Appendix H:
Traffic Impact Analysis

Revised Traffic Impact Study

Proposed Fresno Northwest Walmart Project

Northwest of the Intersection of
Shaw and Brawley Avenues

Fresno, California

Prepared For:
FirstCarbon Solutions
1234 O Street
Fresno, California 93721

Date:
December 1, 2015

Job No.:
13-016.01

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Mr. Jason Brandman
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, California 94597

December 1, 2015

Subject: Revised Traffic Impact Study
Proposed Fresno Northwest Walmart Project
Northwest of the Intersection of Shaw and Brawley Avenues
Fresno, California

Dear Mr. Brandman:

We are pleased to submit this Traffic Impact Study report for the proposed Fresno Northwest Walmart Project. This report supersedes all previous traffic impact study reports for the Project. The report was prepared in accordance with the requirements of the City of Fresno and identifies deficiencies in the existing and/or planned transportation system as well as Project impacts. Recommendations are provided to mitigate Project impacts.

Thank you for the opportunity to perform this traffic impact study and to provide you with this report. Please feel free to contact our office if you have any questions regarding this report or if we can be of further assistance.

Sincerely,

PETERS ENGINEERING GROUP

John Rowland, PE, TE

REGISTERED PROFESSIONAL ENGINEER
JOHN ROWLAND
NO. 2484
EXP. 6-30-16
TRAFFIC
STATE OF CALIFORNIA

EXECUTIVE SUMMARY

This traffic impact study (TIS) has been prepared to study the potential traffic impacts related to the proposed relocation of an existing Walmart store in Fresno California, hereinafter referred to as the "Project." The TIS will be utilized in the preparation of an environmental impact report (EIR) for the Project. This report supersedes all previous traffic impact study reports for the Project.

The TIS was prepared to investigate potential traffic impacts resulting from the Project in both the near-term and long-term cumulative (year 2035) conditions. The analysis focuses on the anticipated effect of vehicle traffic on study area intersections and roadway segments. Additional discussions are included related to transit facilities, bicycle facilities, pedestrian facilities, and regional transportation concepts that are not yet planned and funded.

The proposed Project consists of the relocation of Walmart Store No. 18151 from 3680 W. Shaw Avenue to the Project site at 4080 W. Shaw Avenue. The two sites are located north of Shaw Avenue on opposite sides of Brawley Avenue. The Project site covers 17.60 acres and is bounded by the Herndon Canal and Pacific Storage to the west, San Jose Avenue to the north, Brawley Avenue to the east, and commercial uses along Shaw Avenue to the south.

The Project site contains an existing 193,361-square-foot vacant commercial building with associated parking and landscaped areas. The proposed interior Walmart building area would be approximately 193,361 square feet and the outdoor garden center would total 5,795 square feet.

Vehicular access to the Project site is provided at the following locations:

- North (Service): Right-in/right-out driveway connecting to Brawley Avenue;
- Middle (Secondary): Right-in/right-out driveway connecting to Brawley Avenue;
- South (Primary): Right-in/right-out/left-in driveway connecting to Brawley Avenue. A median prevents left-out turning movements;
- Reciprocal Driveway Access: Reciprocal driveway access to Brawley Avenue and Shaw Avenue is provided through the commercial uses immediately south of the Project site.

The TIS evaluates the following scenarios:

<u>Baseline Conditions</u>

- Existing Conditions;
- Near-Term No-Project Conditions (includes approved and pending projects);
- Long-Term (Year 2035) No-Project Conditions;

<u>Project Conditions</u>

- Existing Plus Project Conditions;
- Near-Term With-Project Conditions (includes approved and pending projects);
- Long-Term (Year 2035) With-Project Conditions.

The Project study area includes 16 intersections, 12 road segments, and two freeway interchanges in the City of Fresno.

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the Project, and to analyze the traffic conditions expected to occur in the future.

The traffic impact study concludes that some deficiencies are expected to occur at several of the study intersections and road segments without the Project as development progresses in the Fresno area.

The Project is expected to cause near-term and long-term Project significant impacts in the roadway segments and/or intersections studied. The Project will be required to mitigate the significant impacts or accept unavoidable impacts as described herein.

Existing-Plus-Project Conditions - Impacts and Mitigation Measures

Impact TRANS-1

At the intersection of Barstow and Brawley Avenues, the Project will cause the LOS to drop from E to F during the a.m. peak hour and will exacerbate a substandard LOS F by adding more than 5.0 seconds of delay during the p.m. peak hour with peak-hour traffic signal warrants met.

Mitigation Measure TRANS-1

The Project applicant shall install a traffic signal at the intersection of Barstow and Brawley Avenues to ensure that the Project's impact to the Barstow and Brawley Avenues intersection is mitigated by the Project's opening day. The traffic signal shall meet City of Fresno standards and provide protected left-turn phasing as directed by the City. Signal installation shall be at the applicant's expense, subject to the applicant's right of reimbursement for costs incurred beyond the applicant's fair share.

In accordance with Caltrans equitable share methodology, financial responsibility for this improvement is limited to 12.2 percent of the estimated $300,000 improvement costs, or $36,600.00. The Project applicant shall be reimbursed the remaining 87.8 percent of the mitigation measure's costs from the City's TSMI fund.

If the City, as anticipated, is installing the traffic signal at the intersection of Barstow and Brawley Avenues at the time the Project's building permit is issued, the Project applicant need not install the traffic signal, and shall instead provide the City with a payment representing 12.2 percent of the estimated $300,000 cost of signal installation, or $36,000 at the time the Project receives its building permit.

With the installation of a traffic signal at this location, the a.m./p.m. peak hour intersection operations will improve from the existing LOS E/F to LOS A/B. Because the applicant would be required to install the signal if the City has not already done so, there is certainty that this mitigation measure would be implemented as envisioned; therefore, the residual significance of this impact would be less than significant.

Near-Term With-Project Conditions - Impacts and Mitigation Measures

Impact TRANS-2

At the intersection of Barstow and Brawley Avenues, the Project will exacerbate a substandard LOS F by adding more than 5.0 seconds of delay during the a.m. and p.m. peak hours.

Mitigation Measure TRANS-2

The implementation of Mitigation Measure TRANS-1 would mitigate the Project's impact at this location, and improve operations to acceptable a.m./p.m. peak hour LOS A/B.

Impact TRANS-3

At the intersection of Shaw and Brawley Avenues, the Project will increase the calculated 95th-percentile queue length from 210 feet to 296 feet in the southbound left-turn lane (where the existing storage length is 260 feet) during the Saturday peak hour.

The analyses suggest that the southbound left-turn lane should be lengthened to accommodate the 296-foot queue length occurring during the Saturday peak hour. However, such a measure would reduce the length of the northbound left-turn lane at the Project entrance by a commensurate amount because the two lanes are back-to-back with no available space between them. Reducing the length of the northbound left-turn lane at the site entrance is not recommended. In the event that the northbound storage lane were to back up into the northbound though lanes, the resulting queue could back up into the intersection of Shaw and Brawley Avenues, causing worse intersection operations, blockage of the intersection, and safety hazards. Whereas if the queue in the southbound left-turn lane were to extend 36 feet into the southbound through lanes, the interior of the intersection of Shaw and Brawley Avenues would not be blocked and could still operate. Therefore, improvements are not feasible at this location.

Year 2035 With-Project Conditions - Impacts and Mitigation Measures

Impact TRANS-4

At the intersection of Barstow and Brawley Avenues, the Project will exacerbate a cumulative substandard LOS F by adding more than 5.0 seconds of delay during the a.m. and p.m. peak hours.

Mitigation Measure TRANS-4

The implementation of Mitigation Measure TRANS-1 would mitigate the Project's impact at this location, and improve operations to acceptable a.m./p.m. peak hour LOS A/B.

Impact TRANS-5

At the intersection of San Jose and Gates Avenues, it is assumed that the Project will exacerbate a cumulative substandard LOS F by adding more than 5.0 seconds of delay during the a.m. and p.m. peak hours.

Mitigation Measure TRANS-5

San Jose Avenue/Gates Avenue: Prior to the City's issuance of the Project building permit, the Project applicant shall pay the City the Project's fair share of the cost of constructing the following improvements or their functional equivalent to mitigate intersection deficiencies at this location by the year 2035:

Signalization of the intersection in accordance with City of Fresno standards with protected left-turn phasing and the following lane configurations:

Eastbound:	one left-turn lane and one through lane with a shared right turn
Westbound:	one left-turn lane and one through lane with a shared right turn
Northbound:	one left-turn lane and two through lanes with a shared right turn
Southbound:	one left-turn lane and two through lanes with a shared right turn

With these improvements, the intersection of San Jose and Gates Avenues will operate at LOS D during the a.m. peak hour and LOS C during the p.m. peak hour. Under Caltrans's equitable share methodology, the Project applicant is responsible for 3.5 percent of the cost of this improvement estimated to cost $300,000.00, and shall pay the City $10,500 toward the above-identified improvements prior to issuance of building permit.

Impact TRANS-6

At the intersection of the Site Access driveway and Brawley Avenues, the Project will cause a substandard LOS E in the on-site eastbound-to-southbound right-turn lane exiting the site during the Saturday peak hour.

The substandard LOS occurs on an approach that is already limited to right turns out of the Project site and will be experienced solely by Project trips exiting the site. A second right-turn lane at a stop-controlled intersection is not recommended because vehicles would be required to cross over a through lane during the right-turn. Traffic signals are not warranted nor recommended due to the short spacing between the driveway and either Shaw Avenue or San Jose Avenue. Therefore, physical improvements are not feasible at this location.

Mitigation Measure TRANS-6

On or before issuance of the Project's final certificate of occupancy, the Project applicant shall implement and maintain throughout Project operations the following Trip Reduction Strategies promoting employee use of public transit, bicycle travel and ridesharing to reduce vehicle trips to and from the store:

EXECUTIVE SUMMARY (Continued)

Marketing Strategies	
Alternate Transportation Bulletin Board	Facility will maintain a Rideshare Bulletin Board centrally accessible to Associates with Rideshare Program information, Rideshare newsletter, and other alternative commute information, including: • Fresno Area Express (FAX) Transit schedules, maps, and fares; • Bicycle route maps and information about taking bikes on public transportation. This information shall be updated on a regular basis to ensure that current information is posted.
Employer Rideshare Newsletter	An Employer Rideshare Newsletter will be made available to Associates on the Rideshare Bulletin Board on a quarterly basis
Rideshare New Hire Orientation	New Hires will view Walmart's Rideshare DVD, and receive information on the facility Rideshare Program and commute mode alternatives. New Hires will be shown the Rideshare Board and bike racks as part of the store tour.
Rideshare promotional materials	Rideshare Program promotional materials include: • Annual Rideshare Recognition Pins for participants • Annual facility Rideshare Poster
Annual Rideshare *Clean Air Challenge* Poster Contest	Associates' children and grandchildren are invited to participate in the annual Rideshare *Clean Air Challenge* poster contest. The children are encouraged to use their imaginations to illustrate the importance of ridesharing to our communities and to the environment. The top three winning entries are highlighted on the annual Rideshare poster.
Program Support Strategy	
On-site Rideshare Coordinator	A designated on-site Rideshare Coordinator is responsible for promoting the Rideshare Program and maintaining the Rideshare Board. The facility receives support and promotional materials from Walmart's Senior Rideshare Coordinator.
Internal Guaranteed Ride Home Service	Associates commuting to work in a rideshare method are eligible for an emergency return ride (in the event of an emergency or unexpected situation) on the days they rideshare. Unexpected situations may include unscheduled overtime or personal emergencies requiring employees to leave the worksite. The return ride will be provided by a volunteering employee or by a member of management.
Personalized commute assistance	The on-site Rideshare coordinator will provide personalized assistance such as assisting with transit itineraries, bicycle routes, carpool matching and personal follow-up.
Services and facilities to reduce lunchtime errand trips	
Lockers on-site	Facility maintains lockers for employee use
On-site Kitchen	Facility provides an eating area with a sink, microwave and refrigerator
On-site ATM	Facility provides an on-site ATM
On-site vending machines	Facility provides on-site vending machines in the employee eating area
On-site restaurant	Facility provides on-site fast food restaurant

The implementation of Mitigation Measure TRANS-6 will help promote use of alternative forms of transportation. However, since the number of vehicle trips this measure could reduce at the Site Access and Brawley Avenue intersection cannot be quantified, Mitigation Measure TRANS-6 could reduce but would not mitigate the Project's impact at this location.

Impact TRANS-7

At the intersection of Shaw and Blythe Avenues, the Project will increase the calculated 95th-percentile queue length in the eastbound left-turn lane from 537 feet to 573 feet during the Saturday peak hour, and will increase the calculated 95th-percentile queue length in the westbound through lanes from 867 feet to 903 feet during the p.m. peak hour.

Mitigation Measure TRANS-7

Prior to the City's issuance of the Project building permit, the Project applicant shall pay the City its fair share of the cost of constructing the following improvement or its functional equivalent to mitigate queuing deficiencies at this location by the year 2035:

Addition of a third eastbound through lane to allow more traffic to bypass the excessive queue in the eastbound left-turn lane.

Under Caltrans's equitable share methodology, the Project applicant is responsible for 6.5 percent of the cost of this improvement estimated to cost $255,000.00, and shall pay the City $16,575 toward the above-identified improvements prior to issuance of building permit. With implementation of this mitigation measure, the Project's contributions to the existing queues would be less than significant, as follows:

In the eastbound left-turn lane, the programmed improvement would reduce the calculated 95th-percentile queue length from 573 feet to 549 feet during the Saturday peak hour. The existing queue in 2035 without the Project is 537 feet. The existing storage length is 235 feet. With mitigation, the Project adds a less-than-significant 12 feet to the existing 537-foot queue length.

- In the westbound through lanes, the programmed improvements would reduce the calculated 95th-percentile queue length in the 2035 with-Project scenario from 903 feet to 874 feet in the p.m. peak hour. The existing queue in 2035 without the Project is 867 feet. The existing storage length 840 feet. With mitigation, the Project adds a less-than-significant seven feet to the existing queue length.

The addition of a third eastbound through lane is adequate to mitigate the Project's queuing impacts. With the construction of an additional lane, the intersection will be built out to the maximum configuration designated in the Fresno General Plan.

Impact TRANS-8

At the intersection of Shaw Avenue and Golden State Boulevard, the Project will exacerbate a cumulative substandard LOS F by adding more than 5.0 seconds of delay during the p.m. and Saturday peak hours.

The Project will also increase the calculated 95th-percentile queue length from 590 feet to 627 feet during the a.m. peak hour where the existing storage length is 150 feet; in the northbound left-turn lane the Project will increase the queue length from 453 feet to 483 feet during the a.m. peak hour where the existing storage length is 155 feet, in the northbound right-turn lane the Project will increase the queue length from 542 feet to 578 feet during the a.m. peak hour where the existing storage length is 50 feet; in the southbound left-turn lane the Project will increase the queue length from 257 feet to 284 feet during the a.m. peak hour where the existing storage length is 200 feet.

Mitigation Measure TRANS-8

The intersection of Shaw Avenue and Golden State Boulevard shall be widened and new traffic signals installed in accordance with City of Fresno standards and the following lane configurations:

Eastbound:	two left-turn lanes, three through lane, and one right-turn lane
Westbound:	two left-turn lanes, three through lane, and one right-turn lane
Northbound:	two left-turn lanes, two through lane, and one right-turn lane
Southbound:	two left-turn lanes, two through lane, and one right-turn lane

With implementation of this mitigation the intersection will operate at LOS C during the a.m. peak hour and LOS E during the p.m. and Saturday peak hours. Furthermore, the average delay during each peak-hour scenario is reduced to levels below those that would exist in 2035 without the proposed Project:

- No-Project 2015 weekday a.m. delay of 71.8 seconds (LOS E) is reduced to 31.0 seconds (LOS C)
- No-Project weekday p.m. delay of 155.3 seconds (LOS F) is reduced to 59.1 seconds (LOS E)
- No-Project Saturday delay of 220.7 seconds (LOS F) is reduced to 73.5 seconds (LOS E).

With implementation of this mitigation the intersection will continue to experience excessive queues as described below:

- In the westbound left-turn lane, the programmed improvements would reduce the calculated 95th-percentile queue length from 627 feet to 246 feet during the a.m. peak hour. The existing queue length in 2035 without the Project is 590 feet. The existing storage length is 150 feet. With mitigation, the calculated queue length is reduced from 590 feet to 246 feet.
- In the northbound left-turn lane, the programmed improvements will reduce the calculated 95th-percentile queue length from 483 feet to 149 feet during the a.m. peak hour. The existing queue length in 2035 without the Project is 453 feet. The existing storage length is 155 feet. With mitigation, the calculated queue length is reduced from 453 feet to 149 feet.
- In the northbound right-turn lane the programmed improvements will reduce the calculated 95th-percentile queue length from 578 feet to 499 feet during the a.m. peak

hour. The existing queue length in 2035 without the Project is 542 feet. The existing storage length is 50 feet. With mitigation, the calculated queue length is reduced from 590 feet to 246 feet.

- In the southbound left-turn lane, the programmed improvements will reduce the calculated 95th-percentile queue length from 284 feet to 84 feet during the a.m. peak hour. The existing queue length in 2035 without the Project is 257 feet. The existing storage length is 200 feet. With mitigation, the calculated queue length is reduced from 257 feet to 84 feet.

The intersection will be constructed to the maximum configuration designated in the Fresno General Plan. Further improvements are not feasible at this location to achieve LOS D.

Under Caltrans's equitable share methodology, the applicant is responsible for 4.4 percent of the cost of constructing this improvement. The intersection is included in the City of Fresno TSMI fee program. Therefore, the Project's payment of its fair share of the cost of construction into the TSMI fund reduces the Project's impact to less than significant.

Impact TRANS-9

At the intersection of Shaw and Brawley Avenues, the Project will lead to a substandard LOS E during the p.m. and Saturday peak hours. The Project will also increase by more than 25 feet the calculated 95th-percentile queue length from 239 feet to 325 feet during the p.m. peak hour where the existing storage length is 250 feet, in the westbound right-turn lane the Project will increase the queue length from 140 feet to 210 feet during the p.m. peak hour where the existing storage length is 140 feet, in the northbound left-turn lane the Project will increase the queue length from 340 feet to 385 feet during the p.m. peak hour where the existing storage length is 255 feet, in the southbound left-turn lane the Project will increase the queue length from 289 feet to 385 feet during the p.m. peak hour and from 303 feet to 440 feet during the Saturday peak hour where the existing storage length is 260 feet, in the southbound right-turn lane the Project will increase the queue length from 113 feet to 175 feet during the p.m. peak hour and from 156 feet to 282 feet during the Saturday peak hour where the existing storage length is 145 feet.

The intersection of Shaw and Brawley Avenues is constructed to the maximum configuration possible and designated in the Fresno General Plan. Substandard levels of service were expected on Brawley Avenue as indicated in the City of Fresno General Plan. Therefore, based on right-of-way constraints, General Plan designations, and/or City practices and policies, further improvements are not feasible at this location to achieve LOS D. The Project's impact remains significant and unavoidable.

Impact TRANS-10

On Figarden Drive between Bullard and Gates Avenues, the Project will cause the cumulative LOS to drop from D to E during the p.m. peak hour.

Figarden Drive has been constructed to the maximum configuration designated in the Fresno General Plan. Therefore, based on right-of-way constraints, General Plan

designations, and/or City practices and policies, improvements are not feasible at this location. The Project's impact remains significant and unavoidable.

Mitigation Measure TRANS-11

Prior to the commencement of construction activities, the Project applicant shall prepare and submit a Construction Traffic Control Plan to the City of Fresno for review and approval. The plan shall address any known road or lane closures and include measures necessary to facilitate safe circulation during these times. The plan shall also identify routing for all delivery and haul trucks. The plan shall also identify suitable locations for construction worker parking.

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1.0 – INTRODUCTION

This traffic impact study has been prepared to study the potential traffic impacts related to the proposed relocation of an existing Walmart store in Fresno California, hereinafter referred to as the "Project." The traffic impact study will be utilized in the preparation of an environmental impact report (EIR) for the Project. This report supersedes previous traffic impact study reports for the Project dated June 26, 2014 and September 11, 2015.

1.1 – Purpose

The traffic impact study was prepared to investigate potential traffic impacts resulting from the Project in both the near-term and long-term cumulative (year 2035) conditions. The analysis focuses on the anticipated effect of vehicle traffic on study area intersections and roadway segments. Additional discussions are included related to transit facilities, bicycle facilities, pedestrian facilities, and regional transportation concepts that are not yet planned and funded.

1.2 – Project Description

The Project site location is presented in the attached Figure 1-1, Vicinity Map, and the Project site plan is presented in the attached Figure 1-2, Site Plan.

The proposed Project consists of the relocation of Walmart Store No. 18151 from 3680 W. Shaw Avenue to the Project site at 4080 W. Shaw Avenue. The two sites are located north of Shaw Avenue on opposite sides of Brawley Avenue. The Project site covers 17.60 acres and is bounded by the Herndon Canal and Pacific Storage to the west, San Jose Avenue to the north, Brawley Avenue to the east, and commercial uses along Shaw Avenue to the south.

The Project site contains an existing 193,361-square-foot vacant commercial building with associated parking and landscaped areas. The proposed interior Walmart building area would be approximately 193,361 square feet and the outdoor garden center would total 5,795 square feet.

Vehicular access to the Project site is provided at the following locations:

- North (Service): Right-in/right-out driveway connecting to Brawley Avenue;
- Middle (Secondary): Right-in/right-out driveway connecting to Brawley Avenue;
- South (Primary): Right-in/right-out/left-in driveway connecting to Brawley Avenue. A median prevents left-out turning movements;
- Reciprocal Driveway Access: Reciprocal driveway access to Brawley Avenue and Shaw Avenue is provided through the commercial uses immediately south of the Project site.

1.3 – Study Area and Time Period

The study intersections and road segments were determined based on the anticipated volume and distribution of Project traffic in consultation with staff of the City of Fresno and the California Department of Transportation (Caltrans). This report includes analysis of the following intersections:

1. Bullard Avenue / Figarden Drive
2. Gates Avenue / Figarden Drive
3. Barstow Avenue / Brawley Avenue
4. San Jose Avenue / Gates Avenue
5. San Jose Avenue / Brawley Avenue
6. San Jose Avenue / Marty Avenue
7. San Jose Avenue / Valentine Avenue
8. Site Access / Brawley Avenue
9. Shaw Avenue / Golden State Boulevard
10. Shaw Avenue / Blythe Avenue
11. Shaw Avenue / El Capitan Avenue
12. Shaw Avenue / Brawley Avenue
13. Shaw Avenue / Marty Avenue
14. Shaw Avenue / Valentine Avenue
15. Shaw Avenue / Feland Avenue
16. Shaw Avenue / Marks Avenue
17. Shaw Avenue / State Route (SR) 99 Interchange (trip trace only)
18. Ashlan Avenue / SR 99 Interchange (trip trace only)

This report also includes analysis of the following road segments:

1. Shaw Avenue between Golden State Boulevard and Blythe Avenue
2. Shaw Avenue between Blythe and El Capitan Avenues
3. Shaw Avenue between El Capitan and Brawley Avenues
4. Shaw Avenue between Brawley and Marty Avenues
5. Shaw Avenue between Marty and Valentine Avenues
6. Shaw Avenue between Valentine and Feland Avenues
7. Shaw Avenue between Feland and Marks Avenues
8. Figarden Drive between Bullard and Gates Avenues
9. Figarden Drive between Gates and Barstow Avenues
10. Brawley Avenue between Barstow and San Jose Avenues
11. Brawley Avenue between San Jose Avenue and Site Access
12. Brawley Avenue between Site Access and Shaw Avenue

The locations of the study intersections and road segments are presented in Figure 1-3, Study Intersections and Road Segments.

A qualitative discussion of the rail crossing on Shaw Avenue east of Golden State Boulevard is included.

1.4 – Study Scenarios

The analyses were performed in conformance with the City of Fresno *Traffic Impact Study Report Guidelines* dated February 2, 2009 and the Caltrans *Guide for the Preparation of*

Traffic Impact Studies dated December 2002. The following time periods are considered in the study:

- Weekday a.m. peak hour between 7:00 and 9:00 a.m.;
- Weekday p.m. peak hour between 4:00 and 6:00 p.m.;
- Weekend peak hour on Saturday between 12:30 and 2:30 p.m.
- Weekday midday peak hour between 11:00 a.m. and 2:00 p.m. (intersections on Shaw Avenue and site access only).

Weekday a.m. and p.m. peak hours were analyzed for all conditions. Intersection traffic volumes for the weekend and midday peak hours were compared to the weekday peak hours to determine the governing peak hour. If either the weekday a.m. peak hour volumes or the weekday p.m. peak volumes at an intersection exceed the weekend or midday peak hour volumes, then the weekend or midday analyses do not govern and were not performed. The City of Fresno did not require midday or weekend road segment analyses.

The peak hours were analyzed for the following scenarios:

<u>Baseline Conditions</u>

- Existing Conditions;
- Near-Term No-Project Conditions (includes approved and pending projects);
- Long-Term (Year 2035) No-Project Conditions;

<u>Project Conditions</u>

- Existing Plus Project Conditions;
- Near-Term With-Project Conditions (includes approved and pending projects);
- Long-Term (Year 2035) With-Project Conditions.

1.5 – List of Abbreviations

The following is a list of abbreviations that may be used the text of this report.

NB – Northbound
EB – Eastbound
NBL – Northbound left
NBR – Northbound right
SBL – Southbound left
SBR – Southbound right
EBL – Eastbound left
EBR – Eastbound right
WBL – Westbound left
WBR – Westbound right
TGH – Trip Generation Handbook
ITE – Institute of Transportation Engineers
DU – dwelling units
TPM – Tentative Parcel Map
SFR – Single Family Residential
Sat. – Saturday
NWC – Northwest corner
NEC – Northeast corner
SB – Southbound
WB – Westbound
LOS – Level of service
OWS – One-way stop control
TWS – Two-way stop control
AWS – All-way stop control
HCM – Highway Capacity Manual
PHF – Peak Hour Factor
sec – seconds
SR – State Route
ksf – 1,000 square feet
n/r – Analysis not required
sf – square feet
TTM – Tentative Tract Map
MFR – Multi-family residential
b/w – between
SWC – Southwest corner
SEC – Southeast corner
mph – miles per hour
COG – Council of Fresno County Governments
CMUTCD – California Manual on Uniform Traffic Control Devices

2.0 – IMPACT SIGNIFICANCE CRITERIA

2.1 – Level of Service

The Transportation Research Board *Highway Capacity Manual*, 2010, (HCM2010) defines level of service (LOS) as, "A quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Automobile mode LOS characteristics for both unsignalized and signalized intersections are presented in Tables 2.1 and 2.2. Automobile mode LOS characteristics for uninterrupted flow two-lane highways are presented in Table 2.3.

Table 2.1
Level of Service Characteristics for Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

Table 2.2
Level of Service Characteristics for Signalized Intersections

Level of Service	Description	Average Vehicle Delay (seconds)
A	Volume-to-capacity ratio is low. Progression is exceptionally favorable or the cycle length is very short.	<10
B	Volume-to-capacity ratio is low. Progression is highly favorable or the cycle length is very short.	>10-20
C	Volume-to-capacity ratio is no greater than 1.0. Progression is favorable or cycle length is moderate.	>20-35
D	Volume-to-capacity ratio is high but no greater than 1.0. Progression is ineffective or cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35-55
E	Volume-to-capacity ratio is high but no greater than 1.0. Progression is unfavorable and cycle length is long. Individual cycle failures are frequent.	>55-80
F	Volume-to-capacity ratio is greater than 1.0. Progression is very poor and cycle length is long. Most cycles fail to clear the queue.	>80

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

Table 2.3
Level of Service Characteristics for Road Segments

Level of Service	Description
A	High operating speeds with a small amount of platooning.
B	Speed reductions are present and platooning is noticeable.
C	Most vehicles traveling in platoons with speeds noticeably curtailed.
D	Platooning increases significantly.
E	Demand approaching capacity. Speeds seriously curtailed.
F	Demand exceeds capacity and heavy congestion exists.

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

The City of Fresno General Plan includes the following policies pertaining to vehicular LOS that are relevant to the proposed Project:

MT-1-k **Multi-Modal Level of Service Standards.** Develop and use a tiered system of flexible, multi-modal Level of Service standards for streets designated by the Circulation Diagram (Figure MT-1). Strive to accommodate a peak hour vehicle LOS of D or better on street segments and at intersections, except where Policies MT-1-m through MT-1-p provide greater specificity. Establish minimum acceptable service levels for other modes and use them in the development and environmental review process.

MT-1-n **Peak Hour Vehicle LOS.** Maintain a peak-hour vehicle LOS standard of D or better for all roadway areas outside of identified Activity Center and Bus Rapid Transit Corridor districts, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.

MT-1-o **LOS Deviations Outside of Activity Centers and Areas Designated for Mixed-Use.** Accept vehicle LOS E or F conditions outside of identified multi-modal districts only if provisions commensurate with the level of impact and approved by the City Traffic Engineer are made to sufficiently improve the overall transportation system and/or promote non-vehicular transportation as part of a development project or City-initiated project.

MT-2-i **Transportation Impact Studies.** Require a Transportation Impact Study (currently named Traffic Impact Study) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements:

- When a project includes a General Plan amendment that changes the General Plan Land Use Designation.
- When the project will substantially change the off-site transportation system (auto, transit, bike or pedestrian) or connection to the system, as determined by the City Traffic Engineer.

- Transportation impact criteria are tiered based on a project's location within the City's Sphere of Influence. This is to assist with areas being incentivized for development. The four zones, as defined on Figure MT-4, are listed below. The following criteria apply:
  - Traffic Impact Zone I (TIZ-I): TIZ-I represents the Downtown Planning Area. Maintain a peak hour LOS standard of F or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips.
  - Traffic Impact Zone II (TIZ-II): TIZ-II generally represents areas of the City currently built up and wanting to encourage infill development. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips.
  - Traffic Impact Zone III (TIZ-III): TIZ-III generally represents areas near or outside the City Limits but within the SOI as of December 31, 2012. Maintain a peak hour LOS standard of D or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 100 or more peak hour new vehicle trips.
  - Traffic Impact Zone IV (TIZ-IV): TIZ-IV represents the southern employment areas within and planned by the City. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips.

The proposed Project site is located in TIZ-III. Shaw Avenue represents the boundary between TIZ-II and TIZ-III, with TIZ-II being located south of Shaw Avenue. City staff has indicated that it is the City's practice to apply the more conservative of the TIZ criteria to intersections on the boundary. Therefore, intersections on Shaw Avenue will be considered to be within TIZ-III.

For purposes of this study, a significant traffic impact will be identified if:

- a proposed project will decrease the LOS below D at an intersection or road segment;
- a proposed project will exacerbate an intersection already operating at a substandard LOS by increasing the average delay at the intersection by 5.0 seconds or more, or by causing the LOS to drop from E to F;
- a proposed project will exacerbate a road segment already operating at substandard LOS by increasing the volume-to-capacity ratio (v/c) of the road segment by 0.15 or more, or by causing the LOS to drop from E to F.

2.2 – Intersection Queuing Criteria

The City of Fresno *Traffic Impact Study Report Guidelines* dated January 20, 2009 requires a queuing analysis of the study intersections and recommendations for queues that are projected to exceed the available storage capacity. However, it should be noted that queuing

is not included in the significance criteria recognized by the City and is reviewed to confirm the LOS results. It should also be noted that substantial queues would be expected where the City of Fresno has accepted LOS F as described above.

A queuing deficiency is identified in the no-Project condition if the calculated 95th-percentile queue length exceeds the storage length by more than 25 feet (the average storage length for one additional vehicle) since the bay taper can typically store at least one vehicle. A significant queuing impact is determined if the Project causes the calculated 95th-percentile queue length to exceed the existing or planned storage capacity at a signalized intersection by more than 25 feet. In storage lanes that are already deficient without the Project, a significant queuing impact is determined if the Project increases the calculated 95th-percentile queue length by at least 25 feet.

Where left-turn lanes connect to two-way left-turn lanes, although the calculated queue may exceed the length of the painted left-turn pocket, the presence of the two-way left-turn lane provides additional storage and allows the queue to avoid spilling into through lanes. Therefore, queues exceeding the painted storage length in these situations are not highlighted as existing deficiencies because they do not contribute to operational problems.

Where right-turn queues exceed the length of the right-turn lane, operational problems do not typically occur since the right-turn lane and the adjacent through lanes operate on the same traffic signal phase. However, severe right-turn queues can extend into through lanes and affect lane utilization. The need for mitigation of right-turn queues should be based on engineering judgment on a case-by-case basis.

2.3 – Transit, Bicycle, and Pedestrian Facilities

A significant impact is determined if a proposed project would disrupt or impede existing or planned transit, bicycle, or pedestrian facilities.

3.0 – TRAFFIC ANALYSIS METHODOLOGY

This section describes the methods and criteria used to evaluate LOS and traffic signal warrants.

3.1 – Intersection Analysis Methodology

The levels of service and 95th-percentile queues at the study intersections were determined using the computer program Synchro 8, which is based on the HCM procedures for calculating levels of service. Queue lengths are reported only for signalized intersections to reveal possible deficiencies that would not be apparent based only on LOS results. For example, if a left-turn lane is not long enough to contain the queues, then the vehicles waiting to turn left will back up into the through traffic lanes and potentially block through traffic while the through traffic signal phase is being served with green time. This type of deficiency would not be apparent based on LOS calculations alone for signalized intersections. On the other hand, at stop-sign-controlled intersections a queuing analysis would not reveal any additional deficiencies that are not already revealed in the LOS analysis. Therefore, queuing analyses are not presented for unsignalized intersections, with the exception of the intersection of Brawley Avenue and the main site access to evaluate operations of the site access and potential queuing in through lanes on Brawley Avenue.

For signalized intersections and all-way-stop-controlled intersections, the overall intersection LOS and the average delay per vehicle are presented. For one-way and two-way stop-controlled intersections, an overall intersection LOS is not defined in the HCM. Therefore, for one-way and two-way stop-controlled intersections the LOS and average delay per vehicle for the movement with the greatest delay is reported.

Although peak-hour traffic volumes are typically utilized in the operational analysis of intersections, the HCM actually utilizes the peak 15-minute period as the basis for operational analyses by incorporating the peak hour factor (PHF) into the analyses. The PHF is the relationship between peak-hour volumes and peak 15-minute volumes calculated by dividing the peak-hour volume by four times the peak 15-minute volume. PHFs for the existing-conditions, existing-plus-Project conditions, and near-term conditions analyses were determined based on the existing traffic volumes. The HCM suggests that a PHF of 0.92 in urban areas and 0.88 in rural areas may be used in the absence of field data. For purposes of the cumulative year 2035 analyses performed for this study, in which field data is not available and traffic volumes are projected, a PHF of 0.92 is used (unless the existing PHF exceeds 0.92, in which case the existing PHF is used).

3.2 – Traffic Signal Warrants

The California Department of Transportation *California Manual on Uniform Traffic Control Devices for Streets and Highways, 2012 Edition* (CMUTCD) presents various warrant analyses to assist in evaluating the need for traffic signals at an intersection. Traffic signal warrants are a series of standards that provide guidelines for determining whether a traffic signal is appropriate at a given intersection. If one or more of the signal warrants are met, signalization of the intersection may be appropriate. However, a signal likely should not be installed if none or few of the warrants are met since the installation of signals may increase delays on the previously uncontrolled major street and may contribute to an increase in accidents.

The installation of a traffic signal can serve as mitigation when a significant impact is identified at an unsignalized intersection. Since the analyses presented herein are based on peak hour traffic volumes, Figure 4C-4, Warrant 3, Peak Hour (70% Factor) as presented in the CMUTCD is utilized. For purposes of this study, traffic signals are considered to be a feasible mitigation if the peak-hour traffic signal warrant is met.

3.3 – Road Segment Analysis Methodology

Road segment analyses were based on the 2012 Florida Department of Transportation (FDOT) Quality/Level of Service Handbook Tables. The Florida road segment tables were developed based on procedures outlined in the HCM and are commonly utilized in the San Joaquin Valley for road segment analyses. The Florida tables are specified in the City of Fresno *Traffic Impact Study Report Guidelines* dated February 2, 2009 as an acceptable method for analysis of road segments in the City of Fresno.

The Florida tables present LOS criteria based on the type of roadway being analyzed and the regional setting (i.e., urban areas or transitioning areas). The appropriate Florida table is dependent upon the setting. Table 4, Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas (Major City/County Roadways) dated December 18, 2012 was utilized in the analysis. The table is attached in Appendix A. Table 3.1 presents the specific volume thresholds used in the analyses.

Table 3.1
Volume Thresholds for Non-State Signalized Roadway Levels of Service
Class I (40 MPH or Higher Posted Speed Limit)

Lanes	Configuration	A	B	C	D	E	F
4	Divided with left-turn lanes, no right-turn lanes	*	*	≤3,078	3,079 – 3,222	>3,222	**
4	Divided with left-turn lanes and right-turn lanes	*	*	≤3,231	3,232 – 3,383	>3,383	**
6	Divided with left-turn lanes, no right-turn lanes	*	*	≤4,725	4,726 – 4,851	>4,851	**
6	Divided with left-turn lanes and right-turn lanes	*	*	≤4,961	4,962 – 5,093	>5,093	**

Reference: Florida Department of Transportation Table 4, Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas (utilizing Non-State Signalized Roadway Adjustments) dated December 18, 2012

4.0 – PROJECT TRIPS

4.1 – Project Trip Generation

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*, are typically used to estimate the number of trips anticipated to be generated by proposed projects.

For purposes of estimating the Project trip generation, the ITE data for Land Use 813 (applicable to the proposed Walmart store) is based on the size of the proposed building (gross floor area) excluding the outdoor garden center, which would be 193,361 square feet for the current Project. It should be noted that ITE specifies that "Garden centers contained within the principal outside faces of the exterior building walls were included in the gross square floor areas reported. Outdoor or fenced-in areas outside the principal faces of the exterior walls were excluded." With respect to gross floor area utilized in the calculations, ITE states that "unroofed areas and unenclosed roofed-over spaces, except those contained within the principal outside faces of exterior walls, should be excluded from the area calculations." Outdoor or fenced-in areas such as the outdoor garden center at the proposed Walmart are specifically not included in the definition of gross floor area and are excluded from the calculations. Excluding the areas outside the principal walls does not suggest that they do not generate trips to or from the Project site; rather, it means that the ITE methodology already accounts for these trips in the trip generation rates reported by ITE for the areas within the "principal outside faces of exterior walls."

Tables 4.1 through 4.4 present the trip generation estimates for the Project.

Table 4.1
Weekday Project Trip Generation

Land Use	Size	Daily		A.M. Peak Hour (Occurs between 7:00 and 9:00 a.m.)					P.M. Peak Hour (Occurs between 4:00 and 6:00 p.m.)				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
813 - Free-Standing Discount Superstore	193.361 ksf	50.75	9,814	1.85	56:44	200	158	358	4.35	49:51	413	429	842

Reference: *Trip Generation Manual, 9th Edition, Institute of Transportation Engineers 2012*
Rates are reported in trips per ksf. In:Out are percentages of the total.

Table 4.2
Weekday Midday Project Trip Generation

Land Use	Size	Weekday Midday Peak Hour (Occurs between 12:00 and 1:00 p.m.)				
		Percent of 24-Hour Entering	In	Percent of 24-Hour Exiting	Out	Total
813 - Free-Standing Discount Superstore	193.361 ksf	8.3	408	7.7	378	786

Reference: *Trip Generation Manual, 9th Edition, Institute of Transportation Engineers 2012*

Table 4.3
Saturday Project Trip Generation

Land Use	Size	Daily		Peak Hour (Occurs between 12:00 and 5:00 p.m.)				
		Rate	Total	Rate	In:Out	In	Out	Total
813 - Free-Standing Discount Superstore	193.361 ksf	64.07	12,389	5.64	50:50	545	546	1,091

Reference: *Trip Generation Manual, 9th Edition, Institute of Transportation Engineers 2012*
Rates are reported in trips per ksf. In:Out are percentages of the total.

Table 4.4
Sunday Project Trip Generation

Land Use	Size	Daily		Peak Hour (Occurs between 12:00 and 5:00 p.m.)				
		Rate	Total	Rate	In:Out	In	Out	Total
813 - Free-Standing Discount Superstore	193.361 ksf	56.12	10,852	5.18	51:49	511	491	1,002

Reference: *Trip Generation Manual, 9th Edition, Institute of Transportation Engineers 2012*
Rates are reported in trips per ksf. In:Out are percentages of the total.

For informational purposes, it is noted that the trip generation values summarized in Tables 4.1 through 4.4 are the same values that would currently be applied to the Super-K store that previously occupied the existing building since the Super-K was the same use (Free-Standing Discount Superstore) and building size as the proposed Project. Therefore, the proposed Project is identical, from a trip generation perspective, to the original occupant of the building.

Table 4.5 summarizes truck deliveries associated with the proposed store.

Table 4.5
Project Truck Delivery Summary

Tractor Trailer (4 axles or more)		Vendor (2 axles)
TRU	Non-TRU	
2-3 (7 days per week)	5-6 (7 days per week)	8-10 (5 days per week)

Notes: TRU = Transportation Refrigeration Unit
Source: CEI Engineering 2014

Truck deliveries would typically occur between the hours of 7:00 a.m. and 10:00 p.m., while a limited number of deliveries during late night and early morning hours could occur as well.

4.2 – Internal Capture

Data presented in the ITE *Trip Generation Handbook* dated June 2004 (TGH) and a review of the existing commercial uses immediately south of the Project site suggest that captured-trip reductions are applicable to the proposed Project. The calculations utilized existing traffic volumes observed at the site driveways, which are the trips generated by the existing commercial properties. Capture rates of 20-percent between individual uses were taken from Tables 7.1 and 7.2 of the TGH. Data is not presented in Tables 7.1 and 7.2 of the TGH for the a.m. peak hour or weekend peak hour, and driveway counts were not performed for 24-hour weekday conditions or midday conditions; therefore, internal capture was calculated

only for the weekday p.m. peak hour. Table 4.6 presents the results of the captured-trip analyses.

Table 4.6
Internally Captured Trips

Time Period	Trips Entering Site	Trips Exiting Site
Weekday	n/a	n/a
Weekday A.M. Peak Hour	n/a	n/a
Weekday Midday	n/a	n/a
Weekday P.M. Peak Hour	-23	-23
Weekend Peak Hour	n/a	n/a

n/a: Data not available

The Project trips with captured-trip reductions applied are presented in Table 4.7. These values represent the Project trips that would be expected to occur at the site entrances and exits.

Table 4.7
Project Trips With Captured-Trip Adjustments

Time Period	Trips Entering Site	Trips Exiting Site	Total
Weekday	4,907	4,907	9,814
Weekday A.M. Peak Hour	200	158	358
Weekday Midday	408	378	786
Weekday P.M. Peak Hour	390	406	796
Weekend Peak Hour	545	546	1,091

4.3 – Pass-By Trips and Diverted-Linked Trips

The TGH presents information suggesting that pass-by reductions are applicable to the Project. The TGH states: "There are instances, however, when the total number of trips generated by a site is different from the amount of new traffic added to the street system by the generator. For example, retail-oriented developments such as shopping centers…are often located adjacent to busy streets in order to attract the motorists already on the street. These sites attract a portion of their trips from traffic passing the site… These retail trips may not add new traffic to the adjacent street system."

With respect to describing "pass-by trips", the TGH states: "Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. Pass-by trips are not diverted from another roadway."

With respect to describing "diverted linked trips", the TGH states: "Diverted linked trips are trips that are attracted from the traffic volume on roadways within the vicinity of the generator but require diversion from that roadway to another roadway to gain access to the site."

Data provided in Chapter 5 of the TGH and the proposed orientation of the Project suggest that pass-by trips and diverted linked trips will be generated by the proposed Project. Available data in the TGH indicate that an average of 28 percent of the weekday p.m. peak hour traffic generated by Free-Standing Discount Superstores (Land Use 813) is pass-by traffic, with a range of data from 23 to 40 percent pass-by trips. Data in the TGH indicate

that an average of 17 percent of the weekday p.m. peak hour traffic and 23 percent of the Saturday peak hour traffic generated by Free-Standing Discount Stores (Land Use 815), a similar type of development, is pass-by traffic. Therefore, a pass-by reduction of 15 percent applied to the Project traffic volumes is considered conservative and has been applied during the weekday p.m. peak hour and the weekend peak hours with respect to the traffic volumes expected on the adjacent streets. The TGH does not present pass-by trip information for weekday a.m. and midday peak hours.

The Project site is adjacent to two streets from which pass-by trips could be generated: Shaw Avenue and Brawley Avenue. However, since medians prevent full access to either street, many potential pass-by trips are expected to divert at the intersection of Shaw and Brawley Avenues before accessing the site. For purposes of these analyses, the combined volume of pass-by trips and diverted linked trips will be limited to 15 percent of the total external Project trip generation.

The Project pass-by/diverted-linked trips are summarized in Table 4.8. The Project primary trips are presented in Table 4.9.

Table 4.8
Pass-By / Diverted-Linked Trips

Time Period	Trips Entering Site	Trips Exiting Site
Weekday	n/a	n/a
Weekday A.M. Peak Hour	n/a	n/a
Weekday Midday	n/a	n/a
Weekday P.M. Peak Hour	58	58
Weekend Peak Hour	81	81

n/a: Data not available

Table 4.9
Primary Project Trips

Time Period	Trips Entering Site	Trips Exiting Site	Total
Weekday	4,907	4,907	9,814
Weekday A.M. Peak Hour	200	158	358
Weekday Midday	408	378	786
Weekday P.M. Peak Hour	332	348	680
Weekend Peak Hour	464	465	929

4.4 – Project Trip Distribution and Assignment

The regional distribution of Project trips can be estimated by performing a select zone analysis using an appropriate travel model. The trip generation information and other relevant Project data were provided to the Council of Fresno County Governments (COG) to perform a Project-specific select zone analysis. The select zone analysis was performed using the year 2035 Fresno County travel model. The select zone analysis request submitted to COG and the results of the select zone analysis performed by COG are presented in Appendix B.

The percentage distribution of Project traffic is presented in the attached Figure 4-1, Project Trip Distribution Percentages.

The peak-hour Project traffic volumes presented in Table 4.9 were assigned to the study intersections and road segments in accordance with the trip distribution percentages

described above. The peak-hour Project traffic volumes are presented in Figure 4-2, Weekday A.M. and P.M. Peak Hour Project Traffic Volumes, and Figure 4-3, Weekday Midday and Weekend Peak Hour Project Traffic Volumes.

The weekday pass-by and diverted-linked trips are indicated in Figure 4-4, Weekday Peak Hour Pass-By Trips and Figure 4-5, Weekday Peak Hour Diverted-Linked Trips. The weekend pass-by and diverted-linked trips are indicated in Figure 4-6, Weekend Peak Hour Pass-By Trips and Figure 4-7, Weekend Peak Hour Diverted-Linked Trips.

4.5 – Project Trips on State Facilities

Caltrans requested that the volume of Project trips (trip trace) expected on State facilities, specifically at the SR 99 interchanges at Shaw Avenue and Ashlan Avenue, be presented in the traffic impact study. Operational analyses of the interchanges were not requested. The Project trips were assigned to the interchange and ramp locations based on the select zone analysis as described above and the results are presented in Tables 4.10 and 4.11. These Project trips are identical to that which would be anticipated based on the original occupancy of the existing building (Super-K store) since the ITE land use (813 - Free-Standing Discount Superstore) and the size of the building are identical.

Table 4.10
Project Trips on State Facilities - State Route 99 / Shaw Avenue Interchange

Location	A.M. Peak Hour Trips	P.M. Peak Hour Trips
SR 99 NB on ramp	0	0
SR 99 NB off ramp	0	0
SR 99 SB on ramp	0	1
SR 99 SB off ramp	0	0
Shaw Avenue EB past SR 99	36	59
Shaw Avenue WB past SR 99	28	62

Table 4.11
Project Traffic on State Facilities - State Route 99 / Ashlan Avenue Interchange

Location	A.M. Peak Hour Trips	P.M. Peak Hour Trips
SR 99 NB on ramp from WB Ashlan	0	0
SR 99 NB on ramp from EB Ashlan	0	0
SR 99 NB off ramp	10	21
SR 99 SB on ramp	1	3
SR 99 SB off ramp	0	1
Ashlan Avenue EB past SR 99	3	10
Ashlan Avenue WB past SR 99	3	12

5.0 – EXISTING CONDITIONS

5.1 – Existing Roadway Network

The Project study area includes 16 intersections, 12 road segments, and two freeway interchanges. The Project location, study intersections, and study road segments are illustrated in Figure 1-3, Study Intersections and Road Segments. The existing lane configurations and intersection control at the study intersections are illustrated in Figure 5-1, Existing Lane Configurations and Intersection Control. A description of the major roadways near the Project site is presented below.

Shaw Avenue is an east-west roadway extending through the entire length of the City of Fresno and beyond. The Fresno General Plan designates Shaw Avenue as an arterial street. Shaw Avenue consists of three lanes in each direction divided by a median at the study locations east of Brawley Avenue with a posted speed limit of 40 miles per hour. Traffic volumes were on the order of 33,000 vehicles per day adjacent to the Project site in June 2013. Shaw Avenue generally consists of three lanes in the westbound direction and two lanes in the eastbound direction divided by a median between Brawley Avenue and Blythe Avenue. Shaw Avenue generally consists of four lanes with a median between Blythe Avenue and SR 99.

At the time the traffic counts were performed, the intersections on Shaw Avenue within the study area were coordinated with a cycle length of 122 seconds during the a.m. peak hour and a cycle length of 126 seconds during the p.m. peak hour and weekend peak hours.

The Master Environmental Impact Report (MEIR) for the Fresno General Plan indicates that Shaw Avenue between Golden State Boulevard and Jennifer Avenue is expected to operate at LOS F in the future.

Brawley Avenue is a north-south roadway extending from Figarden Drive (at approximately Barstow Avenue) to Ashlan Avenue within the study area. At this location it is designated as an arterial street in the Fresno General Plan. Brawley Avenue within the study area is developed with four lanes, a median, and bike lanes. The posted speed limit is 40 miles per hour. Traffic volumes were on the order of 18,000 vehicles per day adjacent to the Project site in June 2013. The MEIR for the Fresno General Plan indicates that Brawley Avenue between Shaw Avenue and San Jose Avenue is expected to operate at LOS F in the future

San Jose Avenue is an east-west roadway extending from Salinas Avenue to the BNSF railroad tracks within the study area. It is designated as a collector street in the Fresno General Plan. San Jose Avenue west of Brawley Avenue is developed with one lane in the westbound direction, two lanes in the eastbound direction, a two-way-left-turn lane, and bike lanes. San Jose Avenue between Brawley Avenue and Marty Avenue is developed with two lanes in each direction, a two-way-left-turn lane, and bike lanes. San Jose Avenue east of Marty Avenue is developed with two lanes in the westbound direction, one lane in the eastbound direction, a two-way-left-turn lane, and bike lanes. The posted speed limit is 35 miles per hour west of Brawley Avenue and 40 miles per hour east of Brawley Avenue.

Figarden Drive is a loop road extending from Brawley Avenue (near Barstow Avenue) to Brawley Avenue south of Herndon Avenue and then extending to Bullard Avenue near Marks Avenue. It is designated as an arterial street in the Fresno General Plan. Figarden

Drive is developed with four lanes, a median, and bike lanes in the study area. The posted speed limit is 40 miles per hour.

5.2 – Existing Transit Service

Fresno Area Express (FAX) provides local bus service within Fresno and Clovis, as well as Children's Hospital in Madera County. FAX operates 19 fixed bus routes, two of which have stops that are adjacent to the Project site. Table 5.1 summarizes the two routes.

Table 5.1
Fresno Area Express Bus Route Summary

Route	Nearest Stop	Weekdays		Weekends	
		Hours of Service	Headways	Hours of Service	Headways
9 - Shaw Avenue Crosstown	Intersection of Shaw and Brawley Avenues	5:40 a.m. to 9:58 p.m.	30 minutes	6:35 a.m. to 7:24 p.m.	30 minutes
20 - N. Hughes/N. Marks/ Downtown	Brawley Avenue north of Shaw Avenue	5:40 a.m. to 9:50 p.m.	30 minutes	6:45 a.m. to 6:32 p.m.	45 minutes

Source: City of Fresno, 2013 (http://www.fresno.gov/DiscoverFresno/PublicTransportation/Route/default.htm)

5.3 – Existing Bicycle Facilities

The 2010 City of Fresno Bicycle, Pedestrian and Trails Master Plan classifies bicycle facilities as follows:

- Class I – Off-Street Path: Dedicated and paved pathway right-of-way separated from vehicle traffic
- Class II – On-Street Lanes: Bike facilities share street and include pavement markings and signage.
- Class III – On-Street Route: Bike facilities share street and include signage only.

In the vicinity of the Project site, Class II facilities exist on Brawley Avenue, Figarden Drive, and San Jose Avenue. There are no designated bicycle facilities on Shaw Avenue.

The Bicycle, Pedestrian and Trails Master Plan contemplates a future Class I facility along the Herndon Canal west of the site and a Class II facility along Shaw Avenue.

5.4 – Existing Pedestrian Facilities

Sidewalks exist along the Brawley Avenue, San Jose Avenue, and Shaw Avenue frontages of the Project site and along driveways within the Project site. Pedestrian connectivity is well established in the vicinity of the Project site via sidewalks and crosswalks.

5.5 – Existing At-Grade Railroad Crossing

The Union Pacific Railroad (UPRR) at-grade crossing at Shaw Avenue is equipped with concrete panels, a median on Shaw Avenue, cantilevered overhead flashing light signals, automatic gates, R15-1 crossbucks, railroad crossing pavement markings, and Highway-Rail Grade Crossing Advance Warning signs (W10-1 signs) on both approaches. Pedestrian facilities do not exist at the crossing. The California High Speed Rail project includes a grade separation that will eliminate this at-grade crossing.

According to data available on the Federal Railroad Administration (FRA) web site (http://safetydata.fra.dot.gov), the crossing experienced six train-related accidents from November 1997 to February 2010.

5.6 – Existing Traffic Volumes

Existing peak-hour traffic volumes were determined by performing manual turning movement counts at each of the study intersections. The traffic counts were performed on weekdays between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. Weekday midday counts were performed between 11:00 a.m. and 2:00 p.m. Weekend counts were performed between 12:30 p.m. and 2:30 p.m. The counts were performed while school was in session and were not performed on holidays. The traffic counts included a determination of the number of heavy vehicles (vehicles with three or more axles) on each turning movement. The traffic count data sheets are attached in Appendix C and include the date the counts were performed. In addition, Peters Engineering Group staff observed the study intersections during peak periods.

Existing peak hour turning movement volumes at the study intersections are presented in the following figures:

- Figure 5-2, Existing Weekday A.M. and P.M. Peak Hour Traffic Volumes
- Figure 5-3, Existing Weekday Midday Peak Hour Traffic Volumes
- Figure 5-4, Existing Saturday Peak Hour Traffic Volumes

5.7 – Midday and Saturday Analysis

Midday and Saturday analyses are not typically performed unless they represent a worst-case scenario with traffic volumes in excess of the typical weekday peak hour volume. In order to determine whether midday and/or Saturday analyses should be performed, the existing traffic volumes and Project trips at each intersection were added to determine whether the midday totals or Saturday totals exceed the maximum weekday peak hour total. Table 5.2 presents a summary of the existing-plus-Project traffic volumes at each intersection. The greatest hourly traffic volume at each intersection is indicated in bold font.

Table 5.2
Peak Hour Volume Comparison (Existing Plus Project Volumes)

Intersection	Peak Hour Traffic Volume			
	Weekday A.M.	Weekday P.M.	Weekday Midday	Saturday
Bullard / Figarden	3,002	**3,562**	n/r	2,962
Gates / Figarden	2,283	**2,906**	n/r	2,421
Barstow / Brawley	1,610	**2,177**	n/r	1,835
San Jose / Gates	1,062	**1,331**	n/r	1,104
San Jose / Brawley	1,854	**2,358**	n/r	1,944
San Jose / Marty	631	**748**	n/r	733
San Jose / Valentine	740	**1,075**	n/r	920
Site Access / Brawley	1,589	**2,198**	n/r	2,196
Shaw / Golden State	2,674	3,418	3,174	**3,549**
Shaw / Blythe	1,682	2,983	2,773	**3,225**
Shaw / El Capitan	1,582	2,681	2,663	**2,949**
Shaw / Brawley	2,903	4,973	4,087	**5,155**
Shaw / Marty	2,304	3,602	3,580	**4,067**
Shaw / Valentine	2,323	3,593	3,557	**3,889**
Shaw / Feland	2,509	3,681	3,468	**4,088**
Shaw / Marks	3,738	**4,755**	4,359	4,685

n/r: Analysis not required by City of Fresno

Based on the traffic volumes presented in Table 5.2, weekday midday traffic volumes do not govern at any of the study locations; therefore, weekday midday traffic analyses are not required by the City and will not be performed. The comparison in Table 5.2 indicates that Saturday peak hour volumes govern at several locations; therefore, Saturday peak hour analyses will be performed at the following intersections:

- Site Access / Brawley Avenue
- Shaw Avenue / Golden State Boulevard
- Shaw Avenue / Blythe Avenue
- Shaw Avenue / El Capitan Avenue
- Shaw Avenue / Brawley Avenue
- Shaw Avenue / Marty Avenue
- Shaw Avenue / Valentine Avenue
- Shaw Avenue / Feland Avenue

5.8 – Existing-Conditions Intersection LOS Analysis

The results of the existing-conditions intersection LOS analyses are summarized in Table 5.3. Substandard conditions are identified in bold type. The intersection analysis sheets are presented in Appendix D.

Table 5.3
Peak Hour Intersection Analysis Summary – Existing Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.		Saturday	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Bullard / Figarden	Signals	28.0	C	33.9	C	-	-
Gates / Figarden	Signals	14.3	B	15.7	B	-	-
Barstow / Brawley	OWS	**45.6**	**E**	**135.8**	**F**	-	-
San Jose / Gates	TWS	16.7	C	26.9	D	-	-
San Jose / Brawley	Signals	13.9	B	14.9	B	-	-
San Jose / Marty	OWS	12.4	B	14.0	B	-	-
San Jose / Valentine	AWS	10.8	B	13.0	B	-	-
Site Access / Brawley	OWS	11.1	B	12.7	B	11.2	B
Shaw / Golden State	Signal	21.6	C	30.3	C	26.7	C
Shaw / Blythe	Signal	29.0	C	35.1	D	36.2	D
Shaw / El Capitan	Signal	10.8	B	26.3	C	10.7	B
Shaw / Brawley	Signal	29.5	C	31.6	C	32.6	C
Shaw / Marty	Signal	25.3	C	15.0	B	15.6	B
Shaw / Valentine	Signal	34.9	C	25.0	C	27.4	C
Shaw / Feland	Signal	25.4	C	25.5	C	28.6	C
Shaw / Marks	Signal	28.9	C	34.1	C	-	-

The following study intersection is currently operating at substandard levels of service:

- Barstow Avenue / Brawley Avenue (LOS E in the westbound-to-southbound left-turn lane during the a.m. peak hour and LOS F in the westbound-to-southbound left-turn lane during the p.m. peak hour). The City of Fresno has received funding to construct traffic signals at the intersection of Barstow and Brawley Avenues. Construction is expected to begin in 2016.

The other study intersections are currently operating at acceptable levels of service.

5.9 – Existing-Conditions Queuing Analysis

The results of the existing-conditions queuing analyses are summarized in Table 5.4. Calculated 95th-percentile queues exceeding the available storage capacity are identified in bold type. The queue analysis sheets are presented in Appendix D.

Table 5.4
Queuing Analysis Summary – Existing Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Bullard / Figarden	Storage	235*	***	195	100	***	100	250	***	75	250	***	100
	A.M.	218	51	**225**	116	31	9	221	269	0	129	410	42
	P.M.	150	81	49	**160**	85	4	**521**	376	18	202	365	**203**
Gates / Figarden	Storage	200*	***	150	130	170	85	265	***	S	265	***	100
	A.M.	135	4	0	6	0	0	114	164	S	8	333	**203**
	P.M.	275	12	15	6	0	0	127	435	S	20	315	**169**
San Jose / Brawley	Storage	180**	***	60	100**	***	100	265	***	S	265	***	S
	A.M.	14	34	21	50	70	35	50	89	S	112	208	S
	P.M.	15	28	24	36	57	48	60	245	S	171	154	S
Site Access / Brawley	Storage	-	-	400	-	-	330	225	NS	-	225	NS	S
	A.M.	-	-	0	-	-	3	0	NS	-	5	NS	S
	P.M.	-	-	0	-	-	10	3	NS	-	10	NS	S
	Sat.	-	-	0	-	-	8	3	NS	-	13	NS	S
Shaw / Golden State	Storage	175	***	415	150	***	75	155	***	50	200	***	55
	A.M.	32	263	0	**282**	247	0	54	87	**96**	128	130	0
	P.M.	43	419	0	**433**	440	55	54	158	**297**	164	74	0
	Sat.	48	565	0	**402**	551	47	82	76	**218**	174	60	0
Shaw / Blythe	Storage	235	***	S	275	840	230	75	***	S	75*	***	80
	A.M.	151	271	S	71	153	83	39	18	S	83	84	0
	P.M.	**382**	309	S	48	99	0	62	56	S	212	209	56
	Sat.	**344**	412	S	53	85	0	39	23	S	217	221	58
Shaw / El Capitan	Storage	150	850	75	210	***	85	200	925	S	160	225	S
	A.M.	8	14	0	35	17	0	50	27	S	34	14	S
	P.M.	22	122	0	53	360	13	83	39	S	119	30	S
	Sat.	40	123	1	65	371	16	54	34	S	105	29	S
Shaw / Brawley	Storage	250	***	145	255	***	140	255	***	100	260	***	145
	A.M.	37	127	0	68	176	53	84	99	0	114	230	36
	P.M.	133	208	14	96	146	23	140	264	44	168	174	50
	Sat.	129	206	14	113	201	18	163	162	25	183	126	53
Shaw / Marty	Storage	215	***	135	260	***	140	150**	***	+	145**	***	S
	A.M.	61	84	16	**291**	34	1	128	103	32	64	58	S
	P.M.	100	139	9	**327**	54	1	182	196	67	119	60	S
	Sat.	139	160	9	**371**	79	2	172	154	68	154	84	S
Shaw / Valentine	Storage	265	***	80	310	***	145	145**	***	75	150**	***	150
	A.M.	122	174	2	68	226	28	92	65	0	164	71	0
	P.M.	130	100	7	73	364	35	160	106	40	182	116	9
	Sat.	186	120	9	91	446	20	221	91	0	150	93	34
Shaw / Feland	Storage	300	***	140	260	***	115	150	150	S	160	***	160
	A.M.	95	276	81	147	125	9	67	22	S	**207**	40	0
	P.M.	132	343	21	151	164	14	111	44	S	**226**	48	0
	Sat.	195	331	31	207	175	23	**184**	50	S	**350**	63	23
Shaw / Marks	Storage	250	***	140	265	***	175	220	***	110	250	***	240
	A.M.	122	108	6	88	209	0	116	178	104	108	165	98
	P.M.	214	130	8	152	349	48	197	202	55	111	210	89

* Multiple left-turn lanes with at least one left-turn lane an extension of a trapped through lane.
** Left-turn lane connects to a two-way left-turn lane, additional storage available equal to length of adjacent through lane.
*** Greater than 1,000 feet to next major intersection.
\+ Right-turn lane connects to a trapped through lane, additional storage available equal to length of adjacent through lane.
S Shared with through lane.
\- Does not exist
NS Not required to stop.

The queuing analyses indicate that calculated 95th-percentile queues currently exceed the existing storage capacity at the following locations:

- Bullard Avenue / Figarden Drive: eastbound right turn exceeds storage capacity by 30 feet, westbound left turn exceeds storage capacity by 60 feet, northbound left turn exceeds storage capacity by 271 feet, and southbound right turn exceeds storage capacity by 103 feet;
- Gates Avenue / Figarden Drive: southbound right turn exceeds storage capacity by 103 feet;
- Shaw Avenue / Golden State Boulevard: westbound left turn exceeds storage capacity by 283 feet and northbound right turn exceeds storage capacity by 247 feet;
- Shaw Avenue / Blythe Avenue: eastbound left turn exceeds storage capacity by 147 feet;
- Shaw Avenue / Marty Avenue: westbound left turn exceeds storage capacity by 111 feet;
- Shaw Avenue / Feland Avenue: northbound left turn exceeds storage capacity by 34 feet, southbound left turn exceeds storage capacity by 190 feet.

5.10 – Existing Conditions Road Segment Analyses

The results of the existing-conditions road segment analyses are summarized in Table 5.5. Detailed road segment analyses are presented in Appendix A. The road segment analyses indicate that the study road segments are currently operating at acceptable levels of service.

Table 5.5
Road Segment Analysis Summary – Existing Conditions

Road Segment	A.M. Peak Hour		P.M. Peak Hour	
	Volume	LOS	Volume	LOS
Shaw Avenue				
Between Golden State and Blythe	2,077	C	2,747	C
Between Blythe and El Capitan	1,398	C	2,292	C
Between El Capitan and Brawley	1,470	C	2,877	C
Between Brawley and Marty	1,527	C	2,755	C
Between Marty and Valentine	1,784	C	2,846	C
Between Valentine and Feland	1,958	C	2,902	C
Between Feland and Marks	2,328	C	3,202	C
Figarden Drive				
Between Bullard and Gates	2,181	C	2,639	C
Between Gates and Barstow	1,496	C	2,009	C
Brawley Avenue				
Between Barstow and San Jose	1,376	C	1,818	C
Between San Jose and Site Access	1,299	C	1,602	C
Between Site Access and Shaw	1,260	C	1,601	C

6.0 – NEAR-TERM AND LONG-TERM BASELINE TRAFFIC PROJECTIONS

6.1 – Cumulative Projects

The analyses for the near-term and long-term conditions consider the effects of traffic expected to be generated by pending and approved projects in the study area. Based on information provided by City of Fresno staff, the projects listed in Table 6.1 are either approved or pending approval and are assumed to be constructed in the near-term condition.

Table 6.1
Cumulative Projects

Project	Location	Land Use	Size	Area (acres)	Status
TTM 4422	Sierra b/w Brawley & Blythe	SFR	6 du	2.1	Under Construction
TTM 5315	North of Salinas Avenue b/w Corona & San Jose	SFR	21 du	4.13	Under Construction
TTM 5338	SWC Grantland & Bullard	SFR	123 du	44.8	Under Construction, Almost completed
TTM 5357	NEC Grantland & Bullard	SFR	199 du	49	Under Construction
TTM 5358	NWC Josephine & Riverside Country Club Drive & C-04-246	SFR	230 du	48	Approved, not constructed
TTM 5363	SEC Bryan & Barstow	SFR	109 du	25.85	Approved, not constructed
TTM 5388	Northwest side of Salinas, north of Herndon Canal	SFR	42 du	11.3	Approved, not constructed
TTM 5527	East side of Cecilia, north of Escalon	SFR	12 du	4.8	Approved, not constructed
TTM 5595	SEC Thiele & Josephine Ave	SFR	128 du	19.71	Approved, not constructed
TTM 5316	South of Dakota b/w Hayes and Polk	SFR	253 du	58	Under Construction
TTM 5326	East side of Blythe b/w Dakota & Shields	SFR	69 du	16	Approved, not constructed
TTM 5356	South side of Ashlan b/w Polk & Dante	SFR	9 du	2.39	Approved, not constructed
TTM 5379	South of Gettysburg, west of Cornelia	SFR	20 du	4.2	Approved, not constructed
TTM 5537	West side of Polk b/w Dayton and Shields	SFR	40 du	9.48	Approved, not constructed
TTM 6054	East side of Polk b/w Corona and Dante	SFR	69 du	9.27	Approved, not constructed
TTM 6066	East side of Blythe b/w Shields and Dakota	SFR	78 du	15.63	Approved, not constructed
C-04-062	SWC San Jose & Marty	Senior Housing	148 du	3.73	Partially constructed
Fresno El Paseo	Herndon / Golden State	Commercial	660,000 retail		Approved, mostly constructed
Fresno 40	East side of Friant b/w Audubon and Fresno	Mixed Use	278,200 sf office, 209,650 sf retail, 24 apts.	40	Approved, under construction
Palm Bluffs Corporate Center, S-10-56	7590 N. Colonial Ave.	Commercial	7,050 sf	0.58	Approved, under construction
S-09-051	1334 W. Herndon Ave.	Office	6,000 sf	0.48	Approved, not constructed
Southeast Walmart Expansion	5125 E. Kings Canyon Road	Commercial	52,000 sf store, 34,800 sf retail/rest.	24	Approved, under construction

Table 6.1 (Continued)
Cumulative Projects

Project	Location	Land Use	Size	Area (acres)	Status*
Friant Ranch	Friant, CA	Mixed Use	2,996 du, 324,000 sf office/retail		Approved, not constructed
North Walmart Expansion	NWC Herndon and Ingram	Commercial	40,000 sf retail		Approved, under construction
R-11-004, C-11-058	5317 N. Maroa	PUD	19 du	1.86	Approved, not constructed
A-11-008, R-11-011	Palm and Nees	Mixed Use	180 du and office	3.28	Approved, no construction approved
Westlake	Gettysburg, Shields, Garfield, & Grantland	Res/Comm	2,600 du, up to 295,000 sf commercial	460	Pending
Tuscan Village, C-10-083	NWC Shields & Marty	Senior Housing	41 du	1.3	Approved, not constructed
TTM 5967	East side of Polk b/w Shaw & Gettysburg	SFR	12 du	1.83	Approved, under construction
Universally accessible park, C-08-235	NEC Gettysburg and Vista	Park		7.91	Completed
C-10-216	NEC Ashlan & Blythe	Mixed Use	71,964 sf senior facility with 90 du, 32,800 sf retail	7.4	Approved, under construction
TPM & S-12-037	4150 N Brawley Ave	LI	63 parcels with buildings from 4,955 to 23,055 sf	37.99	Approved, under construction
C-12-226	5525 W Shaw Ave	Commercial	3,452 sf mini mart, 2,217 sf car wash	0.76	Pending
C-09-116	6507 N. Polk	Office/ commercial	34,538 sf	3.99	Approved, not constructed
TPM & C-11-088		Office	104,593 sf	3.96	
C-12-132	6161 W Spruce Ave	Senior Housing	72 units, 12 single units	4.21	Approved, not constructed
C-13-037	6899 N. Milburn	LI	12,111 sf auto body	1.83	Approved
C-13-001	6338 N Cecelia Ave	MFR	32 du	4.05	Pending
R-09-012 & C-09-161	River Park Place b/w Friant and 41	Office	234,723	12	Approved
C-15-025	6985 N. Brawley	Commercial	3,500 sf mini mart and gas station	1.87	Pending
C-15-027	4625 W. Palo Alto	Church	38,618 sf	23.14	Pending
C-14-072	3771 W. Beechwood	Office/Asst Living	86,275 sf	2.93	Approved, not constructed
A-14-002, R-14-002, C-14-012		MFR for 55+	80 du	8.21	Approved, not constructed
S-14-063	4711 N. Blythe Ave.	Light Ind.	4,955 sf warehouse	2.37	Approved, not constructed
TTM 6029 (Previous T5379)	5210 W Donner Ave	SFR	23 du	4.77	Pending

Source: City of Fresno, 2015.

Table 6.2 presents the trip generation values utilized for the cumulative projects.

Table 6.2
Cumulative Projects Trip Generation

Project	A.M. Peak Hour Traffic Volumes		P.M. Peak Hour Traffic Volumes		Weekday Traffic Volumes
	Enter	Exit	Enter	Exit	
TTM 4422	1	3	4	2	57
TTM 5315	4	12	13	8	200
TTM 5338	23	69	77	46	1,171
TTM 5357	37	112	125	74	1,894
TTM 5358	43	129	145	85	2,190
TTM 5363	20	61	69	40	1,038
TTM 5388	8	24	26	16	400
TTM 5527	2	7	8	4	114
TTM 5595	24	72	81	47	1,219
TTM 5755	9	43	41	20	686
TTM 5316	47	142	159	94	2,409
TTM 5326	13	39	43	26	657
TTM 5356	2	5	6	3	86
TTM 5379	4	23	25	15	381
TTM 5599	11	34	38	23	581
C-04-062	28	83	93	55	1,409
Fresno El Paseo Phase 1 (near term)	582	443	1,492	1,589	37,906
Fresno El Paseo (long term)	2,254	1,027	3,573	4,495	95,614
Westlake Phase 1 (near term)	41	121	137	81	2,067
Westlake (long term)	6321	1,500	2,100	1,483	36,744
Tuscan Village C-10-083	3	6	7	4	153
TTM 5967	2	7	8	4	114
C-10-216	50	39	143	148	3,403
TPM & S-12-037	226	46	58	205	1,877
C-12-226	72	70	85	81	1.834
C-12-132	6	12	14	9	309
C-11-176	16	65	64	35	1,064
C-13-001	3	13	13	7	213
TTM 6029	4	13	14	9	219

An estimate of trips generated by approved and pending projects was obtained from information provided by the City of Fresno. To the extent data were available, traffic volumes for these projects were obtained directly from published traffic reports. For development projects that were partially completed and occupied, Peters Engineering Group staff estimated the portion of the project not yet constructed or in use and prorated the estimated number of project-generated trips.

The traffic volumes expected to be generated at each of the study intersections by the pending projects described above are presented in Figure 6-1, Pending Projects Weekday A.M. and P.M. Peak Hour Traffic Volumes, and Figure 6-2, Pending Projects Weekend Peak Hour Traffic Volumes.

6.2 – Baseline Lane Configurations and Intersection Control

The baseline lane configurations for the near-term and long-term conditions are assumed to be the same as the existing conditions presented in Figure 5-1. It should be noted that the

High Speed Rail project will construct a grade separation that will eliminate the intersection of Shaw Avenue and Golden State Boulevard before the year 2035. However, the intersection is included in the 2035 analyses based on the possibility that the High Speed Rail project will not construct the improvements by 2035.

6.3 – Baseline Near-Term Traffic Volumes

The baseline weekday a.m. and p.m. peak hour traffic volumes for the near-term conditions were estimated by adding the estimated traffic volumes for the pending projects presented in Figure 6-1 to the existing traffic volumes presented in Figure 5-2.

The baseline Saturday peak hour traffic volumes for the near-term conditions were estimated by adding the pending projects traffic volumes presented in Figure 6-2 to the existing traffic volumes presented in Figure 5-4. The resulting traffic volumes are presented in Figure 6-3, Near-Term No-Project Weekday A.M. and P.M. Peak Hour Traffic Volumes, and Figure 6-4, Near-Term No-Project Saturday Peak Hour Traffic Volumes.

6.4 – Traffic Modeling and Baseline 2035 Traffic Volumes

The Council of Fresno County Governments (COG) maintains a travel model that is typically used to forecast traffic volumes. The baseline traffic volumes for the year 2035 no-Project conditions were determined using travel model data obtained from the COG using the COG Increment Method, which is described in a document available from the COG entitled *"Model Steering Committee Recommended Procedures for Using Traffic Projections from the Fresno COG Travel Model"* dated December 2002. The Increment Method forecasts future traffic volumes by determining the growth projected by the model between the base year and the horizon year. This growth is then added to the existing traffic volumes.

Future turning movements were forecast based on the methods presented in Chapter 8 of the Transportation Research Board National Cooperative Highway Research Program Report 255 entitled *"Highway Traffic Data for Urbanized Area Project Planning and Design."* The baseline 2035 no-Project traffic volumes are presented in Figure 6-5, 2035 No-Project Weekday A.M. and P.M. Peak Hour Traffic Volumes, and Figure 6-6, 2035 No-Project Saturday Peak Hour Traffic Volumes.

6.5 – Funding and Construction of Transportation Improvements

The Fresno General Plan includes a Major Street Circulation Diagram that depicts the classified street system to support the buildout of General Plan land uses at acceptable service levels. The implementation of the Mobility and Transportation policies of the City's General Plan ensures that the City develops and manages the roadway system to maintain the adopted LOS during the peak hour for all major roadways and intersections in the City. In accordance with General Plan policies, the City participates in cooperative and comprehensive analysis of street and highway needs within the metropolitan and regional areas through the Council of Fresno County Governments (COG).

The City utilizes the results of the COG transportation modeling process to determine circulation network and capacity deficiencies resulting from land use decisions made in the general plan update process, community plan updates, and major plan amendments proposed for development projects. The City programs and funds improvements to the City's circulation network through the Capital Improvement Program in the City's annual budget.

Through the Capital Improvement Program, the City allocates funds to construct improvements. Sources of funding for improvements to the City's circulation network include the City's various transportation impact fee programs, Fresno County-wide Measure C sales tax revenues, State Gas Tax Revenues and grants. These funding sources are described in greater detail below.

City of Fresno Transportation Impact Fee Programs

In order to implement the goals and objectives of the Fresno General Plan and improve and maintain the desired level of service on the Fresno's streets and highways network, the City established two major transportation impact fee programs. The two programs are: 1) the Traffic Signal Mitigation Impact (TSMI) Fee program, which is directed to the improvement of major street intersections, and 2) the Fresno Major Street Impact (FMSI) Fee program, which is directed to the improvement of major streets. These programs collect fees from new development that are used to fund improvement, construction, and expansion of City roadway infrastructure commensurate with growth and development of the City. The TSMI and FMSI fees are paid to the City prior to issuance of Certificates of Occupancy for projects consisting of new development.

The amount of the fee assessed to new development is established based on studies on the need for new and expanded facilities required by new development and the estimated costs of these improvements. The study for each program includes a methodology, based on the foregoing considerations, which produces a fee rate to be applied to determine the "fair-share" cost of street and intersection improvements for all new development. Payment of the TSMI and FMSI fees is a way that new development projects can pay their fair share of the construction costs of these improvements.

City of Fresno Traffic Signal Mitigation Impact (TSMI) Fee Program

Under the City's TSMI Program, the fees are based on calculated costs to mitigate traffic impacts through the funding of signal and intersection lane improvements that serve the new and existing development. TSMI fees for new development are calculated by multiplying the established fee rate by the new development's average daily traffic (ADT).

The TSMI fee program is intended to implement intersection signalization improvements. As such, when a traffic impact study for a proposed development project identifies impacts to intersections that would result from that project's traffic combining with existing traffic (or possibly future traffic, under a long-term scenario), the mitigating improvements to address those impacts will typically have already been included in the capital improvements anticipated for those intersections in the TSMI program. Therefore, payment of TSMI fees by the project developer can constitute mitigation for the project's impacts at those intersections.

The TSMI program assumes that each intersection on the list will eventually be fully improved to its ultimate configuration as part of a six-lane or four-lane (or other) roadway pursuant to the City's P-69 roadway design standards (i.e., for six-lane roadways this includes three through lanes, two left-turn lanes, and one right-turn lane in each direction). The update of the TSMI program consists of identification of improvements needed to mitigate deficiencies resulting from new development. Intersections are also added to ensure

that the TSMI program includes intersections identified for future buildout under the City's Circulation component of the City of Fresno General Plan.

The TSMI Program does not include a schedule for construction of the improvements and does not identify when the improvements will be required. The prioritization of the need for the improvements is monitored by the City based on observed conditions (such as traffic volumes, accidents, pedestrian generators, proximity to schools, and engineering judgment) new development, and relevant traffic impact studies.

For each type of intersection improvement, the City maintains a list of priority improvement projects. The priority ranking is determined by assigning points based on several factors including: an intersection's daily and peak hour traffic volumes, reported collisions, proximity to schools and other pedestrian generators, the need for signal coordination, and engineering judgment. The priority lists are relied upon to prepare the construction schedules for intersection Capital Improvement Projects for which current funding is available.

The construction costs of these improvements are calculated for each intersection, and the aggregate cost of the intersection improvements is divided by the total ADT from the new developments to arrive at a cost per average daily trip. The current TSMI fee rate for commercial retail development is $47.12 per ADT.

As discussed above, the intersection improvements funded by TSMI fees are implemented on a City-wide priority basis, as approved by the City Council each year. As such, specific intersection improvements needed to mitigate the impacts of a particular development project may not be scheduled to be completed before the development project is completed. In such instances, the developer would install the intersection improvements needed to provide mitigation for the project impacts on the project's opening day, and the costs of installing these improvements would be deducted from the developer's total calculated fees payable to the TSMI fee program. In the event that the developer's aggregate cost for installing the intersection improvements exceeds the project's calculated total fees payable to the TSMI fee program, the amount of improvement cost in excess of the calculated fees payable is to be reimbursed to the applicant from the TSMI program.

The intersection improvements identified under the TSMI program are implemented through the Traffic Signal Capital Improvement Program. Although the major portion of funding for the Capital Improvement Program is from the TSMI fund, there are also other sources of funding, such as state and federal grants, which have the effect of reducing the amount of the TSMI fee. In the 2008 TSMI update, the total capital need for intersection improvements was estimated to be approximately $198 million, of which approximately $24 million was funded by grants, which reduced the amount attributable to new development to approximately $174 million.

The following stop-sign-controlled intersections are programmed in the TSMI fee for signalization:

- San Jose Avenue / Marty Avenue
- San Jose Avenue / Valentine Avenue

The following stop-sign-controlled intersections are included in the pending 2016 TSMI fee program update:

- San Jose Avenue / Gates Avenue
- Barstow Avenue / Brawley Avenue

The signalized intersection of Figarden Drive and Bullard Avenue is programmed in the TSMI fee for additional turn lanes (dual lefts on the northbound and eastbound approaches).

The signalized intersection of Shaw Avenue and Marty Avenue is programmed in the TSMI fee for installation of protected left-turn phasing.

The signalized intersection of Shaw Avenue and Golden State Boulevard is programmed in the TSMI fee for widening to include dual lefts and a dedicated right-turn lane on each approach

The signalized intersection of Figarden Drive and Gates Avenue is programmed in the TSMI fee for signals with dual lefts, which has already been constructed.

The analyses performed for this study do not assume that any of the improvements included in the TSMI program will be in place for any analysis scenarios, except for those that are already existing (i.e., the intersection of Figarden Drive and Gates Avenue).

The City of Fresno Major Street Impact (FMSI) Fee Program

The City's FMSI Fee Program is made up of the New Growth Area Major Street Impact Fee and the Citywide Regional Street Impact Fee. These programs were established to provide a financing mechanism to construct the major street circulation system identified in the City's General Plan. The fees under these programs are calculated based on land use and net acreage of the property as determined by the City. As a basis for establishing the FMSI fees, the City staff developed the Major Street Capital Improvement Program and estimated the cost of the improvements necessary to implement the major street network identified in the General Plan and to meet the level of service and other policies of the General Plan. The Citywide Regional Street Impact Fee applies to all new developments and the New Growth Area Major Street Impact Fee is a condition on all new development projects in the New Growth Areas. The proposed Project is located in a New Growth Area. However, the Project does not represent "new development" that would be subject to these fees.

Fresno County-Wide Measure C Program

In 1986, the voters of Fresno County approved Measure C imposing a half-cent sales tax for 20 years to provide a source of funds for specified transportation improvement projects within Fresno County. Money generated through the Measure C is used for various improvements to extend freeways, improve roads, and enhance public safety. In its first 20 years (1986 to 2006) Measure C funded over $1 billion of improvements. In 2006, the voters approved the extension of Measure C from 2007 to 2027, and it is projected to generate $1.7 billion over its 20-year life.

Regional Transportation Mitigation Fee Program

Measure C authorizes the establishment of a Regional Transportation Mitigation Fee (RTMF) program to provide additional funding for regional transportation projects through new fees charged to development projects. The RTMF program was enacted by the County of Fresno and all cities within the County and became effective on January 1, 2009. The program is administered by a Joint Powers Authority (JPA) which was formed for the specific purpose of managing the fee program. In accordance with State law requirements, a nexus study was completed which analyzed the growth of travel demand for each jurisdiction, identified regional road improvements to meet such demands, described the appropriate "nexus" between such demand and improvements, and adopted appropriate mitigation fees applicable to various land use categories. The current RTMF fee rate for commercial retail development is $1.96 per square foot.

Traffic Congestion Relief Program (TCRP)

The California Traffic Congestion Relief Program (TCRP) is based on the Traffic Congestion Relief Act of 2000 and provides a source of funds for "congestion relief improvements, to dedicate the sales tax on gasoline to transportation purposes, and to create a Transportation Investment Fund to finance improvements to neighborhood streets and roads, to provide funding for transit operations and intercity rail, and to supplement the Traffic Congestion Relief Fund."

6.6 – High Speed Rail

The California High Speed Rail project would construct a grade separation that, by the year 2035, would eliminate the intersection of Shaw Avenue and Golden State Boulevard. When this occurs, access between the two roadways will be available via Cornelia Avenue. However, for purposes of this traffic impact study, the intersection of Shaw Avenue and Golden State Boulevard is assumed to remain in its existing condition through the year 2035 and the project's potential impacts at this location are included in the traffic analysis.

7.0 – NEAR-TERM NO-PROJECT CONDITIONS

7.1 – Near-Term No-Project Intersection LOS Analysis

The results of the near-term no-Project intersection LOS analyses are summarized in Table 7.1. Substandard conditions are identified in bold type. The intersection analysis sheets are presented in Appendix D.

Table 7.1
Peak Hour Intersection Analysis Summary – Near-Term No-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.		Saturday	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Bullard / Figarden	Signals	29.7	C	35.6	D	-	-
Gates / Figarden	Signals	20.3	C	27.5	C	-	-
Barstow / Brawley	OWS	**52.2**	**F**	**174.0**	**F**	-	-
San Jose / Gates	TWS	17.4	C	28.3	D	-	-
San Jose / Brawley	Signals	13.9	B	15.5	B	-	-
San Jose / Marty	OWS	12.4	B	14.1	B	-	-
San Jose / Valentine	AWS	10.9	B	13.3	B	-	-
Site Access / Brawley	OWS	11.5	B	13.2	B	11.5	B
Shaw / Golden State	Signal	23.1	C	38.7	D	45.4	D
Shaw / Blythe	Signal	29.1	C	36.3	D	39.4	D
Shaw / El Capitan	Signal	10.5	B	25.3	C	10.6	B
Shaw / Brawley	Signal	29.8	C	32.7	C	34.3	C
Shaw / Marty	Signal	25.9	C	15.2	B	20.8	C
Shaw / Valentine	Signal	35.3	D	25.3	C	24.6	C
Shaw / Feland	Signal	25.5	C	25.7	C	28.9	C
Shaw / Marks	Signal	28.9	C	34.1	C	-	-

The following study intersection is expected to operate at substandard levels of service:

- Barstow Avenue / Brawley Avenue (LOS F in the westbound-to-southbound left-turn lane during the a.m. and p.m. peak hours). The City of Fresno has received funding to construct traffic signals at the intersection of Barstow and Brawley Avenues. Construction is expected to begin in 2016.

The other study intersections are expected to operate at acceptable levels of service.

7.2 – Near-Term No-Project Conditions Queuing Analysis

The results of the near-term no-Project queuing analyses are summarized in Table 7.3. Calculated 95th-percentile queues exceeding the available storage capacity are identified in bold type. The queue analysis sheets are presented in Appendix D.

Table 7.2
Queuing Analysis Summary – Near-Term No-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Bullard / Figarden	Storage	235*	***	195	100	***	100	250	***	75	250	***	100
	A.M.	238	53	**256**	119	32	11	248	275	0	132	416	43
	P.M.	166	82	51	**168**	86	5	**545**	388	19	205	383	**209**
Gates / Figarden	Storage	200*	***	150	130	170	85	265	***	S	265	***	100
	A.M.	137	10	0	43	25	0	115	174	S	21	350	**214**
	P.M.	296	26	16	26	16	0	127	460	S	49	314	**171**
San Jose / Brawley	Storage	180**	***	60	100**	***	100	265	***	S	265	***	S
	A.M.	14	34	22	51	70	35	51	95	S	112	226	S
	P.M.	15	28	28	43	57	48	65	276	S	171	164	S
Site Access / Brawley	Storage	-	-	400	-	-	330	225	NS	-	225	NS	S
	A.M.	-	-	0	-	-	3	0	NS	-	5	NS	S
	P.M.	-	-	0	-	-	10	3	NS	-	10	NS	S
	Sat.	-	-	0	-	-	8	3	NS	-	13	NS	S
Shaw / Golden State	Storage	175	***	415	150	***	75	155	***	50	200	***	55
	A.M.	33	277	0	**287**	280	0	54	94	**96**	174	138	0
	P.M.	53	450	0	**457**	470	**120**	54	176	**379**	**288**	90	0
	Sat.	65	590	0	**402**	566	**192**	82	101	**236**	**486**	95	0
Shaw / Blythe	Storage	235	***	S	275	840	230	75	***	S	75*	***	80
	A.M.	153	293	S	71	169	60	39	18	S	83	84	0
	P.M.	**389**	358	S	45	186	0	62	56	S	212	209	57
	Sat.	**352**	508	S	48	246	18	39	23	S	217	221	61
Shaw / El Capitan	Storage	150	850	75	210	***	85	200	925	S	160	225	S
	A.M.	6	13	0	37	18	0	50	27	S	34	14	S
	P.M.	19	119	0	50	388	25	83	39	S	119	30	S
	Sat.	31	142	0	58	420	13	54	34	S	105	29	S
Shaw / Brawley	Storage	250	***	145	255	***	140	255	***	100	260	***	145
	A.M.	39	126	0	71	193	67	85	101	0	124	238	39
	P.M.	141	216	14	98	168	26	143	276	46	189	182	50
	Sat.	134	280	21	118	245	35	169	174	28	210	133	53
Shaw / Marty	Storage	215	***	135	260	***	140	150**	***	+	145**	***	S
	A.M.	74	92	18	**306**	36	0	130	107	32	74	60	S
	P.M.	106	165	8	**335**	59	1	185	199	67	127	62	S
	Sat.	140	176	8	**378**	85	0	180	157	68	165	84	S
Shaw / Valentine	Storage	265	***	80	310	***	145	145**	***	75	150**	***	150
	A.M.	125	179	4	68	242	26	97	65	0	164	71	1
	P.M.	127	101	7	69	390	31	166	106	40	182	116	16
	Sat.	185	150	14	85	515	16	230	91	0	150	93	41
Shaw / Feland	Storage	300	***	140	260	***	115	150	150	S	160	***	160
	A.M.	94	289	84	149	128	9	67	22	S	**207**	40	0
	P.M.	128	398	27	137	169	12	111	44	S	**226**	48	0
	Sat.	189	411	36	208	192	23	**184**	50	S	**350**	63	23
Shaw / Marks	Storage	250	***	140	265	***	175	220	***	110	250	***	240
	A.M.	123	108	6	88	223	0	118	178	105	108	166	107
	P.M.	218	136	8	152	379	48	198	202	55	111	211	99

* Multiple left-turn lanes with at least one left-turn lane an extension of a trapped through lane.
** Left-turn lane connects to a two-way left-turn lane, additional storage available equal to length of adjacent through lane.
*** Greater than 1,000 feet to next major intersection.
\+ Right-turn lane connects to a trapped through lane, additional storage available equal to length of adjacent through lane.
S Shared with through lane.
\- Does not exist
NS Not required to stop.

The queuing analyses indicate that calculated 95th-percentile queues are expected to exceed the storage capacity at the following locations under near-term no-Project conditions:

- Bullard Avenue / Figarden Drive: eastbound right turn exceeds storage capacity by 61 feet, westbound left turn exceeds storage capacity by 68 feet, northbound left turn exceeds storage capacity by 295 feet, and southbound right turn exceeds storage capacity by 109 feet;
- Gates Avenue / Figarden Drive: southbound right turn exceeds storage capacity by 114 feet;
- Shaw Avenue / Golden State Boulevard: westbound left turn exceeds storage capacity by 307 feet, westbound right turn exceeds storage capacity by 117 feet, northbound right turn exceeds storage capacity by 329 feet, and southbound left turn exceeds storage capacity by 286 feet;
- Shaw Avenue / Blythe Avenue: eastbound left turn exceeds storage capacity by 154 feet;
- Shaw Avenue / Marty Avenue: westbound left turn exceeds storage capacity by 118 feet;
- Shaw Avenue / Feland Avenue: northbound left turn exceeds storage capacity by 34 feet, southbound left turn exceeds storage capacity by 190 feet.

7.3 – Near-Term No-Project Road Segment Analyses

The results of the near-term no-Project road segment analyses are summarized in Table 7.3. Detailed road segment analyses are presented in Appendix A. The study road segments are expected to operate at acceptable levels of service in this scenario.

Table 7.3
Road Segment Analysis Summary – Near-Term No-Project Conditions

Road Segment	A.M. Peak Hour		P.M. Peak Hour	
	Volume	LOS	Volume	LOS
Shaw Avenue				
Between Golden State and Blythe	2,189	C	2,966	C
Between Blythe and El Capitan	1,491	C	2,470	C
Between El Capitan and Brawley	1,562	C	3,047	C
Between Brawley and Marty	1,647	C	2,965	C
Between Marty and Valentine	1,909	C	3,047	C
Between Valentine and Feland	2,044	C	3,060	C
Between Feland and Marks	2,414	C	3,360	C
Figarden Drive				
Between Bullard and Gates	2,263	C	2,741	C
Between Gates and Barstow	1,569	C	2,094	C
Brawley Avenue				
Between Barstow and San Jose	1,451	C	1,905	C
Between San Jose and Site Access	1,380	C	1,724	C
Between Site Access and Shaw	1,341	C	1,706	C

8.0 – YEAR 2035 NO-PROJECT CONDITIONS

8.1 – Year 2035 No-Project Intersection LOS Analysis

The results of the year 2035 no-Project intersection LOS analyses are summarized in Table 8.1. Substandard conditions are identified in bold type. The intersection analysis sheets are presented in Appendix D.

Table 8.1
Peak Hour Intersection Analysis Summary – 2035 No-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.		Saturday	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Bullard / Figarden	Signals	**69.0**	**E**	**60.5**	**E**	-	-
Gates / Figarden	Signals	24.7	C	38.4	D	-	-
Barstow / Brawley	OWS	**148.3**	**F**	**619.1**	**F**	-	-
San Jose / Gates	TWS	*	**F**	*	**F**	-	-
San Jose / Brawley	Signals	31.4	C	49.4	D	-	-
San Jose / Marty	OWS	**51.1**	**F**	**86.3**	**F**	-	-
San Jose / Valentine	AWS	**38.6**	**E**	**49.5**	**E**	-	-
Site Access / Brawley	OWS	13.3	B	17.0	C	13.5	B
Shaw / Golden State	Signal	**71.8**	**E**	**155.3**	**F**	**220.7**	**F**
Shaw / Blythe	Signal	36.5	D	**74.7**	**E**	**101.6**	**F**
Shaw / El Capitan	Signal	6.1	A	10.9	B	24.9	C
Shaw / Brawley	Signal	38.3	D	45.0	D	49.8	D
Shaw / Marty	Signal	17.6	B	22.7	C	17.0	B
Shaw / Valentine	Signal	22.4	C	11.5	B	15.0	B
Shaw / Feland	Signal	13.5	B	31.0	C	45.2	D
Shaw / Marks	Signal	31.8	C	44.1	D	-	-

* Delay is beyond the calculable range.

The following study intersections are expected to operate at substandard levels of service:

- Bullard Avenue / Figarden Drive (LOS E during the a.m. peak hour and LOS F during the p.m. peak hour);
- Barstow Avenue / Brawley Avenue (LOS F in the westbound-to-southbound left-turn lane during the a.m. and p.m. peak hours). The City of Fresno has received funding to construct traffic signals at the intersection of Barstow and Brawley Avenues. Construction is expected to begin in 2016;
- San Jose Avenue / Gates Avenue (LOS F on both the eastbound and westbound approaches during the a.m. and p.m. peak hours);
- San Jose Avenue / Marty Avenue (LOS F during the a.m. and p.m. peak hours on the northbound approach);
- San Jose Avenue / Valentine Avenue (LOS E during the a.m. and p.m. peak hours);
- Shaw Avenue / Golden State Boulevard (LOS E during the a.m. peak hour and LOS F during the p.m. and Saturday peak hours);
- Shaw Avenue / Blythe Avenue (LOS E during the p.m. peak hour and LOS F during the Saturday peak hour).

The other study intersections are expected to operate at acceptable levels of service.

8.2 – Year 2035 No-Project Conditions Queuing Analysis

The results of the year 2035 no-Project queuing analyses are summarized in Table 8.2. Calculated 95th-percentile queues exceeding the available storage capacity are identified in bold type. The queue analysis sheets are presented in Appendix D.

The queuing analyses indicate that calculated 95th-percentile queues are expected to exceed the storage capacity at the following locations in the 2035 no-Project conditions:

- Bullard Avenue / Figarden Drive: eastbound right turn exceeds storage capacity by 533 feet, westbound left turn exceeds storage capacity by 190 feet, northbound left turn exceeds storage capacity by 790 feet, southbound left turn exceeds storage capacity by 76 feet, and southbound right turn exceeds storage capacity by 366 feet;
- Gates Avenue / Figarden Drive: southbound right turn exceeds storage capacity by 241 feet;
- San Jose Avenue / Brawley Avenue: westbound right turn exceeds storage capacity by 125 feet and southbound left turn exceeds storage capacity by 113 feet;
- Shaw Avenue / Golden State Boulevard: westbound left turn exceeds storage capacity by 648 feet, westbound through extends to Blythe Avenue, northbound left turn exceeds storage capacity by 290 feet, northbound right turn exceeds storage capacity by 881 feet, and southbound left turn exceeds storage capacity by 159 feet. It is also noted that the eastbound queue will extend past Cornelia Avenue;
- Shaw Avenue / Blythe Avenue: eastbound left turn exceeds storage capacity by 334 feet, westbound through extends to El Capitan Avenue, and westbound right turn exceeds storage capacity by 72 feet. It is also noted that the eastbound queue will extend past Jennifer Avenue;
- Shaw Avenue / Brawley Avenue: eastbound right turn exceeds storage capacity by 38 feet, northbound left turn exceeds storage capacity by 181 feet, and southbound left turn exceeds storage capacity by 43 feet;
- Shaw Avenue / Marty Avenue: westbound left turn exceeds storage capacity by 63 feet;
- Shaw Avenue / Feland Avenue: westbound left turn exceeds storage capacity by 120 feet, westbound right turn exceeds storage capacity by 72 feet, northbound left turn exceeds storage capacity by 98 feet, and southbound left turn exceeds storage capacity by 378 feet;
- Shaw Avenue / Marks Avenue: eastbound left turn exceeds storage capacity by 69 feet, northbound left turn exceeds storage capacity by 71 feet, northbound right turn exceeds storage capacity by 88 feet, and southbound right turn exceeds storage capacity by 78 feet.

Table 8.2
Queuing Analysis Summary – 2035 No-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Bullard / Figarden	Storage	235*	***	195	100	***	100	250	***	75	250	***	100
	A.M.	257	126	**728**	**153**	45	62	**379**	331	0	155	580	**161**
	P.M.	292	121	**137**	**290**	131	62	**1,040**	522	61	**326**	583	**466**
Gates / Figarden	Storage	200*	***	150	130	170	85	265	***	S	265	***	100
	A.M.	185	41	10	70	43	0	148	226	S	85	483	**341**
	P.M.	362	31	44	32	21	0	187	607	S	186	446	**235**
San Jose / Brawley	Storage	180**	***	60	100**	***	100	265	***	S	265	***	S
	A.M.	23	219	81	204	101	41	75	163	S	**319**	445	S
	P.M.	28	78	37	93	593	**225**	219	573	S	**378**	351	S
Site Access / Brawley	Storage	-	-	400	-	-	330	225	NS	-	225	NS	S
	A.M.	-	-	0	-	-	3	0	NS	-	5	NS	S
	P.M.	-	-	0	-	-	20	5	NS	-	20	NS	S
	Sat.	-	-	0	-	-	13	5	NS	-	23	NS	S
Shaw / Golden State	Storage	175	***	415	150	***	75	155	***	50	200	***	55
	A.M.	113	929	91	**590**	655	10	**453**	161	**542**	**257**	260	0
	P.M.	142	1,389	75	**798**	1,459	79	138	328	**892**	**349**	244	0
	Sat.	166	1,674	44	**790**	1,816	50	**210**	151	**931**	**359**	196	0
Shaw / Blythe	Storage	235	***	S	275	840	230	75	***	S	75*	***	80
	A.M.	182	881	S	76	226	5	43	22	S	110	111	16
	P.M.	**569**	1,023	S	32	**867**	158	75	70	S	238	244	77
	Sat.	**537**	1,442	S	38	847	**302**	46	28	S	250	248	73
Shaw / El Capitan	Storage	150	850	75	210	***	85	200	925	S	160	225	S
	A.M.	6	23	0	58	320	5	65	34	S	45	17	S
	P.M.	19	17	0	64	36	0	118	51	S	175	41	S
	Sat.	32	137	0	82	32	0	76	46	S	152	39	S
Shaw / Brawley	Storage	250	***	145	255	***	140	255	***	100	260	***	145
	A.M.	71	315	27	139	240	3	183	141	16	196	430	121
	P.M.	239	547	**183**	184	479	140	**340**	407	103	**289**	290	113
	Sat.	166	521	63	245	832	152	**436**	238	73	**303**	213	156
Shaw / Marty	Storage	215	***	135	260	***	140	150**	***	+	145**	***	S
	A.M.	54	309	12	255	202	2	160	155	75	91	84	S
	P.M.	104	282	4	**299**	83	1	234	306	83	237	110	S
	Sat.	103	369	10	**323**	210	12	286	242	99	217	174	S
Shaw / Valentine	Storage	265	***	80	310	***	145	145**	***	75	150**	***	150
	A.M.	103	77	1	85	85	6	121	76	0	240	96	6
	P.M.	206	200	14	110	158	10	249	147	49	346	142	42
	Sat.	**324**	135	6	126	145	4	431	131	38	287	120	53
Shaw / Feland	Storage	300	***	140	260	***	115	150	150	S	160	***	160
	A.M.	103	73	0	201	207	11	90	31	S	**300**	52	0
	P.M.	196	615	91	153	261	6	156	58	S	**374**	63	0
	Sat.	298	455	30	**380**	907	**187**	**248**	61	S	**538**	79	40
Shaw / Marks	Storage	250	***	140	265	***	175	220	***	110	250	***	240
	A.M.	203	246	22	104	291	22	155	294	**198**	127	197	141
	P.M.	**319**	328	41	20	576	95	**291**	261	82	145	327	**318**

* Multiple left-turn lanes with at least one left-turn lane an extension of a trapped through lane.
** Left-turn lane connects to a two-way left-turn lane, additional storage available equal to length of adjacent through lane.
*** Greater than 1,000 feet to next major intersection.
\+ Right-turn lane connects to a trapped through lane, additional storage available equal to length of adjacent through lane.
S Shared with through lane.
\- Does not exist
NS Not required to stop.

8.3 – Year 2035 No-Project Road Segment Analyses

The results of the year 2035 no-Project road segment analyses are summarized in Table 8.3. Substandard conditions are identified in bold type. Detailed road segment analyses are presented in Appendix A.

Table 8.3
Road Segment Analysis Summary – 2035 No-Project Conditions

Road Segment	A.M. Peak Hour		P.M. Peak Hour	
	Volume	LOS	Volume	LOS
Shaw Avenue				
Between Golden State and Blythe	2,880	C	**4,165**	**E/F**
Between Blythe and El Capitan	2,888	C	**4,191**	**E/F**
Between El Capitan and Brawley	2,961	C	**4,670**	**E/F**
Between Brawley and Marty	2,923	C	4,370	C
Between Marty and Valentine	3,057	C	4,832	C
Between Valentine and Feland	3,020	C	4,881	C
Between Feland and Marks	3,421	C	4,725	C
Figarden Drive				
Between Bullard and Gates	2,784	C	3,342	D
Between Gates and Barstow	2,000	C	2,590	C
Brawley Avenue				
Between Barstow and San Jose	1,977	C	2,776	C
Between San Jose and Site Access	1,930	C	2,489	C
Between Site Access and Shaw	1,881	C	2,318	C

The following study road segments are expected to operate at substandard levels of service in this scenario:

- Shaw Avenue between Golden State Boulevard and Blythe Avenue (LOS E/F during the p.m. peak hour);
- Shaw Avenue between Blythe Avenue and El Capitan Avenue (LOS E/F during the p.m. peak hour);
- Shaw Avenue between El Capitan Avenue and Brawley Avenue (LOS E/F during the p.m. peak hour).

The other study road segments are expected to operate at acceptable levels of service in this scenario.

9.0 – EXISTING-PLUS-PROJECT CONDITIONS

9.1 – Existing-Plus-Project Lane Configurations and Intersection Control

The existing-plus-Project conditions lane configurations and intersection control are the same as the existing conditions presented in Figure 5-1.

9.2 – Existing-Plus-Project Traffic Volumes

The existing-plus-Project conditions peak-hour traffic volumes are determined by adding the existing traffic volumes and the Project traffic volumes with pass-by and diverted-linked trips adjustments. The existing-plus-Project conditions peak-hour traffic volumes are presented in Figure 9-1, Existing-Plus-Project Weekday A.M. and P.M. Peak Hour Traffic Volumes, and Figure 9-2, Existing-Plus-Project Saturday Peak Hour Traffic Volumes.

9.3 – Existing-Plus-Project Intersection LOS Analysis

The results of the existing-plus-Project conditions intersection LOS analyses are summarized in Table 9.1. Project impacts are identified in bold type. The intersection analysis sheets are presented in Appendix E.

Table 9.1
Peak Hour Intersection Analysis Summary – Existing-Plus-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.		Saturday	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Bullard / Figarden	Signals	29.1	C	35.1	D	-	-
Gates / Figarden	Signals	14.4	B	16.1	B	-	-
Barstow / Brawley	OWS	**50.6**	**F**	**178.3**	**F**	-	-
San Jose / Gates	TWS	17.5	C	28.6	D	-	-
San Jose / Brawley	Signals	14.3	B	15.7	B	-	-
San Jose / Marty	OWS	12.5	B	14.2	B	-	-
San Jose / Valentine	AWS	10.9	B	13.1	B	-	-
Site Access / Brawley	OWS	16.5	C	17.0	C	20.7	C
Shaw / Golden State	Signal	21.9	C	30.9	C	33.9	C
Shaw / Blythe	Signal	28.3	C	42.4	D	41.0	D
Shaw / El Capitan	Signal	10.3	B	28.5	C	9.0	A
Shaw / Brawley	Signal	30.7	C	35.3	D	42.4	D
Shaw / Marty	Signal	19.5	B	23.6	C	28.3	C
Shaw / Valentine	Signal	29.6	C	24.6	C	25.0	C
Shaw / Feland	Signal	24.8	C	24.6	C	27.2	C
Shaw / Marks	Signal	28.7	C	33.7	D	-	-

The Project causes a significant impact based on intersection LOS criteria at one location - the intersection of Barstow and Brawley Avenues. The Project will cause the LOS to drop from E to F during the a.m. peak hour and will exacerbate a substandard LOS F by adding more than 5.0 seconds of delay during the p.m. peak hour. Traffic signal warrants are included in Appendix E and indicate that peak-hour traffic signal warrants are met under the existing-plus-Project conditions at the intersection. Therefore, traffic signals are considered a feasible mitigation and will operate at LOS A during the a.m. peak hour and LOS B during the p.m. peak hour. As previously mentioned, the City of Fresno has received funding to construct traffic signals at the intersection of Barstow and Brawley Avenues. Construction is expected to begin in 2016.

In the event the City does not install the planned traffic signal prior to the Project receiving its building permit, Mitigation Measure TRANS-1 requires the applicant's installation of a traffic signal prior to issuance of a certificate of occupancy, subject to the applicant's right of reimbursement for the amount that exceeds the proposed Project's 12.2 percent fair share responsibility (see Table 11.6 of this report) for the costs of implementing this mitigation.

9.4 – Existing-Plus-Project Conditions Queuing Analysis

The results of the existing-plus-Project conditions queuing analyses are summarized in Table 9.2. The Project does not cause significant impacts based on queuing criteria. Italicized values exceed the storage length. However, although the calculated queue exceeds the storage capacity, the Project does not cause the queue to increase by at least one car length; therefore, a significant queuing impact is not identified. The queue analysis sheets are presented in Appendix E.

Table 9.2
Queuing Analysis Summary – Existing-Plus-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Bullard / Figarden	Storage	235*	***	195	100	***	100	250	***	75	250	***	100
	A.M.	226	51	*250*	119	31	9	249	273	0	129	412	42
	P.M.	161	82	51	*168*	85	4	*540*	381	19	202	374	*202*
Gates / Figarden	Storage	200*	***	150	130	170	85	265	***	S	265	***	100
	A.M.	135	4	0	6	0	0	117	171	S	8	344	*208*
	P.M.	287	12	17	6	0	0	130	447	S	20	326	*170*
San Jose / Brawley	Storage	180**	***	60	100**	***	100	265	***	S	265	***	S
	A.M.	14	34	26	54	70	35	57	95	S	112	215	S
	P.M.	15	28	28	43	57	48	76	271	S	171	166	S
Site Access / Brawley	Storage	-	-	400	-	-	330	225	NS	-	225	NS	S
	A.M.	-	-	28	-	-	3	33	NS	-	5	NS	S
	P.M.	-	-	73	-	-	10	45	NS	-	10	NS	S
	Sat.	-	-	120	-	-	8	65	NS	-	13	NS	S
Shaw / Golden State	Storage	175	***	415	150	***	75	155	***	50	200	***	55
	A.M.	33	287	0	*293*	265	0	54	88	*96*	133	130	0
	P.M.	41	450	0	*441*	466	54	52	149	*257*	185	72	0
	Sat.	48	651	0	*414*	614	50	82	76	*227*	188	60	0
Shaw / Blythe	Storage	235	***	S	275	840	230	75	***	S	75*	***	80
	A.M.	152	287	S	68	162	4	39	18	S	83	83	0
	P.M.	*382*	342	S	44	376	77	62	56	S	212	209	56
	Sat.	*367*	472	S	48	178	0	37	22	S	207	210	56
Shaw / El Capitan	Storage	150	850	75	210	***	85	200	925	S	160	225	S
	A.M.	6	23	0	34	18	0	50	28	S	34	14	S
	P.M.	18	71	0	45	169	5	80	38	S	116	30	S
	Sat.	31	2	0	64	316	3	56	35	S	107	30	S
Shaw / Brawley	Storage	250	***	145	255	***	140	255	***	100	260	***	145
	A.M.	56	110	0	68	178	84	90	124	0	131	247	43
	P.M.	164	260	47	95	206	50	141	311	10	217	217	55
	Sat.	202	295	49	128	158	1	160	251	0	240	197	88
Shaw / Marty	Storage	215	***	135	260	***	140	150**	***	+	145**	***	S
	A.M.	60	98	21	*298*	32	0	132	102	33	64	57	S
	P.M.	91	130	0	*317*	51	0	182	187	65	113	57	S
	Sat.	122	149	25	247	269	11	178	149	67	150	80	S
Shaw / Valentine	Storage	265	***	80	310	***	145	145**	***	75	150**	***	150
	A.M.	121	58	2	73	178	21	96	66	0	165	71	0
	P.M.	112	94	8	73	270	19	164	104	37	177	113	7
	Sat.	153	49	2	77	146	4	221	87	0	144	89	31
Shaw / Feland	Storage	300	***	140	260	***	115	150	150	S	160	***	160
	A.M.	95	280	82	147	120	3	70	22	S	*208*	40	0
	P.M.	148	369	31	119	146	4	112	44	S	*221*	47	0
	Sat.	227	90	3	204	267	28	173	45	S	*294*	58	32
Shaw / Marks	Storage	250	***	140	265	***	175	220	***	110	250	***	240
	A.M.	126	107	6	87	217	0	117	176	102	106	162	98
	P.M.	219	167	7	145	357	43	192	193	48	107	196	101

* Multiple left-turn lanes with at least one left-turn lane an extension of a trapped through lane.
** Left-turn lane connects to a two-way left-turn lane, additional storage available equal to length of adjacent through lane.
*** Greater than 1,000 feet to next major intersection.
\+ Right-turn lane connects to a trapped through lane, additional storage available equal to length of adjacent through lane.
S Shared with through lane.
\- Does not exist
NS Not required to stop.

9.5 – Existing-Plus-Project Road Segment Analyses

The results of the existing-plus-Project road segment analyses are summarized in Table 9.3. Detailed road segment analyses are presented in Appendix A. The Project does not cause significant impacts based on road segment LOS in the existing-plus-Project scenario.

Table 9.3
Road Segment Analysis Summary – Existing-Plus-Project Conditions

Road Segment	A.M. Peak Hour		P.M. Peak Hour	
	Volume	LOS	Volume	LOS
Shaw Avenue				
Between Golden State and Blythe	2,149	C	2,883	C
Between Blythe and El Capitan	1,470	C	2,428	C
Between El Capitan and Brawley	1,558	C	3,035	C
Between Brawley and Marty	1,620	C	2,932	C
Between Marty and Valentine	1,870	C	3,009	C
Between Valentine and Feland	2,037	C	3,052	C
Between Feland and Marks	2,396	C	3,331	C
Figarden Drive				
Between Bullard and Gates	2,217	C	2,707	C
Between Gates and Barstow	1,535	C	2,084	C
Brawley Avenue				
Between Barstow and San Jose	1,419	C	1,900	C
Between San Jose and Site Access	1,364	C	1,745	C
Between Site Access and Shaw	1,503	C	2,149	C

9.6 – Transit, Bicycle, and Pedestrian Facilities

The proposed Project is not expected to impede or interfere with existing transit, bicycle, and pedestrian facilities.

9.7 – Existing-Plus-Project Conditions - Impacts and Mitigation Measures

The existing-plus-Project conditions analyses are based on conditions expected to occur if the Project were to be constructed immediately without the development of any of the pending projects. Traffic impacts identified in the Existing-Plus-Project conditions analyses are stated below, followed by the recommended mitigation. The mitigated intersection analysis sheets are included in Appendix F.

Impact TRANS-1

At the intersection of Barstow and Brawley Avenues, the Project will cause the LOS to drop from E to F during the a.m. peak hour and will exacerbate a substandard LOS F by adding more than 5.0 seconds of delay during the p.m. peak hour with peak-hour traffic signal warrants met.

Mitigation Measure TRANS-1

The Project applicant shall install a traffic signal at the intersection of Barstow and Brawley Avenues to ensure that the Project's impact to the Barstow and Brawley Avenues intersection is mitigated by the Project's opening day. The traffic signal shall meet City of Fresno standards and provide protected left-turn phasing as directed by the City. Signal installation shall be at the applicant's expense, subject to the applicant's right of reimbursement for costs incurred beyond the applicant's fair share. In

accordance with Caltrans equitable share methodology, financial responsibility for this improvement is limited to 12.2 percent of the estimated $300,000 improvement costs, or $36,600.00. The Project applicant shall be reimbursed the remaining 87.8 percent of the mitigation measure's costs from the City's TSMI fund.

If the City, as anticipated, is installing the traffic signal at the intersection of Barstow and Brawley Avenues at the time the Project's building permit is issued, the Project applicant need not install the traffic signal, and shall instead provide the City with a payment representing 12.2 percent of the estimated $300,000 cost of signal installation, or $36,000 at the time the Project receives its building permit.

With the installation of a traffic signal at this location, the a.m./p.m. peak hour intersection operations will improve from the existing LOS E/F to LOS A/B. Because the applicant would be required to install the signal if the City has not already done so, there is certainty that this mitigation measure would be implemented as envisioned; therefore, the residual significance of this impact would be less than significant.

Table 9.4 presents calculated delays and levels of service for the mitigations described above.

Table 9.4
Mitigated Peak Hour Intersection Analysis Summary
Existing-Plus-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS
Barstow / Brawley	Signals	8.3	A	12.8	B

Table 9.5 presents calculated 95th-percentile queue lengths for the mitigations described above.

Table 9.5
Mitigated Queuing Analysis Summary – Existing-Plus-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Barstow / Brawley	Storage	-	-	-	*	-	*	-	*	-	250	*	-
	A.M.	-	-	-	48	-	34	-	115	-	95	162	-
	P.M.	-	-	-	31	-	41	-	326	-	152	141	-

\- Does not exist
* Greater than 1,000 feet to next+ major intersection.

10.0 – NEAR-TERM WITH-PROJECT CONDITIONS

10.1 – Near-Term With-Project Lane Configurations and Intersection Control

The near-term with-Project conditions lane configurations and intersection control are the same as the existing conditions presented in Figure 5-1.

10.2 – Near-Term With-Project Traffic Volumes

The near-term with-Project conditions peak-hour traffic volumes are determined by adding the near-term baseline traffic volumes and the Project traffic volumes with pass-by and diverted-linked trip adjustments. The near-term with-Project conditions peak-hour traffic volumes are presented in Figure 10-1, Near-Term With-Project Weekday A.M. and P.M. Peak Hour Traffic Volumes, and Figure 10-2, Near-Term With-Project Saturday Peak Hour Traffic Volumes.

10.3 – Near-Term With-Project Intersection LOS Analysis

The results of the near-term with-Project conditions intersection LOS analyses are summarized in Table 10.1. Project impacts are identified in bold type. The intersection analysis sheets are presented in Appendix E.

Table 10.1
Peak Hour Intersection Analysis Summary – Near-Term With-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.		Saturday	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Bullard / Figarden	Signals	29.8	C	36.3	D	-	-
Gates / Figarden	Signals	20.5	C	28.0	C	-	-
Barstow / Brawley	OWS	**58.8**	**F**	**237.1**	**F**	-	-
San Jose / Gates	TWS	18.0	C	30.1	D	-	-
San Jose / Brawley	Signals	14.4	B	16.5	B	-	-
San Jose / Marty	OWS	12.5	B	14.3	B	-	-
San Jose / Valentine	AWS	11.0	B	13.4	B	-	-
Site Access / Brawley	OWS	17.4	C	18.3	C	23.3	C
Shaw / Golden State	Signal	23.5	C	397	D	49.2	D
Shaw / Blythe	Signal	27.7	C	44.8	D	50.9	D
Shaw / El Capitan	Signal	10.0	B	10.3	B	8.7	A
Shaw / Brawley	Signal	31.1	C	42.7	D	36.8	D
Shaw / Marty	Signal	27.8	C	26.5	C	23.8	C
Shaw / Valentine	Signal	34.2	C	22.2	C	23.9	C
Shaw / Feland	Signal	24.4	C	15.3	B	30.5	C
Shaw / Marks	Signal	28.7	C	33.6	C	-	-

The Project causes a significant impact based on intersection LOS criteria at the intersection of Barstow and Brawley Avenues. The Project will exacerbate a substandard LOS F that would exist under the near-term no-Project conditions by adding more than 5.0 seconds of delay during the a.m. and p.m. peak hours. Traffic signal warrants are included in Appendix E and indicate that traffic signals are warranted at the intersection. The installation of new traffic signals at this location is required by Mitigation Measure TRANS-1.

10.4 – Near-Term With-Project Conditions Queuing Analysis

The results of the near-term with-Project queuing analyses are summarized in Table 10.2. Project impacts are identified in bold type. Italicized values exceed the storage length. However, although the calculated queue exceeds the storage capacity, the Project does not cause the queue to increase by at least one car length; therefore, a significant impact is not identified. The queue analysis sheets are presented in Appendix E.

The Project causes a significant impact based on queuing criteria in the southbound left-turn lane at the intersection of Shaw and Brawley Avenues. The Project will increase the calculated 95th-percentile queue length from 210 feet to 296 feet during the Saturday peak hour where the existing storage length is 260 feet.

Table 10.2
Queuing Analysis Summary – Near-Term With-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Bullard / Figarden	Storage	235*	***	195	100	***	100	250	***	75	250	***	100
	A.M.	238	52	*259*	*126*	32	11	259	284	0	132	430	43
	P.M.	166	82	51	*175*	86	5	*563*	400	21	205	404	*213*
Gates / Figarden	Storage	200*	***	150	130	170	85	265	***	S	265	***	100
	A.M.	137	10	0	43	25	0	119	181	S	21	381	*217*
	P.M.	296	26	18	26	16	0	133	485	S	49	352	*179*
San Jose / Brawley	Storage	180**	***	60	100**	***	100	265	***	S	265	***	S
	A.M.	14	34	26	55	70	35	58	101	S	112	234	S
	P.M.	15	28	30	49	57	48	79	293	S	182	181	S
Site Access / Brawley	Storage	-	-	400	-	-	330	225	NS	-	225	NS	S
	A.M.	-	-	30	-	-	3	35	NS	-	5	NS	S
	P.M.	-	-	78	-	-	10	50	NS	-	10	NS	S
	Sat.	-	-	135	-	-	8	75	NS	-	13	NS	S
Shaw / Golden State	Storage	175	***	415	150	***	75	155	***	50	200	***	55
	A.M.	33	298	0	*301*	305	0	54	95	96	162	136	0
	P.M.	51	470	0	*465*	494	*115*	52	169	*356*	*289*	87	0
	Sat.	65	673	0	*414*	629	*199*	82	101	*243*	*495*	95	0
Shaw / Blythe	Storage	235	***	S	275	840	230	75	***	S	75*	***	80
	A.M.	154	305	S	69	149	2	39	18	S	83	83	0
	P.M.	*389*	393	S	44	445	95	62	56	S	212	209	57
	Sat.	*375*	576	S	49	458	126	39	22	S	214	217	59
Shaw / El Capitan	Storage	150	850	75	210	***	85	200	925	S	160	225	S
	A.M.	7	33	1	36	19	0	50	28	S	34	14	S
	P.M.	17	27	0	47	97	4	80	38	S	116	30	S
	Sat.	30	1	0	65	146	2	56	36	S	108	30	S
Shaw / Brawley	Storage	250	***	145	255	***	140	255	***	100	260	***	145
	A.M.	59	120	1	68	186	93	91	126	0	142	256	47
	P.M.	190	341	162	114	187	5	142	323	13	236	224	65
	Sat.	208	224	22	116	324	42	163	267	23	**296**	212	68
Shaw / Marty	Storage	215	***	135	260	***	140	150**	***	+	145**	***	S
	A.M.	73	105	23	*300*	38	0	133	107	32	73	60	S
	P.M.	90	155	16	234	238	13	185	192	66	125	59	S
	Sat.	133	284	37	*356*	76	0	187	153	68	161	82	S
Shaw / Valentine	Storage	265	***	80	310	***	145	145**	***	75	150**	***	150
	A.M.	124	270	4	77	173	21	103	66	0	167	72	1
	P.M.	120	41	1	72	83	1	172	105	38	179	115	15
	Sat.	173	117	7	75	533	13	234	88	0	146	90	41
Shaw / Feland	Storage	300	***	140	260	***	115	150	150	S	160	***	160
	A.M.	96	293	86	147	119	4	71	22	S	*211*	41	0
	P.M.	156	128	7	141	126	6	113	44	S	*223*	48	9
	Sat.	229	454	39	179	215	21	175	46	S	*299*	58	24
Shaw / Marks	Storage	250	***	140	265	***	175	220	***	110	250	***	240
	A.M.	129	108	6	87	228	0	118	176	103	106	163	118
	P.M.	194	148	32	145	371	42	195	197	51	107	200	134

* Multiple left-turn lanes with at least one left-turn lane an extension of a trapped through lane.
** Left-turn lane connects to a two-way left-turn lane, additional storage available equal to length of adjacent through lane.
*** Greater than 1,000 feet to next major intersection.
\+ Right-turn lane connects to a trapped through lane, additional storage available equal to length of adjacent through lane.
S Shared with through lane.
\- Does not exist
NS Not required to stop.

10.5 – Near-Term With-Project Road Segment Analyses

The results of the near-term with-Project road segment analyses are summarized in Table 10.3. Detailed road segment analyses are presented in Appendix A. The Project does not cause significant impacts based on road segment LOS in the near-term with-Project scenario.

Table 10.3
Road Segment Analysis Summary – Near-Term With-Project Conditions

Road Segment	A.M. Peak Hour		P.M. Peak Hour	
	Volume	LOS	Volume	LOS
Shaw Avenue				
Between Golden State and Blythe	2,261	C	3,102	D
Between Blythe and El Capitan	1,563	C	2,606	C
Between El Capitan and Brawley	1,650	C	3,206	C
Between Brawley and Marty	1,740	C	3,142	C
Between Marty and Valentine	1,994	C	3,210	C
Between Valentine and Feland	2,123	C	3,210	C
Between Feland and Marks	2,482	C	3,489	C
Figarden Drive				
Between Bullard and Gates	2,299	C	2,809	C
Between Gates and Barstow	1,608	C	2,169	C
Brawley Avenue				
Between Barstow and San Jose	1,494	C	1,987	C
Between San Jose and Site Access	1,445	C	1,867	C
Between Site Access and Shaw	1,584	C	2,254	C

10.6 – Near-Term With-Project Conditions - Impacts and Mitigation Measures

The near-term with-Project conditions analyses are based on conditions expected to occur after construction of the pending projects and the proposed Project. Project traffic impacts identified in the Near-Term With-Project conditions analyses are stated below, followed by the recommended mitigation. The mitigated intersection analysis sheets are included in Appendix F.

Impact TRANS-2

At the intersection of Barstow and Brawley Avenues, the Project will exacerbate a substandard LOS F by adding more than 5.0 seconds of delay during the a.m. and p.m. peak hours.

Mitigation Measure TRANS-2

The implementation of Mitigation Measure TRANS-1 would mitigate the Project's impact at this location, and improve operations to acceptable a.m./p.m. peak hour LOS A/B.

Impact TRANS-3

At the intersection of Shaw and Brawley Avenues, the Project will increase the calculated 95th-percentile queue length from 210 feet to 296 feet in the southbound left-turn lane (where the existing storage length is 260 feet) during the Saturday peak hour.

The analyses suggest that the southbound left-turn lane should be lengthened to accommodate the 296-foot queue length occurring during the Saturday peak hour. However, such a measure would reduce the length of the northbound left-turn lane at the Project entrance by a commensurate amount because the two lanes are back-to-back with no available space between them. Reducing the length of the northbound left-turn lane at the site entrance is not recommended. In the event that the northbound storage lane were to back up into the northbound though lanes, the resulting queue could back up into the intersection of Shaw and Brawley Avenues, causing worse intersection operations, blockage of the intersection, and safety hazards. Whereas if the queue in the southbound left-turn lane were to extend 36 feet into the southbound through lanes, the interior of the intersection of Shaw and Brawley Avenues would not be blocked and could still operate. Therefore, improvements are not feasible at this location.

Table 10.4 presents calculated delays and levels of service for the mitigations described above.

Table 10.4
Mitigated Peak Hour Intersection Analysis Summary
Near-Term With-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS
Barstow / Brawley	Signals	8.2	A	13.4	B

Table 10.5 presents calculated 95th-percentile queue lengths for the mitigations described above.

Table 10.5
Mitigated Queuing Analysis Summary – Near-Term With-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Barstow / Brawley	Storage	-	-	-	*	-	*	-	*	-	250	*	-
	A.M.	-	-	-	48	-	34	-	120	-	95	175	-
	P.M.	-	-	-	32	-	41	-	343	-	164	149	-

\- Does not exist
* Greater than 1,000 feet to next major intersection.

11.0 – YEAR 2035 WITH-PROJECT CONDITIONS

11.1 – Year 2035 With-Project Lane Configurations and Intersection Control

The year 2035 with-Project conditions lane configurations and intersection control are assumed to be the same as the existing conditions presented in Figure 5-1.

11.2 – Year 2035 With-Project Traffic Volumes

The year 2035 with-Project conditions peak-hour traffic volumes are determined by adding the 2035 baseline traffic volumes and the Project traffic volumes with pass-by adjustments. The year 2035 with-Project conditions peak-hour traffic volumes are presented in Figure 11-1, Year 2035 With-Project Weekday A.M. and P.M. Peak Hour Traffic Volumes, and Figure 11-2, Year 2035 With-Project Saturday Peak Hour Traffic Volumes.

11.3 – Year 2035 With-Project Intersection LOS Analysis

The results of the year 2035 with-Project conditions intersection LOS analyses are summarized in Table 11.1. Project impacts are identified in bold type. The intersection analysis sheets are presented in Appendix E.

Table 11.1
Peak Hour Intersection Analysis Summary – 2035 With-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.		Saturday	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Bullard / Figarden	Signals	72.7	E	63.0	E	-	-
Gates / Figarden	Signals	25.2	C	38.0	D	-	-
Barstow / Brawley	OWS	**170.9**	**F**	**758.4**	**F**	-	-
San Jose / Gates	TWS	*	**F**	*	**F**	-	-
San Jose / Brawley	Signals	32.4	C	52.5	D	-	-
San Jose / Marty	OWS	52.5	F	90.5	F	-	-
San Jose / Valentine	AWS	38.6	E	49.8	E	-	-
Site Access / Brawley	OWS	21.8	C	29.1	D	**41.7**	**E**
Shaw / Golden State	Signal	73.0	E	**164.2**	**F**	**232.6**	**F**
Shaw / Blythe	Signal	31.2	C	74.0	E	104.9	F
Shaw / El Capitan	Signal	6.1	A	10.5	B	30.8	C
Shaw / Brawley	Signal	41.5	D	**57.7**	**E**	**66.2**	**E**
Shaw / Marty	Signal	17.9	B	22.9	C	24.6	C
Shaw / Valentine	Signal	28.3	C	11.6	B	17.3	B
Shaw / Feland	Signal	13.4	B	31.1	C	46.8	D
Shaw / Marks	Signal	33.2	C	50.7	D	-	-

* Delay is beyond the calculable range. Additional vehicles typically add significant delay. A significant impact is assumed for Project scenarios.

Note: In some cases, the addition of Project trips reduces the average delay at an intersection. For example, this can occur if the Project adds trips to a movement that experiences less delay than the overall intersection average.

The Project causes significant impacts based on intersection LOS and delay criteria at the following intersections:

- Barstow Avenue / Brawley Avenue (the Project exacerbates a substandard a.m. and p.m. peak hour LOS F by adding more than 5.0 seconds of delay);
- San Jose Avenue / Gates Avenue (the Project exacerbates a substandard a.m. and p.m. peak hour LOS F by adding more than 5.0 seconds of delay);
- Site Access / Brawley Avenue (the Project causes a substandard Saturday peak hour LOS E in the on-site eastbound-to-southbound right-turn lane exiting the Project site);
- Shaw Avenue / Golden State Boulevard (the Project exacerbates a substandard weekday p.m. peak hour and Saturday peak hour LOS F by adding more than 5.0 seconds of delay);
- Shaw Avenue / Brawley Avenue (the Project causes a substandard p.m. and Saturday peak hour LOS E).

Although several of the intersections will operate at substandard LOS, the Project does not exacerbate the delays by 5.0 seconds or more. Therefore, the impact is not significant at those intersections.

11.4 – Year 2035 With-Project Conditions Queuing Analysis

The results of the year 2035 with-Project queuing analyses are summarized in Table 11.2. Project impacts are identified in bold type. Italicized values exceed the storage length. However, although the calculated queue exceeds the storage capacity, the Project does not cause the queue to increase by at least one car length; therefore, a significant impact is not identified. The queue analysis sheets are presented in Appendix E.

The Project causes significant impacts based on queuing criteria at the following locations:

- Shaw Avenue / Golden State Boulevard:
    - In the westbound left-turn lane the Project will increase the calculated 95th-percentile queue length from 590 feet to 627 feet during the a.m. peak hour; the existing storage length is 150 feet;
    - In the northbound left-turn lane the Project will increase the calculated 95th-percentile queue length from 453 feet to 483 feet during the a.m. peak hour; the existing storage length is 155 feet;
    - In the northbound right-turn lane the Project will increase the calculated 95th-percentile queue length from 542 feet to 578 feet during the a.m. peak hour; the existing storage length is 50 feet;
    - In the southbound left-turn lane the Project will increase the calculated 95th-percentile queue length from 257 feet to 284 feet during the a.m. peak hour; the existing storage length is 200 feet.

- Shaw Avenue / Blythe Avenue:
  - In the eastbound left-turn lane the Project will increase the calculated 95th-percentile queue length from 537 feet to 573 feet during the Saturday peak hour; the existing storage length is 235 feet;
  - In the westbound through lanes the Project will increase the calculated 95th-percentile queue length from 867 feet to 903 feet during the p.m. peak hour, contributing to a queue that extends beyond El Capitan Avenue during the p.m. peak hour even in the 2035 no-Project scenario.
- Shaw Avenue / Brawley Avenues:
  - In the eastbound left-turn lanes the Project will increase the calculated 95th-percentile queue length from 239 feet to 325 feet during the p.m. peak hour; the existing storage length is 250 feet;
  - In the westbound right-turn lane the Project will increase the calculated 95th-percentile queue length from 140 feet to 210 feet during the p.m. peak hour; the existing storage length is 140 feet;
  - In the northbound left-turn lane the Project will increase the calculated 95th-percentile queue length from 340 feet to 385 feet during the p.m. peak hour; the existing storage length is 255 feet;
  - In the southbound left-turn lane the Project will increase the calculated 95th-percentile queue length from 289 feet to 385 feet during the p.m. peak hour and from 303 feet to 440 feet during the Saturday peak hour; the existing storage length is 260 feet;
  - In the southbound right-turn lane the Project will increase the calculated 95th-percentile queue length from 113 feet to 175 feet during the p.m. peak hour and from 156 feet to 282 feet during the Saturday peak hour; the existing storage length is 145 feet.

Table 11.2
Queuing Analysis Summary – 2035 With-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Bullard / Figarden	Storage	235*	***	195	100	***	100	250	***	75	250	***	100
	A.M.	257	126	*738*	*158*	45	62	*389*	336	0	155	591	*161*
	P.M.	304	122	159	*301*	131	62	*1,061*	529	63	*326*	594	*461*
Gates / Figarden	Storage	200*	***	150	130	170	85	265	***	S	265	***	100
	A.M.	196	42	12	70	43	0	152	228	S	85	484	*309*
	P.M.	377	33	47	35	24	0	203	640	S	206	456	*258*
San Jose / Brawley	Storage	180**	***	60	100**	***	100	265	***	S	265	***	S
	A.M.	23	219	85	211	101	41	84	173	S	*319*	462	S
	P.M.	25	73	39	96	556	*183*	211	564	S	*353*	356	S
Site Access / Brawley	Storage	-	-	400	-	-	330	225	NS	-	225	NS	S
	A.M.	-	-	40	-	-	3	38	NS	-	5	NS	S
	P.M.	-	-	128	-	-	200	80	NS	-	20	NS	S
	Sat.	-	-	215	-	-	13	128	NS	-	20	NS	S
Shaw / Golden State	Storage	175	***	415	150	***	75	155	***	50	200	***	55
	A.M.	119	1,001	101	**627**	703	14	**483**	172	**578**	**284**	278	0
	P.M.	142	1,442	74	*805*	1,518	80	138	331	*911*	*359*	246	0
	Sat.	166	1,757	44	*802*	1,897	52	*210*	153	*954*	*371*	198	0
Shaw / Blythe	Storage	235	***	S	275	840	230	75	***	S	75*	***	80
	A.M.	193	910	S	81	379	1	46	23	S	118	120	23
	P.M.	*581*	1,093	S	31	**903**	143	75	70	S	238	244	77
	Sat.	**573**	1,542	S	34	865	149	46	28	S	250	248	73
Shaw / El Capitan	Storage	150	850	75	210	***	85	200	925	S	160	225	S
	A.M.	6	2	0	60	83	0	70	36	S	48	18	S
	P.M.	18	16	0	61	45	0	119	52	S	176	41	S
	Sat.	36	108	0	76	237	1	76	46	S	152	39	S
Shaw / Brawley	Storage	250	***	145	255	***	140	255	***	100	260	***	145
	A.M.	105	364	46	145	391	78	201	180	23	232	492	155
	P.M.	**325**	581	*196*	178	694	**210**	**385**	508	94	**385**	351	**175**
	Sat.	225	403	46	244	882	*178*	*458*	397	63	**440**	346	**282**
Shaw / Marty	Storage	215	***	135	260	***	140	150**	***	+	145**	***	S
	A.M.	54	215	15	277	249	6	173	162	77	95	89	S
	P.M.	99	239	9	*309*	85	1	245	309	109	246	111	S
	Sat.	97	421	12	*318*	135	0	309	242	127	217	174	S
Shaw / Valentine	Storage	265	***	80	310	***	145	145**	***	75	150**	***	150
	A.M.	107	136	0	98	69	2	132	79	0	254	101	10
	P.M.	206	237	15	107	126	4	260	148	49	352	143	43
	Sat.	*309*	156	5	126	143	1	454	131	19	288	120	53
Shaw / Feland	Storage	300	***	140	260	***	115	150	150	S	160	***	160
	A.M.	110	100	1	212	206	13	98	32	S	*323*	55	0
	P.M.	191	658	95	146	276	7	161	59	S	*381*	64	0
	Sat.	318	508	52	*380*	948	*182*	*258*	62	S	*548*	80	41
Shaw / Marks	Storage	250	***	140	265	***	175	220	***	110	250	***	240
	A.M.	223	228	19	111	322	29	166	311	*219*	136	210	167
	P.M.	*339*	361	54	229	673	125	*306*	261	82	140	310	*312*

* Multiple left-turn lanes with at least one left-turn lane an extension of a trapped through lane.
** Left-turn lane connects to a two-way left-turn lane, additional storage available equal to length of adjacent through lane.
*** Greater than 1,000 feet to next major intersection.
\+ Right-turn lane connects to a trapped through lane, additional storage available equal to length of adjacent through lane.
S Shared with through lane.
\- Does not exist
NS Not required to stop.

11.5 – Year 2035 With-Project Road Segment Analyses

The results of the year 2035 with-Project road segment analyses are summarized in Table 11.3. Project impacts are identified in bold type. Detailed road segment analyses are presented in Appendix A.

Table 11.3
Road Segment Analysis Summary – 2035 With-Project Conditions

Road Segment	A.M. Peak Hour		P.M. Peak Hour	
	Volume	LOS	Volume	LOS
Shaw Avenue				
Between Golden State and Blythe	2,951	C	4,301	E/F
Between Blythe and El Capitan	2,959	C	4,327	E/F
Between El Capitan and Brawley	3,049	C	4,829	E/F
Between Brawley and Marty	3,017	C	4,547	C
Between Marty and Valentine	3,143	C	4,995	D
Between Valentine and Feland	3,257	C	5,031	D
Between Feland and Marks	3,489	C	4,861	C
Figarden Drive				
Between Bullard and Gates	2,832	C	3,410	**E/F**
Between Gates and Barstow	2,039	C	2,665	C
Brawley Avenue				
Between Barstow and San Jose	2,020	C	2,858	C
Between San Jose and Site Access	2,003	C	2,632	C
Between Site Access and Shaw	2,124	C	2,848	C

The Project causes a significant impact based on road segment LOS criteria at the following road segment in this scenario:

- Figarden Drive between Bullard and Gates Avenues (the Project causes a p.m. peak hour drop from LOS D to LOS E/F). It should be noted the Project increases the v/c ratio by only 0.02 on this segment.

Although three other road segments are expected to operate at substandard LOS, the Project does not decrease the LOS and does not increase the v/c ratio by at least 0.15 at those road segments in this scenario.

11.6 – Year 2035 With-Project Conditions - Impacts and Mitigation Measures

Project traffic impacts identified in the year 2035 with-Project conditions analyses are stated below, followed by the recommended mitigation. The mitigated intersection analysis sheets are included in Appendix F.

Impact TRANS-4

At the intersection of Barstow and Brawley Avenues, the Project will exacerbate a cumulative substandard LOS F by adding more than 5.0 seconds of delay during the a.m. and p.m. peak hours.

Mitigation Measure TRANS-4

The implementation of Mitigation Measure TRANS-1 would mitigate the Project's impact at this location, and improve operations to acceptable a.m./p.m. peak hour LOS A/B.

Impact TRANS-5

At the intersection of San Jose and Gates Avenues, it is assumed that the Project will exacerbate a cumulative substandard LOS F by adding more than 5.0 seconds of delay during the a.m. and p.m. peak hours.

Mitigation Measure TRANS-5

San Jose Avenue/Gates Avenue: Prior to the City's issuance of the Project building permit, the Project applicant shall pay the City the Project's fair share of the cost of constructing the following improvements or their functional equivalent to mitigate intersection deficiencies at this location by the year 2035:

Signalization of the intersection in accordance with City of Fresno standards with protected left-turn phasing and the following lane configurations:

Eastbound: one left-turn lane and one through lane with a shared right turn

Westbound: one left-turn lane and one through lane with a shared right turn

Northbound: one left-turn lane and two through lanes with a shared right turn

Southbound: one left-turn lane and two through lanes with a shared right turn

With these improvements, the intersection of San Jose and Gates Avenues will operate at LOS D during the a.m. peak hour and LOS C during the p.m. peak hour. Under Caltrans's equitable share methodology, the Project applicant is responsible for 3.5 percent of the cost of this improvement estimated to cost $300,000.00, and shall pay the City $10,500 toward the above-identified improvements prior to issuance of building permit.

Impact TRANS-6

At the intersection of the Site Access driveway and Brawley Avenues, the Project will cause a substandard LOS E in the on-site eastbound-to-southbound right-turn lane exiting the site during the Saturday peak hour.

The substandard LOS occurs on an approach that is already limited to right turns out of the Project site and will be experienced solely by Project trips exiting the site. A second right-turn lane at a stop-controlled intersection is not recommended because vehicles would be required to cross over a through lane during the right-turn. Traffic signals are not warranted nor recommended due to the short spacing between the driveway and either Shaw Avenue or San Jose Avenue. Therefore, physical improvements are not feasible at this location.

Mitigation Measure TRANS-6

On or before issuance of the Project's final certificate of occupancy, the Project applicant shall implement and maintain throughout Project operations the following Trip Reduction Strategies promoting employee use of public transit, bicycle travel and ridesharing to reduce vehicle trips to and from the store:

Marketing Strategies	
Alternate Transportation Bulletin Board	Facility will maintain a Rideshare Bulletin Board centrally accessible to Associates with Rideshare Program information, Rideshare newsletter, and other alternative commute information, including: • Fresno Area Express (FAX) Transit schedules, maps, and fares; • Bicycle route maps and information about taking bikes on public transportation. This information shall be updated on a regular basis to ensure that current information is posted.
Employer Rideshare Newsletter	An Employer Rideshare Newsletter will be made available to Associates on the Rideshare Bulletin Board on a quarterly basis
Rideshare New Hire Orientation	New Hires will view Walmart's Rideshare DVD, and receive information on the facility Rideshare Program and commute mode alternatives. New Hires will be shown the Rideshare Board and bike racks as part of the store tour.
Rideshare promotional materials	Rideshare Program promotional materials include: • Annual Rideshare Recognition Pins for participants • Annual facility Rideshare Poster
Annual Rideshare *Clean Air Challenge* Poster Contest	Associates' children and grandchildren are invited to participate in the annual Rideshare *Clean Air Challenge* poster contest. The children are encouraged to use their imaginations to illustrate the importance of ridesharing to our communities and to the environment. The top three winning entries are highlighted on the annual Rideshare poster.
Program Support Strategy	
On-site Rideshare Coordinator	A designated on-site Rideshare Coordinator is responsible for promoting the Rideshare Program and maintaining the Rideshare Board. The facility receives support and promotional materials from Walmart's Senior Rideshare Coordinator.
Internal Guaranteed Ride Home Service	Associates commuting to work in a rideshare method are eligible for an emergency return ride (in the event of an emergency or unexpected situation) on the days they rideshare. Unexpected situations may include unscheduled overtime or personal emergencies requiring employees to leave the worksite. The return ride will be provided by a volunteering employee or by a member of management.
Personalized commute assistance	The on-site Rideshare coordinator will provide personalized assistance such as assisting with transit itineraries, bicycle routes, carpool matching and personal follow-up.
Services and facilities to reduce lunchtime errand trips	
Lockers on-site	Facility maintains lockers for employee use
On-site Kitchen	Facility provides an eating area with a sink, microwave and refrigerator
On-site ATM	Facility provides an on-site ATM
On-site vending machines	Facility provides on-site vending machines in the employee eating area
On-site restaurant	Facility provides on-site fast food restaurant

The implementation of Mitigation Measure TRANS-6 will help promote use of alternative forms of transportation. However, since the number of vehicle trips this measure could reduce at the Site Access and Brawley Avenue intersection cannot be quantified, Mitigation Measure TRANS-6 could reduce but would not mitigate the Project's impact at this location.

Impact TRANS-7

At the intersection of Shaw and Blythe Avenues, the Project will increase the calculated 95th-percentile queue length in the eastbound left-turn lane from 537 feet to 573 feet during the Saturday peak hour, and will increase the calculated 95th-percentile queue length in the westbound through lanes from 867 feet to 903 feet during the p.m. peak hour.

Mitigation Measure TRANS-7

Prior to the City's issuance of the Project building permit, the Project applicant shall pay the City its fair share of the cost of constructing the following improvement or its functional equivalent to mitigate queuing deficiencies at this location by the year 2035:

Addition of a third eastbound through lane to allow more traffic to bypass the excessive queue in the eastbound left-turn lane.

Under Caltrans's equitable share methodology, the Project applicant is responsible for 6.5 percent of the cost of this improvement estimated to cost $255,000.00, and shall pay the City $16,575 toward the above-identified improvements prior to issuance of building permit. With implementation of this mitigation measure, the Project's contributions to the existing queues would be less than significant, as follows:

In the eastbound left-turn lane, the programmed improvement would reduce the calculated 95th-percentile queue length from 573 feet to 549 feet during the Saturday peak hour. The existing queue in 2035 without the Project is 537 feet. The existing storage length is 235 feet. With mitigation, the Project adds a less-than-significant 12 feet to the existing 537-foot queue length.

- In the westbound through lanes, the programmed improvements would reduce the calculated 95th-percentile queue length in the 2035 with-Project scenario from 903 feet to 874 feet in the p.m. peak hour. The existing queue in 2035 without the Project is 867 feet. The existing storage length 840 feet. With mitigation, the Project adds a less-than-significant seven feet to the existing queue length.

The addition of a third eastbound through lane is adequate to mitigate the Project's queuing impacts. With the construction of an additional lane, the intersection will be built out to the maximum configuration designated in the Fresno General Plan.

Impact TRANS-8

At the intersection of Shaw Avenue and Golden State Boulevard, the Project will exacerbate a cumulative substandard LOS F by adding more than 5.0 seconds of delay during the p.m. and Saturday peak hours.

The Project will also increase the calculated 95th-percentile queue length from 590 feet to 627 feet during the a.m. peak hour where the existing storage length is 150 feet; in the

northbound left-turn lane the Project will increase the queue length from 453 feet to 483 feet during the a.m. peak hour where the existing storage length is 155 feet, in the northbound right-turn lane the Project will increase the queue length from 542 feet to 578 feet during the a.m. peak hour where the existing storage length is 50 feet; in the southbound left-turn lane the Project will increase the queue length from 257 feet to 284 feet during the a.m. peak hour where the existing storage length is 200 feet.

Mitigation Measure TRANS-8

The intersection of Shaw Avenue and Golden State Boulevard shall be widened and new traffic signals installed in accordance with City of Fresno standards and the following lane configurations:

Eastbound: two left-turn lanes, three through lane, and one right-turn lane
Westbound: two left-turn lanes, three through lane, and one right-turn lane
Northbound: two left-turn lanes, two through lane, and one right-turn lane
Southbound: two left-turn lanes, two through lane, and one right-turn lane

With implementation of this mitigation the intersection will operate at LOS C during the a.m. peak hour and LOS E during the p.m. and Saturday peak hours. Furthermore, the average delay during each peak-hour scenario is reduced to levels below those that would exist in 2035 without the proposed Project:

- No-Project 2015 weekday a.m. delay of 71.8 seconds (LOS E) is reduced to 31.0 seconds (LOS C)
- No-Project weekday p.m. delay of 155.3 seconds (LOS F) is reduced to 59.1 seconds (LOS E)
- No-Project Saturday delay of 220.7 seconds (LOS F) is reduced to 73.5 seconds (LOS E).

With implementation of this mitigation the intersection will continue to experience excessive queues as described below:

- In the westbound left-turn lane, the programmed improvements would reduce the calculated 95th-percentile queue length from 627 feet to 246 feet during the a.m. peak hour. The existing queue length in 2035 without the Project is 590 feet. The existing storage length is 150 feet. With mitigation, the calculated queue length is reduced from 590 feet to 246 feet.
- In the northbound left-turn lane, the programmed improvements will reduce the calculated 95th-percentile queue length from 483 feet to 149 feet during the a.m. peak hour. The existing queue length in 2035 without the Project is 453 feet. The existing storage length is 155 feet. With mitigation, the calculated queue length is reduced from 453 feet to 149 feet.
- In the northbound right-turn lane the programmed improvements will reduce the calculated 95th-percentile queue length from 578 feet to 499 feet during the a.m. peak hour. The existing queue length in 2035 without the Project is 542 feet. The existing storage length is 50 feet. With mitigation, the calculated queue length is reduced from 590 feet to 246 feet.

- In the southbound left-turn lane, the programmed improvements will reduce the calculated 95th-percentile queue length from 284 feet to 84 feet during the a.m. peak hour. The existing queue length in 2035 without the Project is 257 feet. The existing storage length is 200 feet. With mitigation, the calculated queue length is reduced from 257 feet to 84 feet.

The intersection will be constructed to the maximum configuration designated in the Fresno General Plan. Further improvements are not feasible at this location to achieve LOS D.

Under Caltrans's equitable share methodology, the applicant is responsible for 4.4 percent of the cost of constructing this improvement. The intersection is included in the City of Fresno TSMI fee program. Therefore, the Project's payment of its fair share of the cost of construction into the TSMI fund reduces the Project's impact to less than significant.

Impact TRANS-9

At the intersection of Shaw and Brawley Avenues, the Project will lead to a substandard LOS E during the p.m. and Saturday peak hours. The Project will also increase by more than 25 feet the calculated 95th-percentile queue length from 239 feet to 325 feet during the p.m. peak hour where the existing storage length is 250 feet, in the westbound right-turn lane the Project will increase the queue length from 140 feet to 210 feet during the p.m. peak hour where the existing storage length is 140 feet, in the northbound left-turn lane the Project will increase the queue length from 340 feet to 385 feet during the p.m. peak hour where the existing storage length is 255 feet, in the southbound left-turn lane the Project will increase the queue length from 289 feet to 385 feet during the p.m. peak hour and from 303 feet to 440 feet during the Saturday peak hour where the existing storage length is 260 feet, in the southbound right-turn lane the Project will increase the queue length from 113 feet to 175 feet during the p.m. peak hour and from 156 feet to 282 feet during the Saturday peak hour where the existing storage length is 145 feet.

The intersection of Shaw and Brawley Avenues is constructed to the maximum configuration possible and designated in the Fresno General Plan. Substandard levels of service were expected on Brawley Avenue as indicated in the City of Fresno General Plan. Therefore, based on right-of-way constraints, General Plan designations, and/or City practices and policies, further improvements are not feasible at this location to achieve LOS D. The Project's impact remains significant and unavoidable.

Impact TRANS-10

On Figarden Drive between Bullard and Gates Avenues, the Project will cause the cumulative LOS to drop from D to E during the p.m. peak hour.

Figarden Drive has been constructed to the maximum configuration designated in the Fresno General Plan. Therefore, based on right-of-way constraints, General Plan designations, and/or City practices and policies, improvements are not feasible at this location. The Project's impact remains significant and unavoidable.

Table 11.4 presents calculated delays and levels of service for the mitigations described above.

Table 11.4
Mitigated Peak Hour Intersection Analysis Summary – 2035 With-Project Conditions

Intersection	Control	Weekday A.M.		Weekday P.M.		Saturday	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Barstow / Brawley	Signal	7.8	A	12.3	B	-	-
San Jose / Gates	Signal	42.9	D	30.6	C	-	-
Shaw / Blythe	Signal	24.8	C	73.4	E	56.0	E
Shaw / Golden State	Signal	31.0	C	59.1	E	73.5	E

Table 11.5 presents calculated 95th-percentile queue lengths for the mitigations described above.

Table 11.5
Mitigated Queuing Analysis Summary – 2035 With-Project Conditions

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Barstow / Brawley	Storage	-	-	-	***	-	***	-	***	-	250	***	-
	A.M.	-	-	-	53	-	35	-	180	-	104	240	-
	P.M.	-	-	-	45	-	54	-	436	-	185	208	-
San Jose / Gates+	Storage	115**	***	S	125**	***	S	230	400	S	160**	480	S
	A.M.	167	876	S	104	40	S	49	241	S	158	401	S
	P.M.	33	70	S	139	522	S	292	387	S	114	216	S
Shaw / Blythe	Storage	235	***	S	275	840	230	75	***	S	75*	***	80
	A.M.	182	458	S	76	112	3	43	22	S	110	111	16
	P.M.	574	535	S	28	874	96	70	65	S	223	226	73
	Sat.	549	758	S	37	879	37	46	28	S	250	248	73
Shaw / Golden State	Storage	175	***	415	150	***	75	155	***	50	200	***	55
	A.M.	50	508	104	246	417	7	149	117	499	84	188	0
	P.M.	59	815	51	347	887	91	71	292	826	157	214	0
	Sat.	65	1,023	58	375	1,164	80	108	133	952	163	166	13

+: San Jose Avenue is considered the east-west street at Gates Avenue.
** Left-turn lane connects to a two-way left-turn lane, additional storage available equal to length of adjacent through lane.
*** Greater than 1,000 feet to next major intersection.
- Does not exist
S Shared with through lane.

11.7 – Year 2035 Fair Share Percentages

Where required future mitigations are not included in established development fees and are not the sole responsibility of a particular project, but rather a cumulative result of regional growth, the responsibility for mitigations is determined based on equitable share calculations as presented in the Caltrans *Guide for the Preparation of Traffic Impact Studies*. Caltrans recommends the following equation to determine a project's equitable share of the cost of improvements:

$$P = \frac{T}{T_B - T_E}$$

where:

P = The equitable share of the project's traffic impact;

T = The project trips generated during the peak hour of the adjacent State Highway facility;

T_B = The forecasted (future with project) traffic volume on the impacted State highway facility;

T_E = The existing traffic on the State Highway facility plus approved projects traffic.

Table 11.6 presents equitable share responsibility calculations for the Project based on weekday p.m. peak hour traffic volumes.

Table 11.6
Equitable Share Responsibility Calculations – Weekday P.M. Peak Hour

Location	Mitigation	T	T_E	T_B	P (%)
Barstow / Brawley	LT-1 (Signals)	82	2,095	2,769	12.2
San Jose / Gates	LT-2 (Signals)	41	1,290	2,464	3.5
Shaw / Blythe	LT-4 (EB lane)	136	2,847	4,955	6.5
Shaw / Golden State	LT-5 (widen)	136	3,282	6,396	4.4

12.0 – CONSTRUCTION TRAFFIC

Construction operations for the Project will generate traffic related to construction employees and equipment and hauling construction material to and from the site. The weekday work will begin at approximately 7:00 a.m. and end at approximately 3:00 p.m. Therefore, only the a.m. peak hour will be affected by the construction traffic. There will be no more than 62 construction workers on-site at any given time during construction. There are expected to be up to 32 vendor deliveries per day. Cut and fill operations are expected to be limited.

It is expected that Project construction operations would generate less traffic than the Project's operational traffic generation after Project completion. As shown in Table 4.9, the Project operation will generate a total of 358 vehicle trips during the a.m. peak hour and 680 vehicle trips during the p.m. peak hour. During the construction period, the construction employees would generate a maximum of 62 trips during a single hour, and those trips are expected to occur before 7:00 a.m. and before 4:00 p.m., which does not conflict with the study peak hours. Vendor trips are expected to be distributed throughout the work day. Therefore, the Project's operational characteristics are expected to generate greater traffic volumes than the construction operations, and the impact caused by construction traffic will not exceed the existing-plus-Project conditions impacts identified in this study.

Table 12.1
Construction Traffic

A.M. Construction Traffic			Operational Traffic	Difference
Worker Trips	Truck Trips	Total	A.M. Peak Hour	
57	8	65	358	(293)

Notes: Worker trips calculated by dividing 62 construction workers by 1.10 persons per vehicle, the vehicle occupancy rate for Fresno County a.m. peak-hour home-to-work trips, as reported in the Caltrans 2000–2001 California Statewide Travel Survey. A total of 32 truck deliveries are assumed to occur over an eight-hour workday, which is equivalent to eight truck trips during the A.M. peak hour.

Most of the construction traffic, particularly trucks, would be expected to travel on Shaw Avenue to either SR 99 or SR 41, or on Brawley Avenue to Herndon Avenue. This routing would be similar to existing truck routes for Walmart delivery trucks and would also avoid the use of residential streets. Project construction activities may result in temporary lane closures along Brawley Avenue and Shaw Avenue.

Accordingly, a mitigation measure is proposed requiring the Project applicant to implement a Construction Traffic Control Plan during construction activities to minimize impacts on surrounding roadways and nearby land uses. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

Mitigation Measure TRANS-11

Prior to the commencement of construction activities, the Project applicant shall prepare and submit a Construction Traffic Control Plan to the City of Fresno for review and approval. The plan shall address any known road or lane closures and include measures necessary to facilitate safe circulation during these times. The plan shall also identify routing for all delivery and haul trucks. The plan shall also identify suitable locations for construction worker parking.

13.0 – SITE ACCESS, CIRCULATION, AND PARKING

13.1 – Site Access and Circulation

On-site circulation was analyzed at the main Project driveway and was reviewed at the other three driveways, as well as within the Project site. The existing Project site contains the following four access points that will remain after construction of the Project:

- North (Service): Right-in/right-out driveway connecting to Brawley Avenue;
- Middle (Secondary): Right-in/right-out driveway connecting to Brawley Avenue;
- South (Primary): Right-in/right-out/left-in driveway connecting to Brawley Avenue. A median prevents left-out turning movements;
- Reciprocal Driveway Access: Reciprocal driveway access to Brawley Avenue and Shaw Avenue is provided through the commercial uses immediately south of the Project site.

The main site access ingress and egress driveway on Brawley Avenue is expected to experience acceptable levels of service and minimal queues, with the exception that vehicles exiting the site during the Saturday peak hour in the 2035 scenario may experience a substandard LOS.

Peters Engineering Group has performed a general review of the site plan. Sightlines and turning radii appear to be sufficient to provide for maneuvering by trucks and passenger vehicles. Sight distances, emergency vehicle access, delivery truck access, and on-site circulation planned for the Project appear to be generally adequate and are subject to refinements as part of the site plan review process.

13.2 – Parking

The Project site has an existing parking field with associated landscaping. The Project will reconfigure the existing parking field to provide 790 spaces. The proposed Project will satisfy the City's requirements for parking spaces and, therefore, the Project's parking impacts would be less than significant.

13.3 – Railroad Crossing

Shaw Avenue has an existing at-grade crossing of the Union Pacific Railroad approximately one mile west of the Project site. The proposed Project will not cause a change in the operational characteristics of the crossing. As previously discussed, the California High-Speed Rail Authority is planning a grade separation in which Shaw Avenue will cross over the Union Pacific Railroad tracks, the planned high-speed rail tracks, and Golden State Boulevard. The grade separation project would eliminate the potential for auto-train collisions at this location.

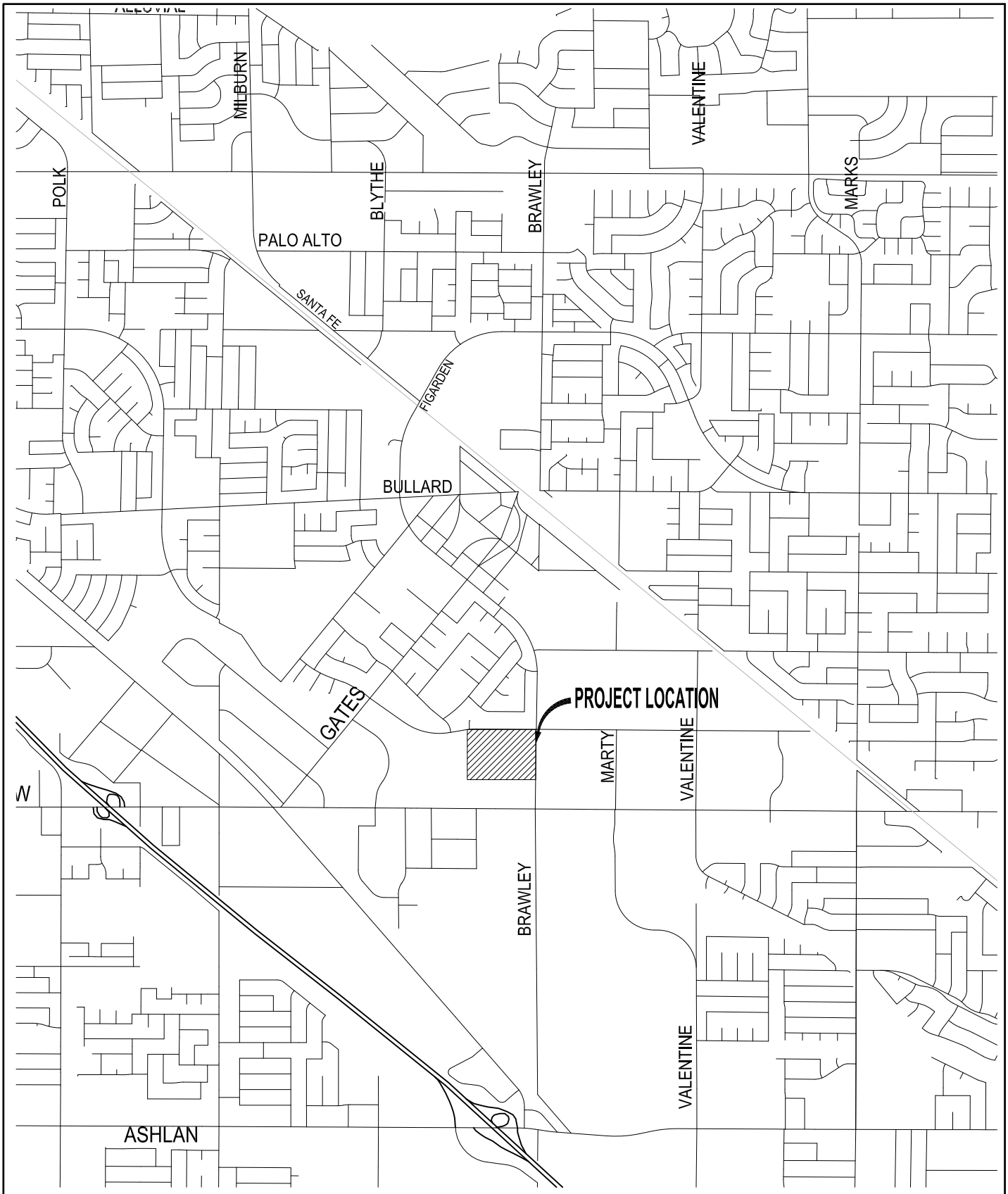
14.0 – CONCLUSIONS AND SUMMARY OF IMPACTS AND MITIGATIONS

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the Project, and to analyze the traffic conditions expected to occur in the future.

The traffic impact study concludes that some deficiencies are expected to occur at several of the study intersections and road segments without the Project as development progresses in the Fresno area.

The Project is expected to cause near-term and long-term Project significant impacts in the roadway segments and/or intersections studied. The Project will be required to mitigate the significant impacts or accept unavoidable impacts as described herein.

FIGURES



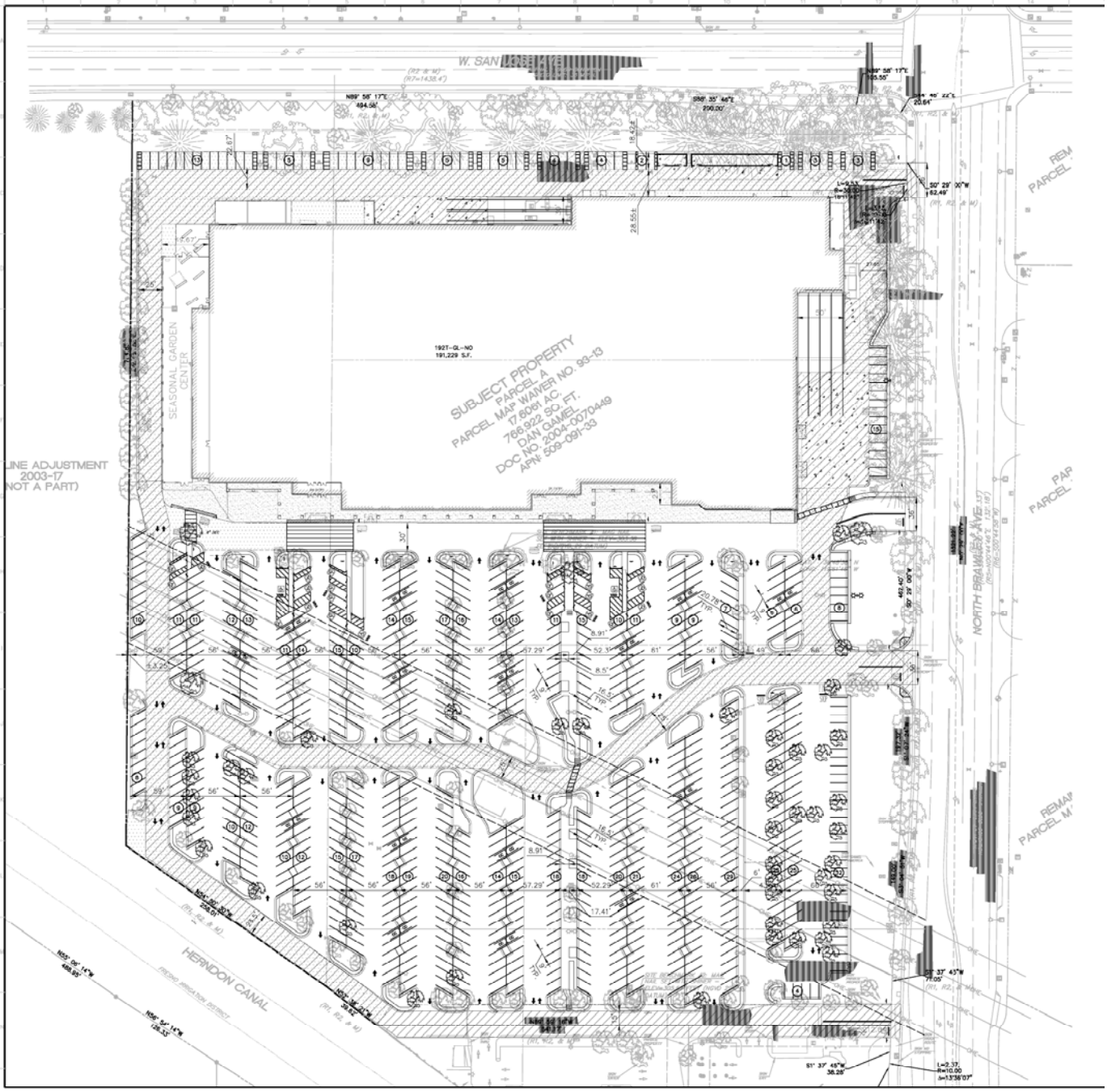
Proposed Fresno Northwest Walmart Project
Fresno, California

VICINITY MAP

Not to Scale

PETERS ENGINEERING GROUP

Figure 1-1



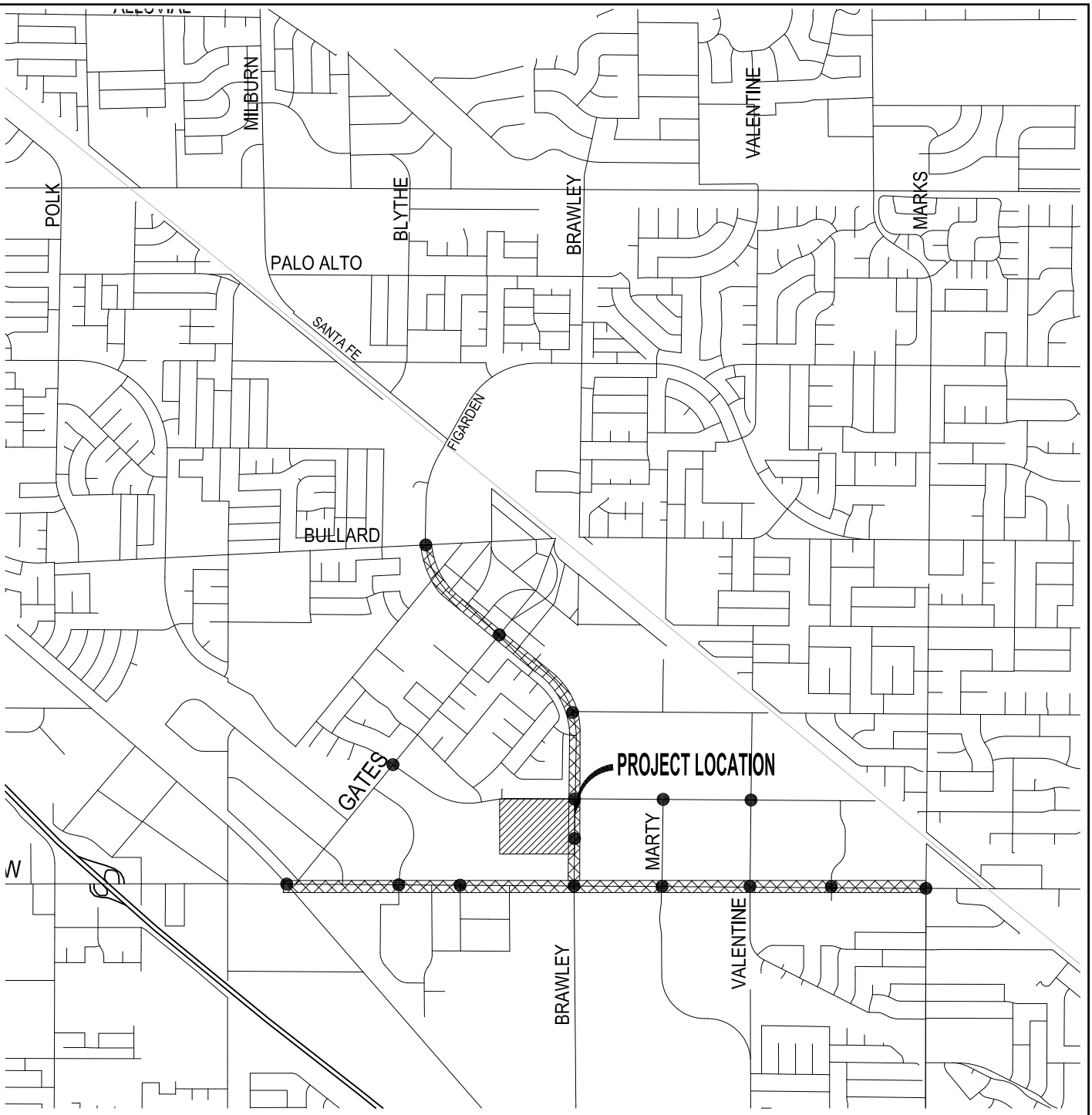
Proposed Fresno Northwest Walmart Project
Fresno, California

SITE PLAN

Not to Scale

PETERS ENGINEERING GROUP

Figure 1-2



LEGEND

- STUDY AREA INTERSECTIONS
- STUDY ROAD SEGMENTS
- PROJECT SITE

Proposed Fresno Northwest Walmart Project
Fresno, California

STUDY INTERSECTIONS AND ROAD SEGMENTS

Not to Scale

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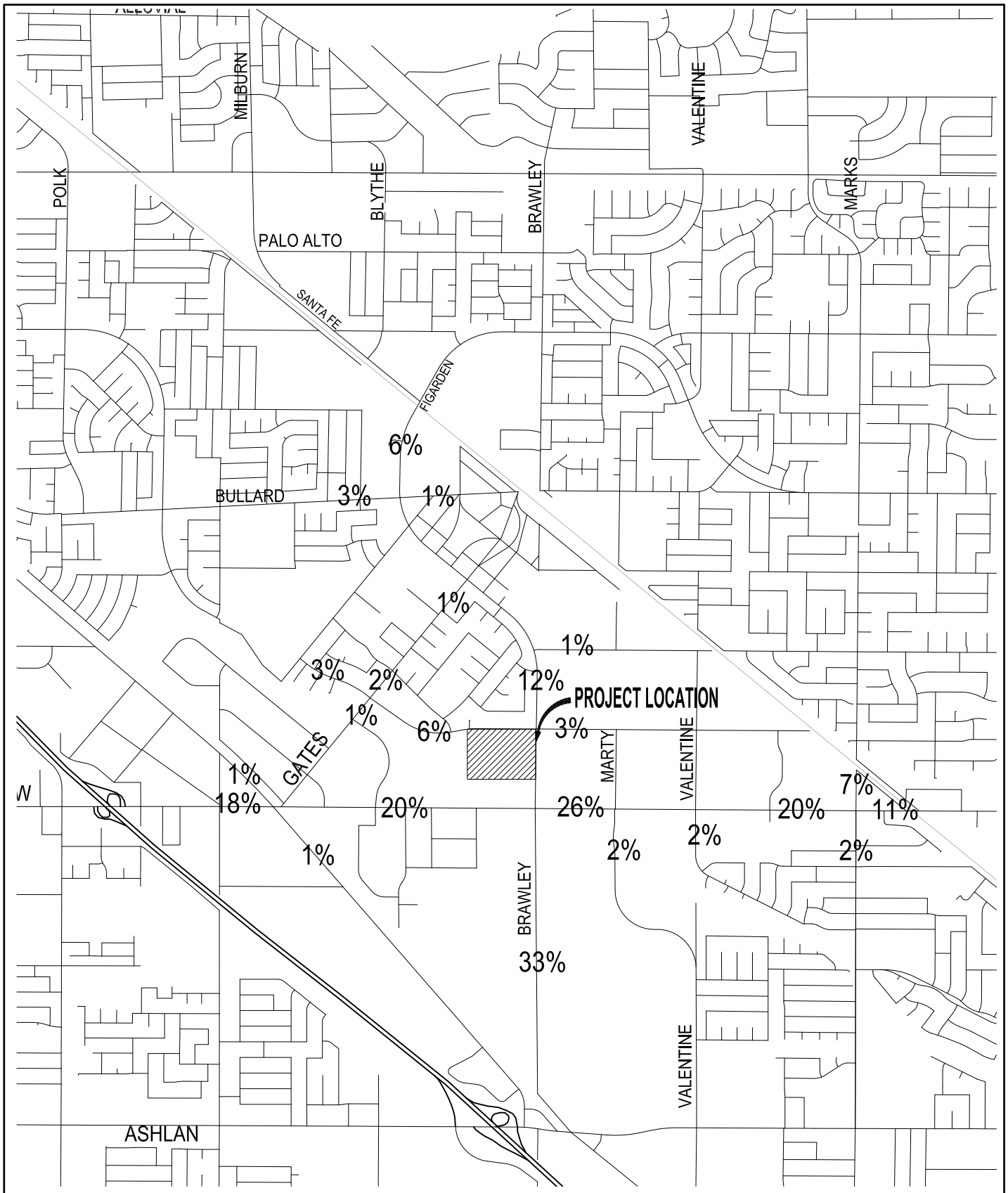
Figure 1-3



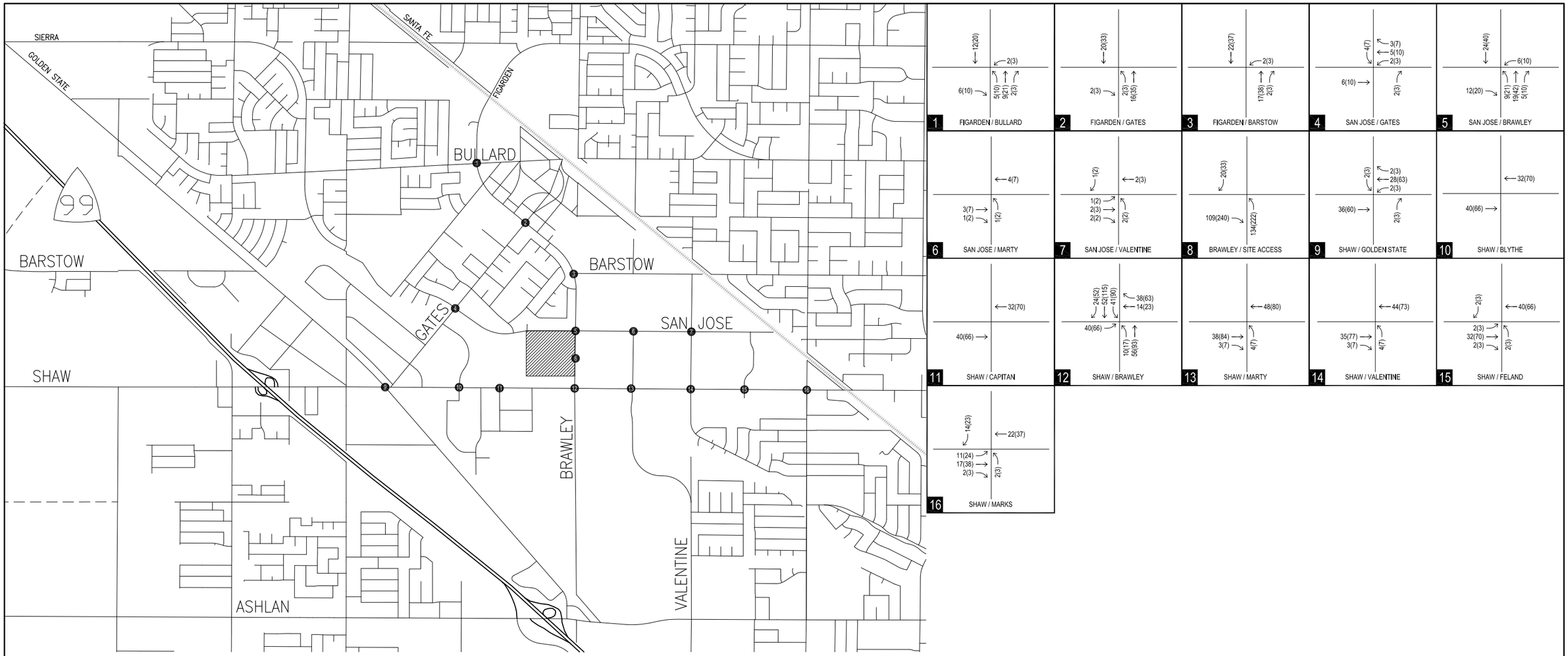
Proposed Fresno Northwest Walmart Project
Fresno, California

PROJECT TRIP DISTRIBUTION PERCENTAGES

Not to Scale

PETERS ENGINEERING GROUP

Figure 4-1



LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

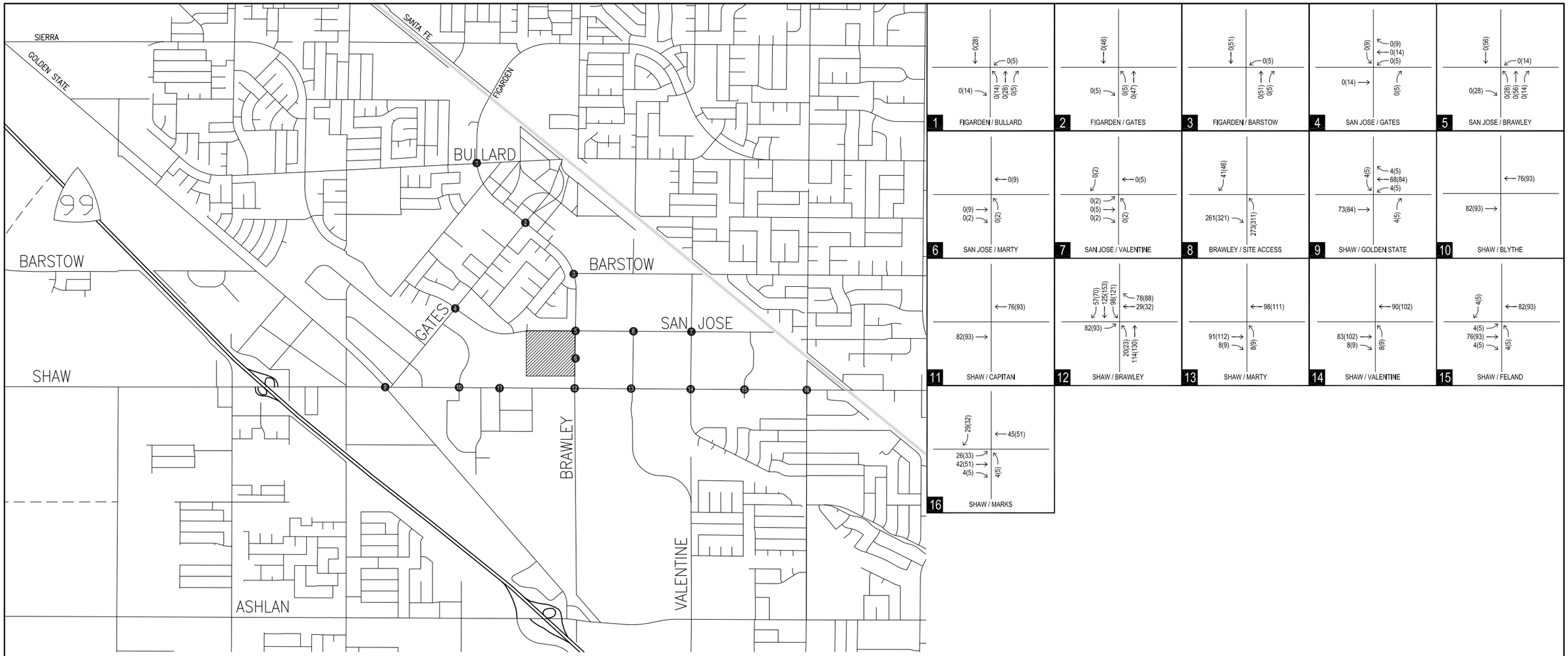
Proposed Fresno Northwest Walmart Project
Fresno, California

WEEKDAY A.M. AND P.M. PEAK-HOUR PROJECT TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 4-2



LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	WEEKDAY MIDDAY (SATURDAY) VOLUMES
▨	PROJECT SITE

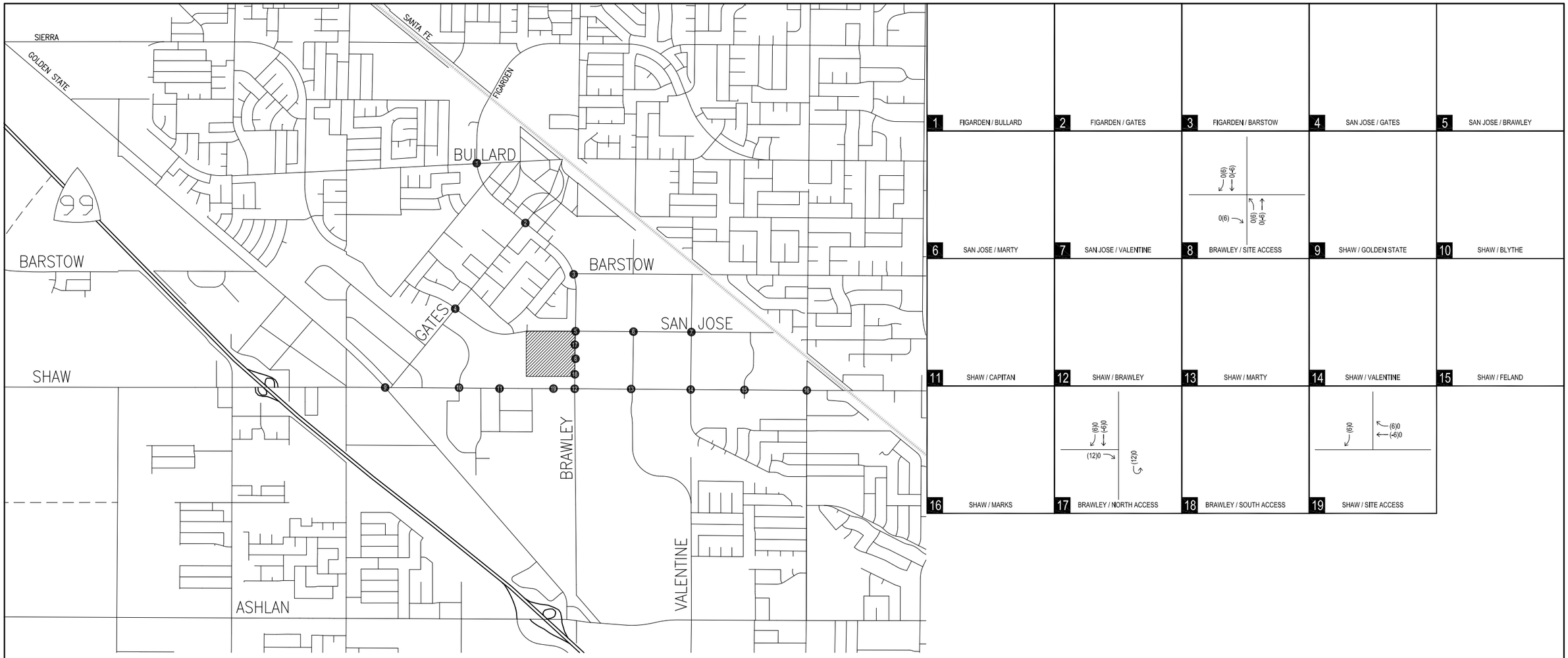
Proposed Fresno Northwest Walmart Project
Fresno, California

WEEKDAY MIDDAY AND WEEKEND PEAK-HOUR PROJECT TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 4-3



LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

Proposed Fresno Northwest Walmart Project
Fresno, California

WEEKDAY PEAK HOUR PASS-BY TRIPS

SCALE

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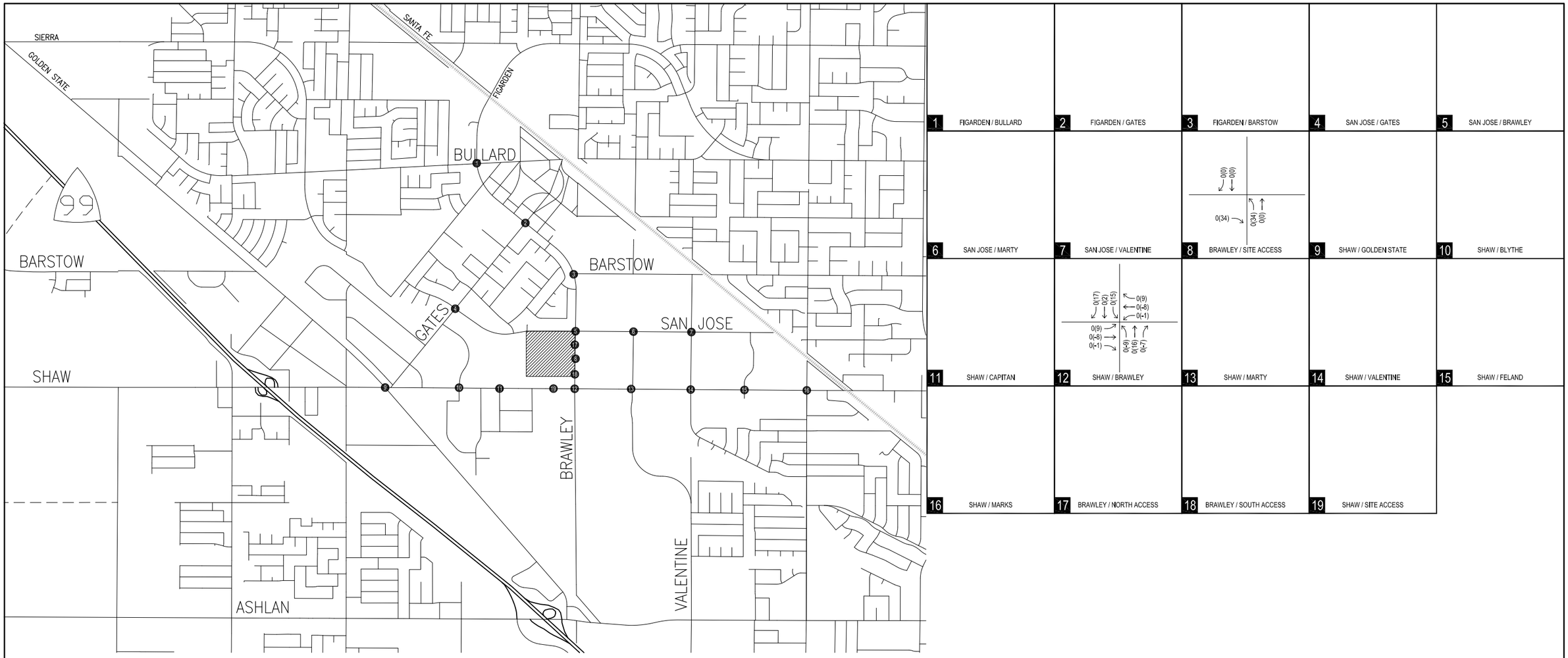
Figure 4-4



LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

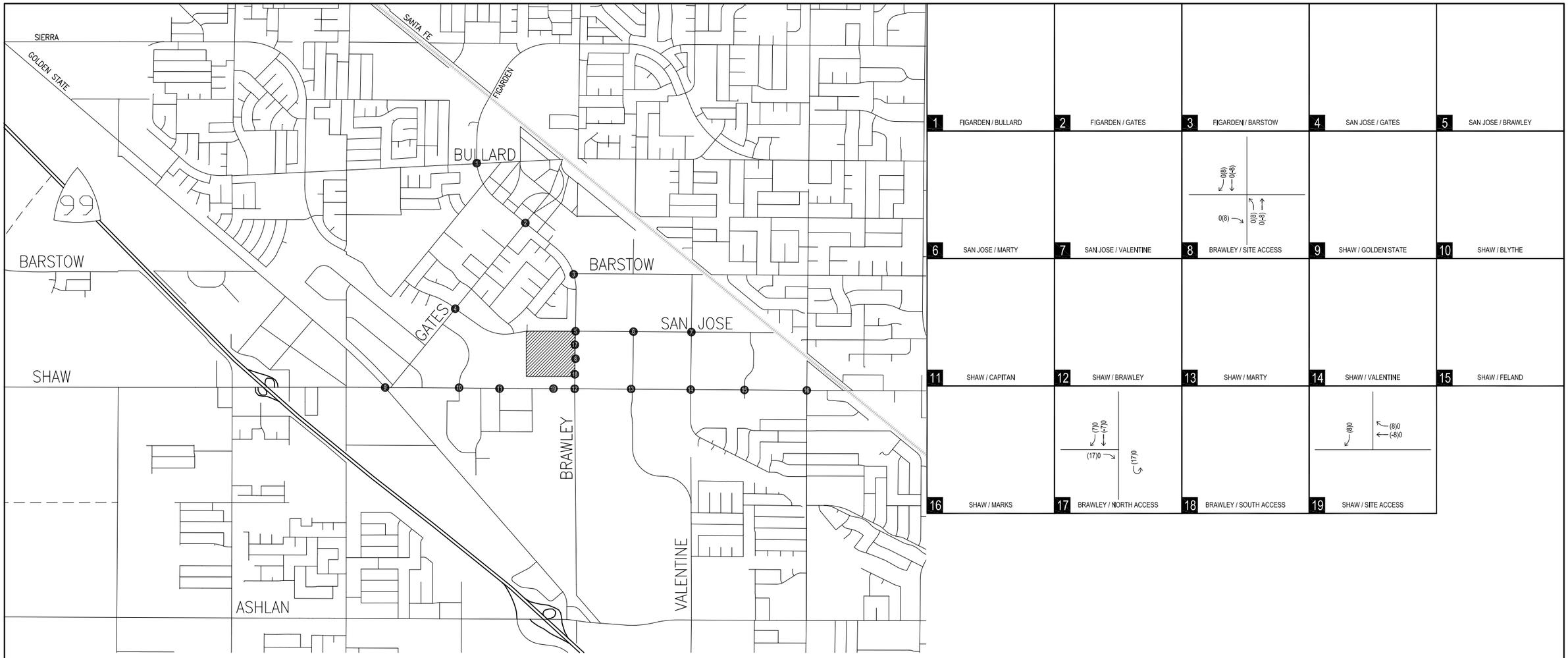
Proposed Fresno Northwest Walmart Project
Fresno, California

WEEKDAY PEAK HOUR DIVERTED-LINKED TRIPS

SCALE

PETERS ENGINEERING GROUP

Figure 4-5



LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	WEEKDAY MIDDAY (SATURDAY) VOLUMES
▨	PROJECT SITE

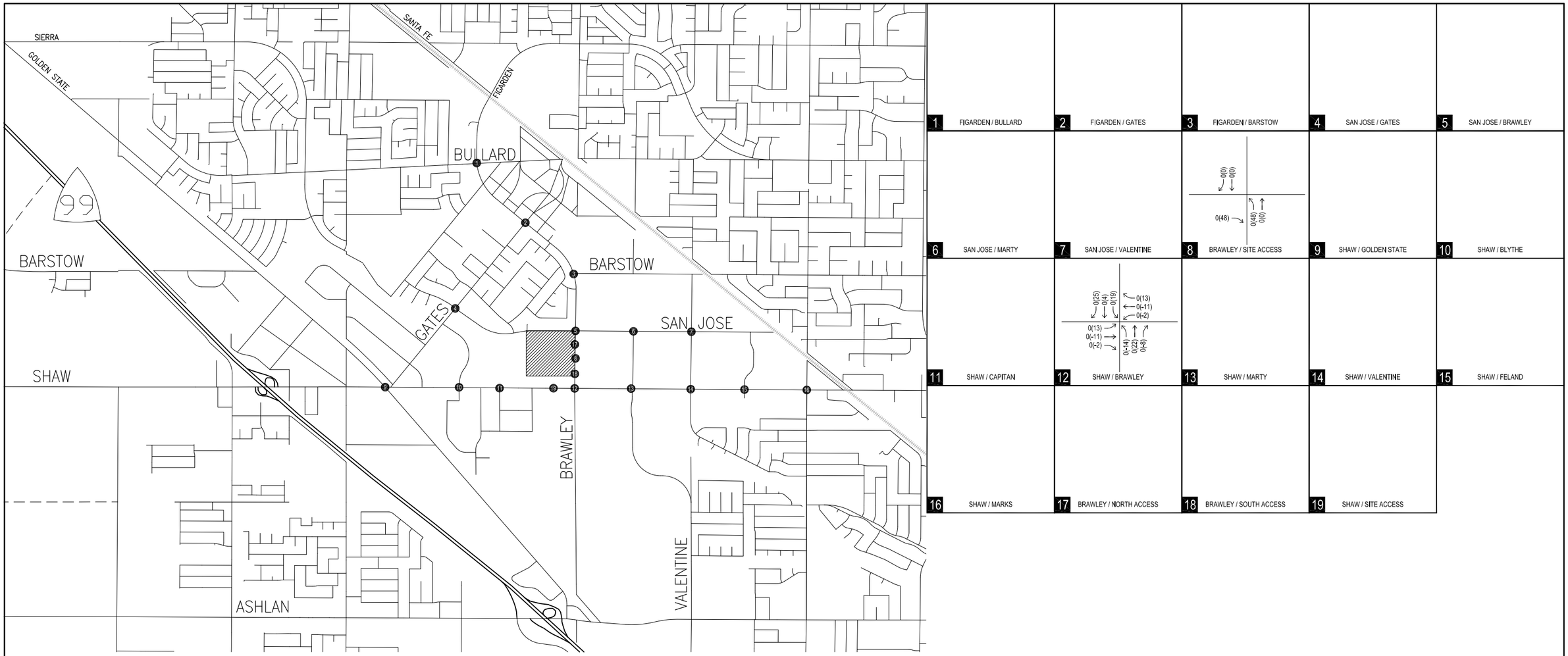
Proposed Fresno Northwest Walmart Project
Fresno, California

WEEKEND PEAK HOUR PASS-BY TRIPS

SCALE

PETERS ENGINEERING GROUP

Figure 4-6



LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	WEEKDAY MIDDAY (SATURDAY) VOLUMES
▨	PROJECT SITE

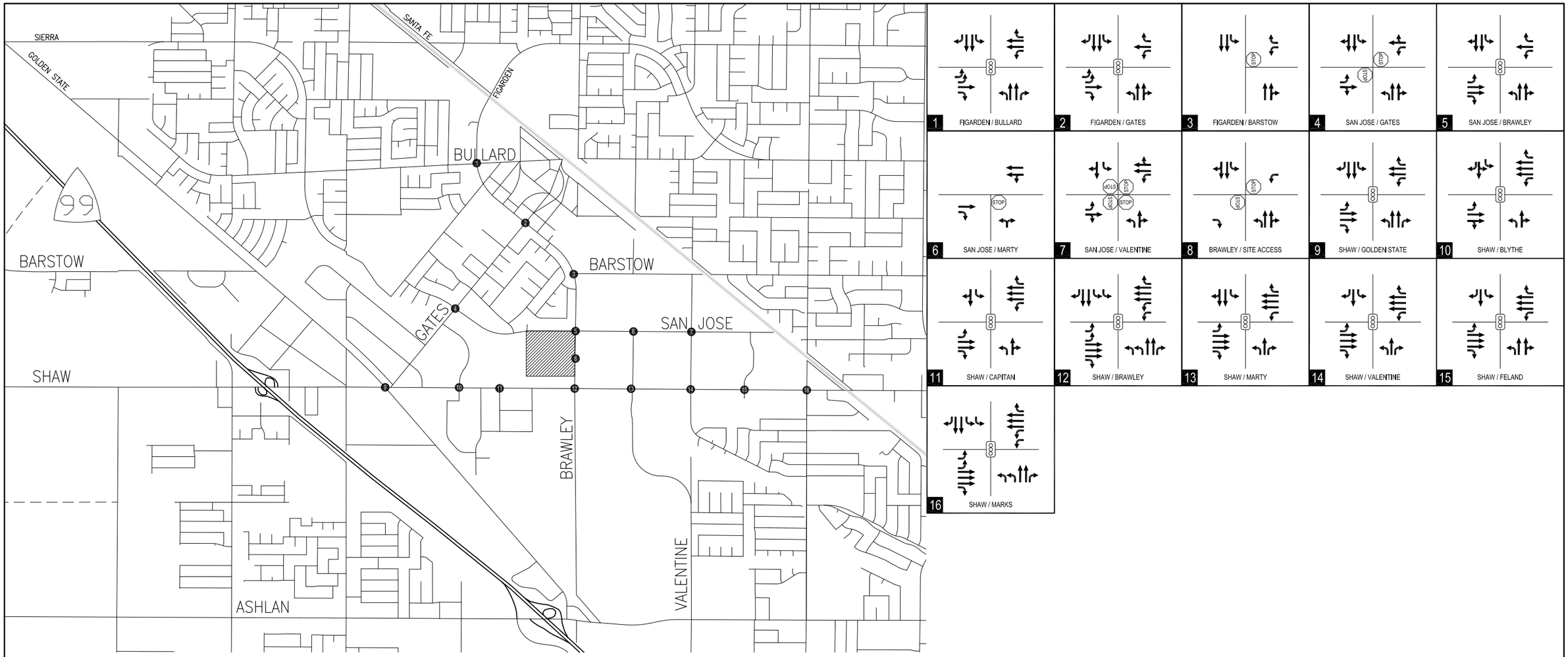
Proposed Fresno Northwest Walmart Project
Fresno, California

WEEKEND PEAK HOUR DIVERTED-LINKED TRIPS

SCALE

PETERS ENGINEERING GROUP

Figure 4-7



LEGEND

- XX STUDY AREA INTERSECTIONS
- PROJECT SITE
- SIGNALIZED INTERSECTION
- STOP SIGN
- DIRECTION OF TRAVEL

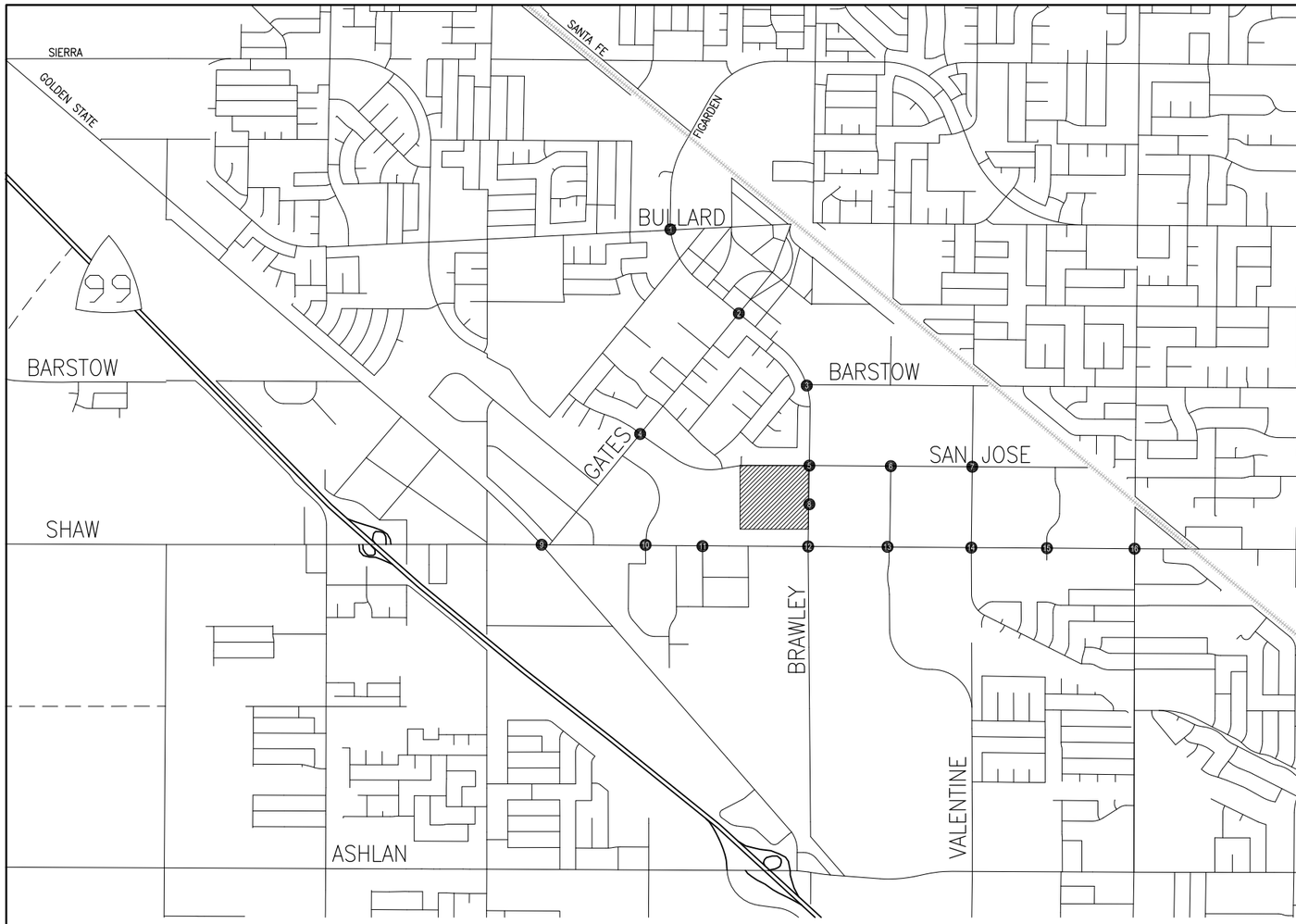
Proposed Fresno Northwest Walmart Project
Fresno, California

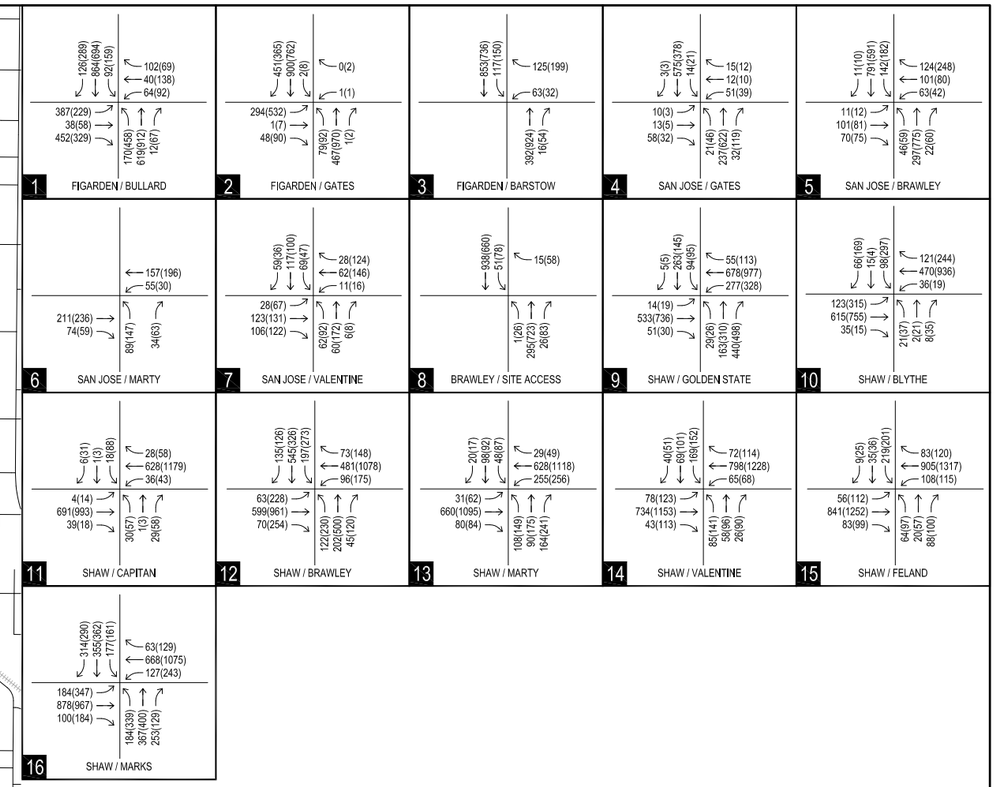
EXISTING LANE CONFIGURATIONS AND INTERSECTION CONTROL

SCALE

PETERS ENGINEERING GROUP

Figure 5-1





LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

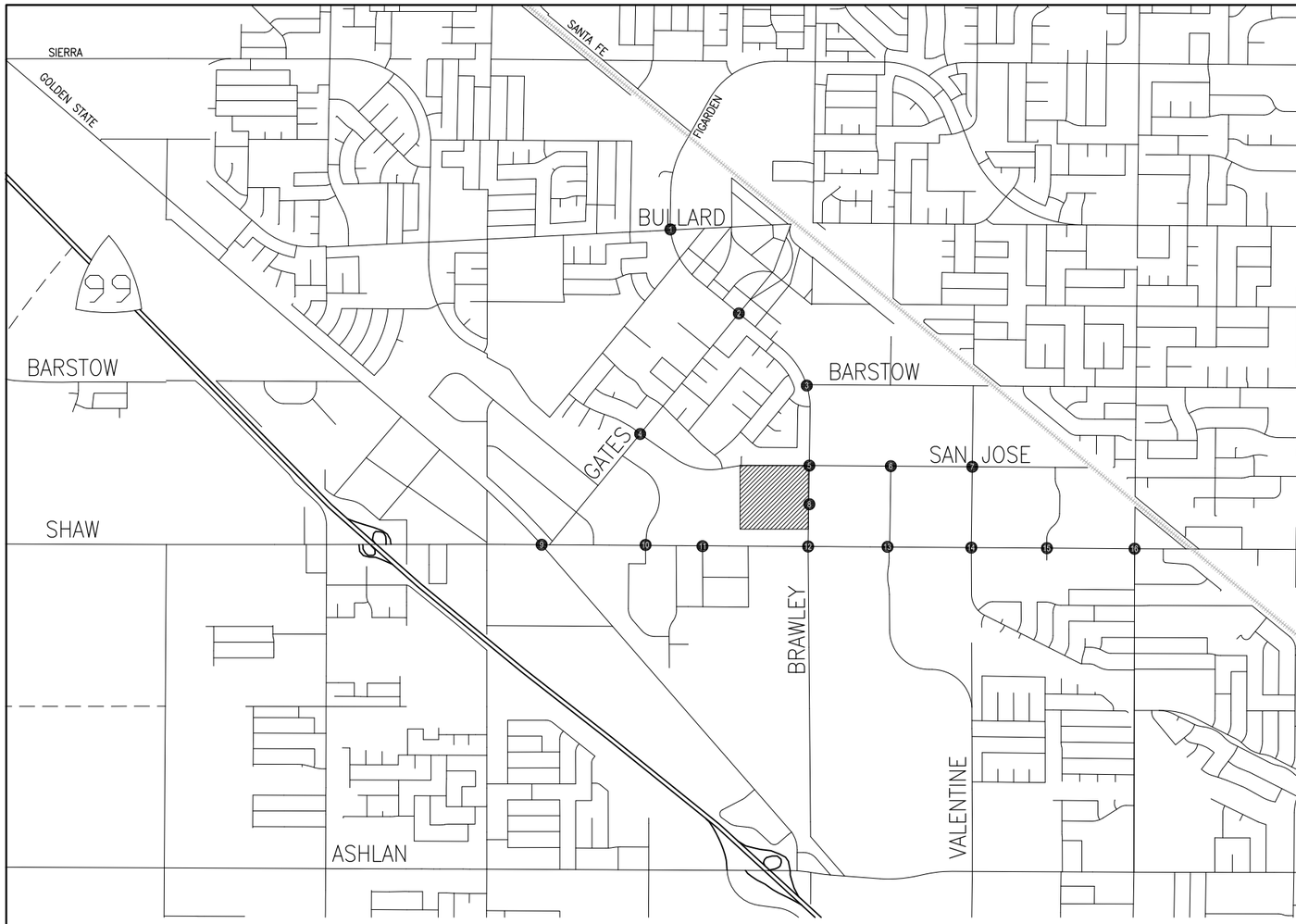
Proposed Fresno Northwest Walmart Project
Fresno, California

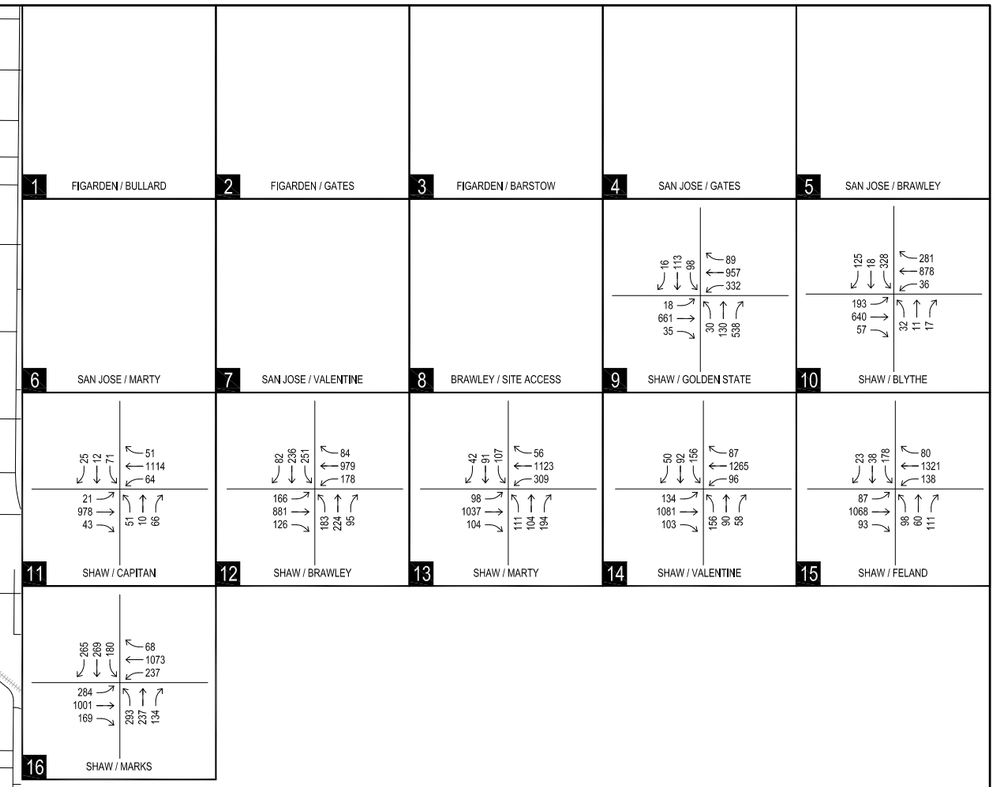
EXISTING WEEKDAY A.M. AND P.M. PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 5-2





LEGEND

- STUDY AREA INTERSECTIONS
- XX WEEKDAY MIDDAY PEAK-HOUR VOLUMES
- PROJECT SITE

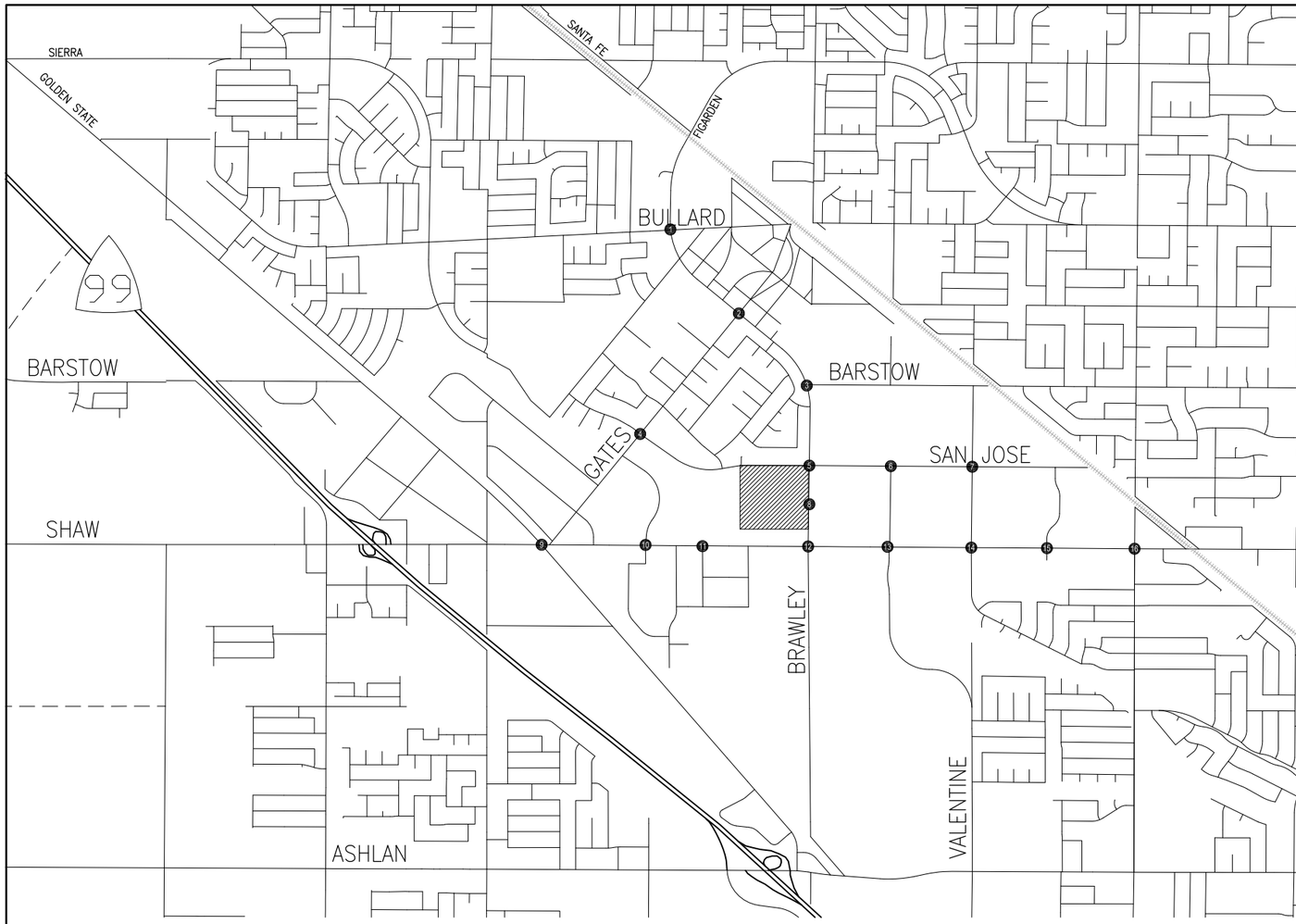
Proposed Fresno Northwest Walmart Project
Fresno, California

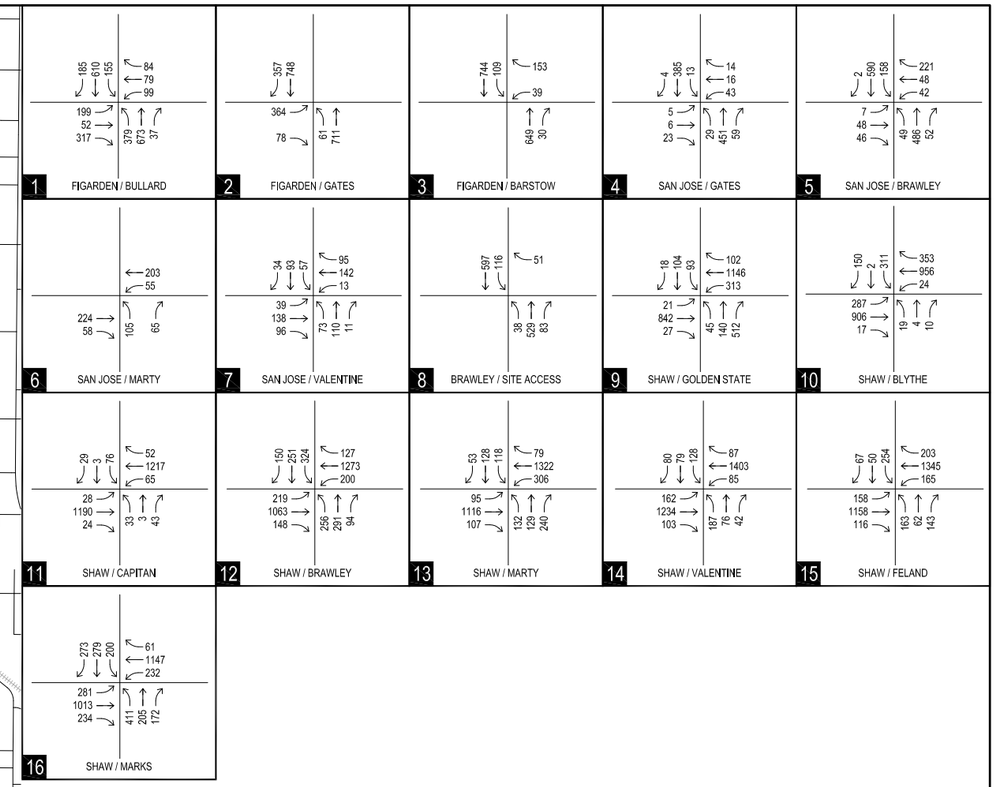
EXISTING WEEKDAY MIDDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 5-3





LEGEND

- STUDY AREA INTERSECTIONS
- XX SATURDAY PEAK-HOUR VOLUMES
- PROJECT SITE

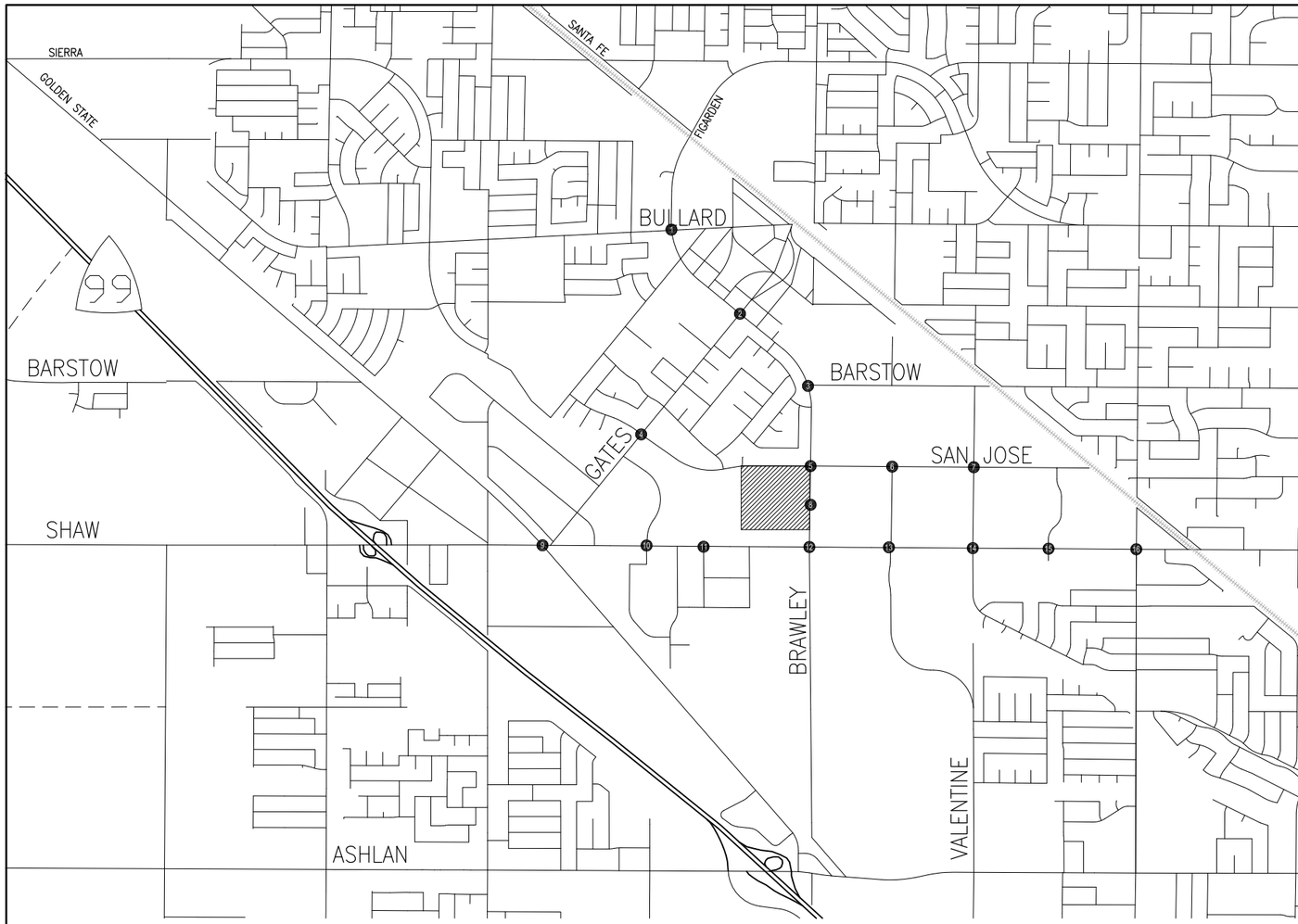
Proposed Fresno Northwest Walmart Project
Fresno, California

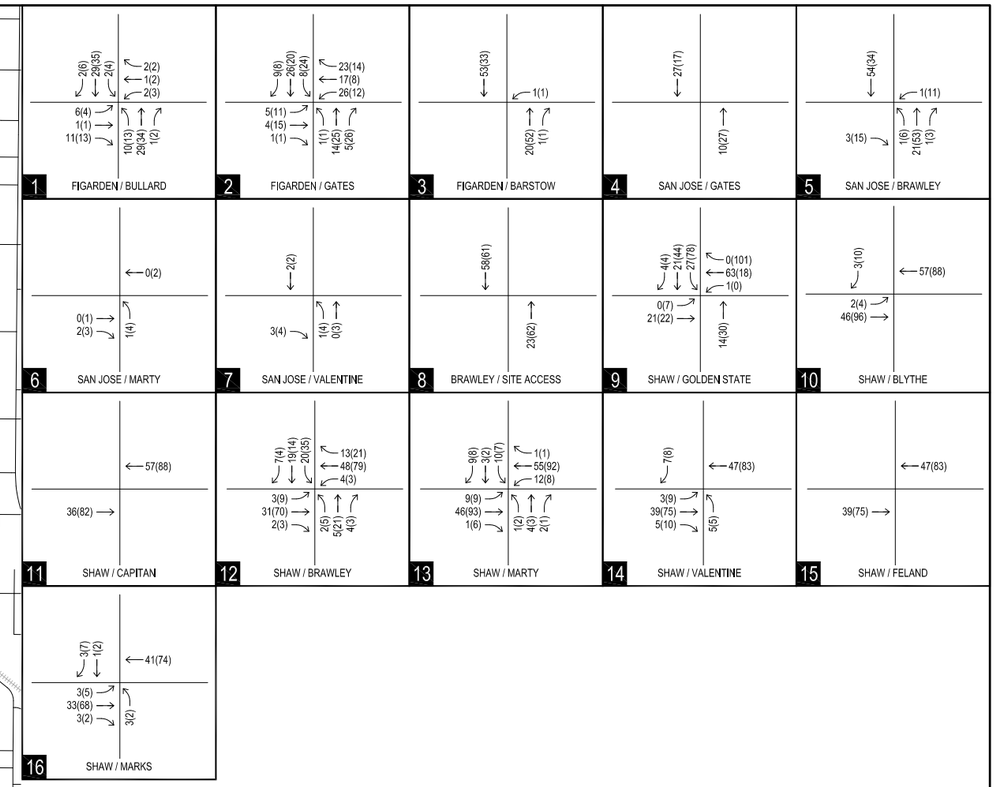
EXISTING SATURDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 5-4





LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

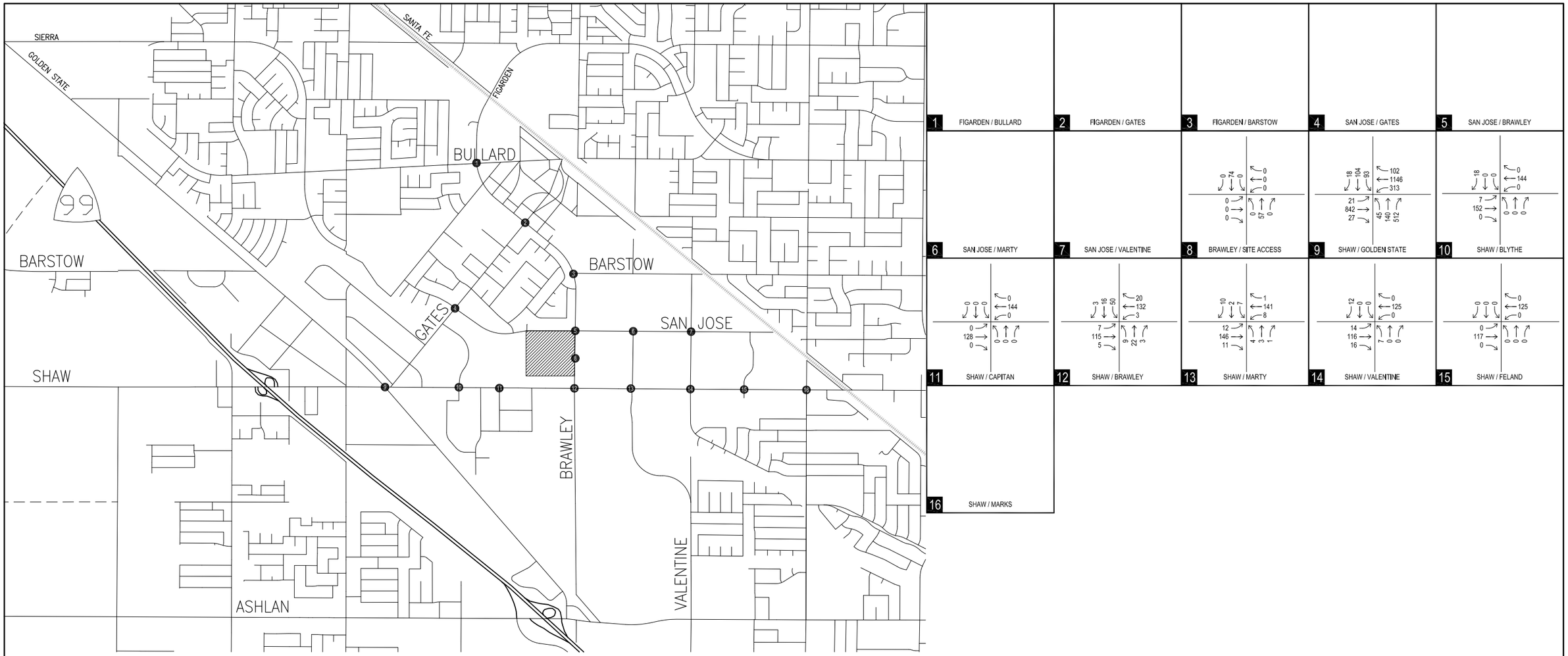
Proposed Fresno Northwest Walmart Project
Fresno, California

PENDING PROJECTS WEEKDAY A.M. AND P.M. PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 6-1



LEGEND

- STUDY AREA INTERSECTIONS
- XX SATURDAY PEAK-HOUR VOLUMES
- PROJECT SITE

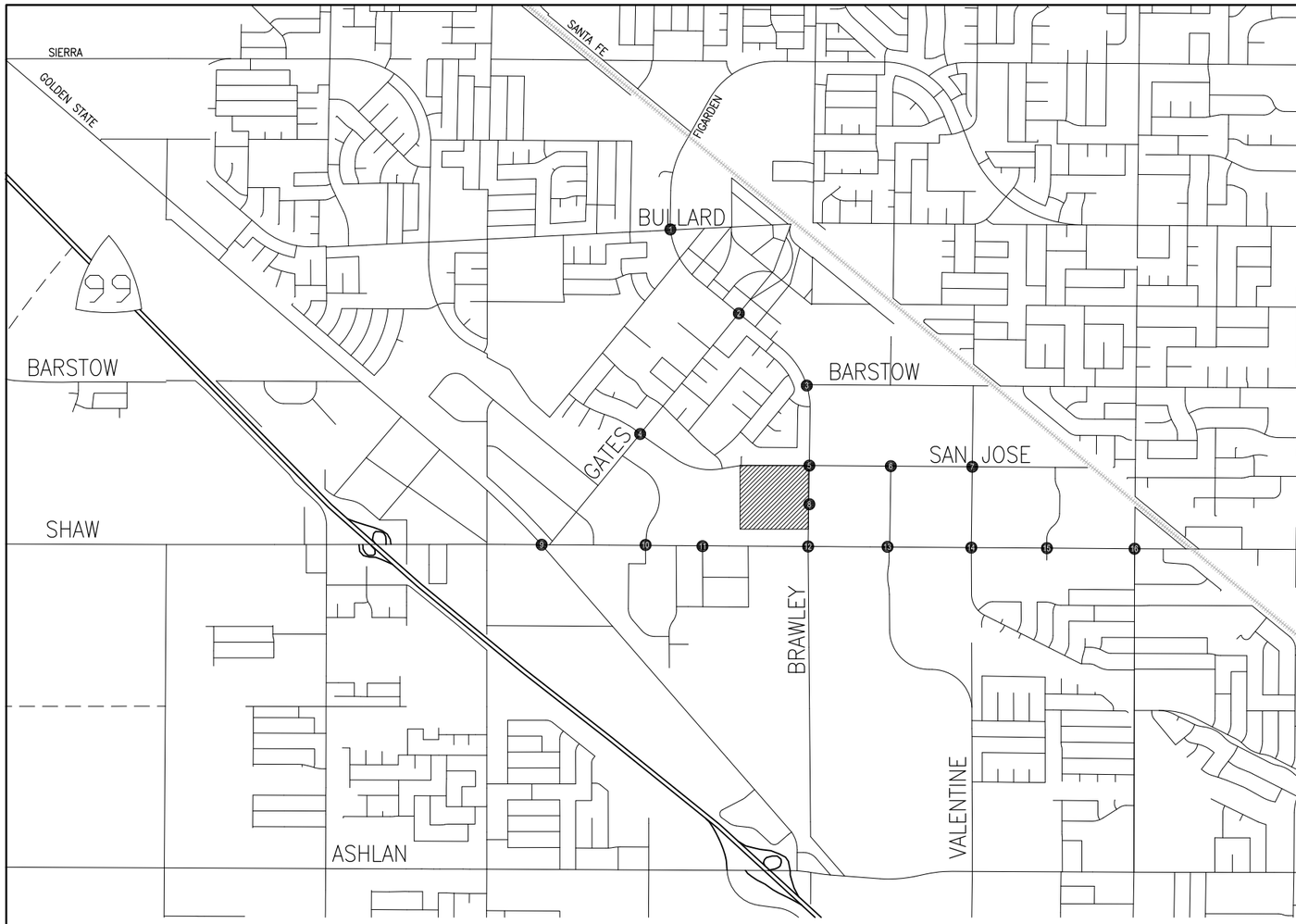
Proposed Fresno Northwest Walmart Project
Fresno, California

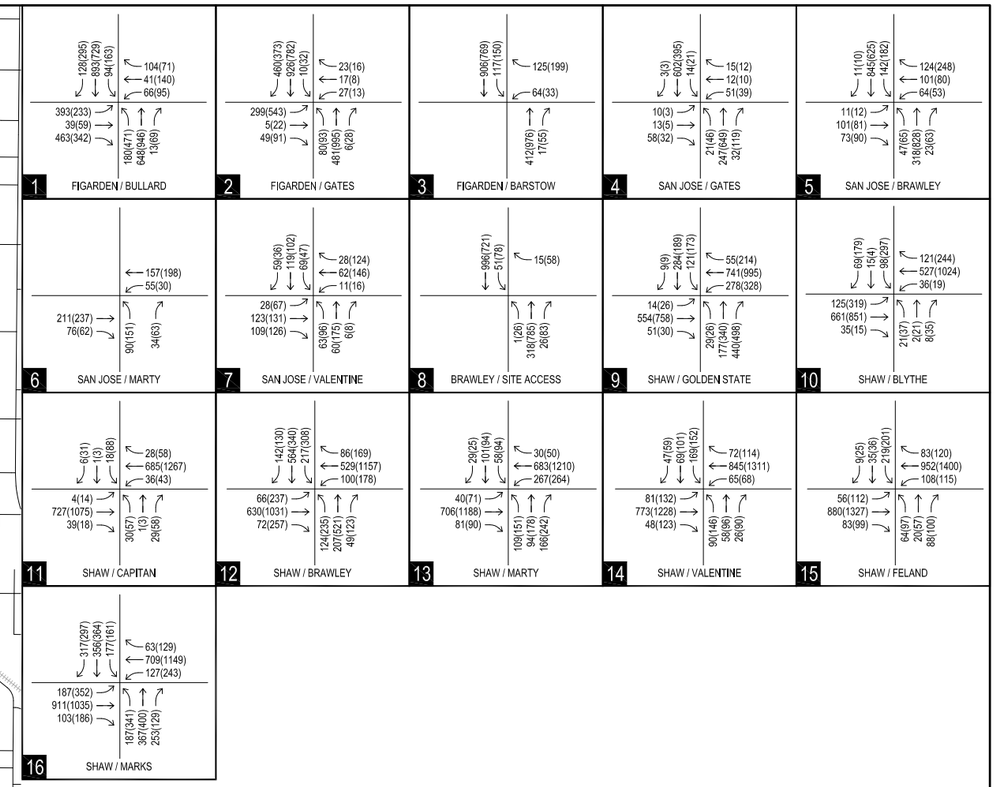
PENDING PROJECTS SATURDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 6-2





LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

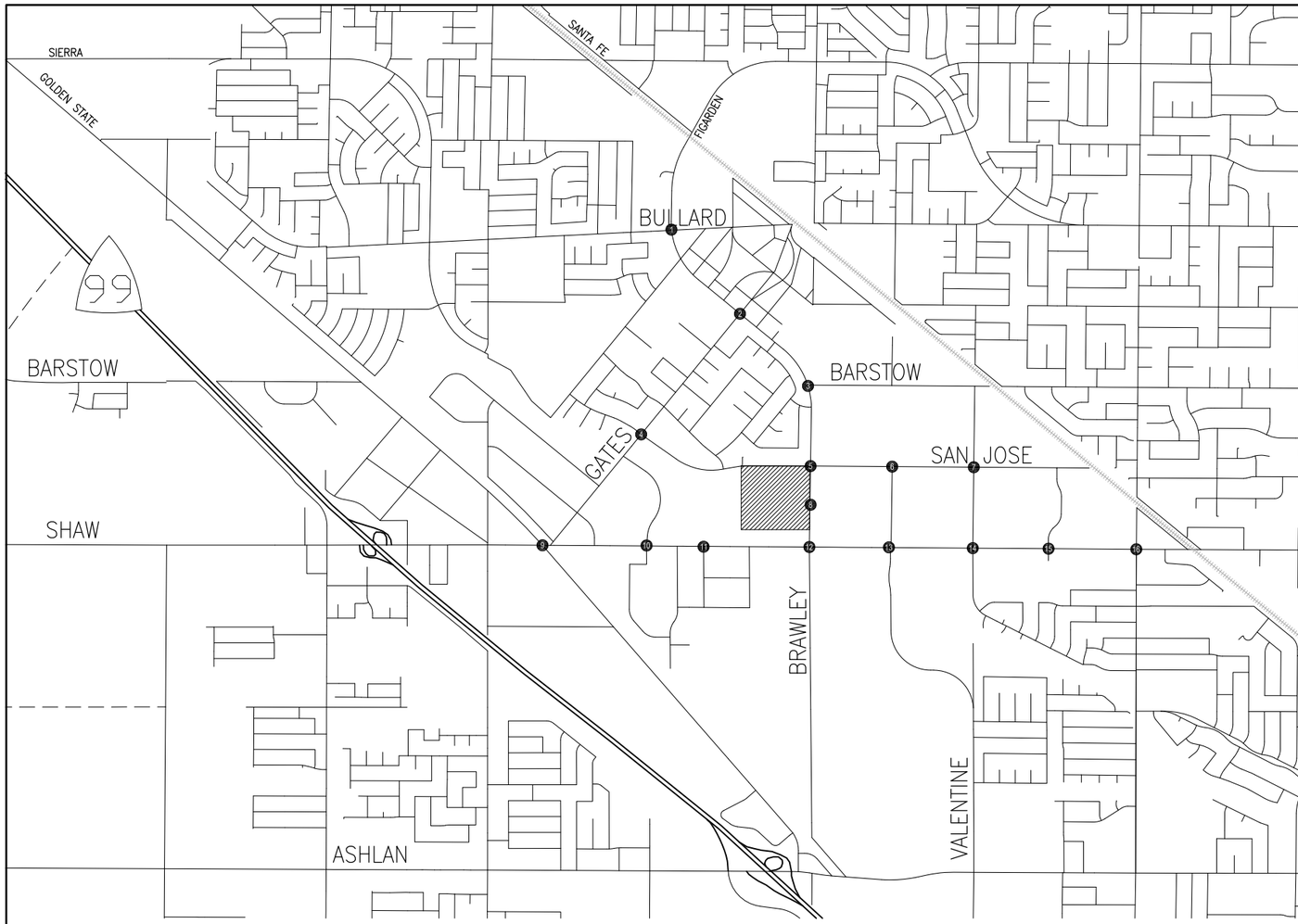
Proposed Fresno Northwest Walmart Project
Fresno, California

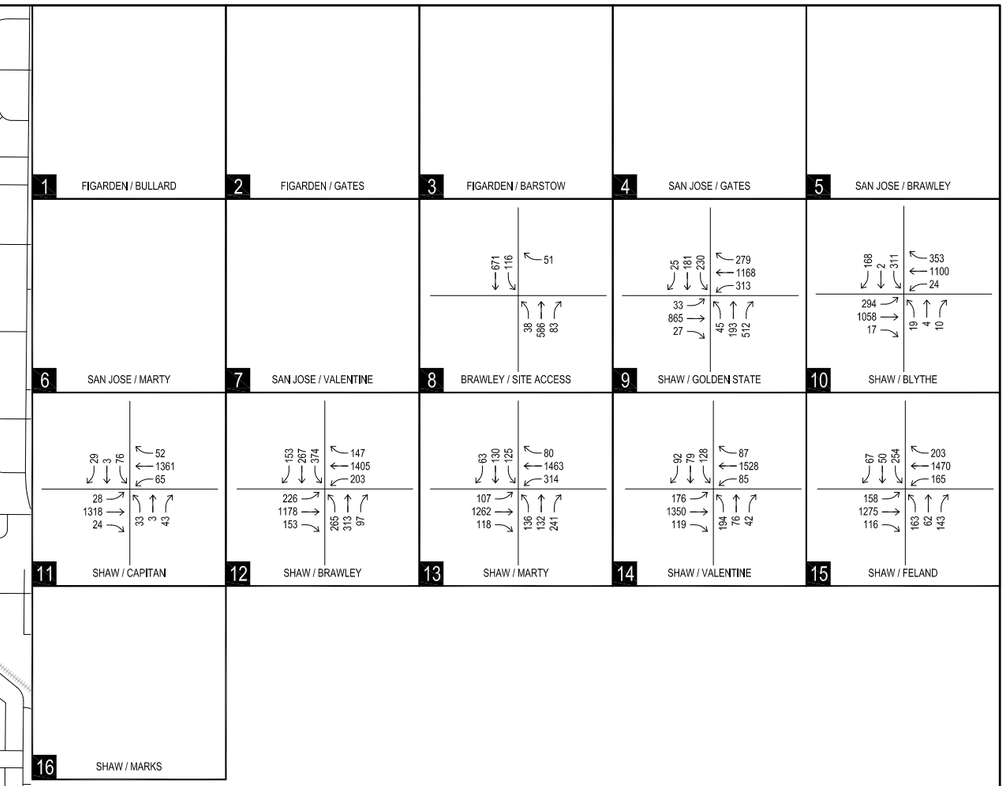
NEAR-TERM NO-PROJECT WEEKDAY A.M. AND P.M. PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 6-3





LEGEND

- STUDY AREA INTERSECTIONS
- XX SATURDAY PEAK-HOUR VOLUMES
- PROJECT SITE

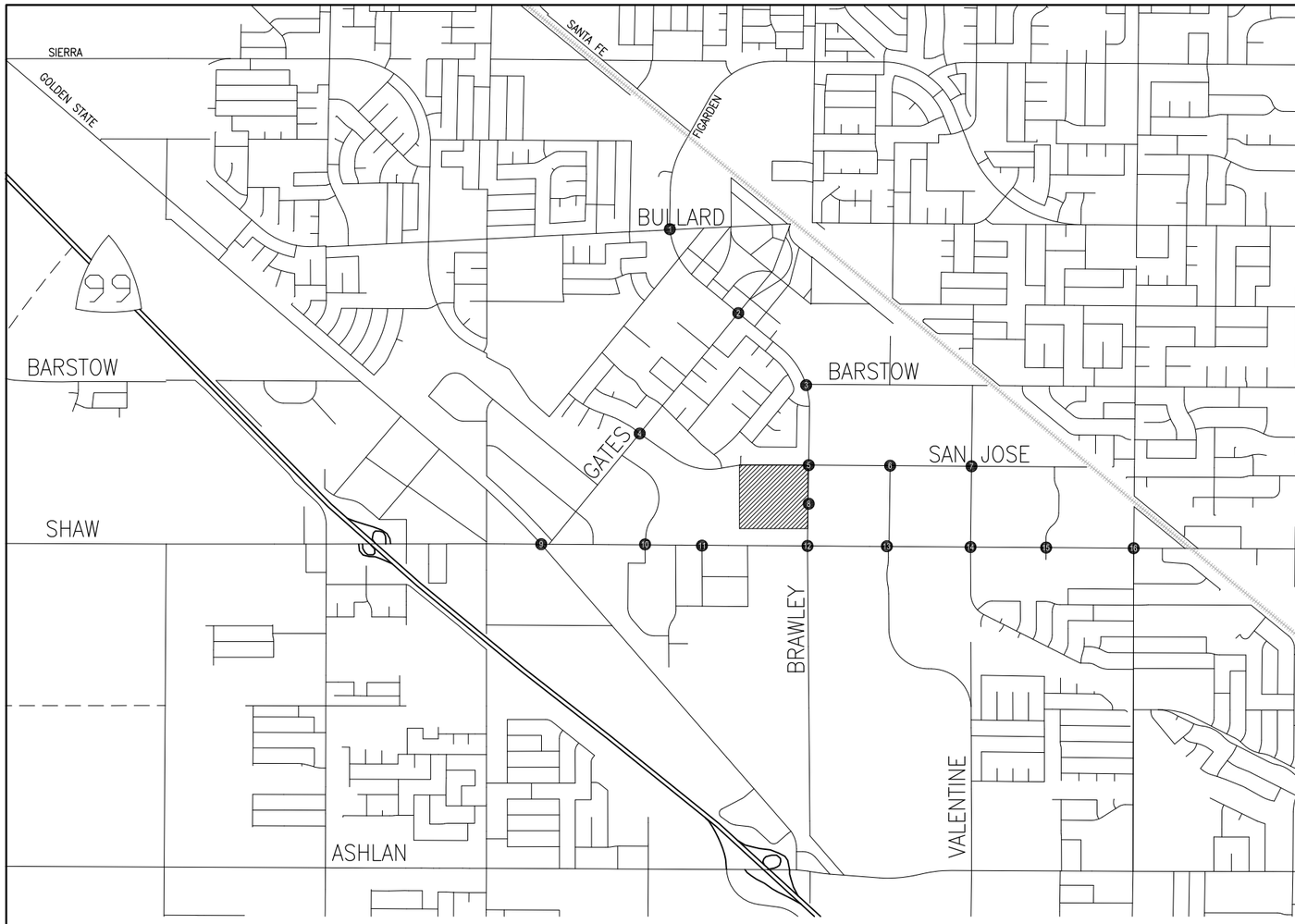
Proposed Fresno Northwest Walmart Project
Fresno, California

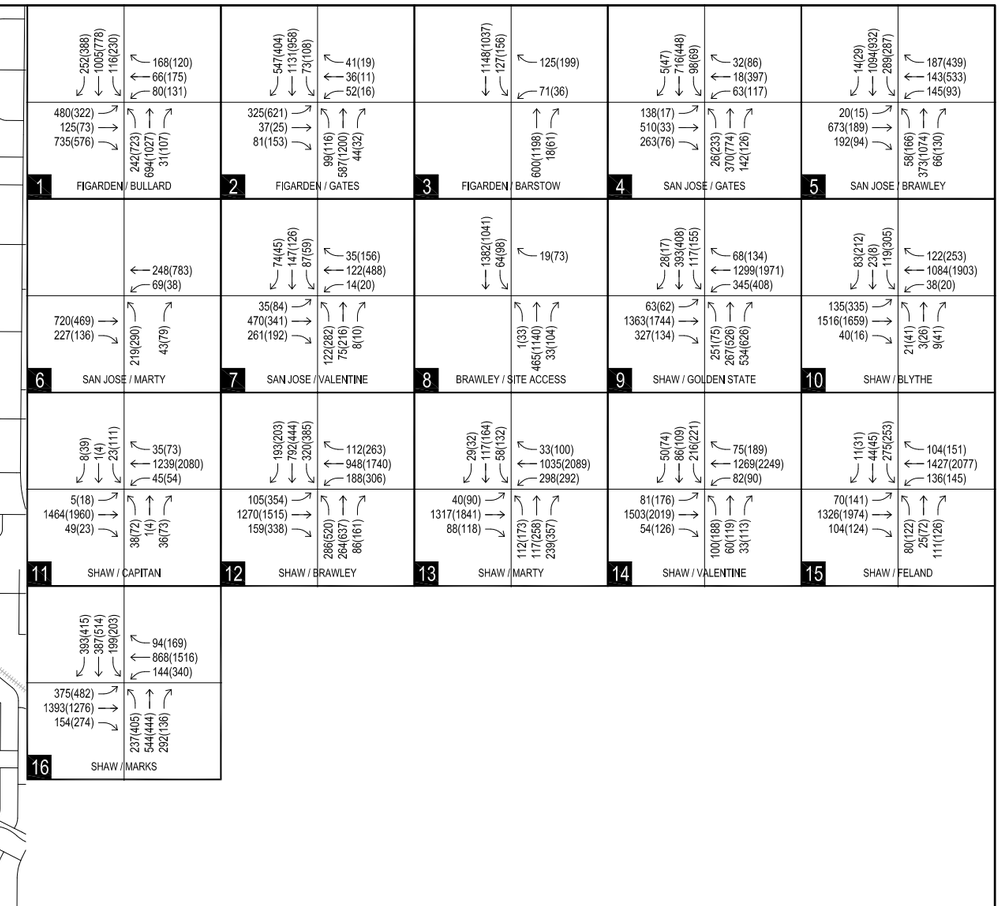
NEAR-TERM NO-PROJECT SATURDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 6-4





LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

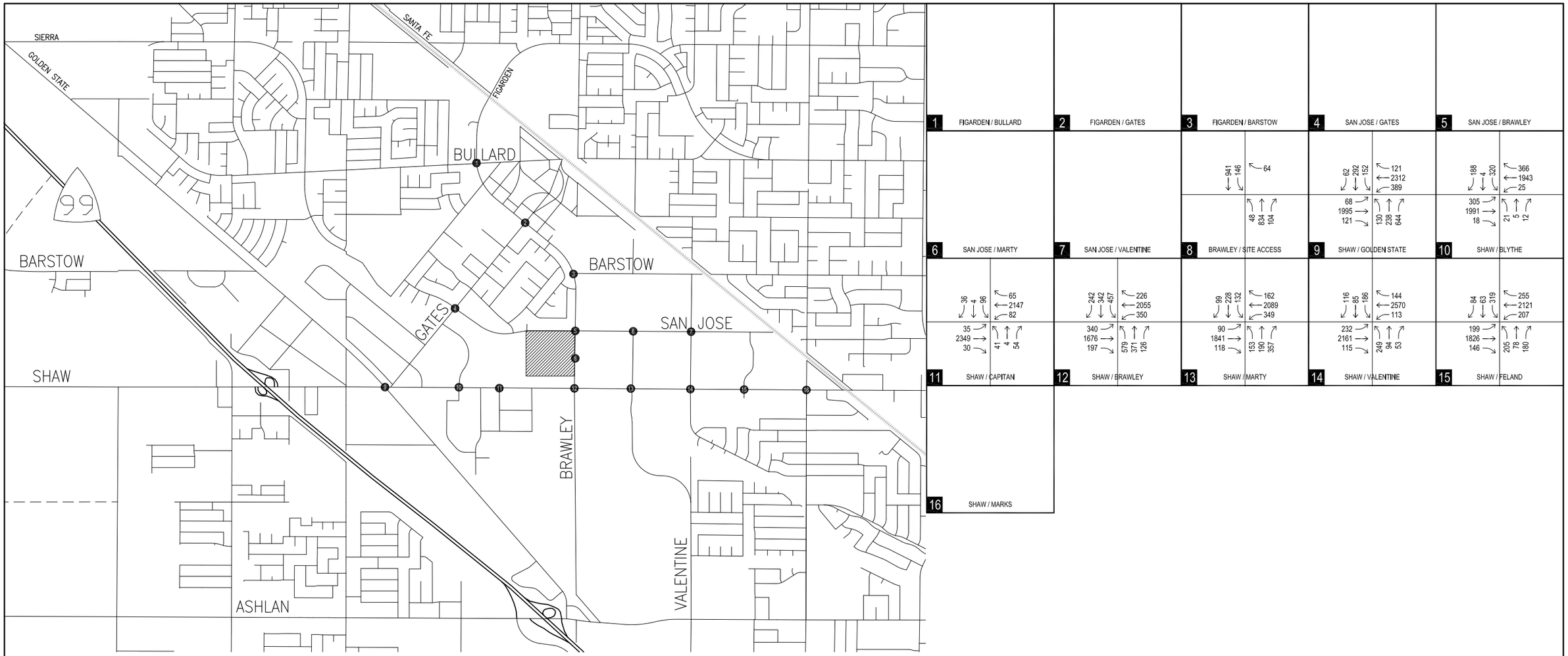
Proposed Fresno Northwest Walmart Project
Fresno, California

2035 NO-PROJECT WEEKDAY A.M. AND P.M. PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 6-5



LEGEND

- STUDY AREA INTERSECTIONS
- XX SATURDAY PEAK-HOUR VOLUMES
- PROJECT SITE

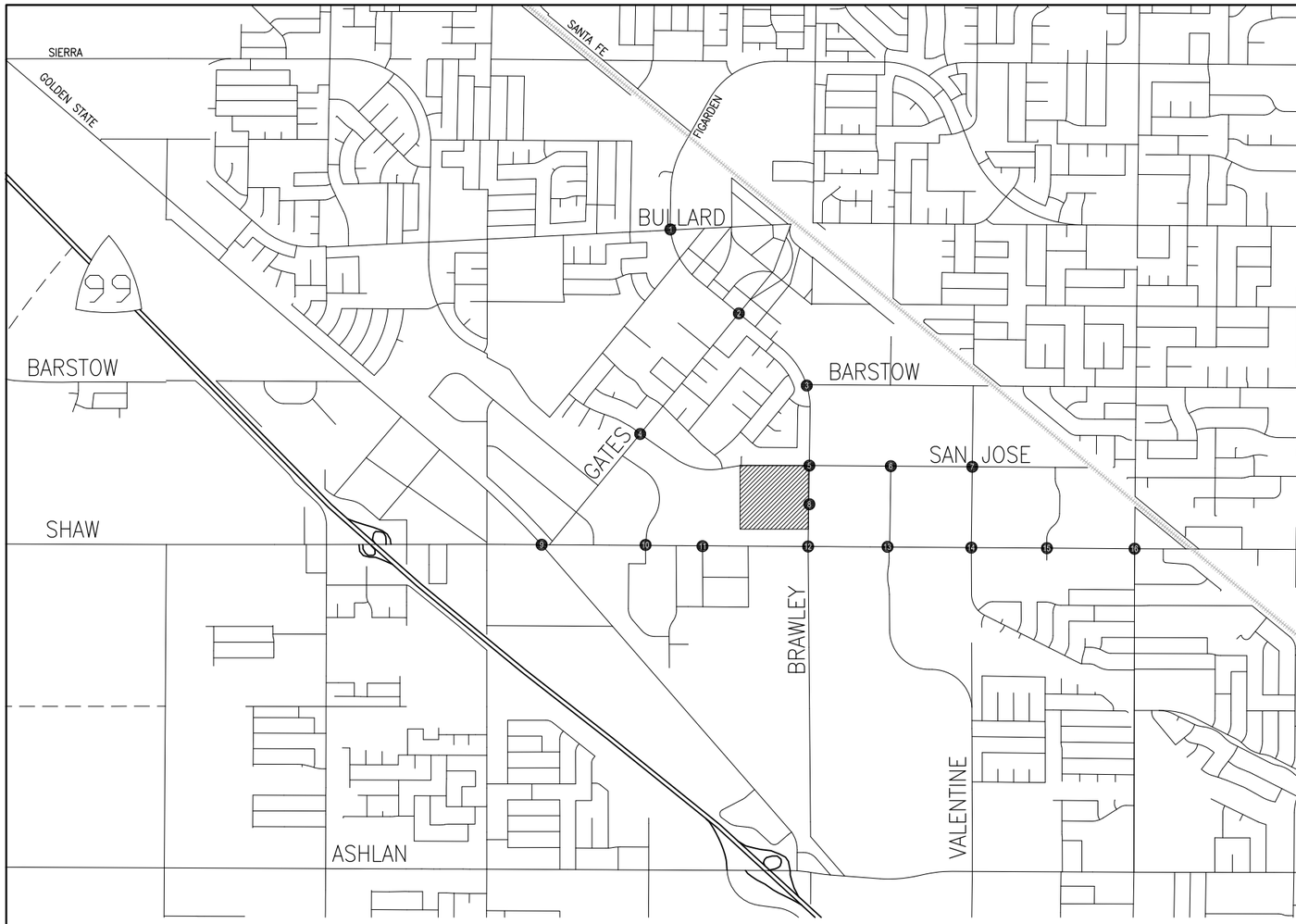
Proposed Fresno Northwest Walmart Project
Fresno, California

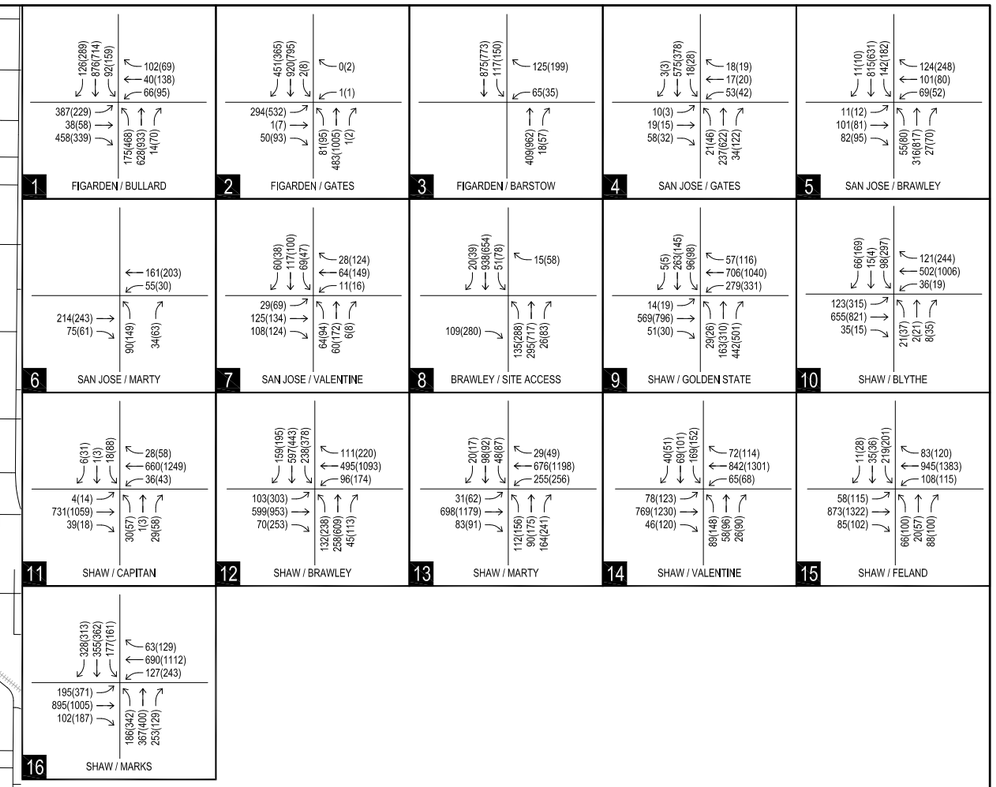
2035 NO-PROJECT SATURDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 6-6





LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

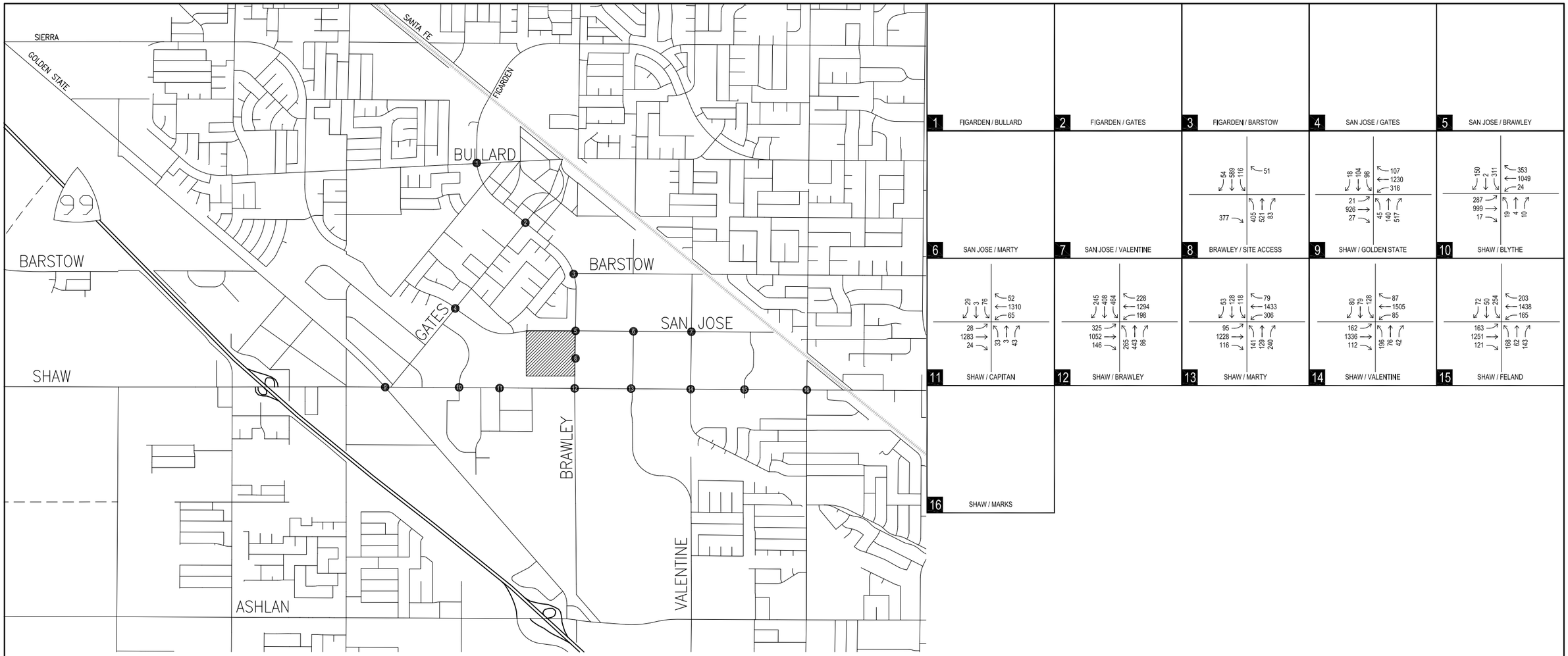
Proposed Fresno Northwest Walmart Project
Fresno, California

EXISTING PLUS PROJECT WEEKDAY A.M. AND P.M. PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 9-1



LEGEND

- STUDY AREA INTERSECTIONS
- XX SATURDAY PEAK-HOUR VOLUMES
- PROJECT SITE

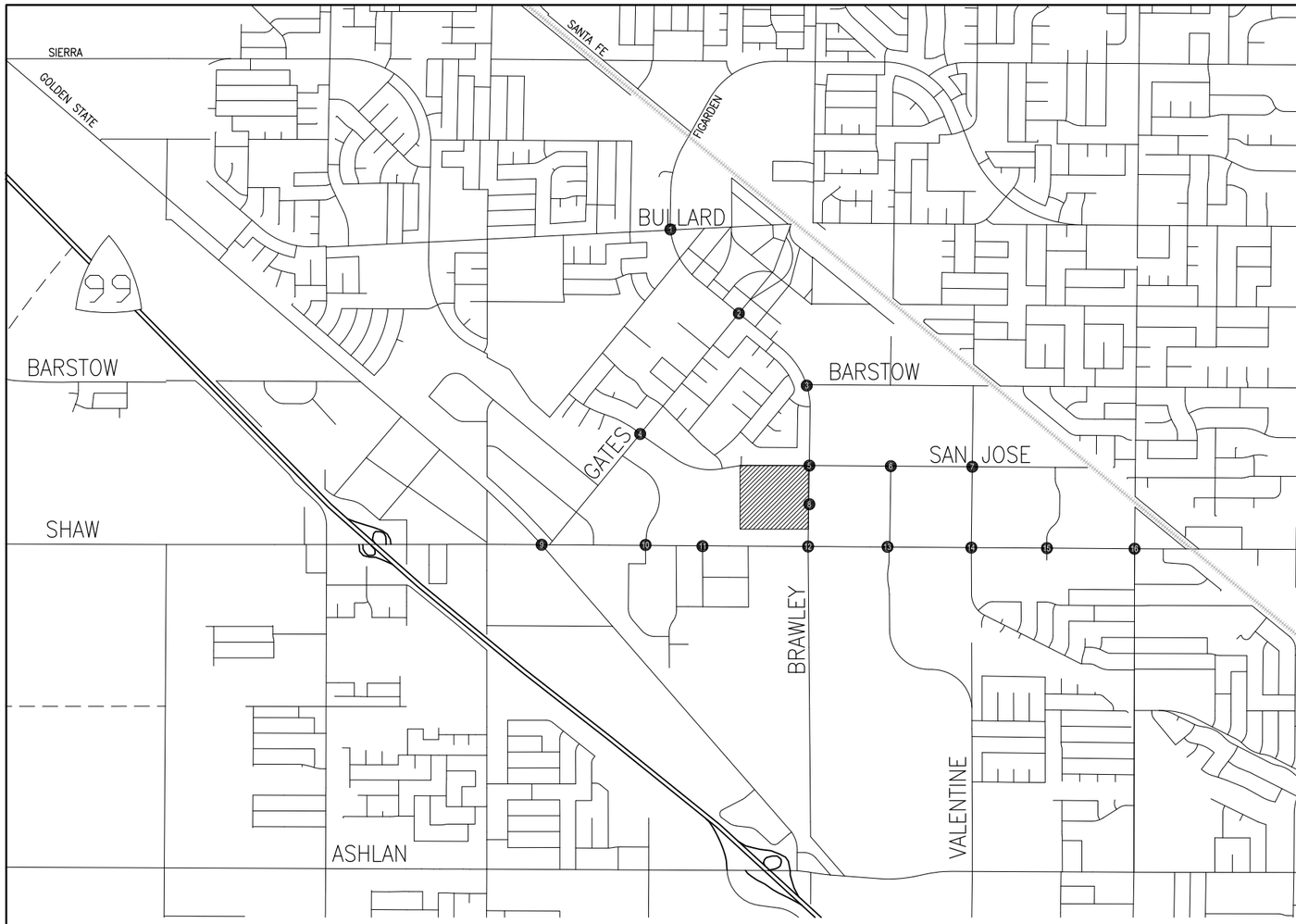
Proposed Fresno Northwest Walmart Project
Fresno, California

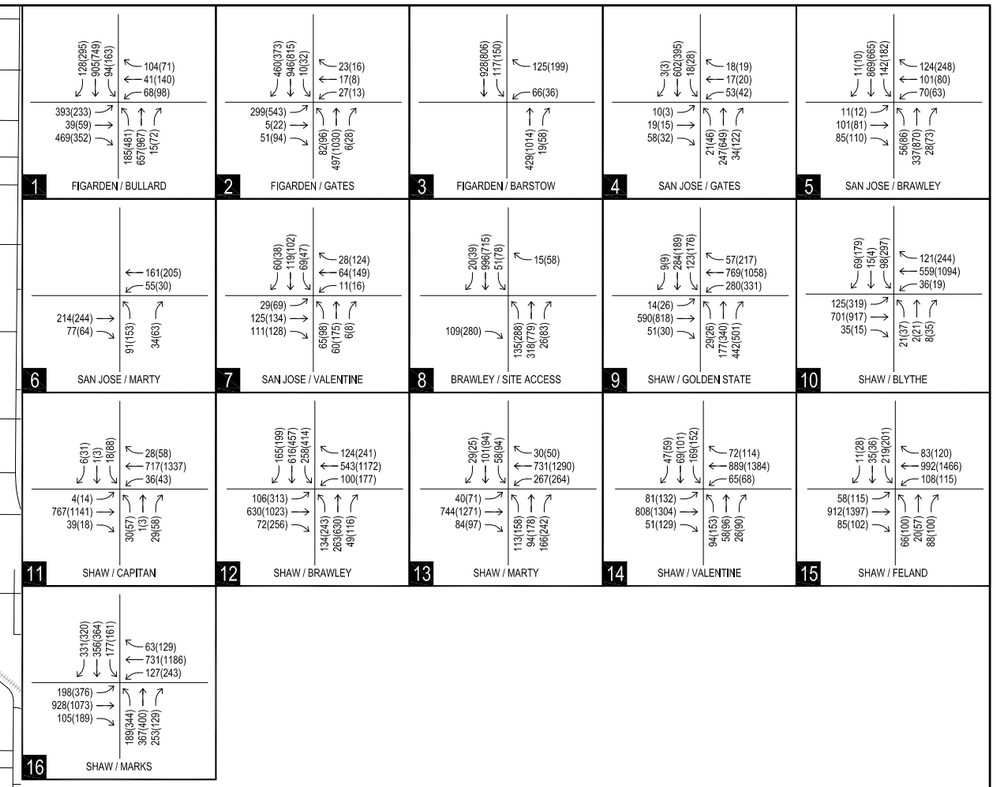
EXISTING PLUS PROJECT SATURDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 9-2





LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

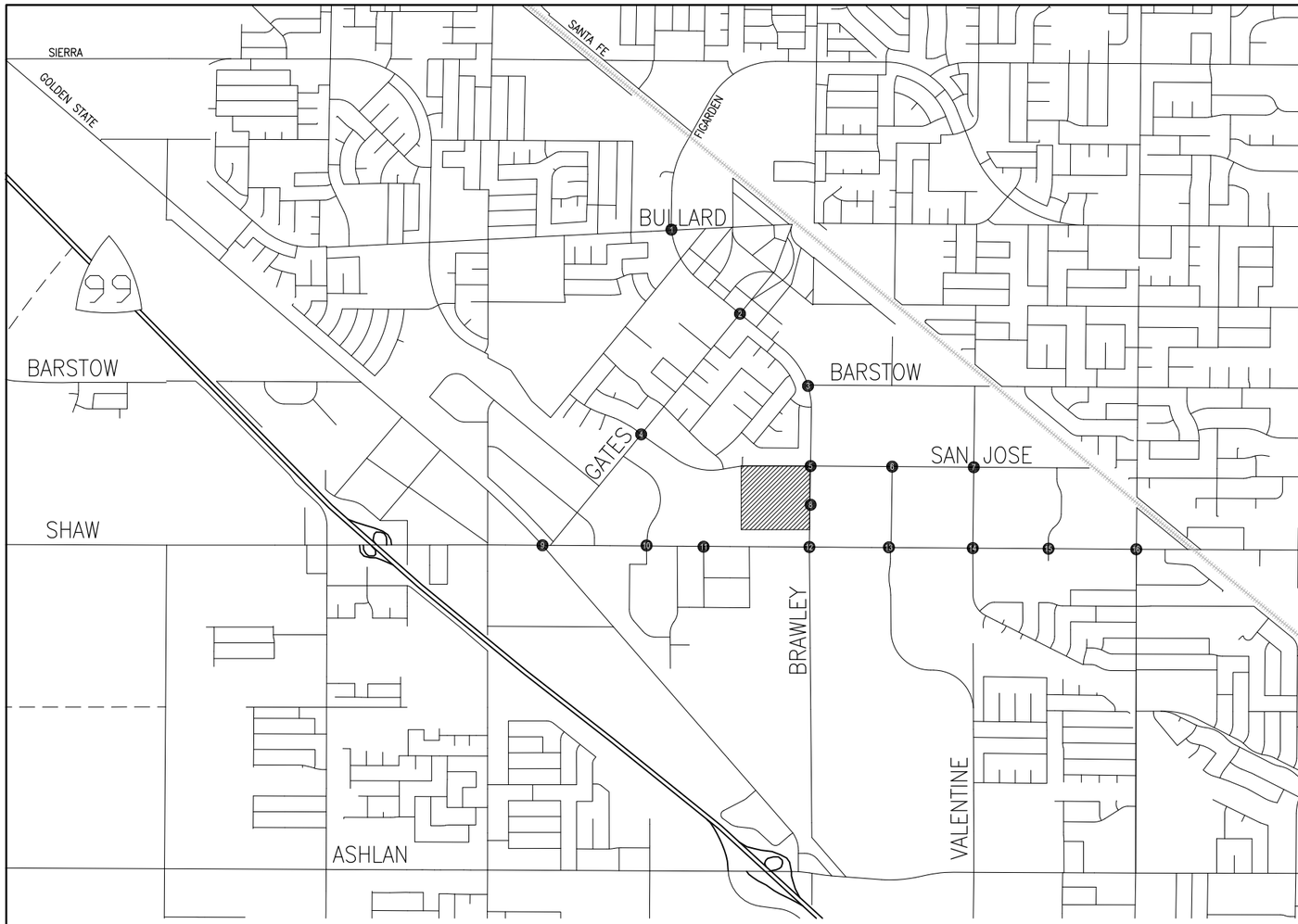
Proposed Fresno Northwest Walmart Project
Fresno, California

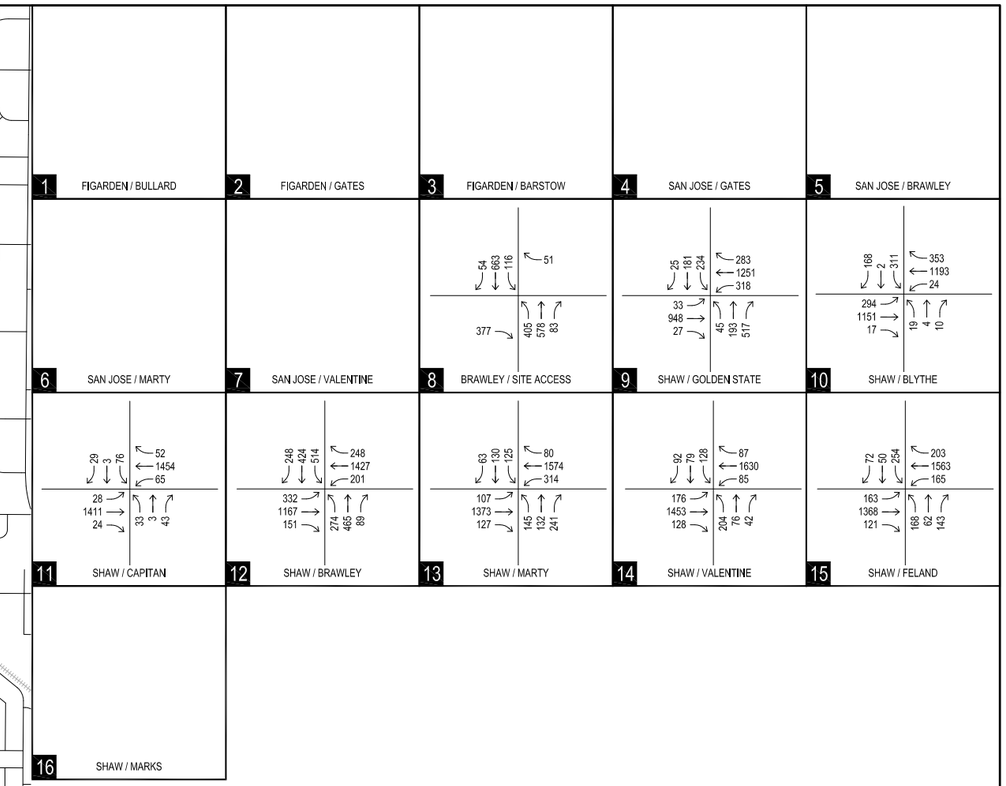
NEAR-TERM WITH-PROJECT WEEKDAY A.M. AND P.M. PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 10-1





LEGEND

- STUDY AREA INTERSECTIONS
- XX SATURDAY PEAK-HOUR VOLUMES
- PROJECT SITE

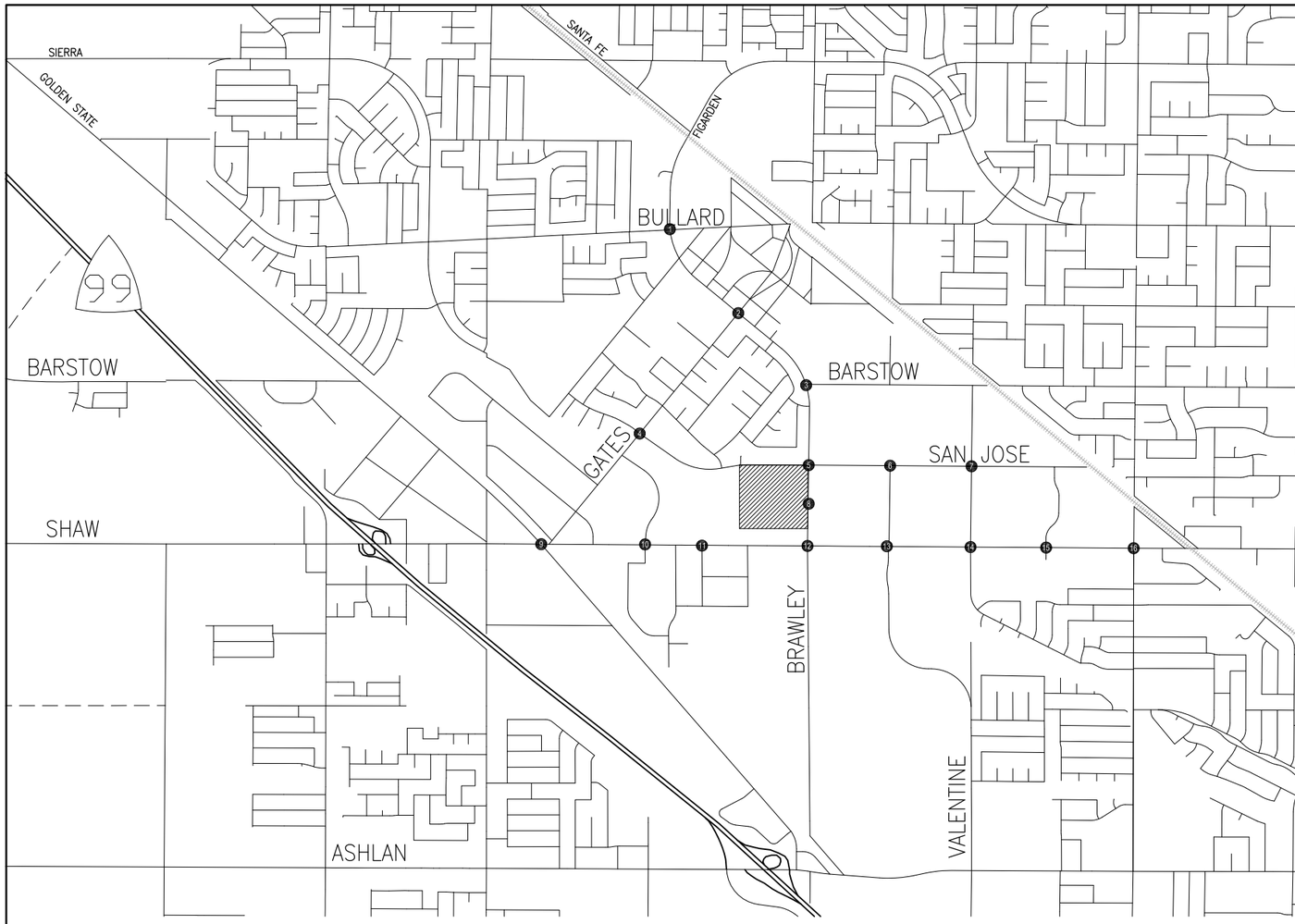
Proposed Fresno Northwest Walmart Project
Fresno, California

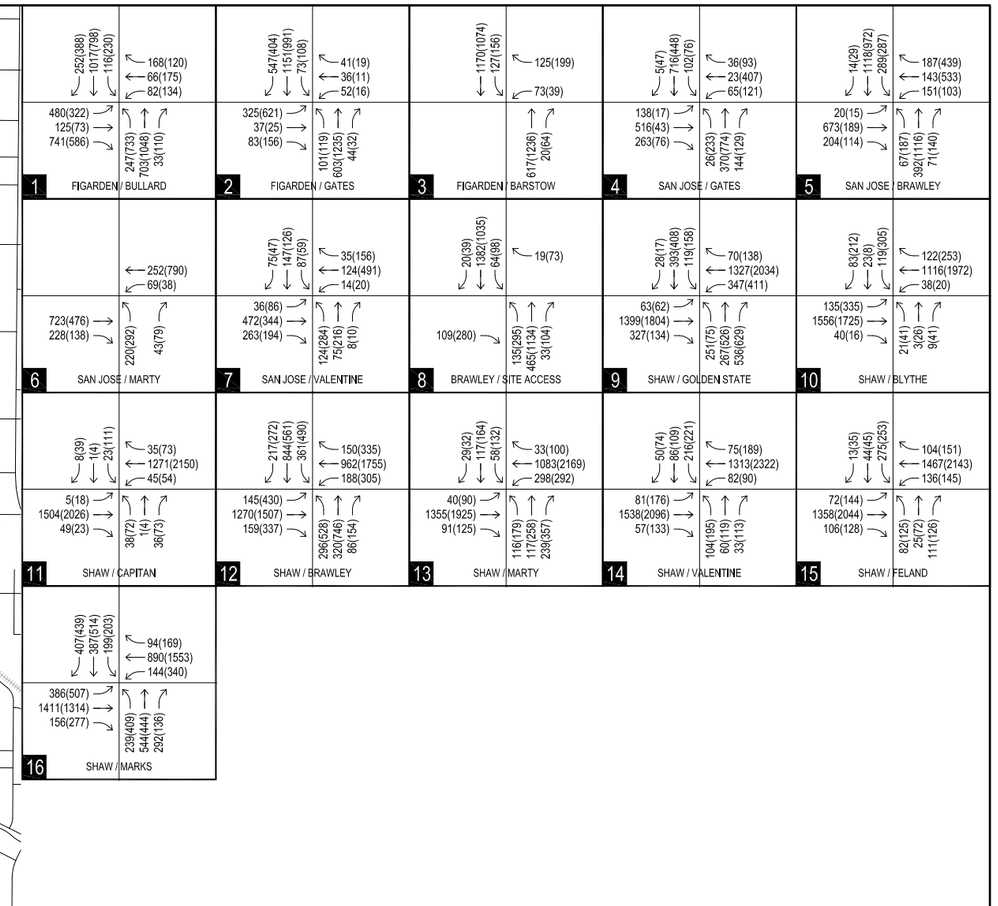
NEAR-TERM WITH-PROJECT SATURDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 10-2





LEGEND

●	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) VOLUMES
▨	PROJECT SITE

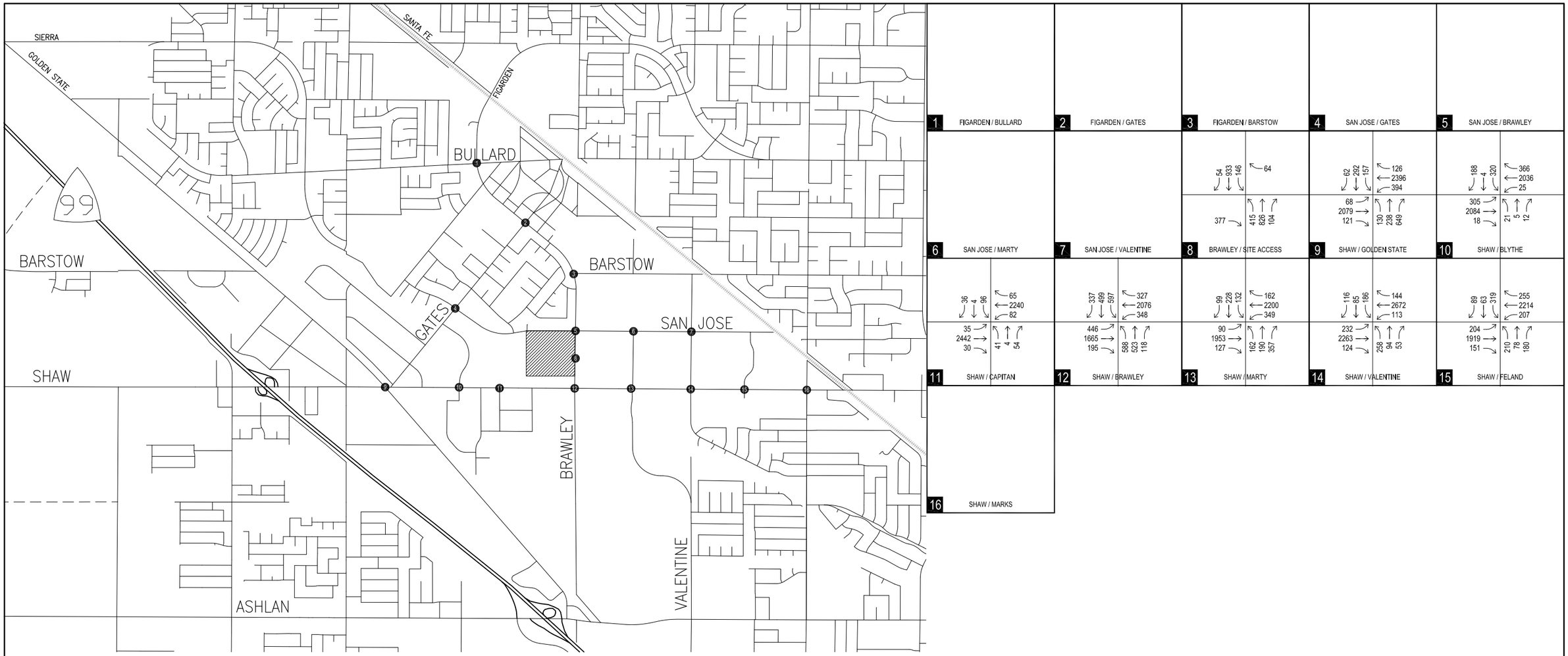
Proposed Fresno Northwest Walmart Project
Fresno, California

2035 WITH-PROJECT WEEKDAY A.M. AND P.M. PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 11-1



LEGEND

- STUDY AREA INTERSECTIONS
- XX SATURDAY PEAK-HOUR VOLUMES
- PROJECT SITE

Proposed Fresno Northwest Walmart Project
Fresno, California

2035 WITH-PROJECT SATURDAY PEAK-HOUR TRAFFIC VOLUMES

SCALE

PETERS ENGINEERING GROUP

Figure 11-2

APPENDIX A

ROADWAY LEVEL OF SERVICE ANALYSES

Road Segment Calculations

SEGMENT	LANES	SPEED LIMIT	DIVIDED	LEFT TURN LANES	RIGHT TURN LANES	FLORIDA TABLE						EXISTING AM			EXISTING PLUS PROJECT AM				EXISTING PM			EXISTING PLUS PROJECT PM			
						Table	Class	B	C	D	E	Volume	LOS	v/c	Volume	LOS	v/c	Δ v/c	Volume	LOS	v/c	Volume	LOS	v/c	Δ v/c
Shaw Avenue																									
Golden State to Blythe	4	40	Y	Y	N	4	I	*	3,078	3,222	**	2,077	C	0.64	2,149	C	0.67	0.02	2,747	C	0.85	2,883	C	0.89	0.04
Blythe to El Capitan	5	40	Y	Y	Y	4	I	*	3,231	3,383	**	1,398	C	0.41	1,470	C	0.43	0.02	2,292	C	0.68	2,428	C	0.72	0.04
El Capitan to Brawley	5	40	Y	Y	Y	4	I	*	3,231	3,383	**	1,470	C	0.43	1,558	C	0.46	0.03	2,877	C	0.85	3,035	C	0.90	0.05
Brawley to Marty	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	1,527	C	0.30	1,620	C	0.32	0.02	2,755	C	0.54	2,932	C	0.58	0.03
Marty to Valentine	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	1,784	C	0.35	1,870	C	0.37	0.02	2,846	C	0.56	3,009	C	0.59	0.03
Valentine to Feland	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	1,958	C	0.38	2,037	C	0.40	0.02	2,902	C	0.57	3,052	C	0.60	0.03
Feland to Marks	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	2,328	C	0.46	2,396	C	0.47	0.01	3,202	C	0.63	3,331	C	0.65	0.03
Figarden Drive																									
Bullard to Gates	4	40	Y	Y	Y	4	I	*	3,231	3,383	**	2,181	C	0.64	2,217	C	0.66	0.01	2,639	C	0.78	2,707	C	0.80	0.02
Gates to Barstow	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,496	C	0.46	1,535	C	0.48	0.01	2,009	C	0.62	2,084	C	0.65	0.02
Brawley Avenue																									
Barstow to San Jose	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,376	C	0.43	1,419	C	0.44	0.01	1,818	C	0.56	1,900	C	0.59	0.03
San Jose to Site Access	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,299	C	0.40	1,364	C	0.42	0.02	1,602	C	0.50	1,745	C	0.54	0.04
Site Access to Shaw	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,260	C	0.39	1,503	C	0.47	0.08	1,601	C	0.50	2,149	C	0.67	0.17

SEGMENT	LANES	SPEED LIMIT	DIVIDED	LEFT TURN LANES	RIGHT TURN LANES	FLORIDA TABLE						NEAR-TERM AM			NEAR-TERM PLUS PROJECT AM				NEAR-TERM PM			NEAR-TERM PLUS PROJECT PM			
						Table	Class	B	C	D	E	Volume	LOS	v/c	Volume	LOS	v/c	Δ v/c	Volume	LOS	v/c	Volume	LOS	v/c	Δ v/c
Shaw Avenue																									
Golden State to Blythe	4	40	Y	Y	N	4	I	*	3,078	3,222	**	2,189	C	0.68	2,261	C	0.70	0.02	2,966	C	0.92	3,102	D	0.96	0.04
Blythe to El Capitan	5	40	Y	Y	Y	4	I	*	3,231	3,383	**	1,491	C	0.44	1,563	C	0.46	0.02	2,470	C	0.73	2,606	C	0.77	0.04
El Capitan to Brawley	5	40	Y	Y	Y	4	I	*	3,231	3,383	**	1,562	C	0.46	1,650	C	0.49	0.03	3,047	C	0.90	3,206	C	0.95	0.05
Brawley to Marty	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	1,647	C	0.32	1,740	C	0.34	0.02	2,965	C	0.58	3,142	C	0.62	0.03
Marty to Valentine	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	1,909	C	0.37	1,994	C	0.39	0.02	3,047	C	0.60	3,210	C	0.63	0.03
Valentine to Feland	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	2,044	C	0.40	2,123	C	0.42	0.02	3,060	C	0.60	3,210	C	0.63	0.03
Feland to Marks	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	2,414	C	0.47	2,482	C	0.49	0.01	3,360	C	0.66	3,489	C	0.69	0.03
Figarden Drive																									
Bullard to Gates	4	40	Y	Y	Y	4	I	*	3,231	3,383	**	2,263	C	0.67	2,299	C	0.68	0.01	2,741	C	0.81	2,809	C	0.83	0.02
Gates to Barstow	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,569	C	0.49	1,608	C	0.50	0.01	2,094	C	0.65	2,169	C	0.67	0.02
Brawley Avenue																									
Barstow to San Jose	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,451	C	0.45	1,494	C	0.46	0.01	1,905	C	0.59	1,987	C	0.62	0.03
San Jose to Site Access	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,380	C	0.43	1,445	C	0.45	0.02	1,724	C	0.54	1,867	C	0.58	0.04
Site Access to Shaw	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,341	C	0.42	1,584	C	0.49	0.08	1,706	C	0.53	2,254	C	0.70	0.17

SEGMENT	LANES	SPEED LIMIT	DIVIDED	LEFT TURN LANES	RIGHT TURN LANES	FLORIDA TABLE						LONG-TERM AM			LONG-TERM PLUS PROJECT AM				LONG-TERM PM			LONG-TERM PLUS PROJECT PM			
						Table	Class	B	C	D	E	Volume	LOS	v/c	Volume	LOS	v/c	Δ v/c	Volume	LOS	v/c	Volume	LOS	v/c	Δ v/c
Shaw Avenue																									
Golden State to Blythe	4	40	Y	Y	N	4	I	*	3,078	3,222	**	2,880	C	0.89	2,951	C	0.92	0.02	4,165	E/F	1.29	4,301	E/F*	1.33	0.04
Blythe to El Capitan	5	40	Y	Y	Y	4	I	*	3,231	3,383	**	2,888	C	0.85	2,959	C	0.87	0.02	4,191	E/F	1.24	4,327	E/F*	1.28	0.04
El Capitan to Brawley	5	40	Y	Y	Y	4	I	*	3,231	3,383	**	2,961	C	0.88	3,049	C	0.90	0.03	4,670	E/F	1.38	4,829	E/F*	1.43	0.05
Brawley to Marty	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	2,923	C	0.57	3,017	C	0.59	0.02	4,370	C	0.86	4,547	C	0.89	0.03
Marty to Valentine	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	3,057	C	0.60	3,143	C	0.62	0.02	4,832	C	0.95	4,995	D	0.98	0.03
Valentine to Feland	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	3,020	C	0.59	3,257	C	0.64	0.05	4,881	C	0.96	5,031	D	0.99	0.03
Feland to Marks	6	40	Y	Y	Y	4	I	*	4,961	5,093	**	3,421	C	0.67	3,489	C	0.69	0.01	4,725	C	0.93	4,861	C	0.95	0.03
Figarden Drive																									
Bullard to Gates	4	40	Y	Y	Y	4	I	*	3,231	3,383	**	2,784	C	0.82	2,832	C	0.84	0.01	3,342	D	0.99	3,410	E/F	1.01	0.02
Gates to Barstow	4	40	Y	Y	N	4	I	*	3,078	3,222	**	2,000	C	0.62	2,039	C	0.63	0.01	2,590	C	0.80	2,665	C	0.83	0.02
Brawley Avenue																									
Barstow to San Jose	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,977	C	0.61	2,020	C	0.63	0.01	2,776	C	0.86	2,858	C	0.89	0.03
San Jose to Site Access	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,930	C	0.60	2,003	C	0.62	0.02	2,489	C	0.77	2,632	C	0.82	0.04
Site Access to Shaw	4	40	Y	Y	N	4	I	*	3,078	3,222	**	1,881	C	0.58	2,124	C	0.66	0.08	2,318	C	0.72	2,848	C	0.88	0.16

* Not a significant impact. V/C increase is less than 0.15

TABLE 4

Generalized **Peak Hour Two-Way** Volumes for Florida's **Urbanized Areas**[1]

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	1,510	1,600	**
4	Divided	*	3,420	3,580	**
6	Divided	*	5,250	5,390	**
8	Divided	*	7,090	7,210	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	660	1,330	1,410
4	Divided	*	1,310	2,920	3,040
6	Divided	*	2,090	4,500	4,590
8	Divided	*	2,880	6,060	6,130

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	260	680	1,770
50-84%	190	600	1,770	>1,770
85-100%	830	1,770	>1,770	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	250	850
50-84%	*	150	780	1,420
85-100%	340	960	1,560	>1,770

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
4	4,120	5,540	6,700	7,190
6	6,130	8,370	10,060	11,100
8	8,230	11,100	13,390	15,010
10	10,330	14,040	16,840	18,930
12	14,450	18,880	22,030	22,860

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 1,800	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	770	1,530	2,170	2,990
4	Divided	3,300	4,660	5,900	6,530
6	Divided	4,950	6,990	8,840	9,790

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1] Values shown are presented as peak hour two-way volumes for levels of service and are for the automobile/truck modes unless specifically stated This table does not constitute a standard and should be used only for general planning applications The computer models from which this table is derived should be used for more specific planning applications The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow

* Cannot be achieved using table input value defaults

** Not applicable for that level of service letter grade For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults

Source:
Florida Department of Transportation
Systems Planning Office
www dot state fl us/planning/systems/sm/los/default shtm

APPENDIX B

TRAFFIC MODELING

Select Zone Analysis Request

PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

REQUEST FOR SELECT ZONE ANALYSIS

DATE: May 17, 2013

PETERS ENGINEERING GROUP JOB NUMBER: 13-016.01

PROJECT NAME: Proposed Fresno Northwest Walmart Project

PROJECT DESCRIPTION: The proposed Fresno Northwest Walmart Project is located northwest of the intersection of Shaw and Brawley Avenues in Fresno, California. The site is already developed with an existing 193,361-square-foot building that was previously a Kmart store and then a Camp America store. Walmart is not proposing to modify the size of the building. Figure 1, Site Vicinity Map, and Figure 2, Site Plan are attached.

SITE ACREAGE: The site covers approximately 17.60 acres

SITE ACCESS LOCATIONS: Site access is provided via the existing driveways on Shaw and Brawley Avenues.

SPECIAL NETWORK INSTRUCTIONS: Create one new TAZ for a year 2035 model run. The new TAZ will connect to Brawley Avenue. See the attached Figure 3.

MODELING REQUEST:

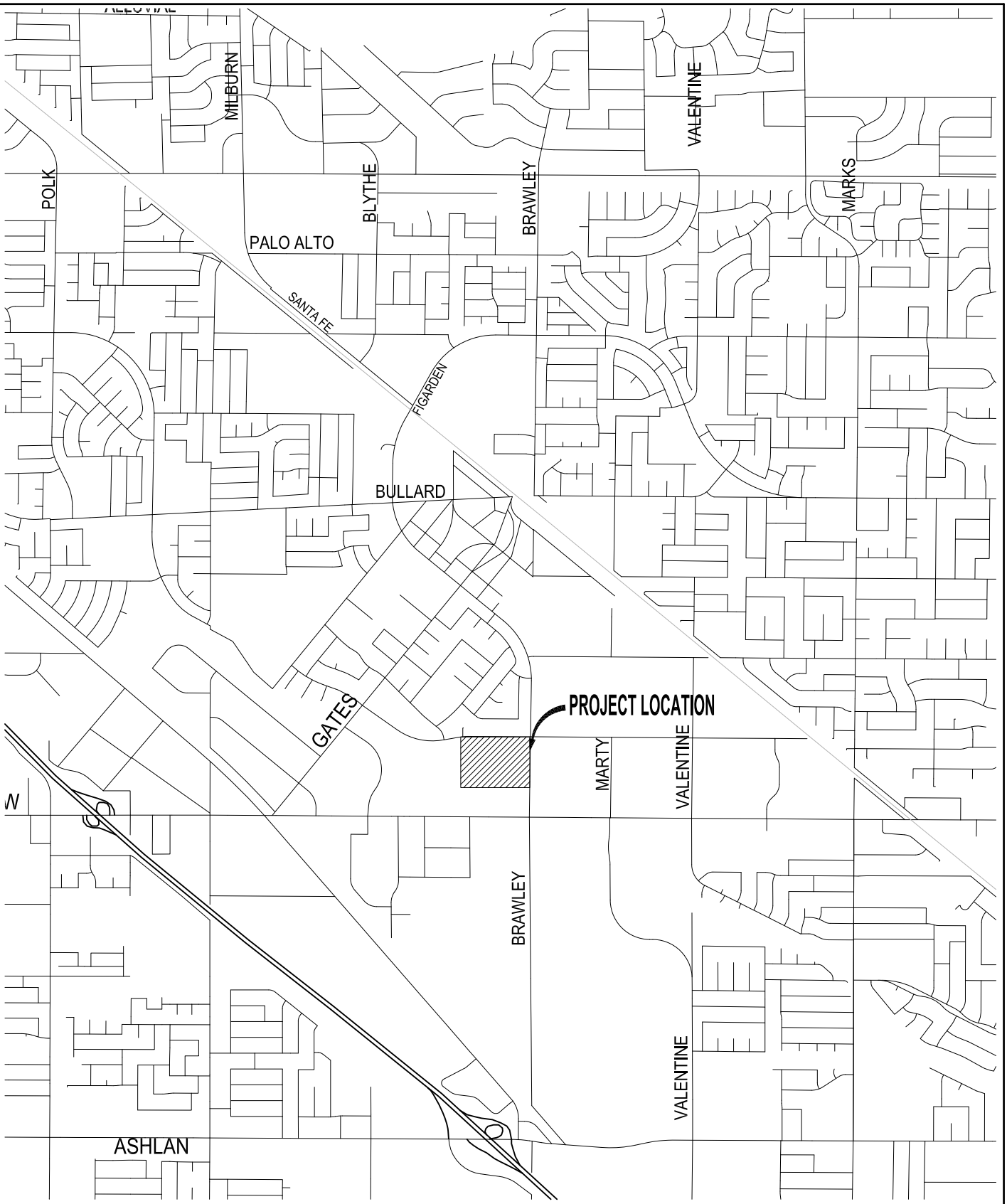
1. We are requesting a year 2035 select zone analysis with ITE volumes for the new TAZ and the year 2035 peak hour volumes.

2. We are also requesting a Zero-Project 2035 model run.

ITE PROJECT TRIP GENERATION:

Table 1
Project Trip Generation

Land Use	Size	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
813 - Free-Standing Discount Superstore	193.361 ksf	50.75	9,814	1.85	56:44	**200**	**158**	358	4.35	49:51	**413**	**429**	842



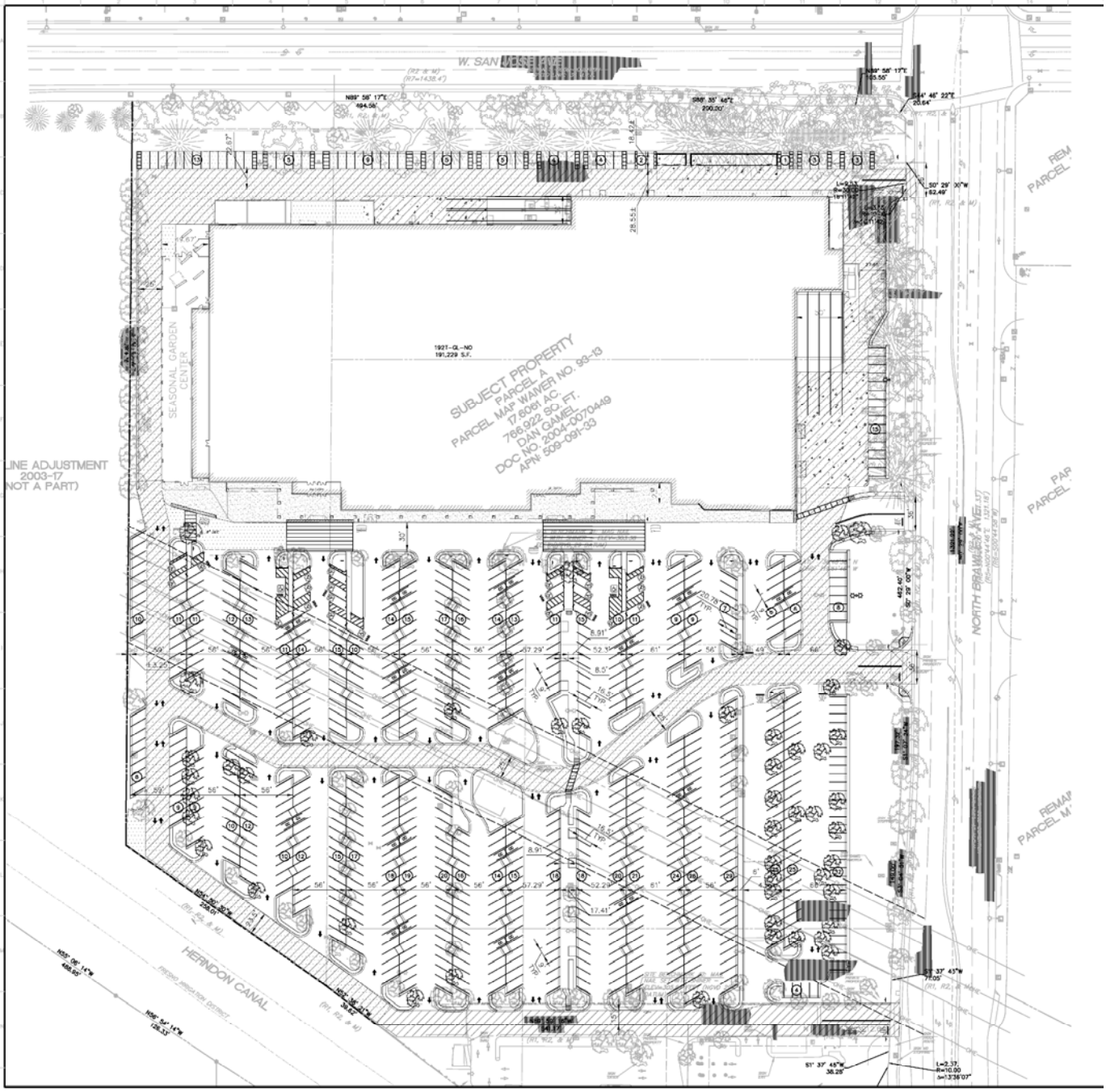
Proposed Walmart Project
Fresno, California

VICINITY MAP

Not to Scale

PETERS ENGINEERING GROUP

Figure 1



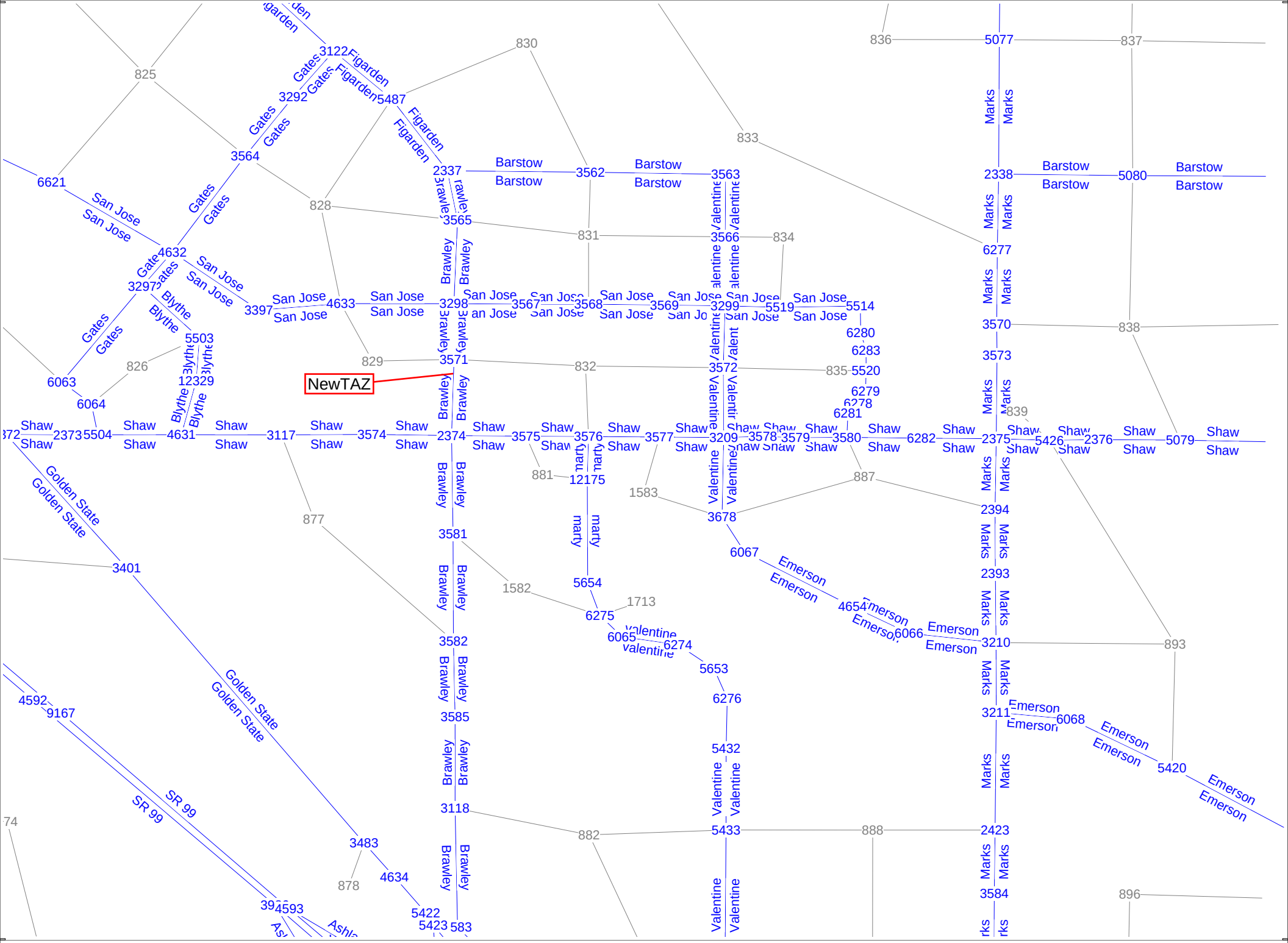
Proposed Walmart Project
Fresno, California

SITE PLAN

Not to Scale

PETERS ENGINEERING GROUP

Figure 2



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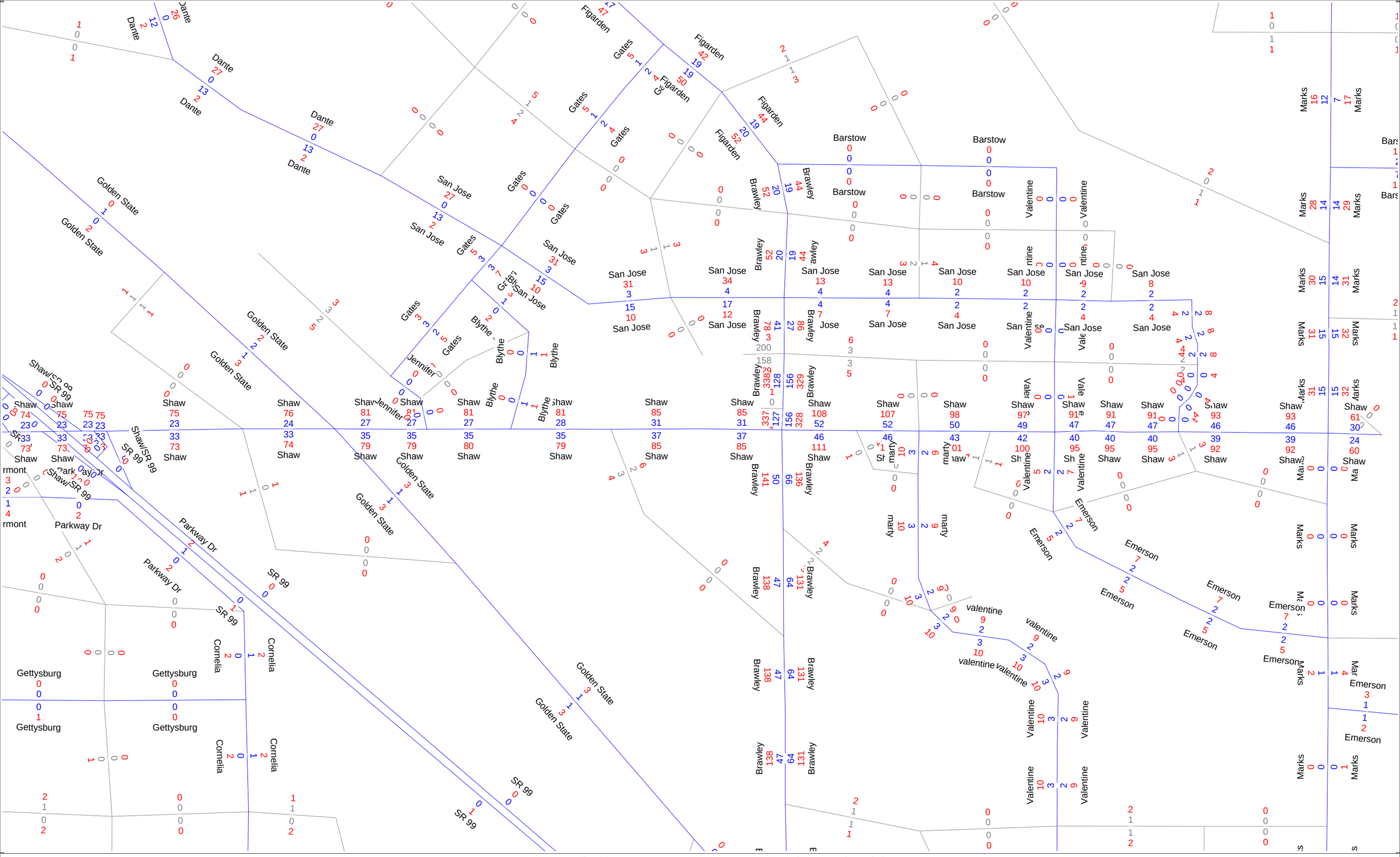
Select Zone Analysis Results

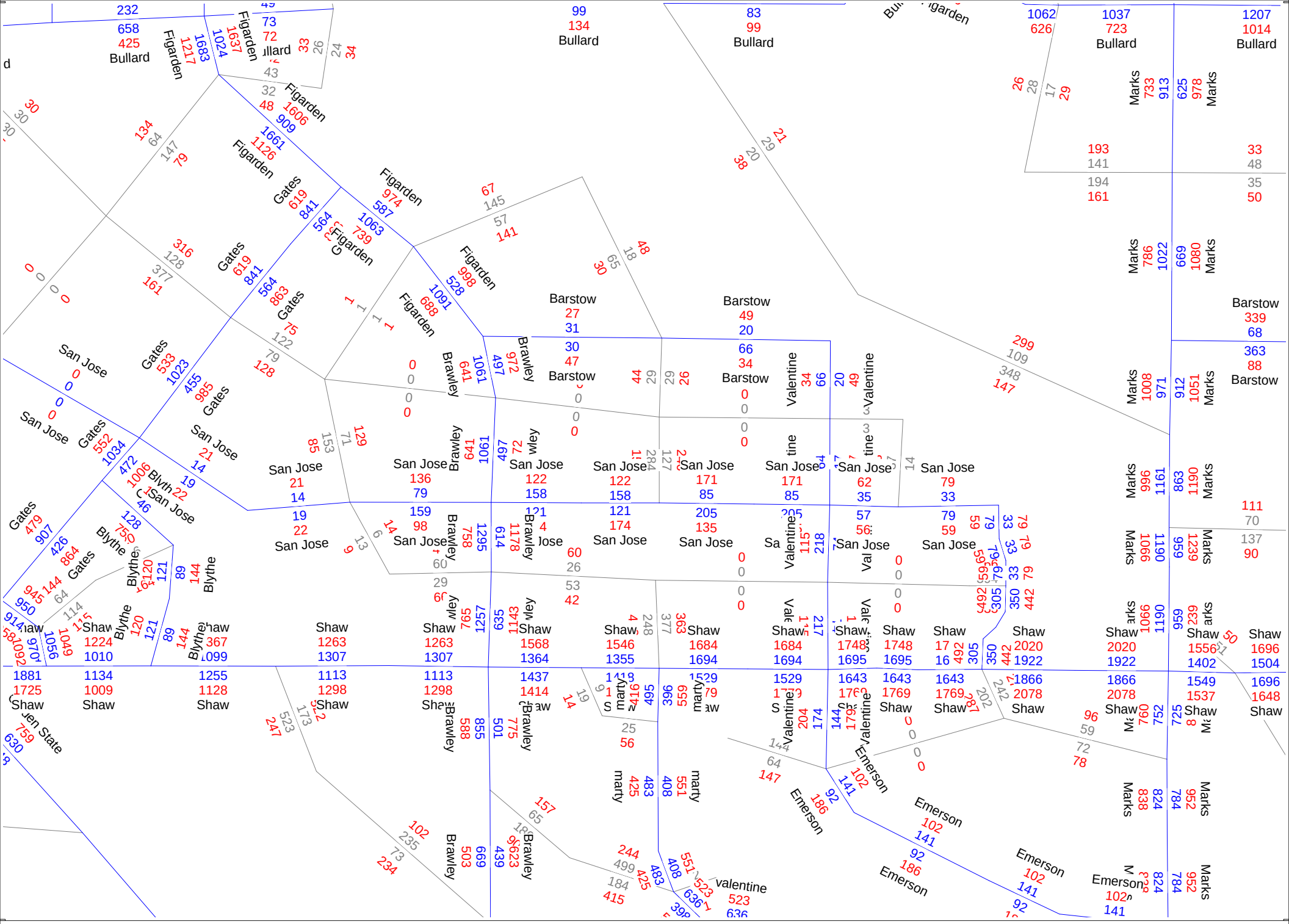


2035 Council of Fresno County Governments Travel Demand Model
Select Zone Analysis AM and PM Peak Hour Traffic Volumes

cube

Licensed to Peters Engineering

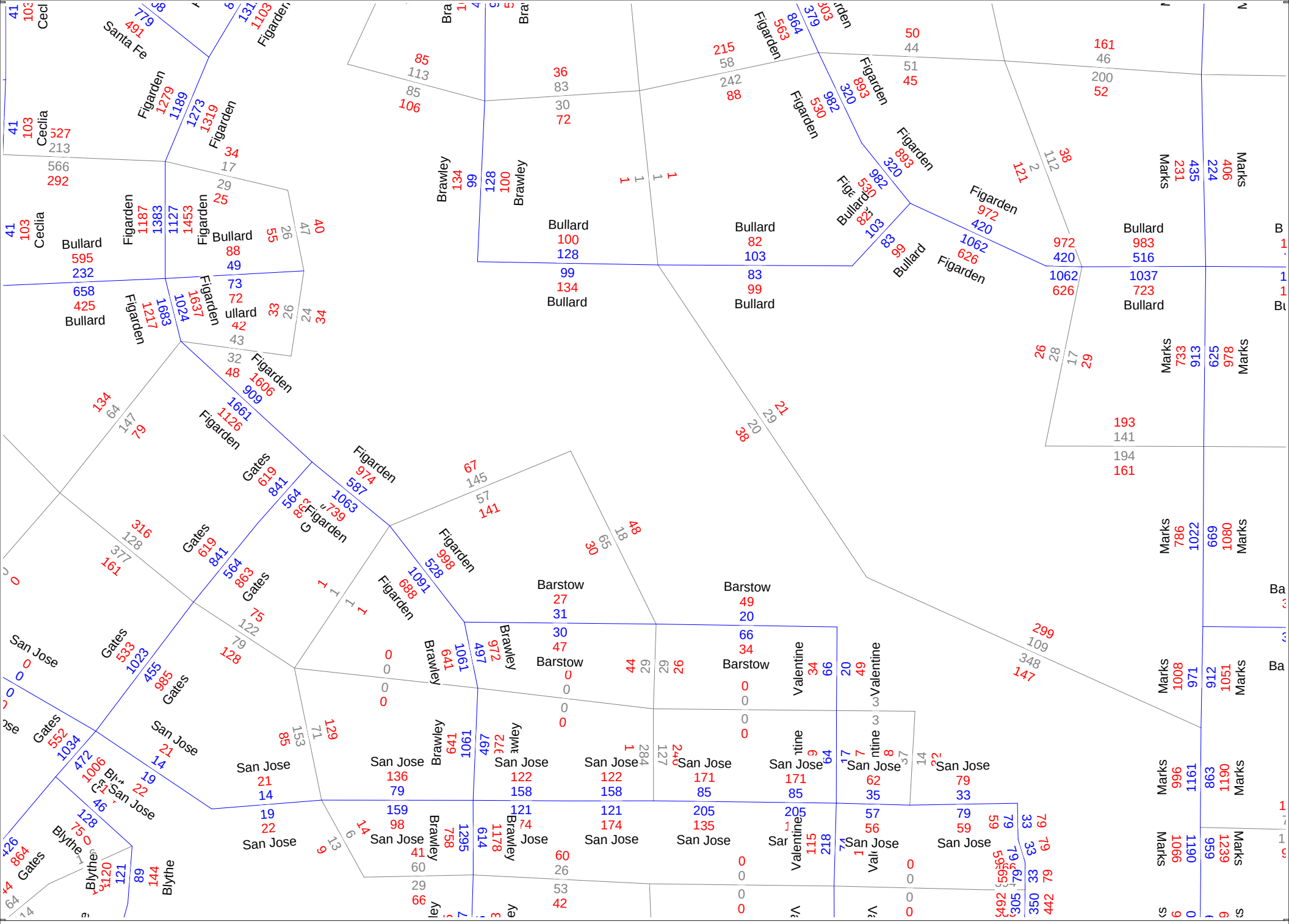
Fresno County Travel Model Loaded Network



2012 Council of Fresno County Governments Travel Deamand Model
AM and PM Peak Hour Traffic Volumes

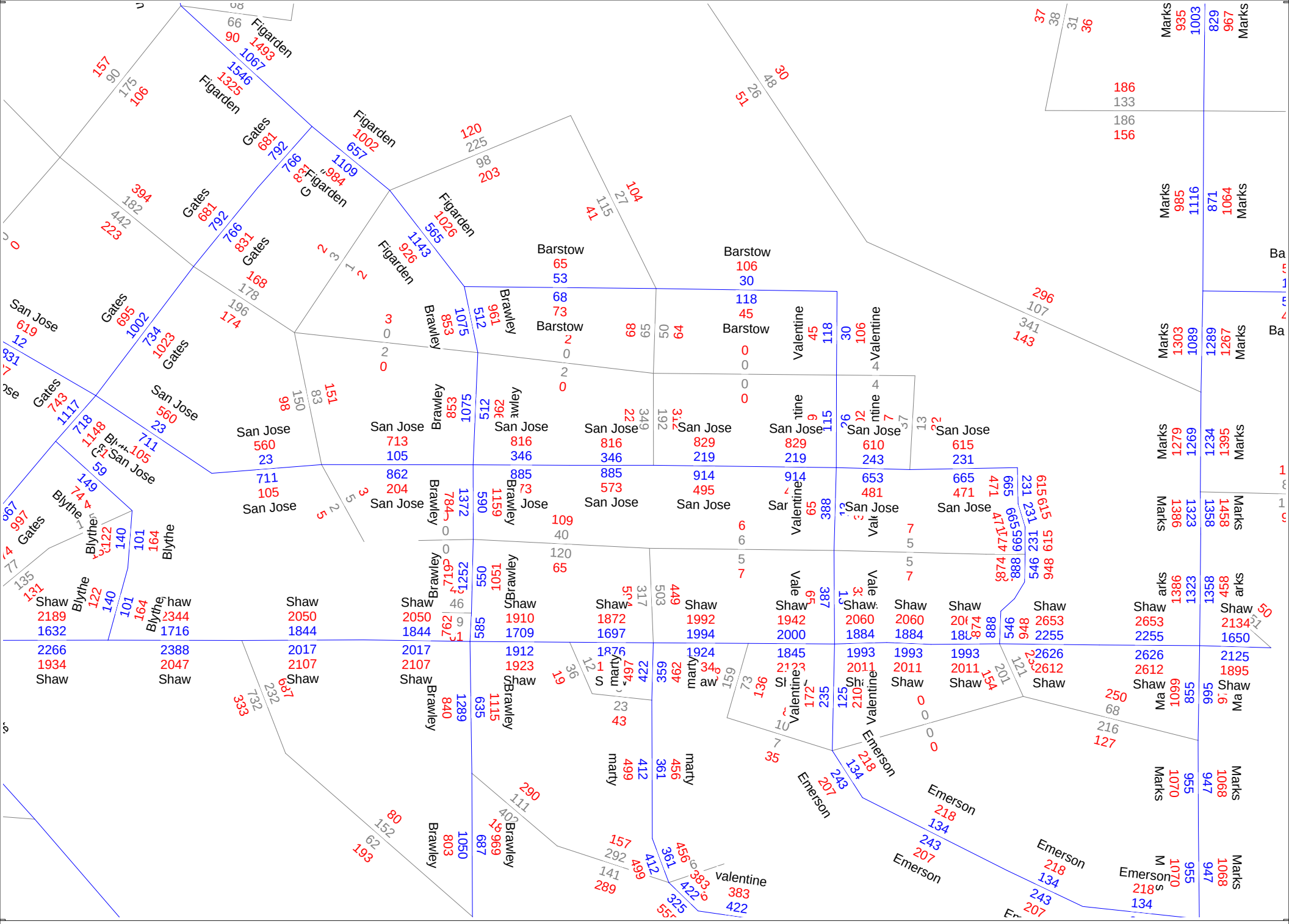
cube

Licensed to Peters Engineering



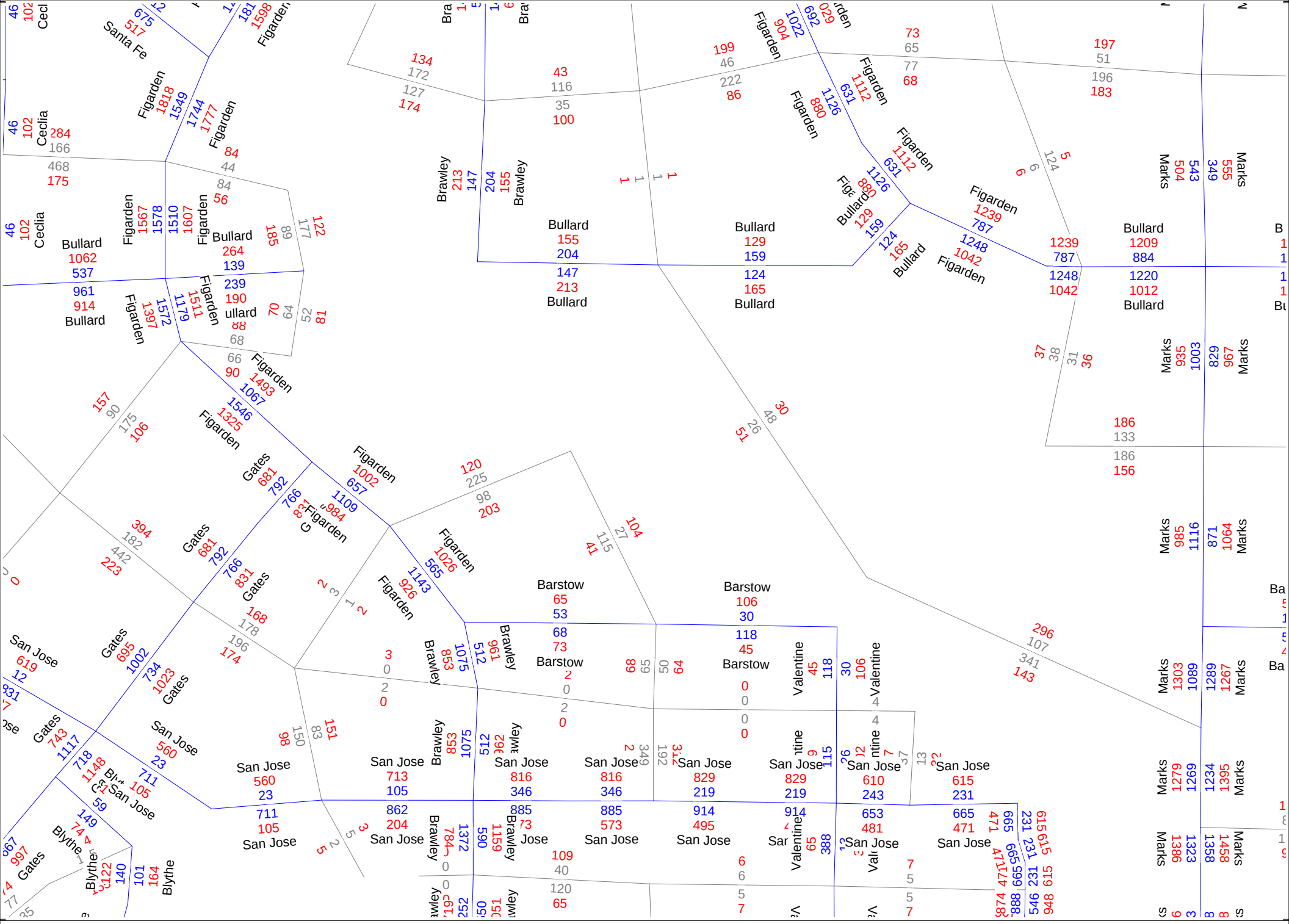
2012 Council of Fresno County Governments Travel Deamand Model
AM and PM Peak Hour Traffic Volumes

cube
Licensed to Peters Engineering



2035 Council of Fresno County Governments Travel Demand Model
AM and PM Peak Hour Traffic Volumes

cube
Licensed to Peters Engineering



2035 Council of Fresno County Governments Travel Demand Model
AM and PM Peak Hour Traffic Volumes

cube
Licensed to Peters Engineering

APPENDIX C

TRAFFIC COUNT DATA SHEETS

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8031_001

Day: WEDNESDAY

City: City of Fresno

Date: 5/1/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
7:00 AM	15	45	13	35	131	39	15	64	12	24	102	7	502
7:15 AM	19	36	10	35	171	33	10	111	16	19	98	17	575
7:30 AM	23	39	11	47	212	33	16	153	17	24	118	14	707
7:45 AM	34	60	10	49	120	42	13	164	19	26	136	18	691
8:00 AM	18	62	16	58	115	29	16	120	15	23	133	19	624
8:15 AM	47	41	8	43	98	31	18	162	19	23	94	22	606
8:30 AM	33	46	15	41	99	36	28	153	26	27	137	28	669
8:45 AM	36	41	14	55	70	36	28	175	24	18	123	25	645
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	225	370	97	363	1016	279	144	1102	148	184	941	150	5019
APPROACH %'s :	32.51%	53.47%	14.02%	21.89%	61.28%	16.83%	10.33%	79.05%	10.62%	14.43%	73.80%	11.76%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	122	202	45	197	545	135	63	599	70	96	481	73	2628
PEAK HR FACTOR :		0.887			0.751			0.920			0.903		0.929

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8031_001

Day: WEDNESDAY

City: City of Fresno

Date: 5/1/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
4:00 PM	57	119	32	53	66	32	51	213	41	32	216	35	947
4:15 PM	57	106	24	65	65	21	59	233	28	39	259	30	986
4:30 PM	42	99	31	57	72	23	50	245	40	47	257	36	999
4:45 PM	58	110	24	53	76	25	55	214	48	46	274	40	1023
5:00 PM	58	132	34	67	81	32	54	258	61	43	271	37	1128
5:15 PM	60	122	31	61	94	33	65	239	60	39	283	36	1123
5:30 PM	54	136	31	92	75	36	54	250	85	47	250	35	1145
5:45 PM	67	108	17	60	71	24	59	206	33	68	245	29	987
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	453	932	224	508	600	226	447	1858	396	361	2055	278	8338
APPROACH %'s :	28.15%	57.92%	13.92%	38.08%	44.98%	16.94%	16.55%	68.79%	14.66%	13.40%	76.28%	10.32%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	230	500	120	273	326	126	228	961	254	175	1078	148	4419
PEAK HR FACTOR :		0.949			0.893			0.927			0.973		0.965

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8043_001 **Day:** SATURDAY

City: City of Fresno **Date:** 5/11/2013

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:30 AM	60	62	21	67	65	30	48	289	37	41	248	26	994
11:45 AM	81	74	27	101	54	28	42	283	23	50	274	24	1061
12:00 PM	88	72	24	92	80	30	59	282	28	59	282	15	1111
12:15 PM	63	66	22	82	72	46	58	260	39	45	322	29	1104
12:30 PM	66	70	23	79	59	43	71	308	39	50	286	18	1112
12:45 PM	56	66	15	90	71	36	47	242	38	52	288	27	1028
1:00 PM	77	55	24	91	58	36	51	240	36	61	327	39	1095
1:15 PM	49	67	17	72	79	34	71	303	41	48	321	28	1130
1:30 PM	61	88	25	75	56	46	47	260	23	41	322	29	1073
1:45 PM	69	81	28	86	58	34	50	260	48	50	303	31	1098
2:00 PM	53	78	20	96	47	39	53	253	38	48	264	26	1015
2:15 PM	50	66	13	79	57	31	48	260	37	61	304	24	1030
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	773	845	259	1010	756	433	645	3240	427	606	3541	316	12851
APPROACH %'s :	41.18%	45.02%	13.80%	45.93%	34.38%	19.69%	14.96%	75.14%	9.90%	13.58%	79.34%	7.08%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	256	291	94	324	251	150	219	1063	148	200	1273	127	4396
PEAK HR FACTOR :		0.900			0.980			0.861			0.937		0.973

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

AM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
7:00 AM	8	40	51	8	56	6	3	84	16	22	99	8	401
7:15 AM	5	48	103	18	77	2	1	134	7	76	217	16	704
7:30 AM	7	34	123	24	71	0	3	140	4	85	173	8	672
7:45 AM	11	54	117	26	57	1	6	142	12	52	161	17	656
8:00 AM	6	27	97	26	58	2	4	117	28	64	127	14	570
8:15 AM	5	30	78	19	58	2	2	135	4	60	135	10	538
8:30 AM	9	43	95	13	50	1	2	181	5	60	134	12	605
8:45 AM	7	42	75	24	41	7	3	144	4	44	104	10	505
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	58	318	739	158	468	21	24	1077	80	463	1150	95	4651
APPROACH %'s :	5.20%	28.52%	66.28%	24.42%	72.33%	3.25%	2.03%	91.19%	6.77%	27.11%	67.33%	5.56%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	29	163	440	94	263	5	14	533	51	277	678	55	2602
PEAK HR FACTOR :		0.868			0.933			0.934			0.817		0.924

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
4:00 PM	10	70	101	24	38	4	2	186	12	90	271	28	836
4:15 PM	11	52	164	22	40	2	11	191	4	97	225	11	830
4:30 PM	13	56	134	29	61	1	3	150	9	66	247	16	785
4:45 PM	7	73	109	29	34	1	3	184	11	83	237	33	804
5:00 PM	8	73	129	14	42	1	9	191	6	84	270	28	855
5:15 PM	1	102	139	21	38	2	5	164	8	83	222	22	807
5:30 PM	10	62	121	31	31	1	2	197	5	78	248	30	816
5:45 PM	10	72	98	22	44	3	5	157	5	88	253	30	787
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	70	560	995	192	328	15	40	1420	60	669	1973	198	6520
APPROACH %'s :	4.31%	34.46%	61.23%	35.89%	61.31%	2.80%	2.63%	93.42%	3.95%	23.56%	69.47%	6.97%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	26	310	498	95	145	5	19	736	30	328	977	113	3282
PEAK HR FACTOR :		0.862			0.957			0.953			0.928		0.960

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: SATURDAY

City: City of Fresno

TOTALS

Date: 5/18/2013

NOON

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
12:30 PM	6	34	105	19	24	3	4	256	6	82	270	23	832
12:45 PM	14	70	71	15	27	5	2	153	19	54	179	31	640
1:00 PM	7	36	146	19	31	3	7	237	7	91	303	25	912
1:15 PM	12	47	131	29	27	4	5	235	7	61	286	21	865
1:30 PM	14	27	120	21	27	4	5	189	5	88	285	27	812
1:45 PM	12	30	115	24	19	7	4	181	8	73	272	29	774
2:00 PM	4	52	145	21	33	4	6	199	7	88	281	29	869
2:15 PM	10	40	131	22	20	3	2	171	7	98	276	38	818
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	79	336	964	170	208	33	35	1621	66	635	2152	223	6522
APPROACH %'s :	5.73%	24.37%	69.91%	41.36%	50.61%	8.03%	2.03%	94.13%	3.83%	21.10%	71.50%	7.41%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	45	140	512	93	104	18	21	842	27	313	1146	102	3363
PEAK HR FACTOR :		0.917			0.896			0.886			0.931		0.922

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002

City: City of Fresno

Day: THURSDAY

Date: 5/30/2013

TOTALS

AM

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
7:00 AM	8	0	5	25	2	42	23	76	4	9	109	21	324
7:15 AM	10	0	0	20	7	43	41	144	12	3	125	18	423
7:30 AM	5	0	4	17	5	31	29	151	5	3	111	15	376
7:45 AM	6	1	2	29	5	18	22	149	15	1	117	25	390
8:00 AM	4	0	0	19	3	26	33	152	10	14	135	22	418
8:15 AM	6	1	2	22	3	20	31	150	9	10	124	30	408
8:30 AM	5	1	1	30	6	9	27	165	8	7	106	27	392
8:45 AM	6	0	5	27	3	11	32	148	8	5	105	42	392
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	50	3	19	189	34	200	238	1135	71	52	932	200	3123
APPROACH %'s :	69.44%	4.17%	26.39%	44.68%	8.04%	47.28%	16.48%	78.60%	4.92%	4.39%	78.72%	16.89%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	21	2	8	98	15	66	123	615	35	36	470	121	1610
PEAK HR FACTOR :		0.705			0.932			0.966			0.917		0.963

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
4:00 PM	14	5	3	68	4	43	61	194	13	3	239	64	711
4:15 PM	7	1	9	83	0	49	55	189	6	4	158	63	624
4:30 PM	9	2	9	81	1	43	74	198	3	5	204	63	692
4:45 PM	9	6	7	71	0	39	78	201	4	6	242	57	720
5:00 PM	16	8	14	84	1	52	78	159	5	5	275	59	756
5:15 PM	3	5	5	61	2	35	85	197	3	3	215	65	679
5:30 PM	3	1	3	74	0	43	82	170	2	5	232	58	673
5:45 PM	4	5	3	48	1	27	73	162	4	1	233	66	627
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	65	33	53	570	9	331	586	1470	40	32	1798	495	5482
APPROACH %'s :	43.05%	21.85%	35.10%	62.64%	0.99%	36.37%	27.96%	70.13%	1.91%	1.38%	77.33%	21.29%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	37	21	35	297	4	169	315	755	15	19	936	244	2847
PEAK HR FACTOR :		0.612			0.858			0.952			0.884		0.941

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002

Day: SATURDAY

City: City of Fresno

TOTALS

Date: 5/18/2013

NOON

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
12:30 PM	5	1	2	82	1	28	55	256	1	4	234	79	748
12:45 PM	1	2	2	95	4	29	41	122	3	11	196	94	600
1:00 PM	8	2	4	77	0	32	78	279	8	3	218	100	809
1:15 PM	3	0	1	88	0	33	75	236	1	9	235	89	770
1:30 PM	6	2	2	64	1	37	72	206	4	4	262	84	744
1:45 PM	2	0	3	82	1	48	62	185	4	8	241	80	716
2:00 PM	5	1	5	79	1	39	80	197	1	6	239	93	746
2:15 PM	2	1	1	78	0	44	62	197	5	6	253	92	741
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	32	9	20	645	8	290	525	1678	27	51	1878	711	5874
APPROACH %'s :	52.46%	14.75%	32.79%	68.40%	0.85%	30.75%	23.54%	75.25%	1.21%	1.93%	71.14%	26.93%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	19	4	10	311	2	150	287	906	17	24	956	353	3039
PEAK HR FACTOR :		0.589			0.884			0.829			0.952		0.939

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

City: City of Fresno

TOTALS

AM

Day: THURSDAY

Date: 5/30/2013

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
7:00 AM	2		2	3	0	0	1	110	5	4	133	2	262
7:15 AM	5		3	5	0	3	1	152	7	4	149	4	333
7:30 AM	3		6	5	0	0	0	178	5	2	131	2	332
7:45 AM	3		0	3	0	0	0	169	13	10	160	6	364
8:00 AM	10		10	2	1	1	0	166	5	12	163	10	380
8:15 AM	4		3	2	0	2	2	175	8	7	154	9	366
8:30 AM	6		8	7	0	1	1	180	17	11	146	4	381
8:45 AM	10		8	7	0	2	1	170	9	6	165	5	383
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	43	0	40	34	1	9	6	1300	69	56	1201	42	2801
APPROACH %'s :	51.81%	0.00%	48.19%	77.27%	2.27%	20.45%	0.44%	94.55%	5.02%	4.31%	92.46%	3.23%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	30	0	29	18	1	6	4	691	39	36	628	28	1510
PEAK HR FACTOR :		0.738			0.694			0.927			0.935		0.986

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
4:00 PM	18	1	23	13	0	3	4	254	6	24	247	7	600
4:15 PM	12	2	16	9	0	4	8	246	9	15	249	15	585
4:30 PM	16	3	14	10	1	9	3	269	9	11	260	15	620
4:45 PM	16	0	7	20	1	5	6	249	6	16	285	12	623
5:00 PM	24	3	23	27	1	9	2	237	9	8	326	14	683
5:15 PM	10	0	13	14	0	4	2	261	1	11	273	18	607
5:30 PM	7	0	15	27	1	13	4	246	2	8	295	14	632
5:45 PM	6	1	13	14	1	10	4	198	5	13	272	12	549
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	109	10	124	134	5	57	33	1960	47	106	2207	107	4899
APPROACH %'s :	44.86%	4.12%	51.03%	68.37%	2.55%	29.08%	1.62%	96.08%	2.30%	4.38%	91.20%	4.42%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	57	3	58	88	3	31	14	993	18	43	1179	58	2545
PEAK HR FACTOR :		0.590			0.744			0.971			0.920		0.932

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

Day: SATURDAY

City: City of Fresno

Date: 5/18/2013

TOTALS

NOON

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
12:30 PM	11	1	14	23	1	7	6	326	3	13	305	16	726
12:45 PM	6	0	12	18	1	9	5	227	8	16	286	13	601
1:00 PM	6	0	7	22	0	6	14	339	7	19	300	9	729
1:15 PM	10	2	10	13	1	7	3	298	6	17	326	14	707
1:30 PM	14	1	4	22	2	9	3	270	8	21	283	18	655
1:45 PM	7	0	1	20	2	8	2	263	4	10	312	14	643
2:00 PM	10	1	7	15	0	8	6	271	6	14	329	14	681
2:15 PM	5	0	6	11	0	8	6	255	7	14	322	17	651
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	69	5	61	144	7	62	45	2249	49	124	2463	115	5393
APPROACH %'s :	51.11%	3.70%	45.19%	67.61%	3.29%	29.11%	1.92%	95.99%	2.09%	4.59%	91.15%	4.26%	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	33	3	43	76	3	29	28	1190	24	65	1217	52	2763
PEAK HR FACTOR :		0.760			0.871			0.863			0.934		0.948

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

AM

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
7:00 AM	18	23	29	11	31	3	1	65	21	31	114	2	349
7:15 AM	18	17	34	11	25	1	4	173	12	29	132	7	463
7:30 AM	25	28	46	16	42	5	10	155	13	40	100	3	483
7:45 AM	43	26	47	8	24	2	4	156	15	72	152	5	554
8:00 AM	21	26	38	13	32	7	7	156	16	44	179	6	545
8:15 AM	21	20	38	10	20	4	9	176	27	75	160	6	566
8:30 AM	23	18	41	17	22	7	11	172	22	64	137	12	546
8:45 AM	28	13	53	19	16	4	8	169	18	61	132	23	544
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	197	171	326	105	212	33	54	1222	144	416	1106	64	4050
APPROACH %'s :	28.39%	24.64%	46.97%	30.00%	60.57%	9.43%	3.80%	86.06%	10.14%	26.23%	69.74%	4.04%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	108	90	164	48	98	20	31	660	80	255	628	29	2211
PEAK HR FACTOR :		0.780			0.798			0.909			0.946		0.977

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

PM

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
4:00 PM	32	45	55	35	33	4	28	244	19	54	280	7	836
4:15 PM	31	28	52	28	29	5	16	257	16	55	215	11	743
4:30 PM	37	38	59	31	21	3	21	277	24	64	266	13	854
4:45 PM	42	36	62	17	19	2	15	270	20	63	289	13	848
5:00 PM	39	40	65	16	20	7	13	281	28	72	302	10	893
5:15 PM	31	61	55	23	32	5	13	267	12	57	261	13	830
5:30 PM	33	39	44	14	26	9	9	265	16	60	279	24	818
5:45 PM	23	30	47	23	28	6	14	225	10	65	268	14	753
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	268	317	439	187	208	41	129	2086	145	490	2160	105	6575
APPROACH %'s :	26.17%	30.96%	42.87%	42.89%	47.71%	9.40%	5.47%	88.39%	6.14%	17.79%	78.40%	3.81%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	149	175	241	87	92	17	62	1095	84	256	1118	49	3425
PEAK HR FACTOR :		0.961			0.817			0.964			0.926		0.959

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: SATURDAY

City: City of Fresno

TOTALS

Date: 5/18/2013

NOON

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
12:30 PM	22	33	71	34	34	13	26	330	27	66	268	18	942
12:45 PM	22	32	59	23	32	8	18	257	33	65	335	20	904
1:00 PM	39	35	63	38	25	11	21	298	26	68	309	14	947
1:15 PM	24	36	51	42	21	13	33	282	22	92	317	17	950
1:30 PM	34	28	60	26	40	15	27	299	34	72	314	25	974
1:45 PM	34	30	68	31	29	9	22	279	25	71	336	20	954
2:00 PM	40	35	61	19	38	16	13	256	26	71	355	17	947
2:15 PM	25	39	53	38	33	10	26	259	29	76	344	13	945
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	240	268	486	251	252	95	186	2260	222	581	2578	144	7563
APPROACH %'s :	24.14%	26.96%	48.89%	41.97%	42.14%	15.89%	6.97%	84.71%	8.32%	17.59%	78.05%	4.36%	
PEAK HR START TIME :	115 PM												TOTAL
PEAK HR VOL :	132	129	240	118	128	53	95	1116	107	306	1322	79	3825
PEAK HR FACTOR :		0.921			0.923			0.915			0.963		0.982

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

City: City of Fresno

Day: SATURDAY

Date: 5/18/2013

TOTALS

NOON

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
12:30 PM	43	31	11	38	18	15	46	365	32	22	303	18	942
12:45 PM	40	17	16	36	19	18	52	286	18	22	352	34	910
1:00 PM	32	28	12	36	23	11	39	308	26	19	323	20	877
1:15 PM	58	24	11	31	19	18	40	333	21	21	331	25	932
1:30 PM	38	15	12	43	19	15	45	319	22	24	370	18	940
1:45 PM	44	17	6	24	24	22	45	302	29	21	359	19	912
2:00 PM	47	20	13	30	17	25	32	280	31	19	343	25	882
2:15 PM	55	20	18	38	12	14	38	305	22	16	352	18	908
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	357	172	99	276	151	138	337	2498	201	164	2733	177	7303
APPROACH %'s :	56.85%	27.39%	15.76%	48.85%	26.73%	24.42%	11.10%	82.28%	6.62%	5.34%	88.91%	5.76%	
PEAK HR START TIME :	115 PM												TOTAL
PEAK HR VOL :	187	76	42	128	79	80	162	1234	103	85	1403	87	3666
PEAK HR FACTOR :		0.820			0.932			0.951			0.956		0.975

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

City: City of Fresno

Day: THURSDAY

Date: 5/30/2013

TOTALS

AM

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
7:00 AM	14	12	4	34	12	8	11	94	4	4	131	5	333
7:15 AM	8	15	2	43	16	12	14	176	15	8	154	15	478
7:30 AM	22	12	3	49	12	5	11	209	11	6	134	12	486
7:45 AM	22	18	0	49	18	4	10	194	16	16	211	23	581
8:00 AM	27	17	8	40	18	13	18	167	11	13	200	20	552
8:15 AM	23	14	9	43	17	11	21	186	8	19	212	15	578
8:30 AM	13	9	9	37	16	12	29	187	8	17	175	14	526
8:45 AM	21	10	6	41	15	5	27	203	18	8	199	20	573
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	150	107	41	336	124	70	141	1416	91	91	1416	124	4107
APPROACH %'s :	50.34%	35.91%	13.76%	63.40%	23.40%	13.21%	8.56%	85.92%	5.52%	5.58%	86.82%	7.60%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	85	58	26	169	69	40	78	734	43	65	798	72	2237
PEAK HR FACTOR :		0.813			0.979			0.954			0.935		0.963

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
4:00 PM	46	24	19	36	30	11	40	282	32	24	289	37	870
4:15 PM	32	33	14	27	27	13	34	265	32	25	266	26	794
4:30 PM	34	24	21	36	33	19	33	289	25	26	272	38	850
4:45 PM	33	25	26	35	24	9	28	277	31	17	315	24	844
5:00 PM	45	20	19	48	25	13	33	295	26	16	328	27	895
5:15 PM	29	27	24	33	19	10	29	292	31	9	313	25	841
5:30 PM	35	28	11	46	24	10	24	258	24	19	285	28	792
5:45 PM	44	28	20	31	17	25	35	260	22	18	318	39	857
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	298	209	154	292	199	110	256	2218	223	154	2386	244	6743
APPROACH %'s :	45.08%	31.62%	23.30%	48.59%	33.11%	18.30%	9.49%	82.24%	8.27%	5.53%	85.70%	8.76%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	141	96	90	152	101	51	123	1153	113	68	1228	114	3430
PEAK HR FACTOR :		0.973			0.864			0.981			0.950		0.958

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

City: City of Fresno

Day: THURSDAY

Date: 5/30/2013

TOTALS

AM

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
7:00 AM	7	4	18	27	8	3	2	109	16	17	135	6	352
7:15 AM	8	3	18	36	5	1	8	193	25	16	157	9	479
7:30 AM	4	5	27	58	10	2	9	218	21	29	151	18	552
7:45 AM	12	3	22	60	7	1	11	225	20	36	230	21	648
8:00 AM	18	8	26	47	12	2	20	196	18	39	234	21	641
8:15 AM	19	4	20	54	9	4	13	217	17	20	225	21	623
8:30 AM	15	5	20	58	7	2	12	203	28	13	216	20	599
8:45 AM	11	6	23	39	7	0	27	200	27	23	253	23	639
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	94	38	174	379	65	15	102	1561	172	193	1601	139	4533
APPROACH %'s :	30.72%	12.42%	56.86%	82.57%	14.16%	3.27%	5.56%	85.07%	9.37%	9.98%	82.82%	7.19%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	64	20	88	219	35	9	56	841	83	108	905	83	2511
PEAK HR FACTOR :		0.827			0.967			0.957			0.932		0.969

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
4:00 PM	31	15	24	48	10	4	31	316	34	28	347	21	909
4:15 PM	22	9	28	50	11	8	31	276	20	34	292	29	810
4:30 PM	19	21	27	56	6	3	18	329	23	25	331	31	889
4:45 PM	25	12	21	47	9	10	32	331	22	28	347	39	923
5:00 PM	34	22	23	57	12	9	24	312	20	36	317	26	892
5:15 PM	29	17	16	42	10	2	16	289	12	24	304	36	797
5:30 PM	27	14	19	45	8	2	43	270	13	33	302	43	819
5:45 PM	31	12	19	60	3	7	22	273	23	33	334	27	844
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	218	122	177	405	69	45	217	2396	167	241	2574	252	6883
APPROACH %'s :	42.17%	23.60%	34.24%	78.03%	13.29%	8.67%	7.81%	86.19%	6.01%	7.86%	83.93%	8.22%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	97	57	100	201	36	25	112	1252	99	115	1317	120	3531
PEAK HR FACTOR :		0.907			0.949			0.950			0.937		0.956

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

Day: SATURDAY

City: City of Fresno

TOTALS

Date: 5/18/2013

NOON

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
12:30 PM	33	19	27	60	18	16	34	298	37	29	272	49	892
12:45 PM	36	15	38	63	11	10	37	266	35	45	355	53	964
1:00 PM	46	19	33	68	19	18	34	292	22	41	300	46	938
1:15 PM	31	11	38	78	10	18	41	311	30	37	323	49	977
1:30 PM	50	17	34	45	10	21	46	289	29	42	367	55	1005
1:45 PM	36	10	36	61	10	23	37	256	36	47	321	47	920
2:00 PM	47	15	43	69	16	17	46	234	32	38	308	51	916
2:15 PM	46	14	28	57	12	12	43	295	19	36	333	48	943
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	325	120	277	501	106	135	318	2241	240	315	2579	398	7555
APPROACH %'s :	45.01%	16.62%	38.37%	67.52%	14.29%	18.19%	11.36%	80.06%	8.57%	9.57%	78.34%	12.09%	
PEAK HR START TIME :	1245 PM												TOTAL
PEAK HR VOL :	163	62	143	254	50	67	158	1158	116	165	1345	203	3884
PEAK HR FACTOR :		0.911			0.875			0.937			0.923		0.966

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

City: City of Fresno

Day: THURSDAY

Date: 5/30/2013

TOTALS

AM

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
7:00 AM	26	49	30	12	69	48	16	119	19	19	93	4	504
7:15 AM	31	61	39	38	100	44	21	171	21	20	136	10	692
7:30 AM	33	85	79	34	112	63	45	252	26	24	114	10	877
7:45 AM	53	101	76	46	83	88	42	245	22	31	191	22	1000
8:00 AM	60	113	53	55	87	72	49	181	21	32	195	14	932
8:15 AM	38	68	45	42	73	91	48	200	31	40	168	17	861
8:30 AM	37	43	34	32	57	52	39	195	33	29	146	6	703
8:45 AM	62	59	51	35	65	75	45	182	17	40	167	18	816
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	340	579	407	294	646	533	305	1545	190	235	1210	101	6385
APPROACH %'s :	25.64%	43.67%	30.69%	19.96%	43.86%	36.18%	14.95%	75.74%	9.31%	15.20%	78.27%	6.53%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	184	367	253	177	355	314	184	878	100	127	668	63	3670
PEAK HR FACTOR :		0.874			0.975			0.899			0.879		0.918

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
4:00 PM	55	59	20	26	78	63	72	253	48	63	278	22	1037
4:15 PM	77	85	30	28	85	82	66	202	61	53	256	24	1049
4:30 PM	98	85	31	51	69	78	76	250	50	46	265	22	1121
4:45 PM	89	95	31	46	94	63	99	243	47	53	256	32	1148
5:00 PM	70	95	36	21	98	53	82	285	47	71	283	36	1177
5:15 PM	86	107	29	51	75	79	83	245	40	58	279	29	1161
5:30 PM	94	103	33	43	95	95	83	194	50	61	257	32	1140
5:45 PM	79	89	27	46	77	66	62	217	60	48	287	17	1075
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	648	718	237	312	671	579	623	1889	403	453	2161	214	8908
APPROACH %'s :	40.42%	44.79%	14.78%	19.97%	42.96%	37.07%	21.37%	64.80%	13.83%	16.02%	76.41%	7.57%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	339	400	129	161	362	290	347	967	184	243	1075	129	4626
PEAK HR FACTOR :		0.943			0.872			0.905			0.928		0.983

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

City: City of Fresno

Day: SATURDAY

Date: 5/18/2013

TOTALS

NOON

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
12:30 PM	87	61	34	27	55	61	96	249	54	46	251	19	1040
12:45 PM	103	61	46	52	70	73	56	247	66	59	293	14	1140
1:00 PM	100	49	44	51	75	62	74	249	57	56	271	12	1100
1:15 PM	92	41	41	45	64	64	82	278	67	50	292	14	1130
1:30 PM	116	54	41	52	70	74	69	239	44	67	291	21	1138
1:45 PM	95	58	33	69	77	73	102	214	53	57	248	18	1097
2:00 PM	119	69	36	51	79	76	82	225	62	39	251	19	1108
2:15 PM	94	68	34	36	62	71	77	258	43	52	256	15	1066
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	806	461	309	383	552	554	638	1959	446	426	2153	132	8819
APPROACH %'s :	51.14%	29.25%	19.61%	25.72%	37.07%	37.21%	20.97%	64.38%	14.66%	15.71%	79.42%	4.87%	
PEAK HR START TIME :	1245 PM												TOTAL
PEAK HR VOL :	411	205	172	200	279	273	281	1013	234	232	1147	61	4508
PEAK HR FACTOR :		0.934			0.959			0.895			0.950		0.989

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_009

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

AM

NS/EW Streets:	Figarden Dr			Figarden Dr			Gates Ave			Gates Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	1	2	0	1	0	1	0	
7:00 AM	19	75	0	0	155	101	41	0	14	0			405
7:15 AM	15	86	0	0	219	109	62	0	12	0			503
7:30 AM	24	122	0	1	231	118	67	0	8	1			572
7:45 AM	21	120	0	1	231	121	74	0	15	0			583
8:00 AM	19	139	1	0	219	103	91	1	13	0			586
8:15 AM	16	113	0	0	179	121	55	0	10	0			494
8:30 AM	4	123	0	0	172	72	51	0	10	0			432
8:45 AM	13	116	0	0	184	81	62	0	9	0			465
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	131	894	1	2	1590	826	503	1	91	1	0	0	4040
APPROACH %'s :	12.77%	87.13%	0.10%	0.08%	65.76%	34.16%	84.54%	0.17%	15.29%	100.00%	0.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	79	467	1	2	900	451	294	1	48	1	0	0	2244
PEAK HR FACTOR :		0.860			0.958			0.817			0.250		0.957

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_009

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Figarden Dr			Figarden Dr			Gates Ave			Gates Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	1	2	0	1	0	1	0	
4:00 PM	21	240	0	0	194	73	134	0	16	0		0	678
4:15 PM	14	225	0	0	157	81	121	0	13	0		0	611
4:30 PM	13	233	2	1	170	78	140	4	18	0		3	662
4:45 PM	22	240	0	1	183	82	132	4	18	0		0	682
5:00 PM	18	253	0	2	196	66	152	1	19	0		0	707
5:15 PM	20	239	1	2	178	93	117	2	21	0		1	674
5:30 PM	33	236	1	3	190	98	151	1	29	1		1	744
5:45 PM	21	242	0	1	198	108	112	3	21	0		0	706
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	162	1908	4	10	1466	679	1059	15	155	1	0	5	5464
APPROACH %'s :	7.81%	92.00%	0.19%	0.46%	68.03%	31.51%	86.17%	1.22%	12.61%	16.67%	0.00%	83.33%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	92	970	2	8	762	365	532	7	90	1	0	2	2831
PEAK HR FACTOR :		0.982			0.924			0.869			0.375		0.951

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_009

Day: SATURDAY

City: City of Fresno

Date: 5/18/2013

TOTALS

NOON

NS/EW Streets:	Figarden Dr			Figarden Dr			Gates Ave			Gates Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	1	2	0	1	0	1	0	
12:30 PM	13	203			183	81	113		11				604
12:45 PM	13	183			178	79	99		21				573
1:00 PM	18	194			200	87	92		15				606
1:15 PM	18	162			142	90	95		23				530
1:30 PM	15	178			207	89	78		31				598
1:45 PM	10	177			199	91	99		9				585
2:00 PM	8	173			191	81	93		12				558
2:15 PM	18	181			181	67	99		15				561
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	113	1451	0	0	1481	665	768	0	137	0	0	0	4615
APPROACH %'s :	7.23%	92.77%	0.00%	0.00%	69.01%	30.99%	84.86%	0.00%	15.14%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	61	711	0	0	748	357	364	0	78	0	0	0	2319
PEAK HR FACTOR :		0.910			0.933			0.936			0.000		0.957

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_010

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	1	1	
7:00 AM	10	47	14	28	148	5	5	19	10	14	18	20	338
7:15 AM	5	47	6	25	214	2	1	18	14	21	23	26	402
7:30 AM	12	92	3	32	209	4	2	26	21	20	28	31	480
7:45 AM	14	74	6	48	184	2	2	25	19	12	26	34	446
8:00 AM	15	84	7	37	184	3	6	32	16	10	24	33	451
8:15 AM	9	84	6	55	152	2	1	10	9	8	18	20	374
8:30 AM	5	74	7	43	141	0	1	10	12	12	16	37	358
8:45 AM	11	77	5	37	151	0	2	11	8	5	10	26	343
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	81	579	54	305	1383	18	20	151	109	102	163	227	3192
APPROACH %'s :	11.34%	81.09%	7.56%	17.88%	81.07%	1.06%	7.14%	53.93%	38.93%	20.73%	33.13%	46.14%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	46	297	22	142	791	11	11	101	70	63	101	124	1779
PEAK HR FACTOR :		0.853			0.963			0.843			0.911		0.927

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_010

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	1	1	
4:00 PM	12	178	14	31	147	3	2	17	10	11	21	56	502
4:15 PM	21	166	12	29	128	1	4	18	13	13	24	52	481
4:30 PM	14	159	12	36	121	3	6	27	11	10	19	70	488
4:45 PM	15	216	15	43	121	0	5	25	11	9	13	46	519
5:00 PM	14	211	17	38	150	4	5	24	20	12	17	55	567
5:15 PM	16	214	11	50	147	2	3	21	19	6	23	73	585
5:30 PM	14	174	19	48	130	3	2	19	19	14	14	67	523
5:45 PM	15	176	13	46	164	1	2	17	17	10	26	53	540
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	121	1494	113	321	1108	17	29	168	120	85	157	472	4205
APPROACH %'s :	7.00%	86.46%	6.54%	22.20%	76.63%	1.18%	9.15%	53.00%	37.85%	11.90%	21.99%	66.11%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	59	775	60	182	591	10	12	81	75	42	80	248	2215
PEAK HR FACTOR :		0.924			0.928			0.857			0.907		0.947

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_010

Day: SATURDAY

City: City of Fresno

TOTALS

Date: 5/25/2013

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	1	1	
12:30 PM	10	128	10	26	152	2	1	14	12	14	12	56	437
12:45 PM	14	139	11	39	146	1	2	15	9	5	14	43	438
1:00 PM	9	120	16	33	148	0	2	9	12	13	19	57	438
1:15 PM	10	98	12	50	117	1	1	13	8	8	11	60	389
1:30 PM	11	129	17	34	155	0	1	15	17	10	13	56	458
1:45 PM	12	114	10	47	160	0	3	11	10	6	7	63	443
2:00 PM	13	128	10	38	140	1	0	11	10	13	13	48	425
2:15 PM	13	115	15	39	135	1	3	11	9	13	15	54	423
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	92	971	101	306	1153	6	13	99	87	82	104	437	3451
APPROACH %'s :	7.90%	83.42%	8.68%	20.89%	78.70%	0.41%	6.53%	49.75%	43.72%	13.16%	16.69%	70.14%	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	49	486	52	158	590	2	7	48	46	42	48	221	1749
PEAK HR FACTOR :		0.935			0.906			0.765			0.948		0.955

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_011

City: City of Fresno

Day: SATURDAY

Date: 5/25/2013

TOTALS

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Site Access			Site Access			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	0	1	0	0	1	
12:30 PM	16	125	21	25	151					0		18	356
12:45 PM	8	139	17	29	132					0		20	345
1:00 PM	10	123	23	33	147					1		16	353
1:15 PM	9	102	16	20	119					0		12	278
1:30 PM	13	136	24	37	149					0		17	376
1:45 PM	7	128	18	26	154					0		6	339
2:00 PM	14	129	28	27	147					0		18	363
2:15 PM	4	136	13	26	147					0		10	336
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	81	1018	160	223	1146	0	0	0	0	1	0	117	2746
APPROACH %'s :	6.43%	80.86%	12.71%	16.29%	83.71%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.85%	0.00%	99.15%	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	38	529	83	116	597	0	0	0	0	0	0	51	1414
PEAK HR FACTOR :		0.939			0.958			0.000			0.708		0.940

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_012

Day: SATURDAY

City: City of Fresno

TOTALS

Date: 5/25/2013

NOON

NS/EW Streets:	Valentine Ave			Valentine Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	0	1	2	0	
12:30 PM	23	29	1	9	20	5	7	21	27	2	32	20	196
12:45 PM	19	34	1	14	22	8	7	39	29	3	20	16	212
1:00 PM	27	32	4	15	31	7	8	25	16	4	32	19	220
1:15 PM	14	27	2	12	22	8	7	30	34	4	28	19	207
1:30 PM	18	37	5	12	33	7	7	34	21	1	36	20	231
1:45 PM	16	29	0	19	21	7	13	33	25	6	36	25	230
2:00 PM	20	21	5	19	17	7	11	30	26	4	32	20	212
2:15 PM	19	23	1	7	22	13	8	41	24	2	38	30	228
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	156	232	19	107	188	62	68	253	202	26	254	169	1736
APPROACH %'s :	38.33%	57.00%	4.67%	29.97%	52.66%	17.37%	13.00%	48.37%	38.62%	5.79%	56.57%	37.64%	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	73	110	11	57	93	34	39	138	96	13	142	95	901
PEAK HR FACTOR :		0.808			0.885			0.935			0.893		0.975

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_012

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

AM

NS/EW Streets:	Valentine Ave			Valentine Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	0	1	2	0	
7:00 AM	7	12	1	6	38	14	3	12	9	0	13	3	118
7:15 AM	13	12	0	7	33	22	6	19	23	1	15	1	152
7:30 AM	11	11	0	20	32	24	5	32	25	0	14	5	179
7:45 AM	21	16	0	18	34	12	7	29	29	0	13	4	183
8:00 AM	16	18	0	17	31	15	11	25	28	3	20	8	192
8:15 AM	14	15	6	14	20	8	5	37	24	8	15	11	177
8:30 AM	14	9	0	11	27	9	4	27	17	0	12	3	133
8:45 AM	8	13	1	15	28	12	3	25	22	6	13	9	155
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	104	106	8	108	243	116	44	206	177	18	115	44	1289
APPROACH %'s :	47.71%	48.62%	3.67%	23.13%	52.03%	24.84%	10.30%	48.24%	41.45%	10.17%	64.97%	24.86%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	62	60	6	69	117	59	28	123	106	11	62	28	731
PEAK HR FACTOR :		0.865			0.806			0.973			0.743		0.952

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_012

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Valentine Ave			Valentine Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	0	1	2	0	
4:00 PM	22	41	1	10	28	7	17	23	27	4	32	21	233
4:15 PM	21	32	3	12	27	10	11	27	23	5	33	22	226
4:30 PM	32	36	0	5	17	10	9	25	28	2	28	27	219
4:45 PM	20	38	2	8	29	5	15	36	25	1	35	27	241
5:00 PM	27	34	1	9	32	9	13	33	32	6	27	30	253
5:15 PM	21	36	3	13	22	8	15	32	36	4	43	32	265
5:30 PM	20	52	2	15	25	11	24	34	23	2	39	35	282
5:45 PM	24	50	2	10	21	8	15	32	31	4	37	27	261
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	187	319	14	82	201	68	119	242	225	28	274	221	1980
APPROACH %'s :	35.96%	61.35%	2.69%	23.36%	57.26%	19.37%	20.31%	41.30%	38.40%	5.35%	52.39%	42.26%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	92	172	8	47	100	36	67	131	122	16	146	124	1061
PEAK HR FACTOR :		0.895			0.897			0.964			0.905		0.941

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_013

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

AM

NS/EW Streets:	Marty Ave			Marty Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	0	2	0	
7:00 AM	10		8	0				27	15	15	18		93
7:15 AM	21		7	0				42	18	13	37		138
7:30 AM	30		8	0				50	26	7	43		164
7:45 AM	17		11	1				60	15	18	38		160
8:00 AM	21		8	1				59	15	17	39		160
8:15 AM	15		7	0				53	15	8	32		130
8:30 AM	20		9	0				41	16	11	28		125
8:45 AM	13		2	0				51	5	4	24		99
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	147	0	60	2	0	0	0	383	125	93	259	0	1069
APPROACH %'s :	71.01%	0.00%	28.99%	100.00%	0.00%	0.00%	0.00%	75.39%	24.61%	26.42%	73.58%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	89	0	34	2	0	0	0	211	74	55	157	0	622
PEAK HR FACTOR :		0.809			0.500			0.938			0.946		0.948

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_013

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Marty Ave			Marty Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	0	2	0	
4:00 PM	34		18					43	17	12	57		181
4:15 PM	25		24					40	15	15	54		173
4:30 PM	40		11					55	16	7	53		182
4:45 PM	33		12					65	19	10	42		181
5:00 PM	43		16					61	12	4	42		178
5:15 PM	31		24					55	12	9	59		190
5:30 PM	28		17					61	13	7	54		180
5:45 PM	21		24					52	10	5	50		162
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	255	0	146	0	0	0	0	432	114	69	411	0	1427
APPROACH %'s :	63.59%	0.00%	36.41%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	79.12%	20.88%	14.38%	85.63%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	147	0	63	0	0	0	0	236	59	30	196	0	731
PEAK HR FACTOR :		0.890			0.000			0.878			0.831		0.962

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_013

City: City of Fresno

Day: SATURDAY

Date: 5/25/2013

TOTALS

NOON

NS/EW Streets:	Marty Ave			Marty Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	0	2	0	
12:30 PM	25		12					42	13	6	53		151
12:45 PM	26		17					60	13	10	41		167
1:00 PM	31		9					44	17	13	61		175
1:15 PM	42		12					61	17	8	42		182
1:30 PM	31		13					49	18	13	49		173
1:45 PM	26		13					64	15	12	48		178
2:00 PM	19		18					48	14	16	49		164
2:15 PM	29		21					63	11	14	57		195
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	229	0	115	0	0	0	0	431	118	92	400	0	1385
APPROACH %'s :	66.57%	0.00%	33.43%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	78.51%	21.49%	18.70%	81.30%	0.00%	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	105	0	65	0	0	0	0	224	58	55	203	0	710
PEAK HR FACTOR :		0.850			0.000			0.892			0.908		0.910

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_014

City: City of Fresno

Day: THURSDAY

Date: 5/30/2013

TOTALS

AM

NS/EW Streets:	Gates Ave			Gates Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	0	
7:00 AM	6	34	15	1	125	0	0	0	10	11	2	1	205
7:15 AM	8	63	8	2	138	1	0	7	14	16	3	2	262
7:30 AM	3	47	5	4	155	0	4	2	20	14	2	1	257
7:45 AM	3	55	7	5	138	0	3	1	13	9	4	4	242
8:00 AM	7	72	12	3	144	2	3	3	11	12	3	8	280
8:15 AM	2	61	8	1	131	2	0	3	13	19	2	0	242
8:30 AM	2	51	6	3	82	2	0	4	4	11	3	4	172
8:45 AM	9	66	8	0	100	1	1	3	9	10	1	2	210
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	40	449	69	19	1013	8	11	23	94	102	20	22	1870
APPROACH %'s :	7.17%	80.47%	12.37%	1.83%	97.40%	0.77%	8.59%	17.97%	73.44%	70.83%	13.89%	15.28%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	21	237	32	14	575	3	10	13	58	51	12	15	1041
PEAK HR FACTOR :		0.797			0.931			0.779			0.848		0.929

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_014

City: City of Fresno

Day: THURSDAY

Date: 5/30/2013

TOTALS

PM

NS/EW Streets:	Gates Ave			Gates Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	0	
4:00 PM	7	148	16	1	88	0	0	2	9	14	4	5	294
4:15 PM	14	128	26	3	94	1	1	3	4	12	4	2	292
4:30 PM	7	179	33	4	95	1	2	1	3	7	3	1	336
4:45 PM	9	144	22	2	73	0	1	0	4	4	3	1	263
5:00 PM	13	170	45	0	75	0	1	0	6	9	1	2	322
5:15 PM	16	159	30	8	109	1	1	1	5	14	2	1	347
5:30 PM	10	162	27	8	95	1	1	2	11	8	1	2	328
5:45 PM	7	131	17	5	99	1	0	2	10	8	6	7	293
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	83	1221	216	31	728	5	7	11	52	76	24	21	2475
APPROACH %'s :	5.46%	80.33%	14.21%	4.06%	95.29%	0.65%	10.00%	15.71%	74.29%	62.81%	19.83%	17.36%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	46	622	119	21	378	3	3	5	32	39	10	12	1290
PEAK HR FACTOR :		0.863			0.852			0.714			0.726		0.929

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_014

Day: SATURDAY

City: City of Fresno

TOTALS

Date: 5/25/2013

NOON

NS/EW Streets:	Gates Ave			Gates Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	0	
12:30 PM	4	108	21	6	96	0	3	2	9	8	3	5	265
12:45 PM	7	117	13	2	97	0	1	2	2	12	5	4	262
1:00 PM	9	112	16	2	89	3	1	0	9	16	6	2	265
1:15 PM	9	114	9	3	103	1	0	2	3	7	2	3	256
1:30 PM	3	99	19	2	98	0	0	1	18	13	1	3	257
1:45 PM	6	98	12	1	104	2	0	0	8	9	1	4	245
2:00 PM	9	119	11	4	88	1	1	4	7	9	1	2	256
2:15 PM	11	112	6	3	83	2	1	5	8	17	1	6	255
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	58	879	107	23	758	9	7	16	64	91	20	29	2061
APPROACH %'s :	5.56%	84.20%	10.25%	2.91%	95.95%	1.14%	8.05%	18.39%	73.56%	65.00%	14.29%	20.71%	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	29	451	59	13	385	4	5	6	23	43	16	14	1048
PEAK HR FACTOR :		0.984			0.939			0.607			0.760		0.989

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_015

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

AM

NS/EW Streets:	Figarden Ave			Figarden Ave			Bullard Ave			Bullard Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	1	1	1	2	1	
7:00 AM	34	89	0	12	170	25	53	7	84	10	7	20	511
7:15 AM	35	116	1	16	211	24	70	10	111	12	16	21	643
7:30 AM	44	164	2	25	237	24	117	9	119	9	8	34	792
7:45 AM	40	167	6	26	215	35	123	9	122	19	8	23	793
8:00 AM	51	172	3	25	201	43	77	10	100	24	8	24	738
8:15 AM	53	111	4	15	206	58	60	12	77	18	8	19	641
8:30 AM	46	114	3	29	144	31	65	11	92	11	8	16	570
8:45 AM	47	124	10	19	163	30	62	7	87	26	14	12	601
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	350	1057	29	167	1547	270	627	75	792	129	77	169	5289
APPROACH %'s :	24.37%	73.61%	2.02%	8.42%	77.97%	13.61%	41.97%	5.02%	53.01%	34.40%	20.53%	45.07%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	170	619	12	92	864	126	387	38	452	64	40	102	2966
PEAK HR FACTOR :		0.886			0.946			0.863			0.920		0.935

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_015

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

PM

NS/EW Streets:	Figarden Ave			Figarden Ave			Bullard Ave			Bullard Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	1	1	1	2	1	
4:00 PM	107	234	15	27	184	59	39	10	79	20	21	14	809
4:15 PM	97	220	11	24	154	61	39	12	71	35	21	16	761
4:30 PM	117	251	12	38	163	61	49	15	64	18	19	6	813
4:45 PM	114	236	7	38	152	52	40	23	70	21	27	6	786
5:00 PM	124	226	15	45	174	63	56	15	87	26	34	22	887
5:15 PM	101	227	14	46	156	73	52	16	75	22	26	17	825
5:30 PM	115	237	16	36	197	78	56	12	58	16	48	20	889
5:45 PM	118	222	22	32	167	75	65	15	109	28	30	10	893
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	893	1853	112	286	1347	522	396	118	613	186	226	111	6663
APPROACH %'s :	31.25%	64.84%	3.92%	13.27%	62.51%	24.22%	35.14%	10.47%	54.39%	35.56%	43.21%	21.22%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	458	912	67	159	694	289	229	58	329	92	138	69	3494
PEAK HR FACTOR :		0.976			0.918			0.815			0.890		0.978

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_015

Day: SATURDAY

City: City of Fresno

Date: 5/25/2013

TOTALS

NOON

NS/EW Streets:	Figarden Ave			Figarden Ave			Bullard Ave			Bullard Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	1	1	1	2	1	
12:30 PM	99	186	15	39	142	58	54	11	80	33	16	28	761
12:45 PM	99	185	5	37	163	40	41	13	76	31	23	19	732
1:00 PM	88	157	8	41	154	40	57	14	85	15	22	21	702
1:15 PM	93	145	9	38	151	47	47	14	76	20	18	16	674
1:30 PM	90	174	12	47	152	44	42	12	82	33	24	15	727
1:45 PM	78	160	15	45	178	59	50	12	87	26	22	12	744
2:00 PM	88	156	11	42	152	40	58	14	85	21	19	19	705
2:15 PM	94	154	9	35	148	45	47	11	78	22	17	18	678
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	729	1317	84	324	1240	373	396	101	649	201	161	148	5723
APPROACH %'s :	34.23%	61.83%	3.94%	16.73%	64.02%	19.26%	34.55%	8.81%	56.63%	39.41%	31.57%	29.02%	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	379	673	37	155	610	185	199	52	317	99	79	84	2869
PEAK HR FACTOR :		0.908			0.990			0.910			0.851		0.943

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_016

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			Barstow Ave			Barstow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	1	0	
7:00 AM	0	66	3	17	156					24		23	289
7:15 AM	0	65	3	23	215					21		31	358
7:30 AM	1	109	6	25	231					16		33	421
7:45 AM	0	96	3	36	208					16		28	387
8:00 AM	0	122	4	33	199					10		33	401
8:15 AM	1	99	6	31	172					10		25	344
8:30 AM	0	108	5	18	180					7		13	331
8:45 AM	0	105	0	30	168					4		23	330
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	770	30	213	1529	0	0	0	0	108	0	209	2861
APPROACH %'s :	0.25%	96.01%	3.74%	12.23%	87.77%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	34.07%	0.00%	65.93%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	392	16	117	853	0	0	0	0	63	0	125	1567
PEAK HR FACTOR :		0.812			0.947			0.000			0.904		0.931

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_016

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			Barstow Ave			Barstow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	1	0	
4:00 PM		221	8	33	186					6		41	495
4:15 PM		188	8	30	141					10		44	421
4:30 PM		210	10	33	150					6		51	460
4:45 PM		229	14	31	170					1		37	482
5:00 PM		242	14	41	197					10		54	558
5:15 PM		241	16	31	170					8		33	499
5:30 PM		221	9	47	164					6		60	507
5:45 PM		220	15	31	205					8		52	531
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1772	94	277	1383	0	0	0	0	55	0	372	3953
APPROACH %'s :	0.00%	94.96%	5.04%	16.69%	83.31%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	12.88%	0.00%	87.12%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	924	54	150	736	0	0	0	0	32	0	199	2095
PEAK HR FACTOR :		0.951			0.931			0.000			0.875		0.939

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_016

Day: SATURDAY

City: City of Fresno

Date: 5/25/2013

TOTALS

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Barstow Ave			Barstow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	1	0	
12:30 PM		160	8	24	167					4		42	405
12:45 PM		176	7	29	172					8		39	431
1:00 PM		158	8	32	173					5		40	416
1:15 PM		150	15	26	158					6		42	397
1:30 PM		167	10	29	192					10		41	449
1:45 PM		155	5	27	196					8		42	433
2:00 PM		168	7	35	175					7		32	424
2:15 PM		159	8	18	181					14		38	418
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1293	68	220	1414	0	0	0	0	62	0	316	3373
APPROACH %'s :	0.00%	95.00%	5.00%	13.46%	86.54%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	16.40%	0.00%	83.60%	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	0	649	30	109	744	0	0	0	0	39	0	153	1724
PEAK HR FACTOR :		0.959			0.956			0.000			0.923		0.960

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

NOON

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
11:00 AM	12	33	83	35	38	1	6	151	12	72	177	19	639
11:15 AM	6	24	78	25	23	0	4	171	2	68	198	15	614
11:30 AM	11	34	122	24	26	1	2	173	8	66	187	24	678
11:45 AM	4	46	100	40	26	1	8	157	16	77	203	22	700
12:00 PM	10	23	108	27	26	4	3	188	8	79	217	20	713
12:15 PM	4	30	239	31	26	11	2	178	9	78	227	24	859
12:30 PM	9	29	104	23	37	2	7	142	11	75	229	23	691
12:45 PM	7	28	101	27	25	1	5	167	9	78	245	19	712
1:00 PM	10	43	94	17	25	2	4	174	6	101	256	23	755
1:15 PM	9	36	77	16	25	3	2	173	8	70	222	20	661
1:30 PM	8	31	77	19	38	1	0	154	13	79	237	18	675
1:45 PM	10	30	59	15	34	2	6	173	5	86	209	16	645
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	100	387	1242	299	349	29	49	2001	107	929	2607	243	8342
APPROACH %'s :	5.78%	22.38%	71.83%	44.17%	51.55%	4.28%	2.27%	92.77%	4.96%	24.58%	68.99%	6.43%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	30	130	538	98	113	16	18	661	35	332	957	89	3017
PEAK HR FACTOR :		0.639			0.835			0.944			0.907		0.878

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

NOON

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
11:00 AM	7	2	6	62	3	22	56	153	3	4	149	72	539
11:15 AM	9	0	2	65	6	15	52	163	8	7	161	59	547
11:30 AM	9	6	10	73	3	16	39	162	5	11	175	70	579
11:45 AM	9	4	6	70	3	19	59	161	9	6	229	70	645
12:00 PM	11	4	8	73	4	21	42	157	9	13	178	78	598
12:15 PM	8	1	5	94	7	37	65	153	5	2	189	76	642
12:30 PM	7	7	2	92	4	26	45	176	11	9	226	76	681
12:45 PM	8	0	5	73	3	30	34	138	34	14	231	60	630
1:00 PM	9	3	5	69	4	32	49	173	7	11	232	69	663
1:15 PM	5	1	6	83	4	23	55	166	6	5	192	76	622
1:30 PM	3	5	10	73	5	37	37	165	4	7	202	54	602
1:45 PM	2	1	7	64	6	31	36	154	23	8	208	68	608
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	87	34	72	891	52	309	569	1921	124	97	2372	828	7356
APPROACH %'s :	45.08%	17.62%	37.31%	71.17%	4.15%	24.68%	21.77%	73.49%	4.74%	2.94%	71.94%	25.11%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	32	11	17	328	18	125	193	640	57	36	878	281	2616
PEAK HR FACTOR :		0.882			0.853			0.959			0.958		0.960

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

NOON

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
11:00 AM	14	0	8	10	1	6	6	209	9	9	217	5	494
11:15 AM	13	1	4	19	0	4	3	222	8	11	207	11	503
11:30 AM	14	1	10	21	1	12	4	234	10	14	236	13	570
11:45 AM	10	0	14	20	1	8	6	221	11	15	286	9	601
12:00 PM	19	7	18	23	3	1	5	237	11	16	274	16	630
12:15 PM	9	0	14	14	8	10	5	252	10	17	275	15	629
12:30 PM	13	3	20	14	0	6	5	268	11	16	279	11	646
12:45 PM	13	1	14	15	1	10	5	210	17	32	266	9	593
1:00 PM	7	1	11	14	1	11	6	253	6	13	283	11	617
1:15 PM	9	1	14	15	1	10	8	235	9	19	266	14	601
1:30 PM	9	1	15	13	1	13	8	239	3	23	258	15	598
1:45 PM	7	2	13	15	2	9	1	239	10	13	271	13	595
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	137	18	155	193	20	100	62	2819	115	198	3118	142	7077
APPROACH %'s :	44.19%	5.81%	50.00%	61.66%	6.39%	31.95%	2.07%	94.09%	3.84%	5.73%	90.17%	4.11%	
PEAK HR START TIME :	1145 AM												TOTAL
PEAK HR VOL :	51	10	66	71	12	25	21	978	43	64	1114	51	2506
PEAK HR FACTOR :		0.722			0.844			0.917			0.991		0.970

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_004

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
11:00 AM	34	63	23	55	50	19	49	167	26	38	178	17	719
11:15 AM	41	53	14	45	46	18	26	180	25	30	211	27	716
11:30 AM	43	61	21	66	58	20	32	212	30	33	251	17	844
11:45 AM	39	46	21	49	51	23	35	216	27	39	257	17	820
12:00 PM	46	63	42	63	61	22	46	235	35	34	249	23	919
12:15 PM	41	52	13	73	49	18	41	217	27	48	250	27	856
12:30 PM	57	63	19	66	75	19	44	213	37	57	223	17	890
12:45 PM	52	61	15	71	70	42	40	163	29	48	207	14	812
1:00 PM	44	53	9	47	73	25	53	230	25	46	277	26	908
1:15 PM	47	60	13	53	76	18	54	182	25	34	209	23	794
1:30 PM	34	56	16	74	61	21	41	208	29	45	253	13	851
1:45 PM	35	67	16	52	52	19	47	187	25	46	209	22	777
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	513	698	222	714	722	264	508	2410	340	498	2774	243	9906
APPROACH %'s :	35.80%	48.71%	15.49%	42.00%	42.47%	15.53%	15.59%	73.97%	10.44%	14.17%	78.92%	6.91%	
PEAK HR START TIME :	1145 AM												TOTAL
PEAK HR VOL :	183	224	95	251	236	82	166	881	126	178	979	84	3485
PEAK HR FACTOR :		0.831			0.889			0.928			0.955		0.948

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

NOON

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
11:00 AM	26	19	52	10	20	8	19	181	18	68	174	10	605
11:15 AM	25	27	47	15	20	11	19	191	22	58	217	9	661
11:30 AM	39	25	50	32	18	8	27	213	25	57	230	9	733
11:45 AM	37	27	60	18	30	5	26	252	24	50	245	7	781
12:00 PM	26	34	58	20	30	5	34	250	15	70	269	6	817
12:15 PM	22	24	53	25	18	11	26	283	27	80	265	13	847
12:30 PM	31	25	50	24	26	8	31	297	28	74	288	13	895
12:45 PM	30	25	41	34	26	12	15	214	28	72	231	15	743
1:00 PM	28	30	50	24	21	11	26	243	21	83	339	15	891
1:15 PM	25	20	58	19	35	18	14	233	32	61	233	13	761
1:30 PM	35	26	39	28	23	9	21	263	22	63	277	10	816
1:45 PM	39	26	46	24	23	8	13	235	23	53	249	8	747
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	363	308	604	273	290	114	271	2855	285	789	3017	128	9297
APPROACH %'s :	28.47%	24.16%	47.37%	40.32%	42.84%	16.84%	7.94%	83.70%	8.36%	20.06%	76.69%	3.25%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	111	104	194	107	91	42	98	1037	104	309	1123	56	3376
PEAK HR FACTOR :		0.947			0.833			0.870			0.851		0.943

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

NOON

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
11:00 AM	14	21	13	36	16	13	28	208	16	21	233	11	630
11:15 AM	26	24	16	37	12	11	44	215	18	21	259	34	717
11:30 AM	23	18	9	34	15	14	40	267	22	17	290	17	766
11:45 AM	32	25	15	24	15	18	36	261	23	29	290	22	790
12:00 PM	34	22	19	35	23	11	35	279	30	20	317	23	848
12:15 PM	33	21	10	45	25	10	46	278	25	18	306	15	832
12:30 PM	36	31	17	41	23	16	32	303	19	26	306	17	867
12:45 PM	41	23	12	30	20	9	22	262	27	29	307	23	805
1:00 PM	46	15	19	40	24	15	34	238	32	23	346	32	864
1:15 PM	34	19	15	35	24	11	37	264	25	30	274	19	787
1:30 PM	49	25	18	44	31	12	24	300	25	13	300	17	858
1:45 PM	23	28	13	25	24	14	26	263	31	29	251	16	743
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	391	272	176	426	252	154	404	3138	293	276	3479	246	9507
APPROACH %'s :	46.60%	32.42%	20.98%	51.20%	30.29%	18.51%	10.53%	81.83%	7.64%	6.90%	86.95%	6.15%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	156	90	58	156	92	50	134	1081	103	96	1265	87	3368
PEAK HR FACTOR :		0.905			0.931			0.931			0.903		0.971

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

Day: THURSDAY

City: City of Fresno

Date: 5/30/2013

TOTALS

NOON

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
11:00 AM	21	10	16	43	10	5	24	239	21	19	263	29	700
11:15 AM	29	6	26	48	4	8	30	209	18	30	272	27	707
11:30 AM	26	5	23	49	16	6	35	229	20	28	280	43	760
11:45 AM	31	8	23	47	8	11	26	280	28	41	302	15	820
12:00 PM	25	12	14	40	13	3	18	244	18	30	340	8	765
12:15 PM	24	13	19	40	5	2	24	240	10	37	326	11	751
12:30 PM	25	11	34	46	10	6	26	304	26	30	313	24	855
12:45 PM	21	18	25	43	15	7	16	266	30	32	325	13	811
1:00 PM	28	18	33	49	8	8	21	258	27	39	357	32	878
1:15 PM	17	11	32	43	8	8	21	275	24	31	249	29	748
1:30 PM	24	8	29	38	14	7	29	304	22	23	272	26	796
1:45 PM	14	11	27	43	8	7	26	257	33	34	279	23	762
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	285	131	301	529	119	78	296	3105	277	374	3578	280	9353
APPROACH %'s :	39.75%	18.27%	41.98%	72.87%	16.39%	10.74%	8.05%	84.42%	7.53%	8.84%	84.55%	6.62%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	98	60	111	178	38	23	87	1068	93	138	1321	80	3295
PEAK HR FACTOR :		0.851			0.919			0.876			0.899		0.938

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

Day: THURSDAY

City: City of Fresno

TOTALS

Date: 5/30/2013

NOON

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
11:00 AM	59	68	29	36	55	62	54	192	39	37	216	19	866
11:15 AM	72	40	39	52	45	70	60	184	36	30	221	12	861
11:30 AM	76	37	25	36	58	62	62	207	35	45	244	10	897
11:45 AM	74	51	40	31	65	69	57	199	53	38	244	14	935
12:00 PM	79	67	36	36	59	69	61	208	37	51	282	15	1000
12:15 PM	68	48	33	36	80	63	78	269	39	71	274	17	1076
12:30 PM	77	43	26	53	73	69	68	289	43	55	281	15	1092
12:45 PM	71	74	31	28	58	60	68	221	50	56	250	21	988
1:00 PM	77	72	44	63	58	73	70	222	37	55	268	15	1054
1:15 PM	62	57	36	35	62	64	65	239	45	45	225	13	948
1:30 PM	92	37	34	52	86	61	63	260	45	50	199	12	991
1:45 PM	73	72	31	47	62	56	58	201	39	49	189	12	889
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	880	666	404	505	761	778	764	2691	498	582	2893	175	11597
APPROACH %'s :	45.13%	34.15%	20.72%	24.71%	37.23%	38.06%	19.33%	68.07%	12.60%	15.95%	79.26%	4.79%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	293	237	134	180	269	265	284	1001	169	237	1073	68	4210
PEAK HR FACTOR :		0.860			0.915			0.909			0.952		0.964

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8031_002 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			Wal-Mart Driveway			Wal-Mart Driveway			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	0	1	0	0	1	
7:00 AM	2	62	2	11	209							4	290
7:15 AM	0	57	4	7	238							2	308
7:30 AM	0	63	3	14	292							1	373
7:45 AM	0	82	10	17	215							6	330
8:00 AM	1	93	9	13	193							6	315
8:15 AM	1	58	15	10	164							7	255
8:30 AM	3	77	16	14	171							6	287
8:45 AM	5	68	8	16	152							6	255
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	12	560	67	102	1634	0	0	0	0	0	0	38	2413
APPROACH %'s :	1.88%	87.64%	10.49%	5.88%	94.12%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	295	26	51	938	0	0	0	0	0	0	15	1326
PEAK HR FACTOR :		0.782			0.808			0.000			0.625		0.889

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8031_002 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			Wal-Mart Driveway			Wal-Mart Driveway			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	0	1	0	0	1	
4:00 PM	10	182	8	26	121							7	354
4:15 PM	7	166	24	20	134							10	361
4:30 PM	6	151	20	20	133							16	346
4:45 PM	7	170	16	18	140							13	364
5:00 PM	3	184	18	25	159							15	404
5:15 PM	9	199	26	23	174							14	445
5:30 PM	11	172	21	14	178							13	409
5:45 PM	3	168	18	16	149							16	370
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	56	1392	151	162	1188	0	0	0	0	0	0	104	3053
APPROACH %'s :	3.50%	87.05%	9.44%	12.00%	88.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	26	723	83	78	660	0	0	0	0	0	0	58	1628
PEAK HR FACTOR :		0.889			0.937			0.000			0.906		0.915

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13 8032 003 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

AM

NS/EW Streets:	Taco Bell/76 Gas Stn Dwy			Taco Bell/76 Gas Stn Dwy			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM						10						9	19
7:15 AM						8						8	16
7:30 AM						7						5	12
7:45 AM						5						10	15
8:00 AM						3						7	10
8:15 AM						7						11	18
8:30 AM						6						11	17
8:45 AM						4						5	9
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	50	0	0	0	0	0	66	116
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	30	0	0	0	0	0	32	62
PEAK HR FACTOR :		0.000			0.750			0.000			0.800		0.816

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13 8032 003 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

PM

NS/EW Streets:	Taco Bell/76 Gas Stn Dwy			Taco Bell/76 Gas Stn Dwy			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM						5						20	25
4:15 PM						8						20	28
4:30 PM						10						20	30
4:45 PM						11						15	26
5:00 PM						8						28	36
5:15 PM						15						24	39
5:30 PM						8						16	24
5:45 PM						11						17	28
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	76	0	0	0	0	0	160	236
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	44	0	0	0	0	0	87	131
PEAK HR FACTOR :		0.000			0.733			0.000			0.777		0.840

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13 8032 004 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			Taco Bell/76 Gas Stn Dwy			Taco Bell/76 Gas Stn Dwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM						8			3				11
7:15 AM						8			8				16
7:30 AM						7			7				14
7:45 AM						3			7				10
8:00 AM						5			5				10
8:15 AM						3			8				11
8:30 AM						6			12				18
8:45 AM						5			7				12
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	45	0	0	57	0	0	0	102
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	19	0	0	32	0	0	0	51
PEAK HR FACTOR :		0.000			0.792			0.667			0.000		0.708

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13 8032 004 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			Taco Bell/76 Gas Stn Dwy			Taco Bell/76 Gas Stn Dwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM						2			24				26
4:15 PM						7			15				22
4:30 PM						5			15				20
4:45 PM						6			16				22
5:00 PM						4			19				23
5:15 PM						9			18				27
5:30 PM						8			20				28
5:45 PM						8			17				25
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	49	0	0	144	0	0	0	193
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	29	0	0	74	0	0	0	103
PEAK HR FACTOR :		0.000			0.806			0.925			0.000		0.920

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13 8032 005 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			Office Depot Dwy			Office Depot Dwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM			0									0	0
7:15 AM			0									1	1
7:30 AM			0									1	1
7:45 AM			3									1	4
8:00 AM			2									2	4
8:15 AM			3									2	5
8:30 AM			8									5	13
8:45 AM			4									1	5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	20	0	0	0	0	0	0	0	0	13	33
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	17	0	0	0	0	0	0	0	0	10	27
PEAK HR FACTOR :		0.531			0.000			0.000			0.500		0.519

CONTROL :

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8043-001
N/S Street: Brawley Ave
E/W Street: Shaw Ave
DATE: 5/11/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:30 AM	0	2	0	0	0	0	0	0
11:45 AM	1	2	2	1	0	0	0	4
12:00 PM	0	0	2	3	1	0	3	1
12:15 PM	0	0	1	0	0	0	0	0
12:30 PM	0	2	0	0	4	0	0	2
12:45 PM	3	1	5	0	1	0	1	2
1:00 PM	0	1	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	3	1
1:30 PM	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	6	0	0	1	0
TOTALS	**4**	**8**	**10**	**11**	**6**	**0**	**9**	**13**

BIKES

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:30 AM	0	0	2	1	3	0	0	0
11:45 AM	0	0	0	0	0	0	0	0
12:00 PM	0	1	0	1	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	1
12:30 PM	0	0	2	0	0	0	0	0
12:45 PM	1	2	1	1	0	1	0	2
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	1
1:45 PM	0	2	0	0	2	0	0	0
2:00 PM	0	0	0	0	0	0	0	3
2:15 PM	0	0	2	0	0	0	1	0
TOTALS	**1**	**6**	**7**	**3**	**5**	**1**	**1**	**8**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-001
N/S Street: Golden State Blvd
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	2	0	0	0	0	0	2	0
7:45 AM	0	1	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
TOTALS	**2**	**2**	**1**	**0**	**0**	**0**	**2**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0
TOTALS	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**2**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	0	1	0	0	0	0	0	0
11:15 AM	0	0	1	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0
1:00 PM	1	1	0	0	0	0	1	0
1:15 PM	0	2	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	1	0	0	0	0	0	0	0
TOTALS	**2**	**4**	**1**	**0**	**0**	**0**	**1**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	2	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	1	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	1	0	0	2	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	1	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	1	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	1	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	1	0
TOTALS	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**7**	**0**	**0**	**3**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	1	0	1	0	0	0	0	1
4:15 PM	1	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	2	1	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	0	0	0	1
TOTALS	**3**	**3**	**2**	**0**	**0**	**0**	**0**	**2**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	2	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0
5:00 PM	0	0	0	0	0	0	0	2	0	0	1	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	2	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**6**	**0**	**0**	**6**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-001
N/S Street: Golden State Blvd
E/W Street: Shaw Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	1	0	0	0
1:00 PM	1	0	1	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	1	0	0	0	0	0	0	0
TOTALS	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**0**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	2	0	0	0	0	0	1	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0
1:30 PM	0	0	0	0	0	0	0	2	0	0	0	0
1:45 PM	0	0	0	0	1	0	0	0	0	0	2	0
2:00 PM	0	0	0	0	1	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**2**	**0**	**0**	**4**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-002
N/S Street: Blythe Ave
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	1
7:15 AM	1	0	1	0	0	0	0	0
7:30 AM	2	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1
8:00 AM	3	1	0	1	0	0	0	0
8:15 AM	1	1	1	0	0	0	0	1
8:30 AM	1	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	1
TOTALS	**8**	**3**	**2**	**1**	**0**	**0**	**0**	**4**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	1	0	0	0	0	0	0	0
11:15 AM	0	1	2	1	0	0	0	2
11:30 AM	0	1	0	0	0	0	1	1
11:45 AM	0	0	0	0	0	0	4	0
12:00 PM	0	0	0	0	0	0	2	2
12:15 PM	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	1	0	0	1	0	0	2	0
1:00 PM	0	1	1	0	0	0	1	2
1:15 PM	1	1	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	1	0	0	0
TOTALS	**3**	**4**	**3**	**2**	**1**	**0**	**10**	**12**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	1	0	0	0	0	0	1	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	1	0
11:45 AM	0	0	0	0	0	0	0	1	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	1	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	1	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	1	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	1	0
TOTALS	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**3**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	0	0	0	1	0
4:30 PM	1	0	0	1	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	6
5:00 PM	1	2	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	1	1	0	0	0	0	1	6
5:45 PM	0	1	0	0	0	0	2	2
TOTALS	**3**	**4**	**1**	**1**	**0**	**0**	**4**	**18**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	2	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**4**	**0**	**0**	**2**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-002
N/S Street: Blythe Ave
E/W Street: Shaw Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	1	2	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0
1:00 PM	2	0	0	0	0	0	0	0
1:15 PM	1	0	1	0	0	0	2	2
1:30 PM	0	0	0	0	0	0	0	1
1:45 PM	0	0	2	2	0	0	4	0
2:00 PM	2	0	0	0	0	0	0	0
2:15 PM	0	1	0	0	1	0	0	0
TOTALS	**6**	**3**	**3**	**2**	**1**	**0**	**6**	**4**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	2	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	1	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	2	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
2:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-003
N/S Street: El Capitan Ave
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	1	1	0	1	0	1	2	0
7:45 AM	1	0	0	0	0	1	0	0
8:00 AM	0	1	0	0	1	0	0	0
8:15 AM	0	0	0	0	1	0	0	0
8:30 AM	0	0	0	0	0	0	0	1
8:45 AM	0	2	0	0	0	0	0	0
TOTALS	**2**	**4**	**0**	**1**	**2**	**2**	**2**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1
TOTALS	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**2**	**1**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	0	1	0	0	0	0	0	0
11:15 AM	1	0	2	0	0	0	0	0
11:30 AM	0	1	0	0	0	1	0	0
11:45 AM	0	0	0	0	2	0	0	0
12:00 PM	0	0	0	0	0	0	1	0
12:15 PM	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	0	0	0
12:45 PM	0	0	0	0	1	1	0	0
1:00 PM	0	1	0	0	1	0	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	1	1	0	0	1	0	0	0
TOTALS	**2**	**4**	**2**	**0**	**6**	**2**	**1**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	0	0	0	1	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	1	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	1	0	0	0	0	0	1	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	1	1	0	2	0	0	2
4:15 PM	1	2	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	1	0
4:45 PM	1	2	0	1	0	0	1	0
5:00 PM	0	0	0	0	1	0	0	1
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**2**	**5**	**2**	**1**	**3**	**0**	**4**	**4**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**2**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-003
N/S Street: El Capitan Ave
E/W Street: Shaw Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	1	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	2	0	0
1:00 PM	1	0	0	0	2	0	0	0
1:15 PM	0	1	1	0	1	0	0	2
1:30 PM	0	1	0	0	1	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	1	0	0	0	0	1
2:15 PM	0	3	0	0	0	0	0	0
TOTALS	**1**	**6**	**2**	**0**	**4**	**2**	**0**	**3**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	1	0	0	0	0	0	0	1	0
1:00 PM	0	0	0	0	0	0	2	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-004
N/S Street: Brawley Ave
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	0	1	0	0	0	0	0	0
11:15 AM	0	2	0	0	0	3	0	2
11:30 AM	0	0	1	1	1	2	1	0
11:45 AM	0	1	1	0	4	1	0	2
12:00 PM	0	1	1	3	0	2	1	2
12:15 PM	0	0	0	0	1	0	0	0
12:30 PM	1	0	1	2	0	0	0	1
12:45 PM	1	0	0	0	2	0	0	0
1:00 PM	0	0	0	1	3	0	3	1
1:15 PM	0	0	0	0	1	0	0	0
1:30 PM	1	1	2	0	3	0	1	2
1:45 PM	1	0	0	3	1	1	1	1
TOTALS	**4**	**6**	**6**	**10**	**16**	**9**	**7**	**11**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	1	0	0	1	0	0	0	0	0	0	0
11:15 AM	0	1	0	0	1	0	0	1	0	0	1	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	1	0
11:45 AM	0	0	0	0	1	0	0	2	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	3	0	0	0	0	0	0	0	0	2	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	1	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	1	0	0	1	0
TOTALS	**0**	**5**	**0**	**0**	**6**	**0**	**0**	**4**	**0**	**0**	**5**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-005
N/S Street: Marty Ave
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	1	0	0	0	0
7:15 AM	0	0	1	0	0	3	1	2
7:30 AM	0	0	0	3	0	0	0	0
7:45 AM	0	0	0	1	0	1	0	0
8:00 AM	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	2	0	3	0	1	0	0
8:45 AM	0	0	0	0	2	1	0	0
TOTALS	**0**	**3**	**1**	**8**	**2**	**6**	**1**	**3**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	1	1	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	1	0
7:45 AM	0	0	1	0	0	0	0	0	0	0	2	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	1	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	1	1	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**4**	**1**	**0**	**1**	**0**	**0**	**3**	**2**	**1**	**4**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	0	0	0	0	0	0	0	0
11:15 AM	0	0	2	0	0	0	0	2
11:30 AM	0	0	2	5	0	0	1	0
11:45 AM	1	1	1	0	0	0	2	0
12:00 PM	0	0	1	0	0	1	0	3
12:15 PM	0	0	0	0	1	0	2	0
12:30 PM	0	1	0	0	0	0	1	1
12:45 PM	1	0	0	1	1	1	1	2
1:00 PM	0	0	0	1	0	0	0	1
1:15 PM	0	0	0	0	0	0	2	2
1:30 PM	0	0	0	0	0	0	0	2
1:45 PM	1	2	2	2	0	1	0	0
TOTALS	**3**	**4**	**8**	**9**	**2**	**3**	**9**	**13**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	1	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	1	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	2	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	2	0
1:45 PM	0	0	0	0	0	0	0	3	0	0	2	0
TOTALS	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**5**	**0**	**0**	**6**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	2	0	1	0	0	2	0	0
4:15 PM	0	0	0	1	1	0	0	0
4:30 PM	0	0	0	1	0	2	0	3
4:45 PM	0	0	1	0	1	0	2	0
5:00 PM	1	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	2
5:30 PM	0	0	1	0	0	3	0	0
5:45 PM	0	1	2	0	0	0	1	0
TOTALS	**3**	**1**	**6**	**2**	**2**	**7**	**3**	**6**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	1	0	0	0	0	0	1	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	2	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	1	0	1	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
TOTALS	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**5**	**1**	**0**	**1**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-005
N/S Street: Marty Ave
E/W Street: Shaw Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	5	2	1	2	0	0	4
12:45 PM	1	2	0	1	0	0	2	0
1:00 PM	0	0	3	2	2	2	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	5	3	0	0	2	0
1:45 PM	1	0	0	1	0	1	0	0
2:00 PM	0	0	1	1	0	0	1	1
2:15 PM	0	1	1	0	0	0	0	2
TOTALS	**2**	**8**	**12**	**9**	**4**	**3**	**5**	**7**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	1	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0
1:00 PM	0	0	0	0	1	0	0	1	0	0	2	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	1	0	0	0	0	0	1	0	0	0	0
1:45 PM	0	0	0	0	3	0	0	1	0	0	1	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	0
2:15 PM	0	0	1	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**1**	**0**	**4**	**0**	**0**	**3**	**0**	**0**	**5**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-006
N/S Street: Valentine Ave
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	1	0	0	0	1	3	0	1
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0
7:45 AM	0	0	3	0	0	2	1	1
8:00 AM	0	0	0	1	2	4	1	0
8:15 AM	0	1	0	0	1	0	0	0
8:30 AM	0	0	2	2	2	2	0	2
8:45 AM	0	0	0	0	1	1	0	1
TOTALS	**1**	**1**	**5**	**3**	**8**	**12**	**2**	**5**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0
7:30 AM	0	2	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	1	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0
TOTALS	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	0	1	1	1	2	3	0	1
11:15 AM	0	1	0	0	2	1	3	2
11:30 AM	2	0	2	0	0	2	2	0
11:45 AM	1	0	1	0	2	3	1	1
12:00 PM	0	0	0	0	2	0	1	0
12:15 PM	0	0	4	0	0	0	1	2
12:30 PM	0	0	1	1	1	2	1	2
12:45 PM	0	0	4	2	2	0	1	2
1:00 PM	0	0	0	2	0	1	1	0
1:15 PM	0	0	0	3	3	1	0	0
1:30 PM	0	0	1	2	1	0	0	2
1:45 PM	0	1	1	0	0	2	0	1
TOTALS	**3**	**3**	**15**	**11**	**15**	**15**	**11**	**13**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	0	0	0	2	0	0	0	0	0	0	0
11:15 AM	0	1	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	3	0	0	1	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	1	0	0	1	0	0	0	0
12:00 PM	0	0	0	0	1	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	1	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	0	0	0	0	0	1	0
1:00 PM	0	0	0	0	0	0	0	1	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	1	0	0	1	0	0	1	0	0	1	0
1:45 PM	0	1	0	0	1	0	0	1	0	0	0	0
TOTALS	**1**	**7**	**0**	**0**	**7**	**0**	**0**	**4**	**0**	**0**	**2**	**0**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	2	0	1	0	0	4	0	0
4:15 PM	0	0	2	2	3	3	1	3
4:30 PM	0	0	1	0	0	4	0	1
4:45 PM	1	0	4	0	0	0	2	1
5:00 PM	2	0	1	0	2	1	0	0
5:15 PM	1	0	1	0	1	2	0	0
5:30 PM	0	0	3	1	1	0	3	4
5:45 PM	0	0	2	0	1	1	0	0
TOTALS	**6**	**0**	**15**	**3**	**8**	**15**	**6**	**9**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	2	0	0	0	0	1	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	0	0	0	2	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
5:00 PM	0	2	0	0	0	0	0	1	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
TOTALS	**0**	**4**	**0**	**0**	**3**	**0**	**0**	**5**	**0**	**1**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-006
N/S Street: Valentine Ave
E/W Street: Shaw Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

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PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	3	1	0	2	10	0	1	0
12:45 PM	0	2	3	2	2	1	0	2
1:00 PM	0	1	4	0	5	2	0	0
1:15 PM	0	0	2	2	2	0	1	4
1:30 PM	0	0	0	1	2	0	0	0
1:45 PM	1	0	4	3	0	0	0	0
2:00 PM	0	1	2	1	1	0	0	4
2:15 PM	0	0	0	1	2	0	2	0
TOTALS	**4**	**5**	**15**	**12**	**24**	**3**	**4**	**10**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	1	0	0	0	0	0	0	0	0	1	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	2	0
1:00 PM	0	0	0	0	2	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	1	0	0	1	0
2:00 PM	1	6	0	0	1	0	0	0	0	0	5	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**1**	**7**	**0**	**0**	**3**	**0**	**0**	**2**	**0**	**0**	**9**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-007
N/S Street: Feland Ave
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	1	2	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	2	2
7:30 AM	0	0	0	1	0	1	0	0
7:45 AM	0	0	0	0	0	0	0	1
8:00 AM	0	1	0	0	0	0	1	1
8:15 AM	1	0	0	0	0	2	1	1
8:30 AM	0	0	1	0	0	0	1	1
8:45 AM	1	0	0	0	0	0	0	1
TOTALS	**2**	**2**	**3**	**1**	**0**	**3**	**5**	**8**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	2	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**1**

N O O N

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	0	0	1	1	2	0	0	3
11:15 AM	0	0	1	0	1	0	0	1
11:30 AM	1	0	0	0	0	0	0	1
11:45 AM	0	1	0	1	1	0	1	5
12:00 PM	1	0	0	1	0	0	1	1
12:15 PM	0	0	1	0	0	0	2	0
12:30 PM	0	1	0	1	0	0	3	2
12:45 PM	0	0	0	0	1	0	0	2
1:00 PM	4	0	0	0	0	0	1	2
1:15 PM	0	0	0	1	0	0	1	0
1:30 PM	0	0	0	0	0	0	1	9
1:45 PM	2	0	0	2	1	1	0	2
TOTALS	**8**	**2**	**3**	**7**	**6**	**1**	**10**	**28**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	1	0	0	1	0	0	2	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	1	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	1	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
1:00 PM	0	1	0	0	1	0	0	0	0	0	1	0
1:15 PM	0	1	1	0	0	0	0	1	0	0	4	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	1	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**4**	**1**	**0**	**3**	**0**	**0**	**4**	**1**	**0**	**6**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	1	0	1	0	1	1
4:15 PM	0	2	0	0	0	0	1	1
4:30 PM	0	0	1	0	0	1	0	3
4:45 PM	0	1	3	0	1	0	0	1
5:00 PM	0	1	0	0	0	2	1	2
5:15 PM	0	0	3	0	0	0	2	7
5:30 PM	0	0	2	2	0	2	1	0
5:45 PM	0	0	0	0	1	0	0	0
TOTALS	**0**	**4**	**10**	**2**	**3**	**5**	**6**	**15**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	1	0	0	0	0	0	1	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	2	0	0	2	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	2	0	0	0	0
TOTALS	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**6**	**0**	**0**	**2**	**1**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-007
N/S Street: Feland Ave
E/W Street: Shaw Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	2	3	0	0	1	0	3	4
12:45 PM	0	1	1	1	1	0	1	2
1:00 PM	0	1	0	2	1	0	1	2
1:15 PM	1	1	0	2	0	0	1	2
1:30 PM	1	0	0	3	0	2	1	4
1:45 PM	1	0	4	0	0	0	1	4
2:00 PM	2	0	1	0	0	4	0	3
2:15 PM	0	0	0	2	3	0	3	1
TOTALS	**7**	**6**	**6**	**10**	**6**	**6**	**11**	**22**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	0	0	0	0	0	1	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	3	0
1:15 PM	0	0	0	0	1	0	0	1	0	0	0	0
1:30 PM	0	1	0	0	1	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**4**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-008
N/S Street: Marks Ave
E/W Street: Shaw Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	2	2	0	0	0	2
7:15 AM	0	0	0	4	1	2	1	0
7:30 AM	0	1	0	2	0	0	1	0
7:45 AM	1	1	3	1	2	0	0	5
8:00 AM	0	0	1	3	0	0	4	0
8:15 AM	0	0	1	0	0	0	0	3
8:30 AM	0	0	1	1	1	1	0	2
8:45 AM	1	0	1	0	0	0	1	3
TOTALS	**2**	**2**	**9**	**13**	**4**	**3**	**7**	**15**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	2	0	0	0	0	0	1	0
7:30 AM	0	1	0	1	0	0	0	1	0	0	0	0
7:45 AM	0	2	0	0	1	0	0	1	1	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	1	0	0	0
8:15 AM	0	0	0	0	2	0	0	1	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	1	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**4**	**0**	**1**	**6**	**0**	**0**	**3**	**2**	**0**	**2**	**0**

N O O N

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
11:00 AM	1	2	1	4	1	0	0	0
11:15 AM	1	1	1	3	0	1	2	2
11:30 AM	0	1	1	1	0	0	0	2
11:45 AM	0	0	5	3	1	2	0	3
12:00 PM	2	1	2	5	1	2	3	1
12:15 PM	0	2	0	0	1	0	3	4
12:30 PM	0	0	1	2	0	0	1	0
12:45 PM	1	0	2	0	0	0	3	4
1:00 PM	1	0	3	4	0	1	2	4
1:15 PM	2	1	0	8	1	0	4	1
1:30 PM	0	2	1	3	0	0	2	6
1:45 PM	0	2	4	2	0	0	3	3
TOTALS	**8**	**12**	**21**	**35**	**5**	**6**	**23**	**30**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
11:00 AM	0	1	0	0	1	0	0	2	0	0	1	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	1	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	1	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	2	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	1	0	0	1	0	0	0	1
1:00 PM	0	1	0	0	0	0	0	1	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	2	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	1	0
1:45 PM	0	0	0	0	0	0	0	0	1	0	0	0
TOTALS	**0**	**2**	**0**	**0**	**3**	**0**	**0**	**4**	**1**	**0**	**7**	**1**

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PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	1	1	1	1	3	2
4:15 PM	1	0	2	1	0	1	0	5
4:30 PM	0	0	0	0	0	0	1	2
4:45 PM	0	0	5	2	1	0	1	5
5:00 PM	0	0	0	3	0	0	3	1
5:15 PM	0	1	1	3	0	0	11	3
5:30 PM	0	0	5	2	1	0	2	1
5:45 PM	1	0	0	5	1	4	0	6
TOTALS	**2**	**1**	**14**	**17**	**4**	**6**	**21**	**25**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	1	0	0	1	0	0	1	0
4:30 PM	0	0	0	0	2	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**2**	**0**	**0**	**3**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-008
N/S Street: Marks Ave
E/W Street: Shaw Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	5	3	3	1	2	5
12:45 PM	0	0	0	0	0	0	4	0
1:00 PM	0	0	0	1	0	0	2	3
1:15 PM	0	0	0	1	0	0	1	2
1:30 PM	0	0	1	0	0	0	0	7
1:45 PM	0	0	0	1	0	0	2	2
2:00 PM	0	0	3	2	0	2	2	4
2:15 PM	0	1	5	0	1	0	2	0
TOTALS	**0**	**1**	**14**	**8**	**4**	**3**	**15**	**23**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	1	0	0	0	0	0	2	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	1	0	0	0	0	0
1:30 PM	0	0	0	0	3	0	0	1	0	0	0	0
1:45 PM	0	2	0	0	0	0	0	3	0	0	0	0
2:00 PM	0	0	0	0	1	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**3**	**0**	**0**	**5**	**0**	**1**	**4**	**0**	**0**	**2**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-009
N/S Street: Figarden Dr
E/W Street: Gates Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	3	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	2
8:00 AM	0	0	1	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	1	0
8:45 AM	0	0	0	0	1	0	0	3
TOTALS	**0**	**1**	**1**	**0**	**2**	**0**	**5**	**8**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	1	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	2	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	0
5:00 PM	1	0	0	0	0	2	0	0
5:15 PM	0	1	0	0	0	1	0	0
5:30 PM	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	1	0	0
TOTALS	**1**	**1**	**0**	**0**	**0**	**8**	**0**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	1	1	0	1	0
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0
TOTALS	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**3**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-009
N/S Street: Figarden Dr
E/W Street: Gates Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	2	2	1	1	0
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	1	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	1	1
1:45 PM	0	0	0	1	0	1	2	1
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	1	3	0	1
TOTALS	**0**	**0**	**1**	**3**	**3**	**5**	**4**	**3**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	2	0	0	1	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	2	0	0	0	0	0	0	1	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-010
N/S Street: Brawley Ave
E/W Street: San Jose Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	1	0	1	0	3	3	3	1
7:15 AM	1	5	0	2	1	1	3	0
7:30 AM	0	3	0	0	3	0	0	3
7:45 AM	1	4	0	3	1	2	0	1
8:00 AM	5	1	1	0	0	1	0	0
8:15 AM	3	0	1	1	0	1	3	0
8:30 AM	1	0	0	0	0	0	0	0
8:45 AM	0	4	0	0	0	1	0	1
TOTALS	**12**	**17**	**3**	**6**	**8**	**9**	**9**	**6**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	2	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	2	0	0	1	0	0	0	0	0	2	0
7:30 AM	0	2	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	3	0	0	1	0	1	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0
TOTALS	**0**	**7**	**0**	**0**	**5**	**0**	**0**	**2**	**0**	**1**	**4**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	1	0	1	0	3	3	3	1
4:15 PM	0	0	1	0	0	0	0	1
4:30 PM	3	0	3	1	2	5	1	0
4:45 PM	0	3	1	3	3	0	0	0
5:00 PM	0	1	0	1	5	3	0	0
5:15 PM	3	0	3	2	2	0	0	0
5:30 PM	1	0	0	1	4	0	2	0
5:45 PM	0	0	1	0	0	0	0	0
TOTALS	**8**	**4**	**10**	**8**	**19**	**11**	**6**	**2**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	2	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	2	1	0	0	0	0	1	0	0	1	0
4:30 PM	0	0	1	0	2	0	0	2	0	0	0	0
4:45 PM	0	2	0	0	2	0	0	2	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**7**	**2**	**0**	**4**	**0**	**0**	**5**	**0**	**0**	**3**	**1**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-010
N/S Street: Brawley Ave
E/W Street: San Jose Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	0	0	1	3	0	0
12:45 PM	0	0	3	0	0	1	0	1
1:00 PM	0	0	0	0	1	1	0	1
1:15 PM	0	0	1	0	4	0	0	1
1:30 PM	0	0	1	3	0	0	3	1
1:45 PM	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	1
2:15 PM	2	0	1	0	0	1	1	0
TOTALS	**2**	**0**	**6**	**3**	**6**	**6**	**4**	**6**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
12:45 PM	0	2	0	0	0	0	0	0	0	0	1	0
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
1:15 PM	1	0	0	0	0	0	0	0	0	0	1	0
1:30 PM	0	0	0	0	1	0	0	1	0	0	0	0
1:45 PM	0	3	0	0	1	0	0	0	0	0	0	0
2:00 PM	0	3	0	0	0	0	0	0	0	0	1	0
2:15 PM	0	6	0	0	5	0	0	1	0	0	5	0
TOTALS	**1**	**15**	**0**	**0**	**9**	**0**	**0**	**2**	**0**	**0**	**8**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-011
N/S Street: Brawley Ave
E/W Street: Site Access
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	0	0	1	2	0	0
12:45 PM	0	0	0	0	0	1	1	2
1:00 PM	0	0	0	0	1	0	0	0
1:15 PM	0	0	0	0	2	2	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	1	1	0
TOTALS	**0**	**0**	**0**	**0**	**4**	**6**	**2**	**3**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
12:45 PM	0	2	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	1	0	0	0	0	0	0	0	0
TOTALS	**0**	**5**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-012
N/S Street: Valentine Ave
E/W Street: San Jose Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	2	0	1	2	0	0
7:15 AM	0	0	1	0	0	2	0	2
7:30 AM	0	0	0	1	0	0	0	1
7:45 AM	2	0	1	1	0	1	1	0
8:00 AM	0	0	0	0	0	0	0	1
8:15 AM	0	2	2	0	1	1	0	0
8:30 AM	1	1	0	1	0	1	0	0
8:45 AM	0	1	0	0	0	0	0	0
TOTALS	**3**	**4**	**6**	**3**	**2**	**7**	**1**	**4**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	1	0
7:45 AM	0	1	0	0	1	0	0	1	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	2	2	0	0	0	0
TOTALS	**0**	**2**	**0**	**1**	**2**	**0**	**2**	**3**	**0**	**0**	**1**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	1	0	0	0
4:15 PM	1	1	0	0	2	3	1	1
4:30 PM	4	1	0	0	0	4	0	0
4:45 PM	1	0	1	0	1	1	2	2
5:00 PM	2	1	0	0	1	0	1	1
5:15 PM	2	1	0	1	1	0	0	3
5:30 PM	0	1	3	0	0	0	4	0
5:45 PM	0	0	0	0	1	1	0	0
TOTALS	**10**	**5**	**4**	**1**	**7**	**9**	**8**	**7**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0
4:45 PM	0	0	0	0	2	0	0	1	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	1	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**4**	**0**	**0**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-012
N/S Street: Valentine Ave
E/W Street: San Jose Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	0	0	0	0	1	1
12:45 PM	2	0	0	0	2	2	0	0
1:00 PM	0	1	2	0	1	0	0	0
1:15 PM	2	0	1	0	5	2	0	0
1:30 PM	1	0	0	0	0	4	0	1
1:45 PM	0	0	0	1	3	1	0	0
2:00 PM	1	0	0	0	0	0	0	0
2:15 PM	1	0	0	0	0	2	1	0
TOTALS	**7**	**1**	**3**	**1**	**11**	**11**	**2**	**2**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	2	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	1	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	1	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	3	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**4**	**2**	**0**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-013
N/S Street: Marty Ave
E/W Street: San Jose Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	2	1	0	0	0	0
7:15 AM	0	0	1	2	0	0	0	0
7:30 AM	0	0	1	2	0	0	0	0
7:45 AM	0	0	2	1	0	0	0	0
8:00 AM	0	0	2	1	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0
8:30 AM	0	0	0	1	1	0	0	0
8:45 AM	0	0	1	0	0	0	0	0
TOTALS	**0**	**0**	**10**	**8**	**1**	**0**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0
7:30 AM	1	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	0	0	1	0
4:15 PM	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	3	0	0	0
4:45 PM	0	0	2	1	0	0	0	2
5:00 PM	0	0	1	0	0	0	1	3
5:15 PM	0	0	0	3	0	0	1	1
5:30 PM	0	0	0	0	0	0	1	0
5:45 PM	0	0	0	0	0	0	0	1
TOTALS	**0**	**0**	**4**	**4**	**3**	**0**	**4**	**8**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	2	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-013
N/S Street: Marty Ave
E/W Street: San Jose Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	0	4	0	0	0	0
12:45 PM	0	0	2	0	0	0	4	0
1:00 PM	0	0	0	1	0	0	0	0
1:15 PM	0	0	3	0	0	0	0	0
1:30 PM	0	0	1	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**6**	**5**	**0**	**0**	**4**	**0**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	1	0	0	0	0	0	0	0	0	0	1	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	3	0	0	0	0
TOTALS	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-014
N/S Street: Gates Ave
E/W Street: San Jose Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	1	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**1**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	0	1	0	0
4:15 PM	0	0	0	0	0	1	0	0
4:30 PM	0	0	0	0	1	1	0	0
4:45 PM	0	0	0	0	0	0	0	1
5:00 PM	1	0	0	1	2	0	0	0
5:15 PM	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	3	1	0	0
5:45 PM	0	0	0	0	0	0	1	0
TOTALS	**1**	**0**	**0**	**1**	**6**	**4**	**1**	**3**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-014
N/S Street: Gates Ave
E/W Street: San Jose Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	1	0	0	1	2	0	0
12:45 PM	0	0	0	0	2	0	0	0
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	1	0	0	0
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	2	0
TOTALS	**0**	**1**	**0**	**0**	**4**	**2**	**2**	**0**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	3	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	2	0	0	0	0	0	0	0
1:45 PM	0	2	1	0	0	0	0	0	1	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**3**	**1**	**0**	**6**	**0**	**0**	**0**	**1**	**0**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-015
N/S Street: Figarden Ave
E/W Street: Bullard Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	1	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	1	0
7:30 AM	1	1	2	0	1	0	1	1
7:45 AM	0	1	0	0	0	3	0	0
8:00 AM	1	1	1	1	0	0	0	2
8:15 AM	0	0	0	0	1	0	1	0
8:30 AM	0	3	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0
TOTALS	**3**	**7**	**3**	**1**	**2**	**3**	**4**	**3**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	1	0	0	0
7:30 AM	0	1	0	0	0	0	0	1	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	1	0	0	0	0	1
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**0**	**0**	**3**	**1**	**1**	**1**	**1**	**0**	**2**	**2**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	2	0	0	0	0	0	5	0
4:15 PM	2	1	0	0	0	1	1	3
4:30 PM	1	0	0	0	0	0	0	2
4:45 PM	0	2	1	0	0	1	1	0
5:00 PM	2	0	0	0	6	4	4	1
5:15 PM	0	1	1	0	0	0	1	5
5:30 PM	4	4	0	0	0	0	1	1
5:45 PM	2	3	0	0	1	0	4	0
TOTALS	**13**	**11**	**2**	**0**	**7**	**6**	**17**	**12**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	1	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	1	0	0	1	0	0
5:30 PM	0	0	0	0	1	0	0	2	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**1**	**3**	**0**	**0**	**3**	**0**	**1**	**2**	**0**	**1**	**1**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-015
N/S Street: Figarden Ave
E/W Street: Bullard Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	2	1	0	0	1	0	0	0
12:45 PM	0	2	0	0	0	0	0	1
1:00 PM	0	7	0	0	0	1	5	0
1:15 PM	1	0	0	0	0	0	0	0
1:30 PM	1	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	1	3	0	0
2:00 PM	0	2	0	0	0	0	3	0
2:15 PM	1	3	0	0	0	0	0	0
TOTALS	**5**	**15**	**0**	**0**	**2**	**4**	**8**	**1**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	1	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	1	0	0	0	0	0	0	0	4	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-016
N/S Street: Brawley Ave
E/W Street: Barstow Ave
DATE: 5/30/2013
CITY: Fresno

DAY: Thursday

A M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	2	0	0	0	0
7:45 AM	0	0	0	0	0	1	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**0**	**2**	**0**	**1**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**2**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

P M

PEDESTRIANS

TIME	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	1	0	1	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	0
4:45 PM	0	0	0	0	0	1	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	3	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**1**	**0**	**4**	**2**	**0**	**0**

BIKES

TIME	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0
5:00 PM	0	1	2	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0
TOTALS	**0**	**3**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-8047-016
N/S Street: Brawley Ave
E/W Street: Barstow Ave
DATE: 5/18/2013
CITY: Fresno

DAY: Saturday

N O O N

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
12:30 PM	0	0	1	0	2	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	1	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**1**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8031_001 **Day:** WEDNESDAY

City: City of Fresno **HEAVY TRUCKS** **Date:** 5/1/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
7:00 AM	3	0	0	1	0	0	3	1	0	0	1	0	9
7:15 AM	1	0	0	0	0	0	0	3	0	0	3	0	7
7:30 AM	0	0	0	1	0	1	0	2	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	3	1	0	1	0	5
8:00 AM	1	0	0	0	0	0	1	1	0	0	3	0	6
8:15 AM	2	0	0	0	0	1	1	3	1	0	1	0	9
8:30 AM	1	0	0	0	0	0	0	1	0	0	2	0	4
8:45 AM	1	0	0	0	0	1	2	0	0	0	1	0	5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	9	0	0	2	0	3	7	14	2	0	12	0	49
APPROACH %'s :	100.00%	0.00%	0.00%	40.00%	0.00%	60.00%	30.43%	60.87%	8.70%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	3	0	0	1	0	2	2	9	2	0	5	0	24
PEAK HR FACTOR :	0.375			0.375			0.650			0.417			0.667

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8031_001 **Day:** WEDNESDAY

City: City of Fresno **HEAVY TRUCKS** **Date:** 5/1/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
4:00 PM	1	0	0	0	0	0	1	0	0	0	1	0	3
4:15 PM	2	0	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	1	0	0	0	0	0	0	1	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 PM	0	0	0	0	1	0	2	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	4	0	0	0	1	0	3	3	0	0	1	0	12
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1	0	2	2	0	0	0	0	5
PEAK HR FACTOR :		0.000			0.250			0.500			0.000		0.417

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
7:00 AM	1	0	4	0	0	0	0	3	0	0	3	0	11
7:15 AM	2	0	2	0	1	0	0	7	3	0	7	0	22
7:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	2
7:45 AM	2	0	1	0	1	0	0	2	2	1	3	0	12
8:00 AM	0	0	2	0	0	0	0	0	1	1	6	1	11
8:15 AM	0	0	3	0	1	0	0	0	0	0	6	2	12
8:30 AM	1	2	0	0	0	0	0	4	0	0	7	1	15
8:45 AM	1	1	0	1	0	1	2	2	0	1	5	0	14
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	7	4	13	1	3	1	2	18	6	3	37	4	99
APPROACH %'s :	29.17%	16.67%	54.17%	20.00%	60.00%	20.00%	7.69%	69.23%	23.08%	6.82%	84.09%	9.09%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	4	1	6	0	2	0	0	9	6	2	16	1	47
PEAK HR FACTOR :		0.688			0.500			0.375			0.594		0.937

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
4:00 PM	2	5	3	1	0	2	0	2	2	0	2	1	20
4:15 PM	1	1	1	1	1	1	3	2	0	1	6	1	19
4:30 PM	0	3	3	1	1	0	0	0	3	1	1	0	13
4:45 PM	0	1	3	0	1	0	0	1	0	1	5	2	14
5:00 PM	0	1	5	0	0	0	0	4	1	0	1	0	12
5:15 PM	0	4	4	0	1	1	0	2	1	0	3	0	16
5:30 PM	1	1	1	0	0	0	0	4	0	0	1	1	9
5:45 PM	0	0	0	0	1	1	1	1	1	0	1	0	6
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	4	16	20	3	5	5	4	16	8	3	20	5	109
APPROACH %'s :	10.00%	40.00%	50.00%	23.08%	38.46%	38.46%	14.29%	57.14%	28.57%	10.71%	71.43%	17.86%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	1	7	13	0	2	1	0	11	2	1	10	3	51
PEAK HR FACTOR :		0.656			0.375			0.650			0.438		0.958

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
11:00 AM	0	0	1	0	4	0	0	2	1	0	3	1	12
11:15 AM	0	1	3	0	3	0	0	3	0	0	7	0	17
11:30 AM	0	5	5	0	0	0	0	2	0	0	3	1	16
11:45 AM	0	3	2	0	0	0	0	1	0	1	2	0	9
12:00 PM	0	1	2	1	0	0	0	7	0	1	2	3	17
12:15 PM	0	5	7	1	0	0	0	7	0	1	1	1	23
12:30 PM	1	1	1	1	1	0	0	0	1	0	4	0	10
12:45 PM	0	3	1	0	0	0	0	0	2	0	3	0	9
1:00 PM	0	0	0	0	0	0	0	1	0	2	4	1	8
1:15 PM	0	5	1	0	0	0	0	3	1	0	1	0	11
1:30 PM	0	3	4	1	2	0	0	1	1	1	3	0	16
1:45 PM	1	3	3	1	1	0	0	0	0	5	3	1	18
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	30	30	5	11	0	0	27	6	11	36	8	166
APPROACH %'s :	3.23%	48.39%	48.39%	31.25%	68.75%	0.00%	0.00%	81.82%	18.18%	20.00%	65.45%	14.55%	

PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	1	9	9	2	1	0	0	8	3	3	12	2	50
PEAK HR FACTOR :	0.396			0.375			0.393			0.607			0.887

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_001

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
12:30 PM	0	2	0	1	1		0	1	1	0	1	0	7
12:45 PM	0	0	1	0	0		0	2	1	0	1	1	6
1:00 PM	0	0	2	0	1		0	0	1	0	5	0	9
1:15 PM	0	0	0	0	0		0	0	0	0	1	0	1
1:30 PM	0	1	1	1	0		0	0	0	1	1	0	5
1:45 PM	1	1	2	0	0		1	0	0	1	3	0	9
2:00 PM	0	0	1	1	1		0	0	0	1	0	0	4
2:15 PM	1	1	3	0	1		1	0	1	1	0	0	9
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	5	10	3	4	0	2	3	4	4	12	1	50
APPROACH %'s :	11.76%	29.41%	58.82%	42.86%	57.14%	0.00%	22.22%	33.33%	44.44%	23.53%	70.59%	5.88%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	1	2	5	1	1	0	1	0	1	2	10	0	24
PEAK HR FACTOR :		0.500			0.500			0.500			0.600		0.924

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002 **Day:** THURSDAY

Heavy Trucks

City: City of Fresno **Date:** 5/30/2013

AM

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
7:00 AM	0		0	1	0	0	1	4	0		1	0	7
7:15 AM	0		0	1	1	2	0	6	1		3	0	14
7:30 AM	0		0	0	0	0	1	3	0		0	0	4
7:45 AM	0		0	0	0	0	0	0	0		0	0	0
8:00 AM	0		0	0	0	0	0	3	0		4	0	7
8:15 AM	1		1	0	0	0	1	2	0		2	0	7
8:30 AM	0		0	0	1	1	0	0	1		4	1	8
8:45 AM	1		0	0	0	2	1	2	0		3	0	9
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	0	1	2	2	5	4	20	2	0	17	1	56
APPROACH %'s :	66.67%	0.00%	33.33%	22.22%	22.22%	55.56%	15.38%	76.92%	7.69%	0.00%	94.44%	5.56%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	2	0	1	0	1	3	2	7	1	0	13	1	31
PEAK HR FACTOR :		0.375			0.500			0.833			0.700		0.960

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
4:00 PM	0			0		1	1	2			1		5
4:15 PM	0			0		2	0	1			3		6
4:30 PM	0			0		0	0	2			1		3
4:45 PM	1			1		0	0	1			2		5
5:00 PM	0			0		0	0	4			0		4
5:15 PM	0			0		0	1	2			1		4
5:30 PM	0			0		0	1	2			2		5
5:45 PM	0			0		0	0	0			1		1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	1	0	3	3	14	0	0	11	0	33
APPROACH %'s :	100.00%	0.00%	0.00%	25.00%	0.00%	75.00%	17.65%	82.35%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	1	0	0	1	0	0	1	9	0	0	4	0	16
PEAK HR FACTOR :		0.250			0.250			0.625			0.500		0.941

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
11:00 AM	0			0	0	0	0	3	0	0	3	0	6
11:15 AM	1			0	0	0	0	2	0	0	3	0	6
11:30 AM	1			0	0	1	0	2	1	1	0	1	7
11:45 AM	1			1	0	0	0	0	0	0	3	0	5
12:00 PM	1			0	0	0	2	3	1	0	1	0	8
12:15 PM	0			0	0	0	0	3	2	0	4	0	9
12:30 PM	0			0	0	1	0	1	0	0	1	0	3
12:45 PM	0			0	1	2	0	1	0	0	1	0	5
1:00 PM	1			1	0	0	1	1	0	0	1	0	5
1:15 PM	0			0	0	1	0	3	1	0	1	0	6
1:30 PM	0			0	0	1	1	3	0	0	1	0	6
1:45 PM	0			0	0	1	1	1	0	0	3	0	6
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	0	0	2	1	7	5	23	5	1	22	1	72
APPROACH %'s :	100.00%	0.00%	0.00%	20.00%	10.00%	70.00%	15.15%	69.70%	15.15%	4.17%	91.67%	4.17%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	1	0	0	1	1	3	1	6	2	0	7	0	22
PEAK HR FACTOR :	0.250			0.417			0.450			0.438			0.956

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_002

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	Blythe Ave			Blythe Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1.5	.5	1	1	2	0	1	3	1	
12:30 PM				0		0	0	1	0		0		1
12:45 PM				1		0	0	0	0		1		2
1:00 PM				0		1	1	1	0		0		3
1:15 PM				0		0	0	0	0		1		1
1:30 PM				0		1	1	3	0		1		6
1:45 PM				0		0	0	1	1		1		3
2:00 PM				0		0	0	1	0		0		1
2:15 PM				0		0	0	1	0		0		1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1	0	2	2	8	1	0	4	0	18
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	33.33%	0.00%	66.67%	18.18%	72.73%	9.09%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	2	2	5	1	0	3	0	13
PEAK HR FACTOR :		0.000			0.500			0.500			0.750		0.939

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
7:00 AM	0			0				6		0	1	0	7
7:15 AM	0			1				6		0	3	0	10
7:30 AM	0			0				3		0	1	1	5
7:45 AM	0			0				0		0	0	0	0
8:00 AM	0			0				3		1	4	0	8
8:15 AM	0			0				2		0	4	0	6
8:30 AM	2			0				0		0	1	0	3
8:45 AM	0			0				2		0	3	0	5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	0	0	1	0	0	0	22	0	1	17	1	44
APPROACH %'s :	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	5.26%	89.47%	5.26%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	2	0	0	0	0	0	0	7	0	1	12	0	22
PEAK HR FACTOR :		0.250			0.000			0.583			0.650		0.984

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
4:00 PM	0		0	0		0	1	1	0		1		3
4:15 PM	2		0	0		0	0	0	1		1		4
4:30 PM	0		0	0		1	0	2	0		0		3
4:45 PM	0		0	0		0	0	2	0		2		4
5:00 PM	0		0	0		0	0	3	1		0		4
5:15 PM	0		1	1		0	0	2	0		1		5
5:30 PM	1		0	0		0	0	2	0		1		4
5:45 PM	0		0	0		0	0	0	0		1		1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	3	0	1	1	0	1	1	12	2	0	7	0	28
APPROACH %'s :	75.00%	0.00%	25.00%	50.00%	0.00%	50.00%	6.67%	80.00%	13.33%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	1	0	1	1	0	0	0	9	1	0	4	0	17
PEAK HR FACTOR :		0.500			0.250			0.625			0.500		0.931

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
11:00 AM	0		0	0			0	1	1	0	4		6
11:15 AM	2		0	0			0	2	0	1	1		6
11:30 AM	0		0	1			1	1	0	0	1		4
11:45 AM	0		0	0			0	1	0	0	3		4
12:00 PM	1		0	0			0	4	0	0	1		6
12:15 PM	0		0	0			0	3	0	0	3		6
12:30 PM	0		0	0			0	1	0	0	1		2
12:45 PM	0		0	0			0	0	0	0	1		1
1:00 PM	0		1	0			0	2	1	0	1		5
1:15 PM	0		0	0			0	3	0	0	1		4
1:30 PM	1		0	0			0	3	0	0	1		5
1:45 PM	0		0	0			0	0	0	0	2		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	4	0	1	1	0	0	1	21	2	1	20	0	51
APPROACH %'s :	80.00%	0.00%	20.00%	100.00%	0.00%	0.00%	4.17%	87.50%	8.33%	4.76%	95.24%	0.00%	

PEAK HR START TIME :	1145 AM												TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	9	0	0	8	0	18
PEAK HR FACTOR :		0.250			0.000			0.563			0.667		0.966

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_003

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	El Capitan Ave			El Capitan Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	1	1	3	1	
12:30 PM	0					0		1			0		1
12:45 PM	0					1		1			1		3
1:00 PM	0					0		2			1		3
1:15 PM	0					0		0			1		1
1:30 PM	0					0		1			0		1
1:45 PM	1					0		1			0		2
2:00 PM	0					0		1			0		1
2:15 PM	0					0		2			0		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	1	0	9	0	0	3	0	14
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	4	0	0	3	0	8
PEAK HR FACTOR :		0.000			0.250			0.500			0.750		0.949

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_004

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
11:00 AM	0	1	1	0	0	0	0	1	0	0	5	0	8
11:15 AM	0	0	1	0	0	0	1	1	1	0	1	1	6
11:30 AM	1	1	0	0	0	0	1	1	1	1	1	0	7
11:45 AM	2	0	0	0	0	0	0	1	1	0	2	0	6
12:00 PM	1	1	0	1	0	0	1	1	1	0	0	0	6
12:15 PM	0	0	0	0	0	0	2	0	2	0	3	0	7
12:30 PM	0	0	0	0	1	0	1	0	0	0	0	0	2
12:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
1:00 PM	0	1	0	0	1	1	1	2	0	0	0	0	6
1:15 PM	1	0	0	0	0	0	0	2	0	0	1	0	4
1:30 PM	0	0	1	0	1	1	0	0	0	0	0	0	3
1:45 PM	0	0	1	0	1	0	0	0	0	0	1	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	5	4	1	4	2	7	9	6	1	14	1	59
APPROACH %'s :	35.71%	35.71%	28.57%	14.29%	57.14%	28.57%	31.82%	40.91%	27.27%	6.25%	87.50%	6.25%	
PEAK HR START TIME :	1145 AM												TOTAL
PEAK HR VOL :	3	1	0	1	1	0	4	2	4	0	5	0	21
PEAK HR FACTOR :	0.500			0.500			0.625			0.417			0.949

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
7:00 AM	0		1	0	0			0	0	0	0	0	1
7:15 AM	0		1	0	1			8	1	0	3	0	14
7:30 AM	1		1	1	0			1	1	1	0	0	6
7:45 AM	1		0	0	0			1	0	0	2	0	4
8:00 AM	0		0	0	0			1	0	0	1	0	2
8:15 AM	0		0	0	0			2	0	0	1	0	3
8:30 AM	0		0	0	1			1	0	0	1	1	4
8:45 AM	0		0	0	0			2	0	0	1	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	0	3	1	2	0	0	16	2	1	9	1	37
APPROACH %'s :	40.00%	0.00%	60.00%	33.33%	66.67%	0.00%	0.00%	88.89%	11.11%	9.09%	81.82%	9.09%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	1	0	0	0	1	0	0	5	0	0	5	1	13
PEAK HR FACTOR :		0.250			0.250			0.625			0.750		0.976

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
4:00 PM	0	0		0	1			1	0		1		3
4:15 PM	1	0		0	0			0	0		0		1
4:30 PM	0	0		0	0			0	0		0		0
4:45 PM	0	0		0	1			0	0		0		1
5:00 PM	0	0		0	0			0	1		0		1
5:15 PM	0	0		0	0			0	0		1		1
5:30 PM	0	1		0	0			2	0		0		3
5:45 PM	0	0		1	0			0	0		1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	1	0	1	2	0	0	3	1	0	3	0	12
APPROACH %'s :	50.00%	50.00%	0.00%	33.33%	66.67%	0.00%	0.00%	75.00%	25.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	1	0	1	0	3
PEAK HR FACTOR :		0.000			0.250			0.250			0.250		0.959

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
11:00 AM	1	0	0	0	0			2	0	0	2		5
11:15 AM	0	0	0	0	1			2	0	0	2		5
11:30 AM	0	0	0	1	0			1	0	0	1		3
11:45 AM	0	0	0	0	0			1	0	0	2		3
12:00 PM	0	0	0	0	1			2	0	1	0		4
12:15 PM	0	1	0	0	0			1	0	0	3		5
12:30 PM	0	0	1	0	0			0	0	0	1		2
12:45 PM	0	0	0	0	1			0	0	0	0		1
1:00 PM	0	0	0	0	0			1	1	0	0		2
1:15 PM	0	0	1	0	0			1	0	0	1		3
1:30 PM	1	0	0	0	0			0	0	0	0		1
1:45 PM	0	0	0	0	0			1	0	0	1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	1	2	1	3	0	0	12	1	1	13	0	36
APPROACH %'s :	40.00%	20.00%	40.00%	25.00%	75.00%	0.00%	0.00%	92.31%	7.69%	7.14%	92.86%	0.00%	

PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	0	1	1	0	1	0	0	2	1	0	4	0	10
PEAK HR FACTOR :		0.500			0.250			0.375			0.333		0.942

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_005

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	Marty Ave			Marty Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	0	1	3	1	1	3	1	
12:30 PM			2					0			0		2
12:45 PM			0					0			0		0
1:00 PM			0					1			1		2
1:15 PM			0					0			1		1
1:30 PM			0					0			0		0
1:45 PM			1					1			0		2
2:00 PM			0					0			0		0
2:15 PM			0					1			0		1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	3	0	0	0	0	3	0	0	2	0	8
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	115 PM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	1	0	0	1	0	3
PEAK HR FACTOR :		0.250			0.000			0.250			0.250		0.981

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
12:30 PM	0						1	1	0		0	0	2
12:45 PM	0						0	0	0		0	0	0
1:00 PM	0						0	1	0			1	2
1:15 PM	0						0	0	0		0	0	0
1:30 PM	0						0	0	0		0	0	0
1:45 PM	2						0	2	1		1	0	6
2:00 PM	0						0	0	0		0	0	0
2:15 PM	0						0	0	0		0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	0	0	0	0	0	1	4	1	0	1	1	10
APPROACH %'s :	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	16.67%	66.67%	16.67%	0.00%	50.00%	50.00%	
PEAK HR START TIME :	115 PM												TOTAL
PEAK HR VOL :	2	0	0	0	0	0	0	2	1	0	1	0	6
PEAK HR FACTOR :		0.250			0.000			0.250			0.250		0.973

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
7:00 AM			1	1	1			0	1		1	0	5
7:15 AM			0	0	1			6	3		2	0	12
7:30 AM			0	0	0			2	0		1	0	3
7:45 AM			0	1	0			0	1		2	0	4
8:00 AM			0	0	0			2	0		1	0	3
8:15 AM			0	1	0			1	1		2	0	5
8:30 AM			1	0	0			1	0		2	1	5
8:45 AM			0	0	0			2	0		1	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	2	3	2	0	0	14	6	0	12	1	40
APPROACH %'s :	0.00%	0.00%	100.00%	60.00%	40.00%	0.00%	0.00%	70.00%	30.00%	0.00%	92.31%	7.69%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	0	1	2	0	0	0	4	2	0	7	1	17
PEAK HR FACTOR :		0.250			0.500			0.750			0.667		0.962

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
4:00 PM			0				0	1	0	0	1		2
4:15 PM			0				0	0	0	0	0		0
4:30 PM			0				0	0	0	0	0		0
4:45 PM			0				0	0	0	1	0		1
5:00 PM			0				0	0	0	1	0		1
5:15 PM			0				0	1	0	0	1		2
5:30 PM			0				1	1	1	0	0		3
5:45 PM			1				0	0	0	0	1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	1	0	0	0	1	3	1	2	3	0	11
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	20.00%	60.00%	20.00%	40.00%	60.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1	0	2	1	0	4
PEAK HR FACTOR :		0.000			0.000			0.250			0.750		0.958

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_006

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Valentine Ave			Valentine Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	3	1	1	3	1	
11:00 AM	0			0		0		1			2	0	3
11:15 AM	0			0		0		1			2	0	3
11:30 AM	0			0		0		2			1	1	4
11:45 AM	0			0		0		1			2	0	3
12:00 PM	0			0		0		2			0	0	2
12:15 PM	0			0		0		1			3	0	4
12:30 PM	0			0		1		1			0	0	2
12:45 PM	0			0		0		0			0	0	0
1:00 PM	0			0		0		1			0	0	1
1:15 PM	0			0		0		2			2	0	4
1:30 PM	0			1		0		0			0	0	1
1:45 PM	1			0		0		1			0	0	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	1	0	1	0	13	0	0	12	1	29
APPROACH %'s :	100.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	100.00%	0.00%	0.00%	92.31%	7.69%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	3	0	0	3	0	7
PEAK HR FACTOR :		0.000			0.250			0.750			0.250		0.971

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
7:00 AM	0		0	0		1	0	2		0	0	0	3
7:15 AM	0		1	0		0	2	4		0	2	0	9
7:30 AM	0		0	1		0	0	2		0	1	0	4
7:45 AM	0		0	1		0	0	1		1	2	0	5
8:00 AM	0		1	0		1	0	2		0	1	0	5
8:15 AM	0		0	0		1	0	2		0	1	0	4
8:30 AM	0		0	1		0	1	1		0	2	1	6
8:45 AM	1		0	0		0	0	2		0	1	0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	2	3	0	3	3	16	0	1	10	1	40
APPROACH %'s :	33.33%	0.00%	66.67%	50.00%	0.00%	50.00%	15.79%	84.21%	0.00%	8.33%	83.33%	8.33%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	0	1	2	0	2	1	6	0	1	6	1	20
PEAK HR FACTOR :		0.250			1.000			0.875			0.667		0.969

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
4:00 PM			1	0		0	1	0			1	0	3
4:15 PM			0	1		0	0	0			0	0	1
4:30 PM			0	0		0	0	0			0	0	0
4:45 PM			0	0		0	1	0			2	0	3
5:00 PM			0	0		0	0	0			1	0	1
5:15 PM			0	0		1	1	0			0	0	2
5:30 PM			0	0		0	0	1			1	0	2
5:45 PM			0	0		0	0	1			1	1	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	1	1	0	1	3	2	0	0	6	1	15
APPROACH %'s :	0.00%	0.00%	100.00%	50.00%	0.00%	50.00%	60.00%	40.00%	0.00%	0.00%	85.71%	14.29%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	1	1	0	0	2	0	0	0	3	0	7
PEAK HR FACTOR :		0.250			0.250			0.500			0.375		0.958

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
11:00 AM	0			0		0	0	0	0	0	3	0	3
11:15 AM	0			0		0	0	1	0	0	1	0	2
11:30 AM	0			1		0	1	1	0	0	2	1	6
11:45 AM	0			0		0	0	1	0	1	2	0	4
12:00 PM	0			0		0	1	0	0	0	0	0	1
12:15 PM	0			0		1	0	1	0	0	0	0	2
12:30 PM	1			0		1	0	2	1	0	0	0	5
12:45 PM	0			0		0	0	0	0	0	0	0	0
1:00 PM	0			1		0	0	0	0	0	0	0	1
1:15 PM	0			0		0	0	2	0	0	2	0	4
1:30 PM	0			1		0	1	1	0	0	0	0	3
1:45 PM	0			0		0	1	0	0	0	0	0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	3	0	2	4	9	1	1	10	1	32
APPROACH %'s :	100.00%	0.00%	0.00%	60.00%	0.00%	40.00%	28.57%	64.29%	7.14%	8.33%	83.33%	8.33%	

PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	1	0	0	1	0	2	0	3	1	0	0	0	8
PEAK HR FACTOR :	0.250			0.750			0.333			0.000			0.937

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_007

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	Feland Ave			Feland Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	3	1	1	3	1	
12:30 PM						0		1					1
12:45 PM						0		0					0
1:00 PM						1		1					2
1:15 PM						0		0					0
1:30 PM						0		0					0
1:45 PM						0		2			1		3
2:00 PM						0		0					0
2:15 PM						0		0					0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	0	4	0	0	1	0	6
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	1245 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	1	0	0	0	0	2
PEAK HR FACTOR :		0.000			0.250			0.250			0.000		0.966

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
7:00 AM	0	1	0	0	0		1	2	0	0	0	0	4
7:15 AM	0	0	1	0	0		0	3	0	1	3	0	8
7:30 AM	0	1	1	0	1		1	3	0	0	1	1	9
7:45 AM	0	0	0	0	1		0	2	0	1	2	0	6
8:00 AM	0	0	0	0	0		0	3	0	0	2	0	5
8:15 AM	1	0	0	1	1		0	2	0	0	0	0	5
8:30 AM	1	0	0	0	0		0	2	1	1	3	0	8
8:45 AM	0	0	1	0	1		0	2	0	0	0	0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	2	3	1	4	0	2	19	1	3	11	1	49
APPROACH %'s :	28.57%	28.57%	42.86%	20.00%	80.00%	0.00%	9.09%	86.36%	4.55%	20.00%	73.33%	6.67%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	1	1	1	1	3	0	1	10	0	1	5	1	25
PEAK HR FACTOR :	0.375			0.500			0.688			0.583			0.917

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
4:00 PM		0			1			1			1		3
4:15 PM		0			2			1			0		3
4:30 PM		0			0			1			0		1
4:45 PM		0			0			0			2		2
5:00 PM		0			1			0			2		3
5:15 PM		1			0			0			1		2
5:30 PM		0			0			1			1		2
5:45 PM		0			0			1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	4	0	0	5	0	0	8	0	18
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	1	0	0	6	0	9
PEAK HR FACTOR :		0.250			0.250			0.250			0.750		0.983

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
11:00 AM	0	0					0	0	0	1	2		3
11:15 AM	0	0					1	0	0	0	2		3
11:30 AM	1	0					0	2	0	0	2		5
11:45 AM	0	0					0	1	0	0	3		4
12:00 PM	0	0					0	1	0	0	0		1
12:15 PM	0	0					0	0	0	0	0		0
12:30 PM	0	0					0	1	0	0	0		1
12:45 PM	0	0					1	0	0	0	0		1
1:00 PM	0	1					0	0	0	0	0		1
1:15 PM	0	0					0	1	2	0	2		5
1:30 PM	0	0					0	1	0	0	0		1
1:45 PM	0	0					0	0	0	0	0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	1	0	0	0	0	2	7	2	1	11	0	25
APPROACH %'s :	50.00%	50.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	18.18%	63.64%	18.18%	8.33%	91.67%	0.00%	

PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	1	1	0	0	0	0	3
PEAK HR FACTOR :		0.250			0.000			0.500			0.000		0.964

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_008

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	Marks Ave			Marks Ave			Shaw Ave			Shaw Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	2	2	1	2	3	1	2	3	1	
12:30 PM	0		0		0			0	1				1
12:45 PM	0		0		0			0	0				0
1:00 PM	0		0		0			1	0				1
1:15 PM	0		1		0			0	0				1
1:30 PM	0		0		0			0	0				0
1:45 PM	1		0		0			1	0				2
2:00 PM	0		0		1			1	0				2
2:15 PM	0		0		0			0	0				0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	1	0	1	0	0	3	1	0	0	0	7
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%	100.00%	0.00%	0.00%	75.00%	25.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	1245 PM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	1	0	0	0	0	2
PEAK HR FACTOR :		0.250			0.000			0.250			0.000		0.988

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_009 **Day:** THURSDAY

Heavy Trucks

City: City of Fresno **Date:** 5/30/2013

AM

NS/EW Streets:	Figarden Dr			Figarden Dr			Gates Ave			Gates Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	1	2	0	1	0	1	0	
7:00 AM		0			1	0	0						1
7:15 AM		1			0	0	0						1
7:30 AM		2			0	0	0						2
7:45 AM		2			0	0	0						2
8:00 AM		0			0	0	1						1
8:15 AM		0			1	1	0						2
8:30 AM		0			0	0	0						0
8:45 AM		0			1	1	0						2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	0	0	3	2	1	0	0	0	0	0	11
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	60.00%	40.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	5	0	0	0	0	1	0	0	0	0	0	6
PEAK HR FACTOR :		0.625			0.000			0.250			0.000		0.956

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_009

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Figarden Dr			Figarden Dr			Gates Ave			Gates Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	1	2	0	1	0	1	0	
4:00 PM					0	0							0
4:15 PM					0	1							1
4:30 PM					0	0							0
4:45 PM					0	0							0
5:00 PM					1	0							1
5:15 PM					1	0							1
5:30 PM					0	0							0
5:45 PM					0	0							0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	1	0	0	0	0	0	0	3
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	66.67%	33.33%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	2	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.000			0.500			0.000			0.000		0.951

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_009

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/18/2013

NOON

NS/EW Streets:	Figarden Dr			Figarden Dr			Gates Ave			Gates Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	1	2	0	1	0	1	0	
12:30 PM						0							0
12:45 PM						0							0
1:00 PM						0							0
1:15 PM						0							0
1:30 PM						0							0
1:45 PM						0							0
2:00 PM						1							1
2:15 PM						1							1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	2	0	0	0	0	0	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.957

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_010

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	1	1	
7:00 AM		0			1				0		0		1
7:15 AM		1			0				0		1		2
7:30 AM		2			0				0		0		2
7:45 AM		1			0				0		0		1
8:00 AM		0			0				0		0		0
8:15 AM		0			1				1		0		2
8:30 AM		0			0				0		0		0
8:45 AM		0			1				0		0		1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	0	3	0	0	0	1	0	1	0	9
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	4	0	0	0	0	0	0	0	0	1	0	5
PEAK HR FACTOR :		0.500			0.000			0.000			0.250		0.928

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_010

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	1	1	
4:00 PM					0								0
4:15 PM					0								0
4:30 PM					0								0
4:45 PM					0								0
5:00 PM					1								1
5:15 PM					1								1
5:30 PM					0								0
5:45 PM					0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	0	0	0	0	0	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	2	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.000			0.500			0.000			0.000		0.947

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_010

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/25/2013

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	1	1	
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
2:00 PM													0
2:15 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.955

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_011

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/25/2013

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Site Access			Site Access			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	0	1	0	0	1	
12:30 PM		0								0			0
12:45 PM		1								0			1
1:00 PM		0								1			1
1:15 PM		0								0			0
1:30 PM		0								0			0
1:45 PM		0								0			0
2:00 PM		0								0			0
2:15 PM		0								0			0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	0	0	0	1	0	0	2
APPROACH %'s :	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.940

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_012

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/25/2013

NOON

NS/EW Streets:	Valentine Ave			Valentine Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	0	1	2	0	
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
2:00 PM													0
2:15 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.975

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_012

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Valentine Ave			Valentine Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	0	1	2	0	
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.952

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_012

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Valentine Ave			Valentine Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	0	1	2	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.941

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_012

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Valentine Ave			Valentine Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_013 **Day:** THURSDAY

Heavy Trucks

City: City of Fresno **Date:** 5/30/2013

AM

NS/EW Streets:	Marty Ave			Marty Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	0	2	0	
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.948

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_013 **Day:** THURSDAY

Heavy Trucks

City: City of Fresno **Date:** 5/30/2013

PM

NS/EW Streets:	Marty Ave			Marty Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	0	2	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.962

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_013

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Marty Ave			Marty Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_013

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/25/2013

NOON

NS/EW Streets:	Marty Ave			Marty Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	0	2	0	
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
2:00 PM													0
2:15 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.910

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_014

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Gates Ave			Gates Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	0	
7:00 AM		0	0		0							0	0
7:15 AM		0	0		0							0	0
7:30 AM		0	0		0							0	0
7:45 AM		0	0		1							0	1
8:00 AM		1	0		0							1	2
8:15 AM		0	1		0							0	1
8:30 AM		0	0		0							0	0
8:45 AM		0	0		0							0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	1	0	1	0	0	0	0	0	0	1	4
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	0	0	0	0	1	3
PEAK HR FACTOR :		0.250			0.250			0.000			0.250		0.933

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_014

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Gates Ave			Gates Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	0	
4:00 PM		0			0								0
4:15 PM		0			1								1
4:30 PM		0			0								0
4:45 PM		0			1								1
5:00 PM		0			0								0
5:15 PM		0			0								0
5:30 PM		0			0								0
5:45 PM		1			0								1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	2	0	0	0	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.250			0.000			0.000			0.000		0.929

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_014

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Gates Ave			Gates Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_014

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/25/2013

NOON

NS/EW Streets:	Gates Ave			Gates Ave			San Jose Ave			San Jose Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	0	1	1	0	
12:30 PM					0								0
12:45 PM					0								0
1:00 PM					0								0
1:15 PM					0								0
1:30 PM					0								0
1:45 PM					0								0
2:00 PM					0								0
2:15 PM					1								1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	0	0	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.989

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_015

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

AM

NS/EW Streets:	Figarden Ave			Figarden Ave			Bullard Ave			Bullard Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	1	1	1	2	1	
7:00 AM	0	0			1				0	0			1
7:15 AM	0	1			0				0	0			1
7:30 AM	1	1			0				0	0			2
7:45 AM	1	1			0				1	0			3
8:00 AM	1	0			0				0	0			1
8:15 AM	0	0			0				0	1			1
8:30 AM	0	0			0				0	0			0
8:45 AM	0	0			1				0	1			2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	3	3	0	0	2	0	0	0	1	2	0	0	11
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	3	3	0	0	0	0	0	0	1	0	0	0	7
PEAK HR FACTOR :		0.750			0.000			0.250			0.000		0.936

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_015 **Day:** THURSDAY

Heavy Trucks

City: City of Fresno **Date:** 5/30/2013

PM

NS/EW Streets:	Figarden Ave			Figarden Ave			Bullard Ave			Bullard Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	1	1	1	2	1	
4:00 PM					0								0
4:15 PM					1								1
4:30 PM					0								0
4:45 PM					0								0
5:00 PM					1								1
5:15 PM					1								1
5:30 PM					0								0
5:45 PM					0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	3	0	0	0	0	0	0	0	3
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	2	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.000			0.500			0.000			0.000		0.978

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_015

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Figarden Ave			Figarden Ave			Bullard Ave			Bullard Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_015

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/25/2013

NOON

NS/EW Streets:	Figarden Ave			Figarden Ave			Bullard Ave			Bullard Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	1	1	1	2	1	
12:30 PM					0								0
12:45 PM					1								1
1:00 PM					1								1
1:15 PM					0								0
1:30 PM					0								0
1:45 PM					0								0
2:00 PM					2								2
2:15 PM					0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	4	0	0	0	0	0	0	0	4
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	0	0	0	0	2	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.000			0.500			0.000			0.000		0.942

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_016 **Day:** THURSDAY

Heavy Trucks

City: City of Fresno **Date:** 5/30/2013

AM

NS/EW Streets:	Brawley Ave			Brawley Ave			Barstow Ave			Barstow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	1	0	
7:00 AM		0			1								1
7:15 AM		1			0								1
7:30 AM		2			0								2
7:45 AM		1			0								1
8:00 AM		0			0								0
8:15 AM		0			1								1
8:30 AM		0			0								0
8:45 AM		0			1								1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	0	3	0	0	0	0	0	0	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	4	0	0	0	0	0	0	0	0	0	0	4
PEAK HR FACTOR :		0.500			0.000			0.000			0.000		0.933

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_016

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			Barstow Ave			Barstow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	1	0	
4:00 PM					0								0
4:15 PM					0								0
4:30 PM					0								0
4:45 PM					0								0
5:00 PM					1								1
5:15 PM					1								1
5:30 PM					0								0
5:45 PM					0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	0	0	0	0	0	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	2	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.000			0.500			0.000			0.000		0.939

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_016

Day: THURSDAY

Heavy Trucks

City: City of Fresno

Date: 5/30/2013

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Barstow Ave			Barstow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
1:00 PM													0
1:15 PM													0
1:30 PM													0
1:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13_8047_016

Day: SATURDAY

Heavy Trucks

City: City of Fresno

Date: 5/25/2013

NOON

NS/EW Streets:	Brawley Ave			Brawley Ave			Barstow Ave			Barstow Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	1	0	
12:30 PM		0			0								0
12:45 PM		1			1								2
1:00 PM		1			0								1
1:15 PM		0			0								0
1:30 PM		0			0								0
1:45 PM		0			0								0
2:00 PM		0			0								0
2:15 PM		0			0								0

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	0	1	0	0	0	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.960

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA13 8032 005 **Day:** WEDNESDAY

City: City of Fresno **Date:** 5/1/2013

PM

NS/EW Streets:	Brawley Ave			Brawley Ave			Office Depot Dwy			Office Depot Dwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM			8									18	26
4:15 PM			12									25	37
4:30 PM			7									21	28
4:45 PM			4									16	20
5:00 PM			8									18	26
5:15 PM			8									27	35
5:30 PM			6									22	28
5:45 PM			6									20	26
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	59	0	0	0	0	0	0	0	0	167	226
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	28	0	0	0	0	0	0	0	0	87	115
PEAK HR FACTOR :		0.875			0.000			0.000			0.806		0.821

CONTROL :

APPENDIX D

BASELINE INTERSECTION ANALYSIS SHEETS

Existing Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	387	38	452	64	40	102	170	619	12	92	864	126
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99
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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	450	44	205	70	43	4	191	696	5	97	909	48
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	544	364	304	90	311	135	232	1754	785	124	1505	669
Arrive On Green	0.16	0.20	0.20	0.05	0.09	0.09	0.13	0.50	0.50	0.07	0.43	0.43
Sat Flow, veh/h	3442	1863	1559	1774	3539	1529	1774	3539	1583	1774	3539	1572
Grp Volume(v), veh/h	450	44	205	70	43	4	191	696	5	97	909	48
Grp Sat Flow(s),veh/h/ln	1721	1863	1559	1774	1770	1529	1774	1770	1583	1774	1770	1572
Q Serve(g_s), s	12.0	1.8	8.2	3.7	1.1	0.2	9.9	11.7	0.2	5.1	18.8	1.0
Cycle Q Clear(g_c), s	12.0	1.8	8.2	3.7	1.1	0.2	9.9	11.7	0.2	5.1	18.8	1.0
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	544	364	304	90	311	135	232	1754	785	124	1505	669
V/C Ratio(X)	0.83	0.12	0.67	0.78	0.14	0.03	0.82	0.40	0.01	0.78	0.60	0.07
Avail Cap(c_a), veh/h	765	690	577	150	824	356	340	1754	785	244	1505	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	31.3	17.7	44.3	39.8	39.4	40.0	15.0	12.1	43.2	21.0	5.1
Incr Delay (d2), s/veh	5.3	0.1	2.6	13.3	0.2	0.1	10.0	0.1	0.0	10.2	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	1.0	4.5	2.1	0.5	0.1	5.5	5.7	0.1	2.9	9.5	0.7
LnGrp Delay(d),s/veh	43.8	31.5	20.3	57.6	40.0	39.5	50.0	15.1	12.1	53.4	22.8	5.3
LnGrp LOS	D	C	C	E	D	D	D	B	B	D	C	A
Approach Vol, veh/h		699			117			892			1054	
Approach Delay, s/veh		36.1			50.5			22.6			24.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	51.8	8.8	23.4	17.3	45.1	18.9	13.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	46.2	8.0	35.0	18.4	40.200001	21.0	22.0
Max Q Clear Time (g_c+I1), s	7.1	13.7	5.7	10.2	11.9	20.8	14.0	3.1
Green Ext Time (p_c), s	0.1	5.6	0.0	1.1	0.6	6.1	1.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	450	44	526	70	43	111	191	696	13	97	909	133
v/c Ratio	0.76	0.10	0.83	0.53	0.11	0.35	0.72	0.42	0.02	0.54	0.65	0.19
Control Delay	51.0	33.3	24.6	65.1	42.6	4.1	59.5	21.8	0.0	58.2	30.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	33.3	24.6	65.1	42.6	4.1	59.5	21.8	0.0	58.2	30.1	5.2
Queue Length 50th (ft)	145	24	113	45	13	0	120	162	0	61	253	0
Queue Length 95th (ft)	218	51	225	#116	31	9	#221	269	0	129	410	42
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	709	641	778	139	766	466	331	1675	815	226	1400	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.07	0.68	0.50	0.06	0.24	0.58	0.42	0.02	0.43	0.65	0.19

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	294	1	48	1	0	0	79	467	1	2	900	451
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	359	1	0	1	0	0	92	543	1	2	938	311
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	212	180	3	3	3	118	2008	4	4	1733	767
Arrive On Green	0.14	0.11	0.00	0.00	0.00	0.00	0.07	0.55	0.55	0.00	0.49	0.49
Sat Flow, veh/h	3442	1863	1583	1774	1863	1583	1774	3624	7	1774	3539	1567
Grp Volume(v), veh/h	359	1	0	1	0	0	92	265	279	2	938	311
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1863	1583	1774	1770	1861	1774	1770	1567
Q Serve(g_s), s	6.0	0.0	0.0	0.0	0.0	0.0	3.0	4.7	4.7	0.1	11.0	7.5
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	0.0	0.0	3.0	4.7	4.7	0.1	11.0	7.5
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	488	212	180	3	3	3	118	981	1032	4	1733	767
V/C Ratio(X)	0.74	0.00	0.00	0.34	0.00	0.00	0.78	0.27	0.27	0.52	0.54	0.41
Avail Cap(c_a), veh/h	698	844	717	211	687	584	211	981	1032	211	1733	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	23.4	0.0	29.7	0.0	0.0	27.4	7.0	7.0	29.7	10.6	9.7
Incr Delay (d2), s/veh	2.4	0.0	0.0	55.8	0.0	0.0	10.5	0.7	0.6	78.5	1.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	0.1	0.0	0.0	1.8	2.5	2.6	0.1	5.6	3.6
LnGrp Delay(d),s/veh	26.9	23.4	0.0	85.5	0.0	0.0	37.9	7.6	7.6	108.2	11.8	11.3
LnGrp LOS	C	C		F			D	A	A	F	B	B
Approach Vol, veh/h		360			1			636			1251	
Approach Delay, s/veh		26.9			85.5			12.0			11.8	
Approach LOS		C			F			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	37.9	5.0	11.7	8.9	34.1	13.4	3.3
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	29.2	7.1	27.0	7.1	29.2	12.1	22.0
Max Q Clear Time (g_c+I1), s	2.1	6.7	2.0	2.0	5.0	13.0	8.0	0.0
Green Ext Time (p_c), s	0.0	11.5	0.0	0.0	0.0	9.5	0.5	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	359	1	59	1	92	544	2	938	470
v/c Ratio	0.60	0.00	0.14	0.01	0.47	0.26	0.01	0.57	0.55
Control Delay	32.3	21.0	0.6	34.0	41.4	10.4	34.0	17.5	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	21.0	0.6	34.0	41.4	10.4	34.0	17.5	9.8
Queue Length 50th (ft)	64	0	0	0	34	37	1	130	42
Queue Length 95th (ft)	135	4	0	6	#114	164	8	333	203
Internal Link Dist (ft)		385				1059		1165	
Turn Bay Length (ft)	200		150	130	265		265		100
Base Capacity (vph)	665	810	752	201	201	2068	201	1654	860
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.00	0.08	0.00	0.46	0.26	0.01	0.57	0.55

Intersection Summary

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

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	63	125	392	16	117	853
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	139	478	20	123	898

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1193	269	0	0	508	0
Stage 1	498	-	-	-	-	-
Stage 2	695	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	180	729	-	-	1053	-
Stage 1	576	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	156	717	-	-	1044	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	399	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.7	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	156	717	1044	-
HCM Lane V/C Ratio	-	-	0.449	0.194	0.118	-
HCM Control Delay (s)	-	-	45.6	11.2	8.9	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	2.1	0.7	0.4	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	10	13	58	51	12	15	21	237	32
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	17	74	60	14	18	26	296	40

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	878	1059	331	737	1041	188	632	0	0
Stage 1	660	660	-	379	379	-	-	-	-
Stage 2	218	399	-	358	662	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	242	223	665	307	229	822	947	-	-
Stage 1	418	458	-	615	613	-	-	-	-
Stage 2	764	601	-	633	457	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	218	211	654	249	216	808	939	-	-
Mov Cap-2 Maneuver	320	322	-	361	319	-	-	-	-
Stage 1	403	449	-	593	591	-	-	-	-
Stage 2	703	579	-	529	448	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	13.3	15.6	0.6
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	939	-	-	320	550	361	481	1200	-	-
HCM Lane V/C Ratio	0.028	-	-	0.04	0.166	0.166	0.066	0.013	-	-
HCM Control Delay (s)	8.9	-	-	16.7	12.8	17	13	8	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.6	0.6	0.2	0	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	14	575	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	2	2	2
Mvmt Flow	15	618	3

Major/Minor	Major2		
Conflicting Flow All	346	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1210	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1200	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.2
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	101	70	63	101	124	46	297	22	142	791	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	13	120	0	69	111	9	54	349	19	148	824	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.91	0.91	0.91	0.85	0.85	0.85	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	645	288	332	339	284	74	1508	82	192	1820	22
Arrive On Green	0.18	0.18	0.00	0.18	0.18	0.18	0.04	0.44	0.44	0.11	0.51	0.51
Sat Flow, veh/h	1251	3539	1583	1250	1863	1557	1774	3413	185	1774	3581	43
Grp Volume(v), veh/h	13	120	0	69	111	9	54	180	188	148	407	427
Grp Sat Flow(s),veh/h/ln	1251	1770	1583	1250	1863	1557	1774	1770	1829	1774	1770	1855
Q Serve(g_s), s	0.5	1.5	0.0	2.5	2.7	0.2	1.6	3.3	3.3	4.2	7.6	7.6
Cycle Q Clear(g_c), s	3.1	1.5	0.0	4.0	2.7	0.2	1.6	3.3	3.3	4.2	7.6	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	303	645	288	332	339	284	74	782	808	192	899	943
V/C Ratio(X)	0.04	0.19	0.00	0.21	0.33	0.03	0.73	0.23	0.23	0.77	0.45	0.45
Avail Cap(c_a), veh/h	609	1511	676	637	795	665	275	782	808	413	899	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	17.8	0.0	19.5	18.3	17.3	24.4	8.9	9.0	22.4	8.1	8.1
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.6	0.0	12.7	0.7	0.7	6.4	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.0	0.9	1.4	0.1	1.0	1.7	1.8	2.4	4.0	4.2
LnGrp Delay(d),s/veh	19.8	18.0	0.0	19.9	18.9	17.4	37.2	9.6	9.6	28.7	9.7	9.7
LnGrp LOS	B	B		B	B	B	D	A	A	C	A	A
Approach Vol, veh/h		133			189			422			982	
Approach Delay, s/veh		18.2			19.2			13.2			12.6	
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	9.6	27.7		14.3	6.2	31.1		14.3
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	12.0	22.2		22.0	8.0	26.2		22.0
Max Q Clear Time (g_c+I1), s	6.2	5.3		5.1	3.6	9.6		6.0
Green Ext Time (p_c), s	0.2	6.5		1.5	0.0	6.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	13	120	83	69	111	136	54	375	148	835
v/c Ratio	0.06	0.19	0.23	0.31	0.33	0.35	0.25	0.21	0.50	0.40
Control Delay	19.0	20.0	6.1	23.6	22.7	6.9	27.9	12.4	29.1	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	20.0	6.1	23.6	22.7	6.9	27.9	12.4	29.1	11.3
Queue Length 50th (ft)	4	18	0	21	34	0	16	38	45	93
Queue Length 95th (ft)	14	34	21	50	70	35	50	89	112	208
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	504	1410	672	497	742	699	256	1799	384	2094
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.12	0.14	0.15	0.19	0.21	0.21	0.39	0.40

Intersection Summary

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	211	74	55	157	89	34
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	92	92	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	224	79	60	171	110	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	234	0	439	244
Stage 1	-	-	-	-	234	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1333	-	561	794
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1322	-	527	781
Mov Cap-2 Maneuver	-	-	-	-	597	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	767	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	639	-	-	1322	-
HCM Lane V/C Ratio	0.238	-	-	0.045	-
HCM Control Delay (s)	12.4	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	28	123	106	0	11	62	28	0	62	60	6
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.74	0.74	0.74	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	29	127	109	0	15	84	38	0	71	69	7
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	11.6	9.6	10
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	26%	0%	100%	0%
Vol Thru, %	0%	91%	0%	54%	74%	53%	0%	66%
Vol Right, %	0%	9%	0%	46%	0%	47%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	66	28	229	42	59	69	176
LT Vol	0	60	0	123	31	31	0	117
Through Vol	0	6	0	106	0	28	0	59
RT Vol	62	0	28	0	11	0	69	0
Lane Flow Rate	71	76	29	236	57	80	85	217
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.132	0.128	0.052	0.374	0.1	0.13	0.152	0.343
Departure Headway (Hd)	6.648	6.076	6.537	5.703	6.357	5.888	6.428	5.685
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	539	590	548	630	564	608	558	632
Service Time	4.387	3.815	4.272	3.438	4.099	3.629	4.162	3.419
HCM Lane V/C Ratio	0.132	0.129	0.053	0.375	0.101	0.132	0.152	0.343
HCM Control Delay	10.4	9.7	9.6	11.8	9.8	9.5	10.3	11.4
HCM Lane LOS	B	A	A	B	A	A	B	B
HCM 95th-tile Q	0.5	0.4	0.2	1.7	0.3	0.4	0.5	1.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	69	117	59
Peak Hour Factor	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	144	73
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	11.1
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	15	1	295	26
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	16	1	378	33

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1496	1718	599	1122	1701	226	1168	0	0
Stage 1	1294	1294	-	407	407	-	-	-	-
Stage 2	202	424	-	715	1294	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	85	89	445	161	91	777	594	-	-
Stage 1	172	231	-	592	596	-	-	-	-
Stage 2	781	585	-	388	231	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	78	82	438	151	84	764	589	-	-
Mov Cap-2 Maneuver	144	168	-	268	172	-	-	-	-
Stage 1	170	216	-	586	590	-	-	-	-
Stage 2	757	579	-	363	216	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	589	-	-	-	764	1125	-	-
HCM Lane V/C Ratio	0.002	-	-	-	0.021	0.056	-	-
HCM Control Delay (s)	11.1	-	-	0	9.8	8.4	-	-
HCM Lane LOS	B	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.2	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	51	938	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	81	81	81
Heavy Vehicles, %	2	2	2
Mvmt Flow	63	1158	0

Major/Minor	Major2		
Conflicting Flow All	422	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1134	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1125	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	533	51	277	678	55	29	163	440	94	263	5
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	15	573	12	338	827	28	31	175	47	108	302	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.82	0.82	0.82	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	1009	447	397	1750	778	46	555	244	140	743	332
Arrive On Green	0.01	0.29	0.29	0.22	0.49	0.49	0.03	0.16	0.16	0.08	0.21	0.00
Sat Flow, veh/h	1774	3539	1567	1774	3539	1574	1774	3539	1553	1774	3539	1583
Grp Volume(v), veh/h	15	573	12	338	827	28	31	175	47	108	302	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1567	1774	1770	1574	1774	1770	1553	1774	1770	1583
Q Serve(g_s), s	0.6	9.6	0.4	12.7	10.8	0.6	1.2	3.1	1.8	4.2	5.1	0.0
Cycle Q Clear(g_c), s	0.6	9.6	0.4	12.7	10.8	0.6	1.2	3.1	1.8	4.2	5.1	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	26	1009	447	397	1750	778	46	555	244	140	743	332
V/C Ratio(X)	0.58	0.57	0.03	0.85	0.47	0.04	0.67	0.32	0.19	0.77	0.41	0.00
Avail Cap(c_a), veh/h	203	1324	586	814	2542	1130	203	1679	737	331	1933	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.00
Uniform Delay (d), s/veh	34.2	21.3	18.0	26.0	11.6	9.1	33.7	26.1	25.6	31.5	23.8	0.0
Incr Delay (d2), s/veh	19.3	0.5	0.0	5.2	0.2	0.0	15.9	0.3	0.4	8.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.8	0.2	6.8	5.2	0.3	0.8	1.5	0.8	2.4	2.6	0.0
LnGrp Delay(d),s/veh	53.5	21.8	18.0	31.1	11.8	9.1	49.5	26.4	26.0	40.1	24.2	0.0
LnGrp LOS	D	C	B	C	B	A	D	C	C	D	C	
Approach Vol, veh/h		600			1193			253			410	
Approach Delay, s/veh		22.5			17.2			29.2			28.4	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	15.8	19.6	24.8	5.8	19.5	5.0	39.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	33.1	32.0	26.1	8.0	38.1	8.0	50.1
Max Q Clear Time (g_c+I1), s	6.2	5.1	14.7	11.6	3.2	7.1	2.6	12.8
Green Ext Time (p_c), s	0.1	3.5	0.9	7.8	0.0	3.5	0.0	12.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	15	573	55	338	827	67	31	175	473	108	302	6
v/c Ratio	0.10	0.66	0.11	0.71	0.43	0.07	0.20	0.31	0.73	0.47	0.38	0.01
Control Delay	45.6	34.4	0.5	38.9	14.0	0.3	46.1	35.5	11.3	46.2	31.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	34.4	0.5	38.9	14.0	0.3	46.1	35.5	11.3	46.2	31.0	0.0
Queue Length 50th (ft)	8	142	0	160	121	0	15	44	0	53	74	0
Queue Length 95th (ft)	32	263	0	282	247	0	54	87	96	128	130	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	188	1232	640	756	2350	1063	188	1563	944	307	1799	843
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.47	0.09	0.45	0.35	0.06	0.16	0.11	0.50	0.35	0.17	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	615	35	36	470	121	21	2	8	98	15	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	127	634	33	39	511	25	23	2	1	116	0	11
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	1337	70	51	1459	446	355	234	117	772	0	340
Arrive On Green	0.13	0.39	0.39	0.06	0.57	0.57	0.20	0.20	0.20	0.22	0.00	0.22
Sat Flow, veh/h	1774	3420	178	1774	5085	1556	1774	1166	583	3548	0	1562
Grp Volume(v), veh/h	127	328	339	39	511	25	23	0	3	116	0	11
Grp Sat Flow(s),veh/h/ln	1774	1770	1829	1774	1695	1556	1774	0	1749	1774	0	1562
Q Serve(g_s), s	7.7	16.0	16.0	2.5	6.2	0.8	1.2	0.0	0.2	3.1	0.0	0.6
Cycle Q Clear(g_c), s	7.7	16.0	16.0	2.5	6.2	0.8	1.2	0.0	0.2	3.1	0.0	0.6
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	236	692	715	51	1459	446	355	0	350	772	0	340
V/C Ratio(X)	0.54	0.47	0.47	0.76	0.35	0.06	0.06	0.00	0.01	0.15	0.00	0.03
Avail Cap(c_a), veh/h	338	692	715	154	1459	446	355	0	350	772	0	340
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	26.2	26.3	53.9	18.8	17.7	37.4	0.0	37.0	36.5	0.0	35.6
Incr Delay (d2), s/veh	1.9	2.3	2.3	19.9	0.7	0.2	0.4	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.3	8.6	1.5	3.0	0.4	0.6	0.0	0.1	1.5	0.0	0.3
LnGrp Delay(d),s/veh	48.6	28.6	28.5	73.8	19.5	17.9	37.7	0.0	37.0	36.9	0.0	35.7
LnGrp LOS	D	C	C	E	B	B	D		D	D		D
Approach Vol, veh/h		794			575			26			127	
Approach Delay, s/veh		31.7			23.1			37.6			36.8	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		28.0	14.0	50.0		30.0	26.0	38.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		23.1	10.0	45.1		25.1	22.0	33.1
Max Q Clear Time (g_c+I1), s		3.2	4.5	18.0		5.1	9.7	8.2
Green Ext Time (p_c), s		0.0	0.2	4.0		0.4	0.3	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	127	670	39	511	132	23	11	60	61	71
v/c Ratio	0.52	0.51	0.34	0.37	0.26	0.06	0.03	0.17	0.17	0.17
Control Delay	55.3	30.8	54.6	16.0	4.8	40.2	23.0	41.6	41.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	30.8	54.6	16.0	4.8	40.2	23.0	41.6	41.5	0.8
Queue Length 50th (ft)	91	213	32	112	38	15	1	41	42	0
Queue Length 95th (ft)	151	271	71	153	83	39	18	83	84	0
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	319	1324	145	1379	511	410	376	345	350	427
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.51	0.27	0.37	0.26	0.06	0.03	0.17	0.17	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	691	39	36	628	28	30	1	29	18	1	6
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	4	743	25	38	668	18	34	1	3	20	1	1
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2127	944	48	3240	1001	407	100	301	405	209	209
Arrive On Green	0.00	1.00	1.00	0.03	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1392	407	1222	1390	850	850
Grp Volume(v), veh/h	4	743	25	38	668	18	34	0	4	20	0	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1392	0	1629	1390	0	1700
Q Serve(g_s), s	0.1	0.0	0.0	2.3	6.0	0.5	2.1	0.0	0.2	1.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	2.3	6.0	0.5	2.2	0.0	0.2	1.4	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		0.50
Lane Grp Cap(c), veh/h	2	2127	944	48	3240	1001	407	0	401	405	0	419
V/C Ratio(X)	2.48	0.35	0.03	0.78	0.21	0.02	0.08	0.00	0.01	0.05	0.00	0.00
Avail Cap(c_a), veh/h	163	2127	944	242	3240	1001	407	0	401	405	0	419
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	0.0	0.0	53.2	8.3	7.3	32.1	0.0	31.3	31.9	0.0	31.3
Incr Delay (d2), s/veh	921.4	0.4	0.0	23.5	0.1	0.0	0.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	477.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.0	1.5	2.8	0.2	0.8	0.0	0.1	0.5	0.0	0.0
LnGrp Delay(d),s/veh	1454.4	0.4	0.0	76.6	8.5	7.4	32.5	0.0	31.4	32.1	0.0	31.3
LnGrp LOS	F	A	A	E	A	A	C		C	C		C
Approach Vol, veh/h		772			724			38			22	
Approach Delay, s/veh		7.9			12.0			32.4			32.0	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.0	7.0	83.0		32.0	15.0	75.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		27.1	15.0	66.1		27.1	10.1	70.099998
Max Q Clear Time (g_c+I1), s		4.2	4.3	2.0		3.4	2.1	8.0
Green Ext Time (p_c), s		0.1	0.0	5.8		0.1	0.5	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	4	743	42	38	668	30	34	34	20	8
v/c Ratio	0.04	0.33	0.04	0.32	0.20	0.03	0.11	0.09	0.07	0.02
Control Delay	31.8	1.7	0.1	43.8	4.5	0.3	39.2	13.5	38.4	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	1.7	0.1	43.8	4.5	0.3	39.2	13.5	38.4	22.3
Queue Length 50th (ft)	3	10	1	15	10	0	22	1	13	1
Queue Length 95th (ft)	m8	14	m0	35	17	0	50	27	34	14
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	159	2235	972	217	3421	1035	306	369	299	356
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.33	0.04	0.18	0.20	0.03	0.11	0.09	0.07	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	599	70	96	481	73	122	202	45	197	545	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	68	651	14	107	534	19	137	227	12	263	727	59
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.89	0.89	0.89	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	1487	458	167	1605	495	200	1261	559	428	1524	677
Arrive On Green	0.03	0.29	0.29	0.10	0.63	0.63	0.06	0.36	0.36	0.12	0.43	0.43
Sat Flow, veh/h	3442	5085	1567	3442	5085	1568	3442	3539	1570	3442	3539	1572
Grp Volume(v), veh/h	68	651	14	107	534	19	137	227	12	263	727	59
Grp Sat Flow(s),veh/h/ln	1721	1695	1567	1721	1695	1568	1721	1770	1570	1721	1770	1572
Q Serve(g_s), s	2.1	11.4	0.6	3.3	5.4	0.3	4.3	4.8	0.5	8.0	16.2	2.4
Cycle Q Clear(g_c), s	2.1	11.4	0.6	3.3	5.4	0.3	4.3	4.8	0.5	8.0	16.2	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	1487	458	167	1605	495	200	1261	559	428	1524	677
V/C Ratio(X)	0.59	0.44	0.03	0.64	0.33	0.04	0.68	0.18	0.02	0.61	0.48	0.09
Avail Cap(c_a), veh/h	314	1487	458	348	1605	495	408	1261	559	630	1524	677
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	31.5	17.9	48.6	14.8	6.6	50.7	24.3	22.9	45.6	22.4	18.5
Incr Delay (d2), s/veh	4.8	0.9	0.1	4.0	0.5	0.1	4.1	0.3	0.1	1.4	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.4	0.3	1.6	2.6	0.2	2.2	2.4	0.2	3.9	8.1	1.1
LnGrp Delay(d),s/veh	57.1	32.4	18.0	52.6	15.4	6.7	54.8	24.6	23.0	47.0	23.5	18.7
LnGrp LOS	E	C	B	D	B	A	D	C	C	D	C	B
Approach Vol, veh/h		733			660			376			1049	
Approach Delay, s/veh		34.5			21.2			35.6			29.1	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	44.0	22.5	37.0	10.4	52.2	7.7	51.8
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	20.1	*39.099998	11.1	*32.099998	13.0	47.1	10.0	34.1
Max Q Clear Time (g_c+I1), s	10.0	6.8	5.3	13.4	6.3	18.2	4.1	7.4
Green Ext Time (p_c), s	3.7	1.4	0.3	4.1	0.2	6.5	0.1	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	68	651	76	107	534	81	137	227	51	263	727	180
v/c Ratio	0.31	0.49	0.15	0.32	0.34	0.14	0.48	0.20	0.09	0.45	0.50	0.25
Control Delay	50.2	17.8	1.6	61.0	39.8	14.1	58.6	30.7	0.3	48.0	28.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	17.8	1.6	61.0	39.8	14.1	58.6	30.7	0.3	48.0	28.7	6.4
Queue Length 50th (ft)	17	104	0	40	138	18	54	68	0	96	221	12
Queue Length 95th (ft)	37	127	0	68	176	53	84	99	0	114	230	36
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	281	1337	508	337	1594	573	365	1134	588	590	1447	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.49	0.15	0.32	0.34	0.14	0.38	0.20	0.09	0.45	0.50	0.25

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	660	80	255	628	29	108	90	164	48	98	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	34	725	18	268	661	15	138	115	31	60	122	9
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.78	0.78	0.78	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	1551	478	494	2833	874	398	552	464	370	991	72
Arrive On Green	0.05	0.61	0.61	0.19	0.37	0.37	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	5085	1568	1774	5085	1569	1245	1863	1567	1229	3342	244
Grp Volume(v), veh/h	34	725	18	268	661	15	138	115	31	60	64	67
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1569	1245	1863	1567	1229	1770	1817
Q Serve(g_s), s	2.2	8.9	0.5	15.7	10.3	0.7	10.5	5.3	1.6	4.4	3.0	3.1
Cycle Q Clear(g_c), s	2.2	8.9	0.5	15.7	10.3	0.7	13.6	5.3	1.6	9.8	3.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	47	1551	478	494	2833	874	398	552	464	370	524	538
V/C Ratio(X)	0.72	0.47	0.04	0.54	0.23	0.02	0.35	0.21	0.07	0.16	0.12	0.12
Avail Cap(c_a), veh/h	154	1551	478	601	2833	874	398	552	464	370	524	538
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	17.3	15.7	40.1	19.2	16.2	34.5	30.4	29.1	34.0	29.6	29.6
Incr Delay (d2), s/veh	16.7	0.9	0.1	0.9	0.2	0.0	2.4	0.9	0.3	0.9	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.2	0.2	7.8	4.9	0.3	3.9	2.9	0.7	1.6	1.6	1.6
LnGrp Delay(d),s/veh	70.8	18.2	15.8	41.0	19.4	16.2	36.9	31.2	29.3	35.0	30.0	30.0
LnGrp LOS	E	B	B	D	B	B	D	C	C	C	C	C
Approach Vol, veh/h		777			944			284			191	
Approach Delay, s/veh		20.5			25.5			33.8			31.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	43.0	40.0		39.0	14.0	69.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		34.1	39.0	35.1		34.1	10.0	64.1
Max Q Clear Time (g_c+I1), s		15.6	17.7	10.9		11.8	4.2	12.3
Green Ext Time (p_c), s		2.1	0.8	5.0		2.2	0.4	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	34	725	88	268	661	31	138	115	210	60	147
v/c Ratio	0.30	0.50	0.17	0.57	0.25	0.04	0.34	0.19	0.32	0.15	0.13
Control Delay	71.5	8.6	3.2	19.4	4.6	0.1	36.0	32.2	5.9	32.7	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.5	8.6	3.2	19.4	4.6	0.1	36.0	32.2	5.9	32.7	26.6
Queue Length 50th (ft)	29	70	4	195	31	0	86	68	0	35	38
Queue Length 95th (ft)	m61	84	16	291	34	1	128	103	32	64	58
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	145	1462	511	565	2671	817	400	616	649	408	1148
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.50	0.17	0.47	0.25	0.04	0.34	0.19	0.32	0.15	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	78	734	43	65	798	72	85	58	26	169	69	40
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	82	773	20	69	849	28	104	71	6	172	70	13
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.82	0.82	0.82	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	2240	690	90	2051	631	535	718	606	537	718	606
Arrive On Green	0.03	0.15	0.15	0.02	0.13	0.13	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1774	5085	1565	1774	5085	1564	1302	1863	1571	1309	1863	1571
Grp Volume(v), veh/h	82	773	20	69	849	28	104	71	6	172	70	13
Grp Sat Flow(s),veh/h/ln	1774	1695	1565	1774	1695	1564	1302	1863	1571	1309	1863	1571
Q Serve(g_s), s	5.1	15.3	1.2	4.3	17.1	1.7	6.2	2.7	0.3	10.8	2.7	0.6
Cycle Q Clear(g_c), s	5.1	15.3	1.2	4.3	17.1	1.7	8.9	2.7	0.3	13.5	2.7	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	2240	690	90	2051	631	535	718	606	537	718	606
V/C Ratio(X)	0.58	0.35	0.03	0.77	0.41	0.04	0.19	0.10	0.01	0.32	0.10	0.02
Avail Cap(c_a), veh/h	303	2240	690	254	2051	631	535	718	606	537	718	606
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	33.3	27.3	54.3	36.3	29.7	24.8	21.9	21.2	26.3	21.9	21.3
Incr Delay (d2), s/veh	3.4	0.4	0.1	11.8	0.6	0.1	0.8	0.3	0.0	1.6	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	2.6	7.3	0.5	2.4	8.2	0.8	2.3	1.5	0.1	4.2	1.4	0.3
LnGrp Delay(d),s/veh	55.9	33.6	27.3	66.1	36.9	29.8	25.6	22.2	21.2	27.8	22.2	21.4
LnGrp LOS	E	C	C	E	D	C	C	C	C	C	C	C
Approach Vol, veh/h		875			946			181			255	
Approach Delay, s/veh		35.6			38.8			24.1			26.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		48.0	9.7	64.3		48.0	24.0	50.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9000001	4.9
Max Green Setting (Gmax), s		43.1	16.0	49.1		43.1	19.1	45.099998
Max Q Clear Time (g_c+I1), s		10.9	6.3	17.3		15.5	7.1	19.1
Green Ext Time (p_c), s		1.8	0.1	6.0		1.8	2.7	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	773	45	69	849	77	104	71	32	172	70	41
v/c Ratio	0.33	0.33	0.06	0.47	0.41	0.12	0.23	0.11	0.05	0.37	0.11	0.07
Control Delay	39.8	9.1	1.0	40.7	10.9	3.1	29.4	27.2	0.2	32.4	27.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	9.1	1.0	40.7	10.9	3.1	29.4	27.2	0.2	32.4	27.2	0.2
Queue Length 50th (ft)	67	41	0	36	170	5	57	37	0	100	37	0
Queue Length 95th (ft)	122	174	m2	68	226	28	92	65	0	164	71	0
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	290	2377	733	232	2079	662	460	658	606	460	658	606
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.33	0.06	0.30	0.41	0.12	0.23	0.11	0.05	0.37	0.11	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	841	83	108	905	83	64	20	88	219	35	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	58	876	31	116	973	48	77	24	29	226	36	4
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.83	0.83	0.83	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1787	549	174	2110	652	618	746	663	612	785	663
Arrive On Green	0.01	0.12	0.12	0.20	0.83	0.83	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1774	5085	1561	1774	5085	1572	1353	1770	1572	1337	1863	1572
Grp Volume(v), veh/h	58	876	31	116	973	48	77	24	29	226	36	4
Grp Sat Flow(s),veh/h/ln	1774	1695	1561	1774	1695	1572	1353	1770	1572	1337	1863	1572
Q Serve(g_s), s	3.7	18.4	2.0	6.9	6.0	0.6	4.1	0.9	1.2	13.7	1.3	0.2
Cycle Q Clear(g_c), s	3.7	18.4	2.0	6.9	6.0	0.6	5.4	0.9	1.2	14.9	1.3	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	1787	549	174	2110	652	618	746	663	612	785	663
V/C Ratio(X)	0.77	0.49	0.06	0.67	0.46	0.07	0.12	0.03	0.04	0.37	0.05	0.01
Avail Cap(c_a), veh/h	202	1787	549	297	2110	652	618	746	663	612	785	663
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	40.8	33.6	44.1	6.2	5.7	21.0	19.3	19.4	23.8	19.5	19.1
Incr Delay (d2), s/veh	14.4	0.9	0.2	3.8	0.6	0.2	0.4	0.1	0.1	1.7	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	2.1	8.8	0.9	3.5	2.8	0.3	1.6	0.5	0.6	5.3	0.7	0.1
LnGrp Delay(d),s/veh	70.1	41.8	33.8	47.9	6.8	5.9	21.5	19.4	19.6	25.5	19.6	19.2
LnGrp LOS	E	D	C	D	A	A	C	B	B	C	B	B
Approach Vol, veh/h		965			1137			130			266	
Approach Delay, s/veh		43.2			11.0			20.7			24.6	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		53.0	24.0	45.0		53.0	8.8	60.2
Change Period (Y+Rc), s		4.9	*4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		48.1	*19.1	*40.099998		48.1	13.0	47.1
Max Q Clear Time (g_c+I1), s		7.4	8.9	20.4		16.9	5.7	8.0
Green Ext Time (p_c), s		1.5	2.6	5.8		1.4	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	58	876	86	116	973	89	77	130	226	36	9
v/c Ratio	0.43	0.52	0.16	0.40	0.44	0.13	0.15	0.10	0.47	0.05	0.01
Control Delay	49.4	32.6	15.6	30.4	8.6	1.3	24.8	6.7	31.4	23.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	32.6	15.6	30.4	8.6	1.3	24.8	6.7	31.4	23.2	0.0
Queue Length 50th (ft)	48	229	35	86	96	1	39	5	131	17	0
Queue Length 95th (ft)	95	276	81	147	125	9	67	22	207	40	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	188	1671	548	290	2196	702	530	1261	485	734	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.52	0.16	0.40	0.44	0.13	0.15	0.10	0.47	0.05	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	184	878	100	127	668	63	184	367	253	177	355	314
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	204	976	32	144	759	16	211	422	114	181	362	109
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.87	0.87	0.87	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	1949	602	204	1756	542	314	1165	516	245	1066	472
Arrive On Green	0.18	0.77	0.77	0.06	0.35	0.35	0.09	0.33	0.33	0.07	0.30	0.30
Sat Flow, veh/h	3442	5085	1571	3442	5085	1570	3442	3539	1569	3442	3539	1568
Grp Volume(v), veh/h	204	976	32	144	759	16	211	422	114	181	362	109
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1570	1721	1770	1569	1721	1770	1568
Q Serve(g_s), s	6.3	8.2	0.4	4.7	13.0	0.6	6.7	10.3	6.0	5.8	9.0	5.9
Cycle Q Clear(g_c), s	6.3	8.2	0.4	4.7	13.0	0.6	6.7	10.3	6.0	5.8	9.0	5.9
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	308	1949	602	204	1756	542	314	1165	516	245	1066	472
V/C Ratio(X)	0.66	0.50	0.05	0.70	0.43	0.03	0.67	0.36	0.22	0.74	0.34	0.23
Avail Cap(c_a), veh/h	429	1949	602	334	1756	542	459	1165	516	395	1066	472
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	9.1	4.2	52.3	28.5	14.6	49.8	28.9	27.5	51.6	30.8	29.7
Incr Delay (d2), s/veh	2.1	0.8	0.1	4.4	0.8	0.1	2.5	0.9	1.0	4.4	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.8	0.3	2.3	6.2	0.3	3.3	5.2	2.7	2.9	4.6	2.7
LnGrp Delay(d),s/veh	47.0	9.9	4.3	56.7	29.3	14.7	52.3	29.8	28.5	55.9	31.7	30.9
LnGrp LOS	D	A	A	E	C	B	D	C	C	E	C	C
Approach Vol, veh/h		1212			919			747			652	
Approach Delay, s/veh		16.0			33.3			36.0			38.3	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	42.2	10.7	57.1	15.2	39.0	23.8	44.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.9000001	4.9
Max Green Setting (Gmax), s	13.0	37.1	11.0	43.1	15.3	34.099998	14.1	39.099998
Max Q Clear Time (g_c+I1), s	7.8	12.3	6.7	10.2	8.7	11.0	8.3	15.0
Green Ext Time (p_c), s	0.2	3.8	0.1	8.7	1.6	2.5	1.9	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	204	976	111	144	759	72	211	422	291	181	362	320
v/c Ratio	0.48	0.53	0.17	0.52	0.47	0.12	0.47	0.38	0.45	0.57	0.37	0.50
Control Delay	32.8	12.1	1.0	60.6	34.3	0.4	52.9	33.8	10.8	60.0	36.6	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	12.1	1.0	60.6	34.3	0.4	52.9	33.8	10.8	60.0	36.6	8.9
Queue Length 50th (ft)	79	84	1	56	174	0	80	135	37	71	120	19
Queue Length 95th (ft)	122	108	6	88	209	0	116	178	104	108	165	98
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	422	1844	642	309	1629	588	450	1124	643	365	989	636
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.53	0.17	0.47	0.47	0.12	0.47	0.38	0.45	0.50	0.37	0.50

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	229	58	329	92	138	69	458	912	67	159	694	289
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	279	71	0	103	155	0	467	931	30	173	754	192
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	348	253	215	130	382	171	519	1756	785	208	1103	489
Arrive On Green	0.10	0.14	0.00	0.07	0.11	0.00	0.29	0.50	0.50	0.12	0.31	0.31
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1774	3539	1583	1774	3539	1568
Grp Volume(v), veh/h	279	71	0	103	155	0	467	931	30	173	754	192
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1774	1770	1583	1774	1770	1568
Q Serve(g_s), s	7.9	3.4	0.0	5.7	4.1	0.0	25.3	18.0	1.0	9.6	18.7	7.0
Cycle Q Clear(g_c), s	7.9	3.4	0.0	5.7	4.1	0.0	25.3	18.0	1.0	9.6	18.7	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	348	253	215	130	382	171	519	1756	785	208	1103	489
V/C Ratio(X)	0.80	0.28	0.00	0.79	0.41	0.00	0.90	0.53	0.04	0.83	0.68	0.39
Avail Cap(c_a), veh/h	412	446	380	177	778	348	640	1756	785	354	1103	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	38.9	0.0	45.7	41.7	0.0	34.0	17.3	13.0	43.2	30.1	14.2
Incr Delay (d2), s/veh	9.3	0.6	0.0	15.7	0.7	0.0	13.8	0.3	0.0	8.4	3.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.8	0.0	3.4	2.0	0.0	14.3	8.9	0.4	5.1	9.6	3.9
LnGrp Delay(d),s/veh	53.3	39.5	0.0	61.4	42.4	0.0	47.8	17.6	13.0	51.6	33.6	16.5
LnGrp LOS	D	D		E	D		D	B	B	D	C	B
Approach Vol, veh/h		350			258			1428			1119	
Approach Delay, s/veh		50.5			50.0			27.3			33.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	54.6	11.3	18.5	34.2	36.1	14.1	15.7
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9	4.9000001	4.0	4.9
Max Green Setting (Gmax), s	20.0	48.2	10.0	24.0	36.1	31.200001	12.0	22.0
Max Q Clear Time (g_c+I1), s	11.6	20.0	7.7	5.4	27.3	20.7	9.9	6.1
Green Ext Time (p_c), s	0.3	9.1	0.0	1.1	2.0	4.1	0.2	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	279	71	401	103	155	78	467	931	68	173	754	314
v/c Ratio	0.73	0.29	0.72	0.64	0.40	0.27	0.87	0.57	0.09	0.68	0.70	0.54
Control Delay	58.1	45.2	12.4	66.8	46.7	2.8	53.3	23.6	2.8	57.5	38.2	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	45.2	12.4	66.8	46.7	2.8	53.3	23.6	2.8	57.5	38.2	20.0
Queue Length 50th (ft)	94	44	0	67	52	0	287	228	0	111	236	82
Queue Length 95th (ft)	#150	81	49	#160	85	4	#521	376	18	202	365	203
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	399	433	676	171	754	434	635	1674	796	343	1071	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.16	0.59	0.60	0.21	0.18	0.74	0.56	0.09	0.50	0.70	0.54

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	532	7	90	1	0	2	92	970	2	8	762	365
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99
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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	611	8	14	1	0	0	94	990	2	9	828	230
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	767	251	208	3	3	3	121	1836	4	17	1585	701
Arrive On Green	0.22	0.13	0.13	0.00	0.00	0.00	0.07	0.51	0.51	0.01	0.45	0.45
Sat Flow, veh/h	3442	1863	1548	1774	1863	1583	1774	3624	7	1774	3539	1566
Grp Volume(v), veh/h	611	8	14	1	0	0	94	483	509	9	828	230
Grp Sat Flow(s),veh/h/ln	1721	1863	1548	1774	1863	1583	1774	1770	1861	1774	1770	1566
Q Serve(g_s), s	9.4	0.2	0.4	0.0	0.0	0.0	2.9	10.4	10.4	0.3	9.5	5.3
Cycle Q Clear(g_c), s	9.4	0.2	0.4	0.0	0.0	0.0	2.9	10.4	10.4	0.3	9.5	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	767	251	208	3	3	3	121	897	943	17	1585	701
V/C Ratio(X)	0.80	0.03	0.07	0.32	0.00	0.00	0.78	0.54	0.54	0.54	0.52	0.33
Avail Cap(c_a), veh/h	985	1026	853	224	728	619	224	897	943	224	1585	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	21.2	21.3	28.1	0.0	0.0	25.8	9.4	9.4	27.7	11.2	10.0
Incr Delay (d2), s/veh	3.6	0.1	0.1	49.3	0.0	0.0	10.3	2.3	2.2	25.0	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	4.9	0.1	0.2	0.1	0.0	0.0	1.8	5.5	5.8	0.3	4.9	2.5
LnGrp Delay(d),s/veh	24.2	21.2	21.4	77.4	0.0	0.0	36.1	11.7	11.6	52.7	12.4	11.3
LnGrp LOS	C	C	C	E			D	B	B	D	B	B
Approach Vol, veh/h		633			1			1086			1067	
Approach Delay, s/veh		24.1			77.4			13.8			12.5	
Approach LOS		C			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	33.4	5.0	12.5	8.7	30.1	17.4	0.0
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	25.2	7.1	31.0	7.1	25.2	16.1	22.0
Max Q Clear Time (g_c+I1), s	2.3	12.4	2.0	2.4	4.9	11.5	11.4	0.0
Green Ext Time (p_c), s	0.0	9.1	0.0	0.0	0.0	9.6	1.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	611	8	103	1	2	94	992	9	828	397
v/c Ratio	0.71	0.01	0.19	0.01	0.01	0.49	0.55	0.06	0.59	0.53
Control Delay	31.0	18.3	2.5	34.0	0.0	42.3	16.6	33.4	20.9	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	18.3	2.5	34.0	0.0	42.3	16.6	33.4	20.9	10.5
Queue Length 50th (ft)	109	2	0	0	0	35	100	3	126	35
Queue Length 95th (ft)	#275	12	15	6	0	#127	#435	20	#315	169
Internal Link Dist (ft)		385					1059		1165	
Turn Bay Length (ft)	200		150	130	85	265		265		100
Base Capacity (vph)	864	908	826	196	663	196	1799	196	1395	752
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.01	0.12	0.01	0.00	0.48	0.55	0.05	0.59	0.53

Intersection Summary

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

Intersection	
Int Delay, s/veh	5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	32	199	924	54	150	736
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	95	95	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	226	973	57	161	791

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1729	535	0	0	1039	0
Stage 1	1011	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	79	490	-	-	665	-
Stage 1	312	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	59	482	-	-	659	-
Mov Cap-2 Maneuver	59	-	-	-	-	-
Stage 1	309	-	-	-	-	-
Stage 2	333	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.1	0	2.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	59	482	659	-
HCM Lane V/C Ratio	-	-	0.616	0.469	0.245	-
HCM Control Delay (s)	-	-	135.8	18.9	12.2	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	2.5	2.5	1	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	3	5	32	39	10	12	46	622	119
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	73	73	73	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	7	45	53	14	16	53	723	138

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	991	1485	244	1194	1417	451	458	0	0
Stage 1	506	506	-	909	909	-	-	-	-
Stage 2	485	979	-	285	508	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	200	124	757	142	136	556	1099	-	-
Stage 1	517	538	-	296	352	-	-	-	-
Stage 2	532	326	-	698	537	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	171	112	744	120	123	547	1090	-	-
Mov Cap-2 Maneuver	289	212	-	217	230	-	-	-	-
Stage 1	488	516	-	279	332	-	-	-	-
Stage 2	467	308	-	620	515	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	12.5	23.3	0.5
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1090	-	-	289	556	217	336	763	-	-
HCM Lane V/C Ratio	0.049	-	-	0.015	0.094	0.246	0.09	0.032	-	-
HCM Control Delay (s)	8.5	-	-	17.6	12.1	26.9	16.8	9.9	-	-
HCM Lane LOS	A	-	-	C	B	D	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0	0.3	0.9	0.3	0.1	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	21	378	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	85	85	85
Heavy Vehicles, %	2	2	2
Mvmt Flow	25	445	4

Major/Minor	Major2		
Conflicting Flow All	872	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	769	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	763	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.5
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	81	75	42	80	248	59	775	60	182	591	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.98		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	94	3	46	87	27	63	833	57	196	635	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	281	552	242	306	291	242	81	1484	102	248	1909	30
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.05	0.44	0.44	0.14	0.54	0.54
Sat Flow, veh/h	1255	3539	1553	1273	1863	1553	1774	3360	230	1774	3566	56
Grp Volume(v), veh/h	14	94	3	46	87	27	63	439	451	196	315	330
Grp Sat Flow(s),veh/h/ln	1255	1770	1553	1273	1863	1553	1774	1770	1820	1774	1770	1852
Q Serve(g_s), s	0.5	1.2	0.1	1.7	2.2	0.8	1.8	9.7	9.7	5.6	5.3	5.3
Cycle Q Clear(g_c), s	2.7	1.2	0.1	2.9	2.2	0.8	1.8	9.7	9.7	5.6	5.3	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.03
Lane Grp Cap(c), veh/h	281	552	242	306	291	242	81	782	804	248	947	992
V/C Ratio(X)	0.05	0.17	0.01	0.15	0.30	0.11	0.78	0.56	0.56	0.79	0.33	0.33
Avail Cap(c_a), veh/h	611	1482	650	641	780	650	270	782	804	371	947	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	20.8	19.2	18.7	20.5	19.6	19.0	24.8	10.9	10.9	21.9	6.9	6.9
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.2	0.6	0.2	14.5	2.9	2.8	6.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.0	0.6	1.2	0.3	1.2	5.3	5.4	3.2	2.8	2.9
LnGrp Delay(d),s/veh	20.9	19.4	18.8	20.7	20.2	19.2	39.3	13.8	13.7	28.6	7.8	7.8
LnGrp LOS	C	B	B	C	C	B	D	B	B	C	A	A
Approach Vol, veh/h		111			160			953			841	
Approach Delay, s/veh		19.5			20.2			15.4			12.7	
Approach LOS		B			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	11.3	28.1		13.1	6.4	33.0		13.1
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	11.0	23.2		22.0	8.0	26.2		22.0
Max Q Clear Time (g_c+I1), s	7.6	11.7		4.7	3.8	7.3		4.9
Green Ext Time (p_c), s	0.2	6.7		1.2	0.0	9.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	94	87	46	87	270	63	898	196	646
v/c Ratio	0.06	0.15	0.25	0.21	0.27	0.55	0.29	0.63	0.63	0.34
Control Delay	19.2	20.0	6.6	21.9	22.1	7.6	28.8	17.2	34.4	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	20.0	6.6	21.9	22.1	7.6	28.8	17.2	34.4	10.8
Queue Length 50th (ft)	4	14	0	14	27	0	19	115	60	66
Queue Length 95th (ft)	15	28	24	36	57	48	60	245	#171	154
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	500	1368	655	494	720	764	249	1432	342	1900
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.07	0.13	0.09	0.12	0.35	0.25	0.63	0.57	0.34

Intersection Summary

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

Intersection	
Int Delay, s/veh	4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	236	59	30	196	147	63
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	268	67	33	213	165	71

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	278	0	450	288
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	172	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1285	-	552	750
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1274	-	529	738
Mov Cap-2 Maneuver	-	-	-	-	600	-
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	636	-	-	1274	-
HCM Lane V/C Ratio	0.371	-	-	0.026	-
HCM Control Delay (s)	14	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	67	131	122	0	16	146	124	0	92	172	8
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.91	0.91	0.91	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	136	127	0	18	160	136	0	102	191	9
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	13.9	12.4	13.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	0%	100%	0%
Vol Thru, %	0%	96%	0%	52%	82%	37%	0%	74%
Vol Right, %	0%	4%	0%	48%	0%	63%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	180	67	253	89	197	47	136
LT Vol	0	172	0	131	73	73	0	100
Through Vol	0	8	0	122	0	124	0	36
RT Vol	92	0	67	0	16	0	47	0
Lane Flow Rate	102	200	70	264	98	216	52	151
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.208	0.377	0.139	0.464	0.185	0.378	0.111	0.291
Departure Headway (Hd)	7.433	6.891	7.299	6.445	6.931	6.39	7.635	6.934
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	486	526	494	561	521	567	472	521
Service Time	5.133	4.591	4.999	4.145	4.631	4.09	5.335	4.634
HCM Lane V/C Ratio	0.21	0.38	0.142	0.471	0.188	0.381	0.11	0.29
HCM Control Delay	12.1	13.7	11.2	14.6	11.2	12.9	11.3	12.5
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.8	1.7	0.5	2.4	0.7	1.8	0.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	47	100	36
Peak Hour Factor	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	111	40
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	12.2
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	58	26	723	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	63	29	812	93

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1353	1852	371	1454	1805	473	712	0	0
Stage 1	878	878	-	927	927	-	-	-	-
Stage 2	475	974	-	527	878	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	108	73	626	91	78	538	884	-	-
Stage 1	309	364	-	289	345	-	-	-	-
Stage 2	539	328	-	502	364	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	83	62	616	80	66	529	877	-	-
Mov Cap-2 Maneuver	188	150	-	186	171	-	-	-	-
Stage 1	296	320	-	277	331	-	-	-	-
Stage 2	455	315	-	442	320	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	12.7	0.3
HCM LOS	A	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	877	-	-	-	529	734	-	-
HCM Lane V/C Ratio	0.033	-	-	-	0.119	0.113	-	-
HCM Control Delay (s)	9.2	-	-	0	12.7	10.5	-	-
HCM Lane LOS	A	-	-	A	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.4	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	78	660	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	94	94	94
Heavy Vehicles, %	2	2	2
Mvmt Flow	83	702	0

Major/Minor	Major2		
Conflicting Flow All	916	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	740	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	734	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.1
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	736	30	328	977	113	26	310	498	95	145	5
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	20	775	8	353	1051	74	30	360	258	99	151	2
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	1065	472	394	1790	796	41	783	345	126	952	421
Arrive On Green	0.02	0.30	0.30	0.22	0.51	0.51	0.02	0.22	0.22	0.07	0.27	0.27
Sat Flow, veh/h	1774	3539	1568	1774	3539	1574	1774	3539	1562	1774	3539	1566
Grp Volume(v), veh/h	20	775	8	353	1051	74	30	360	258	99	151	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1568	1774	1770	1574	1774	1770	1562	1774	1770	1566
Q Serve(g_s), s	1.1	18.8	0.3	18.6	20.1	2.3	1.6	8.5	14.8	5.3	3.1	0.1
Cycle Q Clear(g_c), s	1.1	18.8	0.3	18.6	20.1	2.3	1.6	8.5	14.8	5.3	3.1	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	1065	472	394	1790	796	41	783	345	126	952	421
V/C Ratio(X)	0.65	0.73	0.02	0.90	0.59	0.09	0.74	0.46	0.75	0.79	0.16	0.00
Avail Cap(c_a), veh/h	148	1175	520	554	1985	883	148	1337	590	185	1410	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	46.9	30.1	23.6	36.3	16.7	12.3	46.7	32.5	34.9	43.9	26.8	25.7
Incr Delay (d2), s/veh	21.2	2.1	0.0	13.3	0.4	0.1	22.5	0.4	3.2	12.8	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	0.7	9.5	0.2	10.6	9.9	1.0	1.0	4.2	6.7	3.0	1.5	0.0
LnGrp Delay(d),s/veh	68.2	32.1	23.6	49.7	17.1	12.4	69.2	32.9	38.2	56.8	26.9	25.7
LnGrp LOS	E	C	C	D	B	B	E	C	D	E	C	C
Approach Vol, veh/h		803			1478			648			252	
Approach Delay, s/veh		32.9			24.6			36.7			38.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	26.1	25.3	33.8	6.2	30.8	5.7	53.5
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	36.3	30.0	31.9	8.0	38.3	8.0	53.9
Max Q Clear Time (g_c+I1), s	7.3	16.8	20.6	20.8	3.6	5.1	3.1	22.1
Green Ext Time (p_c), s	0.0	4.2	0.7	8.1	0.0	4.7	0.0	16.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	775	32	353	1051	122	30	360	579	99	151	5
v/c Ratio	0.18	0.84	0.07	0.84	0.60	0.15	0.26	0.42	0.89	0.63	0.14	0.01
Control Delay	59.2	49.4	0.3	60.6	23.7	8.0	60.9	36.6	31.1	72.4	30.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	49.4	0.3	60.6	23.7	8.0	60.9	36.6	31.1	72.4	30.2	0.0
Queue Length 50th (ft)	15	300	0	259	266	12	23	122	171	76	46	0
Queue Length 95th (ft)	43	#419	0	#433	440	55	54	158	297	#164	74	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	134	1075	551	505	1893	863	134	1223	772	168	1290	637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.72	0.06	0.70	0.56	0.14	0.22	0.29	0.75	0.59	0.12	0.01

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	315	755	15	19	936	244	37	21	35	297	4	169
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	332	795	15	22	1064	38	40	23	5	349	0	9
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	1633	31	31	1364	417	325	271	59	653	0	287
Arrive On Green	0.21	0.46	0.46	0.03	0.54	0.54	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3553	67	1774	5085	1554	1774	1478	321	3548	0	1558
Grp Volume(v), veh/h	332	396	414	22	1064	38	40	0	28	349	0	9
Grp Sat Flow(s),veh/h/ln	1774	1770	1850	1774	1695	1554	1774	0	1800	1774	0	1558
Q Serve(g_s), s	21.9	18.7	18.7	1.5	20.0	1.4	2.3	0.0	1.6	10.7	0.0	0.6
Cycle Q Clear(g_c), s	21.9	18.7	18.7	1.5	20.0	1.4	2.3	0.0	1.6	10.7	0.0	0.6
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	371	813	850	31	1364	417	325	0	330	653	0	287
V/C Ratio(X)	0.90	0.49	0.49	0.72	0.78	0.09	0.12	0.00	0.08	0.53	0.00	0.03
Avail Cap(c_a), veh/h	458	813	850	118	1364	417	325	0	330	653	0	287
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	22.6	22.6	57.7	25.0	20.7	41.0	0.0	40.7	44.3	0.0	40.2
Incr Delay (d2), s/veh	17.4	2.1	2.0	24.9	4.2	0.4	0.8	0.0	0.5	3.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	9.6	10.0	0.9	9.8	0.7	1.2	0.0	0.8	5.5	0.0	0.3
LnGrp Delay(d),s/veh	63.6	24.7	24.6	82.5	29.2	21.1	41.8	0.0	41.2	47.5	0.0	40.4
LnGrp LOS	E	C	C	F	C	C	D		D	D		D
Approach Vol, veh/h		1142			1124			68			358	
Approach Delay, s/veh		35.9			30.0			41.5			47.3	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	60.1		27.0	35.0	37.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	55.2		22.1	31.0	32.2
Max Q Clear Time (g_c+I1), s		4.3	3.5	20.7		12.7	23.9	22.0
Green Ext Time (p_c), s		0.2	0.5	5.3		0.9	0.6	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	332	811	22	1064	277	40	61	176	174	197
v/c Ratio	0.86	0.51	0.23	0.82	0.47	0.11	0.17	0.60	0.59	0.46
Control Delay	68.1	26.2	54.3	15.0	2.7	44.4	22.2	57.3	56.8	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	26.2	54.3	15.0	2.7	44.4	22.2	57.3	56.8	9.7
Queue Length 50th (ft)	255	248	19	37	0	28	16	141	138	0
Queue Length 95th (ft)	#382	309	48	99	0	62	56	212	209	56
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	435	1590	112	1299	591	356	364	294	296	432
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.51	0.20	0.82	0.47	0.11	0.17	0.60	0.59	0.46

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	993	18	43	1179	58	57	3	58	88	3	31
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	1024	11	47	1282	39	65	3	8	100	3	4
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2121	941	61	3176	981	402	111	296	398	179	239
Arrive On Green	0.00	1.00	1.00	0.03	0.62	0.62	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1386	446	1190	1382	720	960
Grp Volume(v), veh/h	14	1024	11	47	1282	39	65	0	11	100	0	7
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1386	0	1636	1382	0	1680
Q Serve(g_s), s	0.1	0.0	0.0	3.1	14.8	1.1	4.3	0.0	0.6	6.9	0.0	0.4
Cycle Q Clear(g_c), s	0.1	0.0	0.0	3.1	14.8	1.1	4.7	0.0	0.6	7.5	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.57
Lane Grp Cap(c), veh/h	2	2121	941	61	3176	981	402	0	407	398	0	418
V/C Ratio(X)	7.21	0.48	0.01	0.77	0.40	0.04	0.16	0.00	0.03	0.25	0.00	0.02
Avail Cap(c_a), veh/h	138	2121	941	197	3176	981	402	0	407	398	0	418
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	0.0	0.0	56.1	11.0	8.5	34.9	0.0	33.3	36.1	0.0	33.2
Incr Delay (d2), s/veh	2977.7	0.7	0.0	18.6	0.4	0.1	0.9	0.0	0.1	1.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.2	0.0	1.8	7.0	0.5	1.8	0.0	0.3	2.8	0.0	0.2
LnGrp Delay(d),s/veh	3036.2	0.7	0.0	74.7	11.4	8.5	35.8	0.0	33.4	37.6	0.0	33.2
LnGrp LOS	F	A	A	E	B	A	D		C	D		C
Approach Vol, veh/h		1049			1368			76			107	
Approach Delay, s/veh		41.2			13.5			35.5			37.3	
Approach LOS		D			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		34.0	8.0	84.0		34.0	14.0	78.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		29.1	13.0	70.1		29.1	9.1	73.099998
Max Q Clear Time (g_c+I1), s		6.7	5.1	2.0		9.5	2.1	16.8
Green Ext Time (p_c), s		0.5	0.0	9.0		0.5	1.7	12.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	1024	19	47	1282	63	65	69	100	38
v/c Ratio	0.13	0.48	0.02	0.39	0.39	0.06	0.21	0.17	0.33	0.10
Control Delay	43.4	3.7	0.2	53.4	12.4	3.6	41.4	10.8	44.1	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	3.7	0.2	53.4	12.4	3.6	41.4	10.8	44.1	13.9
Queue Length 50th (ft)	11	81	0	30	294	2	43	2	68	2
Queue Length 95th (ft)	m22	122	m0	m53	360	m13	83	39	119	30
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	140	2142	932	182	3289	995	309	409	301	387
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.48	0.02	0.26	0.39	0.06	0.21	0.17	0.33	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	961	254	175	1078	148	230	500	120	273	326	126
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	245	1033	122	180	1111	68	242	526	25	307	366	27
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.97	0.97	0.97	0.95	0.95	0.95	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	2025	626	239	1958	605	306	901	398	386	1009	447
Arrive On Green	0.09	0.40	0.40	0.14	0.77	0.77	0.09	0.25	0.25	0.11	0.29	0.29
Sat Flow, veh/h	3442	5085	1571	3442	5085	1571	3442	3539	1565	3442	3539	1567
Grp Volume(v), veh/h	245	1033	122	180	1111	68	242	526	25	307	366	27
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1571	1721	1770	1565	1721	1770	1567
Q Serve(g_s), s	8.2	18.1	4.4	5.9	10.6	0.9	8.1	15.4	1.4	10.3	9.8	1.5
Cycle Q Clear(g_c), s	8.2	18.1	4.4	5.9	10.6	0.9	8.1	15.4	1.4	10.3	9.8	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	2025	626	239	1958	605	306	901	398	386	1009	447
V/C Ratio(X)	0.79	0.51	0.19	0.75	0.57	0.11	0.79	0.58	0.06	0.80	0.36	0.06
Avail Cap(c_a), veh/h	495	2025	626	323	1958	605	466	901	398	527	1009	447
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	26.9	12.3	50.0	9.6	4.0	52.8	38.6	33.4	51.2	33.7	30.7
Incr Delay (d2), s/veh	4.5	0.9	0.7	6.1	1.1	0.3	5.2	2.8	0.3	5.9	1.0	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	4.1	8.7	2.5	3.0	4.9	0.6	4.1	7.9	0.7	5.2	4.9	0.7
LnGrp Delay(d),s/veh	57.1	27.8	13.0	56.0	10.7	4.3	57.9	41.4	33.7	57.1	34.7	31.0
LnGrp LOS	E	C	B	E	B	A	E	D	C	E	C	C
Approach Vol, veh/h		1400			1359			793			700	
Approach Delay, s/veh		31.6			16.4			46.2			44.4	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	35.0	20.8	52.0	14.5	38.6	14.7	58.2
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	18.1	* 30.1	11.4	47.099998	16.0	33.1	17.0	42.1
Max Q Clear Time (g_c+I1), s	12.3	17.4	7.9	20.1	10.1	11.8	10.2	12.6
Green Ext Time (p_c), s	1.0	2.7	0.3	8.2	0.4	3.4	0.4	9.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	245	1033	273	180	1111	153	242	526	126	307	366	142
v/c Ratio	0.64	0.54	0.38	0.55	0.61	0.24	0.65	0.62	0.27	0.59	0.37	0.27
Control Delay	64.8	20.8	3.0	34.9	15.9	2.6	62.0	46.7	6.7	55.2	38.1	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.8	20.8	3.0	34.9	15.9	2.6	62.0	46.7	6.7	55.2	38.1	7.0
Queue Length 50th (ft)	99	174	26	56	91	2	98	203	0	122	126	0
Queue Length 95th (ft)	133	208	14	96	146	23	140	264	44	168	174	50
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	463	1900	715	326	1819	632	435	845	470	517	993	533
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.54	0.38	0.55	0.61	0.24	0.56	0.62	0.27	0.59	0.37	0.27

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	1095	84	256	1118	49	149	175	241	87	92	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	65	1141	30	275	1202	28	155	182	64	106	112	8
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.96	0.96	0.96	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1954	603	429	2928	904	353	483	406	261	868	61
Arrive On Green	0.10	0.77	0.77	0.48	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5085	1571	1774	5085	1570	1255	1863	1565	1123	3350	237
Grp Volume(v), veh/h	65	1141	30	275	1202	28	155	182	64	106	59	61
Grp Sat Flow(s),veh/h/ln	1774	1695	1571	1774	1695	1570	1255	1863	1565	1123	1770	1818
Q Serve(g_s), s	4.3	11.3	0.6	13.9	0.0	0.0	13.0	9.6	3.8	10.3	3.0	3.1
Cycle Q Clear(g_c), s	4.3	11.3	0.6	13.9	0.0	0.0	16.1	9.6	3.8	19.9	3.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	89	1954	603	429	2928	904	353	483	406	261	459	471
V/C Ratio(X)	0.73	0.58	0.05	0.64	0.41	0.03	0.44	0.38	0.16	0.41	0.13	0.13
Avail Cap(c_a), veh/h	177	1954	603	517	2928	904	353	483	406	261	459	471
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)	0.83	0.83	0.83	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	9.9	8.6	27.1	0.0	0.0	40.2	36.5	34.3	44.7	34.1	34.1
Incr Delay (d2), s/veh	9.3	1.1	0.1	1.6	0.4	0.1	3.9	2.2	0.8	4.6	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	2.3	5.2	0.3	6.9	0.1	0.0	4.9	5.3	1.7	3.5	1.6	1.6
LnGrp Delay(d),s/veh	62.5	10.9	8.8	28.7	0.4	0.1	44.2	38.7	35.2	49.3	34.6	34.7
LnGrp LOS	E	B	A	C	A	A	D	D	D	D	C	C
Approach Vol, veh/h		1236			1505			401			226	
Approach Delay, s/veh		13.6			5.5			40.3			41.5	
Approach LOS		B			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		36.0	39.0	51.0		36.0	16.0	74.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		31.1	35.0	46.1		31.1	12.0	69.1
Max Q Clear Time (g_c+I1), s		18.1	15.9	13.3		21.9	6.3	2.0
Green Ext Time (p_c), s		2.5	0.9	9.4		2.1	0.5	11.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	65	1141	88	275	1202	53	155	182	251	106	133
v/c Ratio	0.48	0.61	0.14	0.64	0.43	0.06	0.45	0.35	0.41	0.37	0.14
Control Delay	67.8	10.3	1.2	53.6	5.0	0.2	44.1	40.0	6.7	43.2	31.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	10.3	1.2	53.6	5.0	0.2	44.1	40.0	6.7	43.2	31.7
Queue Length 50th (ft)	57	112	4	239	46	0	107	122	0	72	38
Queue Length 95th (ft)	m100	139	m9	327	54	m1	182	196	67	119	60
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	168	1860	622	491	2788	849	345	524	613	283	980
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.61	0.14	0.56	0.43	0.06	0.45	0.35	0.41	0.37	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	1153	113	68	1228	114	141	96	90	152	101	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	126	1177	84	72	1293	67	145	99	25	177	117	10
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.97	0.97	0.97	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	2635	813	93	2364	728	395	583	491	405	583	491
Arrive On Green	0.20	1.00	1.00	0.02	0.15	0.15	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	5085	1568	1774	5085	1566	1251	1863	1568	1254	1863	1568
Grp Volume(v), veh/h	126	1177	84	72	1293	67	145	99	25	177	117	10
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1566	1251	1863	1568	1254	1863	1568
Q Serve(g_s), s	7.9	0.0	0.0	4.8	27.9	4.4	11.4	4.6	1.3	14.1	5.5	0.5
Cycle Q Clear(g_c), s	7.9	0.0	0.0	4.8	27.9	4.4	16.9	4.6	1.3	18.7	5.5	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	2635	813	93	2364	728	395	583	491	405	583	491
V/C Ratio(X)	0.72	0.45	0.10	0.77	0.55	0.09	0.37	0.17	0.05	0.44	0.20	0.02
Avail Cap(c_a), veh/h	286	2635	813	210	2364	728	395	583	491	405	583	491
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	0.0	57.5	38.7	28.7	36.0	29.5	28.4	36.3	29.9	28.2
Incr Delay (d2), s/veh	4.5	0.4	0.2	10.4	0.7	0.2	2.6	0.6	0.2	3.4	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.1	0.0	2.6	13.3	1.9	4.2	2.5	0.6	5.3	2.9	0.2
LnGrp Delay(d),s/veh	50.6	0.4	0.2	67.9	39.4	28.9	38.7	30.2	28.6	39.8	30.6	28.2
LnGrp LOS	D	A	A	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		1387			1432			269			304	
Approach Delay, s/veh		5.0			40.3			34.6			35.9	
Approach LOS		A			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		42.0	10.2	73.8		42.0	24.0	60.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		37.1	14.0	61.1		37.1	19.1	55.099998
Max Q Clear Time (g_c+I1), s		18.9	6.8	2.0		20.7	9.9	29.9
Green Ext Time (p_c), s		2.3	0.1	11.7		2.3	2.0	10.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	126	1177	115	72	1293	120	145	99	93	177	117	59
v/c Ratio	0.45	0.44	0.14	0.50	0.58	0.17	0.41	0.18	0.18	0.48	0.21	0.11
Control Delay	28.4	8.1	1.8	54.9	12.8	3.3	39.9	34.3	7.1	41.7	34.8	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	8.1	1.8	54.9	12.8	3.3	39.9	34.3	7.1	41.7	34.8	2.4
Queue Length 50th (ft)	69	80	4	46	334	13	95	60	0	119	72	0
Queue Length 95th (ft)	130	100	m7	m73	364	35	160	106	40	182	116	9
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	280	2696	828	196	2223	707	355	548	519	371	548	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.44	0.14	0.37	0.58	0.17	0.41	0.18	0.18	0.48	0.21	0.11

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	112	1252	99	115	1317	120	97	57	100	201	36	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	118	1318	61	122	1401	89	105	62	30	212	38	7
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	2271	699	149	2317	717	507	817	369	482	644	543
Arrive On Green	0.03	0.15	0.15	0.17	0.91	0.91	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1774	5085	1566	1774	5085	1573	1345	2364	1069	1290	1863	1570
Grp Volume(v), veh/h	118	1318	61	122	1401	89	105	45	47	212	38	7
Grp Sat Flow(s),veh/h/ln	1774	1695	1566	1774	1695	1573	1345	1770	1663	1290	1863	1570
Q Serve(g_s), s	7.9	28.7	4.0	7.9	6.5	0.7	6.7	2.0	2.2	15.7	1.6	0.3
Cycle Q Clear(g_c), s	7.9	28.7	4.0	7.9	6.5	0.7	8.3	2.0	2.2	18.0	1.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	146	2271	699	149	2317	717	507	612	575	482	644	543
V/C Ratio(X)	0.81	0.58	0.09	0.82	0.60	0.12	0.21	0.07	0.08	0.44	0.06	0.01
Avail Cap(c_a), veh/h	269	2271	699	255	2317	717	507	612	575	482	644	543
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.70	0.70	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	40.3	29.8	48.6	3.2	2.9	28.8	26.1	26.2	32.2	26.0	25.6
Incr Delay (d2), s/veh	9.1	1.0	0.2	7.5	0.8	0.2	0.9	0.2	0.3	2.9	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	4.2	13.7	1.8	4.1	2.9	0.3	2.6	1.0	1.1	6.0	0.9	0.2
LnGrp Delay(d),s/veh	65.9	41.3	30.0	56.1	4.0	3.1	29.7	26.4	26.5	35.1	26.2	25.6
LnGrp LOS	E	D	C	E	A	A	C	C	C	D	C	C
Approach Vol, veh/h		1497			1612			197			257	
Approach Delay, s/veh		42.8			7.9			28.2			33.5	
Approach LOS		D			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		46.0	22.0	58.0		46.0	13.8	66.2
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		41.1	17.1	53.099998		41.1	18.0	53.1
Max Q Clear Time (g_c+I1), s		10.3	9.9	30.7		20.0	9.9	8.5
Green Ext Time (p_c), s		1.8	0.4	9.9		1.7	0.2	14.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	118	1318	104	122	1401	128	105	171	212	38	26
v/c Ratio	0.62	0.62	0.15	0.48	0.60	0.17	0.24	0.16	0.55	0.06	0.05
Control Delay	63.9	16.4	3.9	33.6	6.9	1.3	32.9	12.0	41.4	29.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	16.4	3.9	33.6	6.9	1.3	32.9	12.0	41.4	29.7	0.2
Queue Length 50th (ft)	78	246	0	97	131	5	62	18	142	21	0
Queue Length 95th (ft)	132	343	21	m151	164	m14	111	44	226	48	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	252	2142	675	252	2323	740	437	1098	385	607	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.62	0.15	0.48	0.60	0.17	0.24	0.16	0.55	0.06	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	347	967	184	243	1075	129	339	400	129	161	362	290
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	381	1063	97	261	1156	42	361	426	37	185	416	46
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	480	2046	632	322	1775	548	511	1000	443	254	736	325
Arrive On Green	0.28	0.80	0.80	0.09	0.35	0.35	0.15	0.28	0.28	0.07	0.21	0.21
Sat Flow, veh/h	3442	5085	1572	3442	5085	1570	3442	3539	1567	3442	3539	1561
Grp Volume(v), veh/h	381	1063	97	261	1156	42	361	426	37	185	416	46
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1570	1721	1770	1567	1721	1770	1561
Q Serve(g_s), s	12.4	8.5	1.0	9.0	23.1	2.2	12.0	11.8	1.6	6.3	12.7	2.9
Cycle Q Clear(g_c), s	12.4	8.5	1.0	9.0	23.1	2.2	12.0	11.8	1.6	6.3	12.7	2.9
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	480	2046	632	322	1775	548	511	1000	443	254	736	325
V/C Ratio(X)	0.79	0.52	0.15	0.81	0.65	0.08	0.71	0.43	0.08	0.73	0.56	0.14
Avail Cap(c_a), veh/h	573	2046	632	428	1775	548	571	1000	443	314	736	325
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	7.9	2.8	53.6	33.1	26.3	48.9	35.3	18.7	54.7	42.9	39.0
Incr Delay (d2), s/veh	4.9	0.7	0.4	8.4	1.9	0.3	3.5	1.3	0.4	6.4	3.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	3.8	0.7	4.7	11.1	1.0	6.0	6.0	0.9	3.3	6.6	1.3
LnGrp Delay(d),s/veh	46.8	8.6	3.2	62.1	35.0	26.5	52.4	36.6	19.1	61.1	46.0	39.9
LnGrp LOS	D	A	A	E	C	C	D	D	B	E	D	D
Approach Vol, veh/h		1541			1459			824			647	
Approach Delay, s/veh		17.7			39.6			42.7			49.9	
Approach LOS		B			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	12.9	39.0	15.3	58.8	21.9	30.0	27.1	47.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.9	4.9000001
Max Green Setting (Gmax), s	11.0	34.1	15.0	48.1	20.0	25.1	20.1	42.099998
Max Q Clear Time (g_c+I1), s	8.3	13.8	11.0	10.5	14.0	14.7	14.4	25.1
Green Ext Time (p_c), s	0.6	2.6	0.3	11.4	1.1	1.9	2.5	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	381	1063	202	261	1156	139	361	426	137	185	416	333
v/c Ratio	0.67	0.53	0.29	0.70	0.67	0.23	0.68	0.45	0.27	0.65	0.59	0.60
Control Delay	34.7	9.8	1.4	64.3	38.2	6.1	57.4	39.9	8.3	67.0	49.8	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	9.8	1.4	64.3	38.2	6.1	57.4	39.9	8.3	67.0	49.8	11.1
Queue Length 50th (ft)	156	94	3	106	296	2	144	152	5	76	163	14
Queue Length 95th (ft)	214	130	8	152	349	48	197	202	55	111	210	89
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	572	2012	704	408	1720	610	544	957	510	299	704	556
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.53	0.29	0.64	0.67	0.23	0.66	0.45	0.27	0.62	0.59	0.60

Intersection Summary

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	51	38	529	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	55	40	563	88

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1246	1616	331	1261	1572	346	632	0	0
Stage 1	874	874	-	698	698	-	-	-	-
Stage 2	372	742	-	563	874	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	130	103	665	127	109	650	947	-	-
Stage 1	311	365	-	397	440	-	-	-	-
Stage 2	621	420	-	478	365	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	102	84	654	109	89	639	939	-	-
Mov Cap-2 Maneuver	202	173	-	220	189	-	-	-	-
Stage 1	295	314	-	377	418	-	-	-	-
Stage 2	538	399	-	411	314	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	11.2	0.5
HCM LOS	A	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	939	-	-	-	639	915	-	-
HCM Lane V/C Ratio	0.043	-	-	-	0.087	0.132	-	-
HCM Control Delay (s)	9	-	-	0	11.2	9.5	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.5	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	116	597	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	96	96	96
Heavy Vehicles, %	2	2	2
Mvmt Flow	121	622	0

Major/Minor	Major2		
Conflicting Flow All	661	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	923	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	915	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.6
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	842	27	313	1146	102	45	140	512	93	104	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		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	24	946	8	337	1232	67	49	152	157	103	116	2
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	1219	540	382	1909	849	62	586	258	131	723	319
Arrive On Green	0.02	0.34	0.34	0.22	0.54	0.54	0.04	0.17	0.17	0.07	0.20	0.20
Sat Flow, veh/h	1774	3539	1570	1774	3539	1575	1774	3539	1555	1774	3539	1560
Grp Volume(v), veh/h	24	946	8	337	1232	67	49	152	157	103	116	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1770	1575	1774	1770	1555	1774	1770	1560
Q Serve(g_s), s	1.2	21.2	0.3	16.3	21.8	1.8	2.4	3.3	8.3	5.1	2.4	0.1
Cycle Q Clear(g_c), s	1.2	21.2	0.3	16.3	21.8	1.8	2.4	3.3	8.3	5.1	2.4	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	1219	540	382	1909	849	62	586	258	131	723	319
V/C Ratio(X)	0.67	0.78	0.01	0.88	0.65	0.08	0.79	0.26	0.61	0.79	0.16	0.01
Avail Cap(c_a), veh/h	160	1274	565	600	2152	957	160	1449	637	200	1529	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	26.0	19.2	33.7	14.4	9.8	42.4	32.2	34.3	40.4	29.0	28.1
Incr Delay (d2), s/veh	19.7	3.0	0.0	9.4	0.6	0.0	19.0	0.2	2.3	10.8	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	0.8	10.9	0.1	9.0	10.8	0.8	1.5	1.6	3.7	2.9	1.2	0.0
LnGrp Delay(d),s/veh	62.8	29.0	19.2	43.0	15.0	9.9	61.5	32.5	36.6	51.2	29.1	28.1
LnGrp LOS	E	C	B	D	B	A	E	C	D	D	C	C
Approach Vol, veh/h		978			1636			358			221	
Approach Delay, s/veh		29.7			20.6			38.3			39.4	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	19.6	23.1	35.4	7.1	23.0	5.8	52.7
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	36.3	30.0	31.9	8.0	38.3	8.0	53.9
Max Q Clear Time (g_c+I1), s	7.1	10.3	18.3	23.2	4.4	4.4	3.2	23.8
Green Ext Time (p_c), s	0.1	2.3	0.8	7.3	0.0	2.4	0.0	19.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	24	946	30	337	1232	110	49	152	557	103	116	20
v/c Ratio	0.20	0.84	0.05	0.82	0.63	0.12	0.39	0.24	0.87	0.62	0.15	0.05
Control Delay	55.9	43.1	0.2	55.9	21.2	6.5	60.6	36.6	23.6	66.2	33.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	43.1	0.2	55.9	21.2	6.5	60.6	36.6	23.6	66.2	33.6	0.2
Queue Length 50th (ft)	15	303	0	206	243	6	31	45	63	66	33	0
Queue Length 95th (ft)	48	#565	0	#402	551	47	82	76	218	#174	60	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	141	1129	572	531	1976	896	141	1285	845	177	1356	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.84	0.05	0.63	0.62	0.12	0.35	0.12	0.66	0.58	0.09	0.03

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	287	906	17	24	956	353	19	4	10	311	2	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	346	1092	19	25	1006	76	21	4	1	354	0	11
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	1629	28	39	1358	415	324	262	65	650	0	285
Arrive On Green	0.21	0.46	0.46	0.04	0.53	0.53	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3559	62	1774	5085	1554	1774	1434	358	3548	0	1557
Grp Volume(v), veh/h	346	543	568	25	1006	76	21	0	5	354	0	11
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1695	1554	1774	0	1792	1774	0	1557
Q Serve(g_s), s	23.0	29.0	29.0	1.7	18.4	3.0	1.2	0.0	0.3	10.9	0.0	0.7
Cycle Q Clear(g_c), s	23.0	29.0	29.0	1.7	18.4	3.0	1.2	0.0	0.3	10.9	0.0	0.7
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	377	810	847	39	1358	415	324	0	327	650	0	285
V/C Ratio(X)	0.92	0.67	0.67	0.65	0.74	0.18	0.06	0.00	0.02	0.54	0.00	0.04
Avail Cap(c_a), veh/h	456	810	847	118	1358	415	324	0	327	650	0	285
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.5	25.6	25.6	57.2	24.9	21.3	40.8	0.0	40.4	44.7	0.0	40.5
Incr Delay (d2), s/veh	21.2	4.4	4.2	15.6	3.4	0.9	0.4	0.0	0.1	3.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	15.2	15.8	1.0	8.9	1.4	0.6	0.0	0.1	5.7	0.0	0.3
LnGrp Delay(d),s/veh	67.7	30.0	29.8	72.9	28.3	22.2	41.2	0.0	40.5	48.0	0.0	40.8
LnGrp LOS	E	C	C	E	C	C	D		D	D		D
Approach Vol, veh/h		1457			1107			26			365	
Approach Delay, s/veh		38.9			28.9			41.1			47.7	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	60.1		27.0	35.0	37.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	55.2		22.1	31.0	32.2
Max Q Clear Time (g_c+I1), s		3.2	3.7	31.0		12.9	25.0	20.4
Green Ext Time (p_c), s		0.0	0.5	7.5		0.9	0.6	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	36.2
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	346	1112	25	1006	372	21	15	176	179	170
v/c Ratio	0.88	0.69	0.26	0.77	0.56	0.06	0.05	0.60	0.61	0.42
Control Delay	70.2	30.5	53.8	13.7	4.4	43.8	25.2	57.3	57.7	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	30.5	53.8	13.7	4.4	43.8	25.2	57.3	57.7	9.8
Queue Length 50th (ft)	268	384	22	35	0	14	3	141	143	0
Queue Length 95th (ft)	344	412	m53	85	0	39	23	217	221	58
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	435	1602	112	1299	662	350	329	294	295	409
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.69	0.22	0.77	0.56	0.06	0.05	0.60	0.61	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	1190	24	65	1217	52	33	3	43	76	3	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	1384	15	70	1309	32	38	3	6	86	3	5
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	2085	925	90	3121	964	394	135	269	393	152	254
Arrive On Green	0.04	1.00	1.00	0.05	0.61	0.61	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3539	1570	1774	5085	1570	1385	551	1102	1384	624	1040
Grp Volume(v), veh/h	33	1384	15	70	1309	32	38	0	9	86	0	8
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1570	1385	0	1652	1384	0	1664
Q Serve(g_s), s	2.2	0.0	0.0	4.6	15.9	1.0	2.6	0.0	0.5	6.0	0.0	0.4
Cycle Q Clear(g_c), s	2.2	0.0	0.0	4.6	15.9	1.0	3.0	0.0	0.5	6.5	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.63
Lane Grp Cap(c), veh/h	33	2085	925	90	3121	964	394	0	404	393	0	407
V/C Ratio(X)	1.01	0.66	0.02	0.78	0.42	0.03	0.10	0.00	0.02	0.22	0.00	0.02
Avail Cap(c_a), veh/h	136	2085	925	194	3121	964	394	0	404	393	0	407
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.3	0.0	0.0	55.9	12.0	9.1	35.3	0.0	34.2	36.7	0.0	34.2
Incr Delay (d2), s/veh	61.5	1.1	0.0	13.4	0.4	0.1	0.5	0.0	0.1	1.3	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	1.6	0.3	0.0	2.6	7.5	0.4	1.0	0.0	0.2	2.4	0.0	0.2
LnGrp Delay(d),s/veh	118.9	1.1	0.0	69.2	12.4	9.1	35.8	0.0	34.3	37.9	0.0	34.3
LnGrp LOS	F	A	A	E	B	A	D		C	D		C
Approach Vol, veh/h		1432			1411			47			94	
Approach Delay, s/veh		3.8			15.1			35.5			37.6	
Approach LOS		A			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		34.0	10.0	82.0		34.0	14.0	78.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		29.1	13.0	70.1		29.1	9.1	73.099998
Max Q Clear Time (g_c+I1), s		5.0	6.6	2.0		8.5	4.2	17.9
Green Ext Time (p_c), s		0.4	0.1	15.1		0.4	0.6	12.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	1384	28	70	1309	56	38	52	86	36
v/c Ratio	0.28	0.66	0.03	0.50	0.41	0.06	0.12	0.13	0.28	0.09
Control Delay	40.0	4.0	0.3	52.5	12.9	3.4	39.8	12.2	42.9	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.0	4.0	0.3	52.5	12.9	3.4	39.8	12.2	42.9	14.3
Queue Length 50th (ft)	26	154	1	47	328	4	25	2	58	2
Queue Length 95th (ft)	m40	123	m1	m65	371	m16	54	34	105	29
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	140	2109	919	182	3176	963	310	397	306	386
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.66	0.03	0.38	0.41	0.06	0.12	0.13	0.28	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	219	1063	148	200	1273	127	256	291	94	324	251	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	255	1236	73	213	1354	48	284	323	16	331	256	40
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.90	0.90	0.90	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	1986	614	268	1948	602	346	883	390	412	977	432
Arrive On Green	0.09	0.39	0.39	0.16	0.77	0.77	0.10	0.25	0.25	0.12	0.28	0.28
Sat Flow, veh/h	3442	5085	1571	3442	5085	1571	3442	3539	1564	3442	3539	1566
Grp Volume(v), veh/h	255	1236	73	213	1354	48	284	323	16	331	256	40
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1571	1721	1770	1564	1721	1770	1566
Q Serve(g_s), s	8.8	23.6	2.6	7.2	16.1	0.6	9.8	9.1	0.9	11.3	6.8	2.3
Cycle Q Clear(g_c), s	8.8	23.6	2.6	7.2	16.1	0.6	9.8	9.1	0.9	11.3	6.8	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	1986	614	268	1948	602	346	883	390	412	977	432
V/C Ratio(X)	0.80	0.62	0.12	0.80	0.70	0.08	0.82	0.37	0.04	0.80	0.26	0.09
Avail Cap(c_a), veh/h	485	1986	614	317	1948	602	457	883	390	517	977	432
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	29.6	12.0	50.0	10.6	4.0	53.2	37.4	34.3	51.7	34.1	32.4
Incr Delay (d2), s/veh	5.4	1.5	0.4	9.9	1.8	0.2	8.7	1.2	0.2	7.2	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	11.3	1.5	3.8	7.5	0.4	5.1	4.6	0.4	5.8	3.4	1.0
LnGrp Delay(d),s/veh	59.0	31.1	12.4	59.9	12.4	4.2	61.9	38.5	34.5	59.0	34.7	32.9
LnGrp LOS	E	C	B	E	B	A	E	D	C	E	C	C
Approach Vol, veh/h		1564			1615			623			627	
Approach Delay, s/veh		34.8			18.4			49.1			47.4	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	35.0	19.7	52.0	16.1	38.2	15.2	56.5
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	18.1	* 30.1	11.4	47.099998	16.0	33.1	17.0	42.1
Max Q Clear Time (g_c+I1), s	13.3	11.1	9.2	25.6	11.8	8.8	10.8	18.1
Green Ext Time (p_c), s	1.1	1.8	0.2	9.0	0.4	2.8	0.4	11.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	255	1236	172	213	1354	135	284	323	104	331	256	153
v/c Ratio	0.66	0.65	0.26	0.65	0.75	0.21	0.71	0.38	0.22	0.64	0.26	0.29
Control Delay	69.5	18.1	2.3	42.8	21.2	3.1	64.1	41.8	3.8	56.6	37.1	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5	18.1	2.3	42.8	21.2	3.1	64.1	41.8	3.8	56.6	37.1	7.0
Queue Length 50th (ft)	104	168	8	71	144	0	115	116	0	132	87	0
Queue Length 95th (ft)	129	206	14	113	201	18	163	162	25	183	126	53
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	463	1900	660	326	1808	629	435	845	470	517	968	531
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.65	0.26	0.65	0.75	0.21	0.65	0.38	0.22	0.64	0.26	0.29

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	1116	107	306	1322	79	132	129	240	118	128	53
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	103	1213	51	319	1377	50	143	140	50	128	139	19
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1905	588	462	2856	881	322	471	395	285	791	106
Arrive On Green	0.15	0.75	0.75	0.52	1.00	1.00	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1571	1774	5085	1569	1214	1863	1565	1181	3131	421
Grp Volume(v), veh/h	103	1213	51	319	1377	50	143	140	50	128	78	80
Grp Sat Flow(s),veh/h/ln	1774	1695	1571	1774	1695	1569	1214	1863	1565	1181	1770	1783
Q Serve(g_s), s	6.9	14.1	1.1	16.6	0.0	0.0	12.9	7.5	3.0	12.1	4.2	4.3
Cycle Q Clear(g_c), s	6.9	14.1	1.1	16.6	0.0	0.0	17.2	7.5	3.0	19.6	4.2	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	130	1905	588	462	2856	881	322	471	395	285	447	451
V/C Ratio(X)	0.79	0.64	0.09	0.69	0.48	0.06	0.44	0.30	0.13	0.45	0.17	0.18
Avail Cap(c_a), veh/h	173	1905	588	505	2856	881	322	471	395	285	447	451
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)	0.75	0.75	0.75	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	11.4	9.8	25.8	0.0	0.0	42.7	37.1	35.5	45.0	35.9	36.0
Incr Delay (d2), s/veh	12.5	1.2	0.2	2.7	0.4	0.1	4.4	1.6	0.7	5.0	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	6.6	0.5	8.2	0.1	0.0	4.7	4.1	1.4	4.3	2.2	2.3
LnGrp Delay(d),s/veh	64.0	12.6	10.0	28.4	0.4	0.1	47.1	38.8	36.1	50.1	36.8	36.8
LnGrp LOS	E	B	A	C	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1367			1746			333			286	
Approach Delay, s/veh		16.4			5.5			41.9			42.8	
Approach LOS		B			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		36.0	39.0	51.0		36.0	16.0	74.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		31.1	35.0	46.1		31.1	12.0	69.1
Max Q Clear Time (g_c+I1), s		19.2	18.6	16.1		21.6	8.9	2.0
Green Ext Time (p_c), s		2.3	1.1	10.0		2.1	0.4	14.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	103	1213	116	319	1377	82	143	140	261	128	197
v/c Ratio	0.67	0.65	0.19	0.67	0.49	0.10	0.50	0.29	0.44	0.45	0.22
Control Delay	73.6	13.2	2.1	54.2	6.5	0.5	47.6	40.3	7.0	46.1	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	13.2	2.1	54.2	6.5	0.5	47.6	40.3	7.0	46.1	28.9
Queue Length 50th (ft)	89	132	6	275	66	0	101	94	0	89	50
Queue Length 95th (ft)	m139	160	m9	371	79	m2	172	154	68	154	84
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	168	1860	622	491	2788	857	287	475	587	284	892
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.65	0.19	0.65	0.49	0.10	0.50	0.29	0.44	0.45	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	162	1234	103	85	1403	87	187	76	42	128	79	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	171	1299	81	89	1461	57	228	93	7	138	85	20
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.82	0.82	0.82	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	2612	805	113	2326	716	410	574	483	408	574	483
Arrive On Green	0.22	1.00	1.00	0.02	0.15	0.15	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	5085	1568	1774	5085	1566	1275	1863	1568	1281	1863	1568
Grp Volume(v), veh/h	171	1299	81	89	1461	57	228	93	7	138	85	20
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1566	1275	1863	1568	1281	1863	1568
Q Serve(g_s), s	11.1	0.0	0.0	6.0	32.5	3.8	19.0	4.4	0.4	10.6	4.0	1.1
Cycle Q Clear(g_c), s	11.1	0.0	0.0	6.0	32.5	3.8	23.0	4.4	0.4	15.0	4.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	2612	805	113	2326	716	410	574	483	408	574	483
V/C Ratio(X)	0.86	0.50	0.10	0.79	0.63	0.08	0.56	0.16	0.01	0.34	0.15	0.04
Avail Cap(c_a), veh/h	281	2612	805	206	2326	716	410	574	483	408	574	483
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	0.0	58.1	41.5	29.3	38.6	30.3	29.0	35.8	30.2	29.2
Incr Delay (d2), s/veh	13.3	0.5	0.2	8.8	1.0	0.2	5.3	0.6	0.1	2.2	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.1	0.0	3.2	15.5	1.7	7.3	2.3	0.2	4.0	2.1	0.5
LnGrp Delay(d),s/veh	59.0	0.5	0.2	67.0	42.5	29.5	43.9	31.0	29.0	38.0	30.8	29.4
LnGrp LOS	E	A	A	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		1551			1607			328			243	
Approach Delay, s/veh		7.0			43.4			39.9			34.8	
Approach LOS		A			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		42.0	11.7	72.3		42.0	24.0	60.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		37.1	14.0	61.1		37.1	19.1	55.099998
Max Q Clear Time (g_c+I1), s		25.0	8.0	2.0		17.0	13.1	34.5
Green Ext Time (p_c), s		1.9	0.1	13.9		2.3	0.4	10.6

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	171	1299	108	89	1461	91	228	93	51	138	85	86
v/c Ratio	0.61	0.50	0.14	0.57	0.66	0.13	0.60	0.17	0.10	0.37	0.16	0.17
Control Delay	35.6	10.7	2.9	57.6	15.3	2.5	46.0	34.1	1.1	38.6	33.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	10.7	2.9	57.6	15.3	2.5	46.0	34.1	1.1	38.6	33.9	6.3
Queue Length 50th (ft)	109	102	4	59	397	15	160	56	0	89	51	0
Queue Length 95th (ft)	186	120	m9	m91	446	m20	221	91	0	150	93	34
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	280	2579	790	196	2223	692	379	548	519	376	548	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.50	0.14	0.45	0.66	0.13	0.60	0.17	0.10	0.37	0.16	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	158	1158	116	165	1345	203	163	62	143	254	50	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	168	1232	69	179	1462	151	179	68	41	289	57	18
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.91	0.91	0.91	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	2194	675	204	2251	696	468	731	406	453	622	524
Arrive On Green	0.04	0.14	0.14	0.23	0.89	0.89	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1774	5085	1565	1774	5085	1573	1310	2188	1217	1271	1863	1569
Grp Volume(v), veh/h	168	1232	69	179	1462	151	179	54	55	289	57	18
Grp Sat Flow(s),veh/h/ln	1774	1695	1565	1774	1695	1573	1310	1770	1635	1271	1863	1569
Q Serve(g_s), s	11.6	27.8	4.7	12.0	9.6	1.7	13.4	2.6	2.9	25.0	2.6	1.0
Cycle Q Clear(g_c), s	11.6	27.8	4.7	12.0	9.6	1.7	16.0	2.6	2.9	27.8	2.6	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	198	2194	675	204	2251	696	468	591	546	453	622	524
V/C Ratio(X)	0.85	0.56	0.10	0.88	0.65	0.22	0.38	0.09	0.10	0.64	0.09	0.03
Avail Cap(c_a), veh/h	259	2194	675	246	2251	696	468	591	546	453	622	524
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.3	41.9	32.0	46.5	4.5	4.0	33.7	28.2	28.3	37.9	28.2	27.6
Incr Delay (d2), s/veh	16.3	0.9	0.3	17.0	0.9	0.4	2.4	0.3	0.4	6.7	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	6.6	13.2	2.1	6.8	4.1	0.8	5.1	1.3	1.3	9.6	1.4	0.4
LnGrp Delay(d),s/veh	74.6	42.8	32.3	63.5	5.4	4.5	36.0	28.5	28.6	44.6	28.5	27.7
LnGrp LOS	E	D	C	E	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1469			1792			288			364	
Approach Delay, s/veh		46.0			11.1			33.2			41.2	
Approach LOS		D			B			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		46.0	22.0	58.0		46.0	17.7	62.3
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		41.1	17.1	53.099998		41.1	18.0	53.1
Max Q Clear Time (g_c+I1), s		18.0	14.0	29.8		29.8	13.6	11.6
Green Ext Time (p_c), s		2.6	0.2	9.3		2.1	0.2	16.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	1232	123	179	1462	221	179	225	289	57	76
v/c Ratio	0.76	0.58	0.18	0.71	0.66	0.30	0.42	0.20	0.81	0.09	0.13
Control Delay	65.5	14.8	4.9	41.0	7.4	1.8	36.8	10.4	57.8	30.2	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.5	14.8	4.9	41.0	7.4	1.8	36.8	10.4	57.8	30.2	4.2
Queue Length 50th (ft)	112	219	6	146	147	18	114	20	215	32	0
Queue Length 95th (ft)	#195	331	31	m207	175	m23	184	50	#350	63	23
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	252	2142	686	252	2232	739	430	1118	357	607	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.58	0.18	0.71	0.66	0.30	0.42	0.20	0.81	0.09	0.13

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Near-Term No-Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	393	39	463	66	41	104	180	648	13	94	893	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		0.98	1.00		0.97	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	457	45	222	72	45	4	202	728	6	99	940	48
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	539	358	299	93	310	134	241	1781	797	126	1519	675
Arrive On Green	0.16	0.19	0.19	0.05	0.09	0.09	0.14	0.50	0.50	0.07	0.43	0.43
Sat Flow, veh/h	3442	1863	1559	1774	3539	1529	1774	3539	1583	1774	3539	1572
Grp Volume(v), veh/h	457	45	222	72	45	4	202	728	6	99	940	48
Grp Sat Flow(s),veh/h/ln	1721	1863	1559	1774	1770	1529	1774	1770	1583	1774	1770	1572
Q Serve(g_s), s	12.7	2.0	9.3	3.9	1.2	0.2	10.9	12.6	0.2	5.4	20.3	1.0
Cycle Q Clear(g_c), s	12.7	2.0	9.3	3.9	1.2	0.2	10.9	12.6	0.2	5.4	20.3	1.0
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	539	358	299	93	310	134	241	1781	797	126	1519	675
V/C Ratio(X)	0.85	0.13	0.74	0.78	0.15	0.03	0.84	0.41	0.01	0.79	0.62	0.07
Avail Cap(c_a), veh/h	667	629	526	145	797	344	327	1781	797	235	1519	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	32.8	18.7	45.9	41.4	40.9	41.3	15.2	12.1	44.8	21.8	5.3
Incr Delay (d2), s/veh	8.4	0.2	3.6	13.0	0.2	0.1	13.0	0.2	0.0	10.2	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	1.0	5.1	2.3	0.6	0.1	6.2	6.2	0.1	3.0	10.2	0.8
LnGrp Delay(d),s/veh	48.6	33.0	22.3	59.0	41.6	41.0	54.4	15.4	12.2	55.0	23.7	5.5
LnGrp LOS	D	C	C	E	D	D	D	B	B	E	C	A
Approach Vol, veh/h		724			121			936			1087	
Approach Delay, s/veh		39.6			51.9			23.8			25.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	54.3	9.1	23.7	18.2	47.0	19.4	13.5
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	48.1	8.0	33.1	18.12.099998	42	19.0	22.1
Max Q Clear Time (g_c+I1), s	7.4	14.6	5.9	11.3	12.9	22.3	14.7	3.2
Green Ext Time (p_c), s	0.1	6.0	0.0	1.2	0.5	6.4	0.7	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	457	45	538	72	45	113	202	728	15	99	940	135
v/c Ratio	0.81	0.10	0.85	0.57	0.11	0.34	0.76	0.46	0.02	0.57	0.67	0.19
Control Delay	56.6	34.1	27.7	69.3	42.4	4.0	63.5	23.2	0.1	61.4	31.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	34.1	27.7	69.3	42.4	4.0	63.5	23.2	0.1	61.4	31.2	5.2
Queue Length 50th (ft)	158	26	139	50	15	0	135	182	0	67	285	0
Queue Length 95th (ft)	#238	53	256	#119	32	11	#248	275	0	132	416	43
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	616	582	733	133	739	456	318	1612	790	217	1408	693
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.08	0.73	0.54	0.06	0.25	0.64	0.45	0.02	0.46	0.67	0.19

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	299	5	49	27	17	23	80	481	6	10	926	460
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99
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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	365	6	1	29	18	0	93	559	6	10	965	315
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	472	372	312	44	163	138	119	1725	19	18	1499	663
Arrive On Green	0.14	0.20	0.20	0.02	0.09	0.00	0.07	0.48	0.48	0.01	0.42	0.42
Sat Flow, veh/h	3442	1863	1560	1774	1863	1583	1774	3587	38	1774	3539	1565
Grp Volume(v), veh/h	365	6	1	29	18	0	93	276	289	10	965	315
Grp Sat Flow(s),veh/h/ln	1721	1863	1560	1774	1863	1583	1774	1770	1855	1774	1770	1565
Q Serve(g_s), s	7.1	0.2	0.0	1.1	0.6	0.0	3.6	6.6	6.6	0.4	14.9	10.0
Cycle Q Clear(g_c), s	7.1	0.2	0.0	1.1	0.6	0.0	3.6	6.6	6.6	0.4	14.9	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	472	372	312	44	163	138	119	851	892	18	1499	663
V/C Ratio(X)	0.77	0.02	0.00	0.66	0.11	0.00	0.78	0.32	0.32	0.56	0.64	0.48
Avail Cap(c_a), veh/h	604	730	611	183	595	505	183	851	892	183	1499	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	22.1	22.1	33.3	29.0	0.0	31.6	11.0	11.0	34.0	15.7	14.3
Incr Delay (d2), s/veh	4.7	0.0	0.0	15.7	0.3	0.0	11.0	1.0	1.0	24.3	2.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.1	0.0	0.7	0.3	0.0	2.1	3.5	3.6	0.3	7.7	4.7
LnGrp Delay(d),s/veh	33.4	22.1	22.1	49.0	29.3	0.0	42.6	12.0	12.0	58.3	17.9	16.8
LnGrp LOS	C	C	C	D	C		D	B	B	E	B	B
Approach Vol, veh/h		372			47			658			1290	
Approach Delay, s/veh		33.2			41.5			16.3			17.9	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	38.0	6.6	18.7	9.5	34.1	14.4	10.9
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	29.2	7.1	27.0	7.1	29.2	12.1	22.0
Max Q Clear Time (g_c+I1), s	2.4	8.6	3.1	2.2	5.6	16.9	9.1	2.6
Green Ext Time (p_c), s	0.0	11.3	0.0	0.1	0.0	8.0	0.4	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	365	6	60	29	18	25	93	566	10	965	479
v/c Ratio	0.65	0.01	0.13	0.17	0.08	0.07	0.51	0.30	0.06	0.62	0.58
Control Delay	36.6	23.2	0.6	37.3	29.5	0.3	46.2	12.7	36.3	21.1	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	23.2	0.6	37.3	29.5	0.3	46.2	12.7	36.3	21.1	11.8
Queue Length 50th (ft)	81	2	0	13	8	0	42	66	4	188	62
Queue Length 95th (ft)	#137	10	0	43	25	0	#115	174	21	#350	214
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	624	755	711	188	616	645	188	1913	188	1552	823
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.01	0.08	0.15	0.03	0.04	0.49	0.30	0.05	0.62	0.58

Intersection Summary

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

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	64	125	412	17	117	906
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	139	502	21	123	954

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1246	282	0	0	533	0
Stage 1	523	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	166	715	-	-	1031	-
Stage 1	559	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	144	703	-	-	1022	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	385	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	144	703	1022	-
HCM Lane V/C Ratio	-	-	0.494	0.198	0.121	-
HCM Control Delay (s)	-	-	52.2	11.4	9	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	2.3	0.7	0.4	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	10	13	58	51	12	15	21	247	32
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	17	74	60	14	18	26	309	40

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	913	1100	345	763	1082	194	661	0	0
Stage 1	689	689	-	391	391	-	-	-	-
Stage 2	224	411	-	372	691	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	228	211	651	294	216	815	923	-	-
Stage 1	402	445	-	605	606	-	-	-	-
Stage 2	758	593	-	621	444	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	205	199	640	238	204	801	915	-	-
Mov Cap-2 Maneuver	307	312	-	350	308	-	-	-	-
Stage 1	387	436	-	583	584	-	-	-	-
Stage 2	697	571	-	517	435	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	13.6	16	0.6
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	915	-	-	307	537	350	468	1186	-	-
HCM Lane V/C Ratio	0.029	-	-	0.042	0.17	0.171	0.068	0.013	-	-
HCM Control Delay (s)	9.1	-	-	17.2	13.1	17.4	13.3	8.1	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.6	0.6	0.2	0	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	14	602	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	2	2	2
Mvmt Flow	15	647	3

Major/Minor	Major2		
Conflicting Flow All	359	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1196	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1186	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.2
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	101	73	64	101	124	47	318	23	142	845	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	13	120	0	70	111	9	55	374	20	148	880	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.91	0.91	0.91	0.85	0.85	0.85	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	647	289	332	340	285	75	1509	80	192	1819	21
Arrive On Green	0.18	0.18	0.00	0.18	0.18	0.18	0.04	0.44	0.44	0.11	0.51	0.51
Sat Flow, veh/h	1251	3539	1583	1250	1863	1557	1774	3417	182	1774	3584	41
Grp Volume(v), veh/h	13	120	0	70	111	9	55	193	201	148	434	456
Grp Sat Flow(s),veh/h/ln	1251	1770	1583	1250	1863	1557	1774	1770	1829	1774	1770	1855
Q Serve(g_s), s	0.5	1.5	0.0	2.6	2.7	0.2	1.6	3.5	3.6	4.2	8.3	8.3
Cycle Q Clear(g_c), s	3.1	1.5	0.0	4.1	2.7	0.2	1.6	3.5	3.6	4.2	8.3	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	303	647	289	332	340	285	75	781	808	192	898	942
V/C Ratio(X)	0.04	0.19	0.00	0.21	0.33	0.03	0.73	0.25	0.25	0.77	0.48	0.48
Avail Cap(c_a), veh/h	608	1509	675	637	794	664	275	781	808	412	898	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	17.8	0.0	19.6	18.3	17.3	24.4	9.0	9.0	22.4	8.3	8.3
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.6	0.0	12.9	0.8	0.7	6.4	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.0	0.9	1.4	0.1	1.0	1.9	2.0	2.4	4.4	4.6
LnGrp Delay(d),s/veh	19.8	18.0	0.0	19.9	18.9	17.4	37.3	9.8	9.8	28.8	10.2	10.1
LnGrp LOS	B	B		B	B	B	D	A	A	C	B	B
Approach Vol, veh/h		133			190			449			1038	
Approach Delay, s/veh		18.2			19.2			13.2			12.8	
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	9.6	27.7		14.3	6.2	31.1		14.3
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	12.0	22.2		22.0	8.0	26.2		22.0
Max Q Clear Time (g_c+I1), s	6.2	5.6		5.1	3.6	10.3		6.1
Green Ext Time (p_c), s	0.2	7.0		1.5	0.0	6.8		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	13	120	87	70	111	136	55	401	148	891
v/c Ratio	0.06	0.19	0.24	0.31	0.33	0.35	0.25	0.22	0.50	0.43
Control Delay	19.0	20.0	6.5	23.7	22.7	6.9	28.0	12.5	29.1	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	20.0	6.5	23.7	22.7	6.9	28.0	12.5	29.1	11.6
Queue Length 50th (ft)	4	18	0	21	34	0	17	42	45	102
Queue Length 95th (ft)	14	34	22	51	70	35	51	95	112	226
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	504	1410	672	497	742	699	256	1799	384	2095
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.13	0.14	0.15	0.19	0.21	0.22	0.39	0.43

Intersection Summary

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	211	76	55	157	90	34
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	92	92	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	224	81	60	171	111	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	234	0	439	244
Stage 1	-	-	-	-	234	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1333	-	561	794
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1322	-	527	781
Mov Cap-2 Maneuver	-	-	-	-	597	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	767	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	638	-	-	1322	-
HCM Lane V/C Ratio	0.24	-	-	0.045	-
HCM Control Delay (s)	12.4	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	28	123	109	0	11	62	28	0	63	60	6
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.74	0.74	0.74	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	29	127	112	0	15	84	38	0	72	69	7
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	11.7	9.6	10
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	26%	0%	100%	0%
Vol Thru, %	0%	91%	0%	53%	74%	53%	0%	67%
Vol Right, %	0%	9%	0%	47%	0%	47%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	66	28	232	42	59	69	178
LT Vol	0	60	0	123	31	31	0	119
Through Vol	0	6	0	109	0	28	0	59
RT Vol	63	0	28	0	11	0	69	0
Lane Flow Rate	72	76	29	239	57	80	85	220
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.134	0.128	0.053	0.379	0.101	0.131	0.152	0.348
Departure Headway (Hd)	6.665	6.093	6.551	5.712	6.378	5.908	6.442	5.702
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	588	547	629	562	607	557	631
Service Time	4.407	3.835	4.286	3.447	4.118	3.648	4.178	3.438
HCM Lane V/C Ratio	0.134	0.129	0.053	0.38	0.101	0.132	0.153	0.349
HCM Control Delay	10.4	9.7	9.7	11.9	9.8	9.5	10.3	11.5
HCM Lane LOS	B	A	A	B	A	A	B	B
HCM 95th-tile Q	0.5	0.4	0.2	1.8	0.3	0.4	0.5	1.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	69	119	59
Peak Hour Factor	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	147	73
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	11.2
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	15	1	318	26
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	16	1	408	33

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1582	1820	635	1188	1803	241	1240	0	0
Stage 1	1366	1366	-	437	437	-	-	-	-
Stage 2	216	454	-	751	1366	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	73	77	421	144	79	760	557	-	-
Stage 1	155	213	-	568	578	-	-	-	-
Stage 2	766	568	-	369	213	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	67	71	414	135	73	747	552	-	-
Mov Cap-2 Maneuver	130	155	-	251	158	-	-	-	-
Stage 1	153	199	-	562	572	-	-	-	-
Stage 2	742	562	-	345	199	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	9.9	0
HCM LOS	A	A	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	552	-	-	-	747	1097	-	-
HCM Lane V/C Ratio	0.002	-	-	-	0.022	0.057	-	-
HCM Control Delay (s)	11.5	-	-	0	9.9	8.5	-	-
HCM Lane LOS	B	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.2	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	51	996	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	81	81	81
Heavy Vehicles, %	2	2	2
Mvmt Flow	63	1230	0

Major/Minor	Major2		
Conflicting Flow All	451	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1106	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1097	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	554	51	278	741	55	29	177	440	121	284	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	15	596	11	339	904	24	31	190	49	139	326	2
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.82	0.82	0.82	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	995	441	395	1732	770	45	558	245	176	820	362
Arrive On Green	0.01	0.28	0.28	0.22	0.49	0.49	0.03	0.16	0.16	0.10	0.23	0.23
Sat Flow, veh/h	1774	3539	1566	1774	3539	1574	1774	3539	1553	1774	3539	1563
Grp Volume(v), veh/h	15	596	11	339	904	24	31	190	49	139	326	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1566	1774	1770	1574	1774	1770	1553	1774	1770	1563
Q Serve(g_s), s	0.6	10.8	0.4	13.7	13.0	0.6	1.3	3.6	2.0	5.7	5.8	0.1
Cycle Q Clear(g_c), s	0.6	10.8	0.4	13.7	13.0	0.6	1.3	3.6	2.0	5.7	5.8	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	995	441	395	1732	770	45	558	245	176	820	362
V/C Ratio(X)	0.59	0.60	0.02	0.86	0.52	0.03	0.69	0.34	0.20	0.79	0.40	0.01
Avail Cap(c_a), veh/h	191	1242	550	763	2383	1060	191	1575	691	310	1813	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	23.1	19.4	27.8	13.0	9.9	36.0	27.9	27.3	32.7	24.2	22.0
Incr Delay (d2), s/veh	19.9	0.6	0.0	5.5	0.2	0.0	16.9	0.4	0.4	7.6	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	0.4	5.4	0.2	7.3	6.3	0.3	0.8	1.8	0.9	3.2	2.8	0.0
LnGrp Delay(d),s/veh	56.3	23.7	19.4	33.3	13.3	9.9	52.9	28.2	27.6	40.3	24.5	22.0
LnGrp LOS	E	C	B	C	B	A	D	C	C	D	C	C
Approach Vol, veh/h		622			1267			270			467	
Approach Delay, s/veh		24.4			18.6			31.0			29.2	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	16.6	20.5	25.8	5.9	22.1	5.1	41.3
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	33.1	32.0	26.1	8.0	38.1	8.0	50.1
Max Q Clear Time (g_c+I1), s	7.7	5.6	15.7	12.8	3.3	7.8	2.6	15.0
Green Ext Time (p_c), s	0.1	3.8	0.9	7.8	0.0	3.8	0.0	13.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	15	596	55	339	904	67	31	190	473	139	326	10
v/c Ratio	0.11	0.70	0.11	0.75	0.51	0.08	0.22	0.36	0.75	0.58	0.35	0.02
Control Delay	47.1	36.6	0.5	42.6	17.4	0.3	47.7	36.8	11.8	50.2	30.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	36.6	0.5	42.6	17.4	0.3	47.7	36.8	11.8	50.2	30.5	0.1
Queue Length 50th (ft)	8	156	0	171	147	0	16	50	0	72	82	0
Queue Length 95th (ft)	33	277	0	287	280	0	54	94	96	#174	138	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	171	1119	596	686	2149	983	171	1419	900	278	1634	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.53	0.09	0.49	0.42	0.07	0.18	0.13	0.53	0.50	0.20	0.01

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	125	661	35	36	527	121	21	2	8	98	15	69
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	129	681	33	39	573	25	23	2	1	116	0	11
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	1343	65	51	1459	446	355	234	117	772	0	340
Arrive On Green	0.13	0.39	0.39	0.06	0.57	0.57	0.20	0.20	0.20	0.22	0.00	0.22
Sat Flow, veh/h	1774	3434	166	1774	5085	1556	1774	1166	583	3548	0	1562
Grp Volume(v), veh/h	129	351	363	39	573	25	23	0	3	116	0	11
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1774	1695	1556	1774	0	1749	1774	0	1562
Q Serve(g_s), s	7.8	17.4	17.4	2.5	7.1	0.8	1.2	0.0	0.2	3.1	0.0	0.6
Cycle Q Clear(g_c), s	7.8	17.4	17.4	2.5	7.1	0.8	1.2	0.0	0.2	3.1	0.0	0.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	236	692	716	51	1459	446	355	0	350	772	0	340
V/C Ratio(X)	0.55	0.51	0.51	0.76	0.39	0.06	0.06	0.00	0.01	0.15	0.00	0.03
Avail Cap(c_a), veh/h	338	692	716	154	1459	446	355	0	350	772	0	340
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	26.7	26.7	53.9	19.0	17.7	37.4	0.0	37.0	36.5	0.0	35.6
Incr Delay (d2), s/veh	2.0	2.6	2.6	19.8	0.8	0.2	0.4	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	9.0	9.3	1.5	3.4	0.4	0.6	0.0	0.1	1.5	0.0	0.3
LnGrp Delay(d),s/veh	48.7	29.3	29.2	73.7	19.8	17.9	37.7	0.0	37.0	36.9	0.0	35.7
LnGrp LOS	D	C	C	E	B	B	D		D	D		D
Approach Vol, veh/h		843			637			26			127	
Approach Delay, s/veh		32.3			23.1			37.6			36.8	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		28.0	14.0	50.0		30.0	26.0	38.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		23.1	10.0	45.1		25.1	22.0	33.1
Max Q Clear Time (g_c+I1), s		3.2	4.5	19.4		5.1	9.8	9.1
Green Ext Time (p_c), s		0.0	0.2	4.3		0.4	0.3	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	129	717	39	573	132	23	11	60	61	74
v/c Ratio	0.53	0.54	0.34	0.42	0.26	0.06	0.03	0.17	0.17	0.17
Control Delay	55.6	31.5	54.5	16.2	4.6	40.3	23.0	41.6	41.5	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.6	31.5	54.5	16.2	4.6	40.3	23.0	41.6	41.5	0.9
Queue Length 50th (ft)	93	232	32	127	31	15	1	41	42	0
Queue Length 95th (ft)	153	293	71	169	60	39	18	83	84	0
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	319	1325	145	1379	511	410	376	345	350	427
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.54	0.27	0.42	0.26	0.06	0.03	0.17	0.17	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	727	39	36	685	28	30	1	29	18	1	6
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	4	782	25	38	729	18	34	1	3	20	1	1
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2127	944	48	3240	1001	407	100	301	405	209	209
Arrive On Green	0.00	1.00	1.00	0.03	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1392	407	1222	1390	850	850
Grp Volume(v), veh/h	4	782	25	38	729	18	34	0	4	20	0	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1392	0	1629	1390	0	1700
Q Serve(g_s), s	0.1	0.0	0.0	2.3	6.7	0.5	2.1	0.0	0.2	1.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	2.3	6.7	0.5	2.2	0.0	0.2	1.4	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		0.50
Lane Grp Cap(c), veh/h	2	2127	944	48	3240	1001	407	0	401	405	0	419
V/C Ratio(X)	2.48	0.37	0.03	0.78	0.22	0.02	0.08	0.00	0.01	0.05	0.00	0.00
Avail Cap(c_a), veh/h	163	2127	944	242	3240	1001	407	0	401	405	0	419
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	0.0	0.0	53.2	8.5	7.3	32.1	0.0	31.3	31.9	0.0	31.3
Incr Delay (d2), s/veh	915.6	0.4	0.0	23.5	0.2	0.0	0.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	477.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.0	1.5	3.2	0.2	0.8	0.0	0.1	0.5	0.0	0.0
LnGrp Delay(d),s/veh	1448.5	0.4	0.0	76.6	8.6	7.4	32.5	0.0	31.4	32.1	0.0	31.3
LnGrp LOS	F	A	A	E	A	A	C		C	C		C
Approach Vol, veh/h		811			785			38			22	
Approach Delay, s/veh		7.5			11.9			32.4			32.0	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.0	7.0	83.0		32.0	15.0	75.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		27.1	15.0	66.1		27.1	10.1	70.099998
Max Q Clear Time (g_c+I1), s		4.2	4.3	2.0		3.4	2.1	8.7
Green Ext Time (p_c), s		0.1	0.0	6.2		0.1	0.7	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	4	782	42	38	729	30	34	34	20	8
v/c Ratio	0.04	0.35	0.04	0.32	0.21	0.03	0.11	0.09	0.07	0.02
Control Delay	29.2	1.6	0.1	46.2	4.5	0.2	39.2	13.5	38.4	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	1.6	0.1	46.2	4.5	0.2	39.2	13.5	38.4	22.3
Queue Length 50th (ft)	3	9	1	14	11	0	22	1	13	1
Queue Length 95th (ft)	m6	13	m0	37	18	0	50	27	34	14
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	159	2235	972	217	3421	1035	306	369	299	356
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.35	0.04	0.18	0.21	0.03	0.11	0.09	0.07	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	630	72	100	529	86	124	207	49	217	564	142
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	72	685	15	111	588	22	139	233	13	289	752	66
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.89	0.89	0.89	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	1481	456	171	1598	493	202	1256	557	435	1524	677
Arrive On Green	0.04	0.29	0.29	0.10	0.63	0.63	0.06	0.35	0.35	0.13	0.43	0.43
Sat Flow, veh/h	3442	5085	1567	3442	5085	1568	3442	3539	1570	3442	3539	1572
Grp Volume(v), veh/h	72	685	15	111	588	22	139	233	13	289	752	66
Grp Sat Flow(s),veh/h/ln	1721	1695	1567	1721	1695	1568	1721	1770	1570	1721	1770	1572
Q Serve(g_s), s	2.3	12.2	0.6	3.4	6.2	0.4	4.4	5.0	0.6	8.8	16.9	2.7
Cycle Q Clear(g_c), s	2.3	12.2	0.6	3.4	6.2	0.4	4.4	5.0	0.6	8.8	16.9	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	1481	456	171	1598	493	202	1256	557	435	1524	677
V/C Ratio(X)	0.60	0.46	0.03	0.65	0.37	0.04	0.69	0.19	0.02	0.66	0.49	0.10
Avail Cap(c_a), veh/h	312	1481	456	347	1598	493	406	1256	557	628	1524	677
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	32.0	18.0	48.7	15.2	6.7	50.9	24.6	23.1	45.9	22.7	18.6
Incr Delay (d2), s/veh	4.7	1.0	0.1	3.9	0.6	0.2	4.1	0.3	0.1	1.8	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.9	0.3	1.7	2.9	0.3	2.2	2.5	0.3	4.3	8.5	1.2
LnGrp Delay(d),s/veh	57.1	33.0	18.2	52.6	15.8	6.8	55.0	24.9	23.2	47.7	23.8	18.9
LnGrp LOS	E	C	B	D	B	A	E	C	C	D	C	B
Approach Vol, veh/h		772			721			385			1107	
Approach Delay, s/veh		35.0			21.2			35.7			29.8	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.8	44.0	22.2	37.0	10.5	52.4	7.9	51.3
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	20.3	*39.099998	11.3	*32.099998	13.0	47.1	10.0	34.1
Max Q Clear Time (g_c+I1), s	10.8	7.0	5.4	14.2	6.4	18.9	4.3	8.2
Green Ext Time (p_c), s	3.1	1.5	0.3	4.2	0.2	6.8	0.1	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	72	685	78	111	588	96	139	233	55	289	752	189
v/c Ratio	0.32	0.51	0.15	0.33	0.37	0.17	0.48	0.21	0.09	0.49	0.52	0.26
Control Delay	52.6	17.3	1.5	60.5	40.0	16.2	58.6	30.8	0.3	48.9	29.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	17.3	1.5	60.5	40.0	16.2	58.6	30.8	0.3	48.9	29.0	6.9
Queue Length 50th (ft)	19	104	0	41	153	25	54	70	0	107	231	16
Queue Length 95th (ft)	39	126	0	71	193	67	85	101	0	124	238	39
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	281	1337	508	337	1589	571	365	1134	588	590	1445	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.51	0.15	0.33	0.37	0.17	0.38	0.21	0.09	0.49	0.52	0.26

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	706	81	267	683	30	109	94	166	58	101	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	44	776	19	281	719	16	140	121	25	72	126	10
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.78	0.78	0.78	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	1539	474	505	2810	867	391	548	461	363	977	77
Arrive On Green	0.07	0.61	0.61	0.19	0.37	0.37	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	5085	1568	1774	5085	1569	1239	1863	1567	1229	3322	261
Grp Volume(v), veh/h	44	776	19	281	719	16	140	121	25	72	66	70
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1569	1239	1863	1567	1229	1770	1814
Q Serve(g_s), s	2.8	10.1	0.6	16.6	11.4	0.8	10.8	5.7	1.3	5.5	3.2	3.3
Cycle Q Clear(g_c), s	2.8	10.1	0.6	16.6	11.4	0.8	14.1	5.7	1.3	11.1	3.2	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	61	1539	474	505	2810	867	391	548	461	363	520	533
V/C Ratio(X)	0.72	0.50	0.04	0.56	0.26	0.02	0.36	0.22	0.05	0.20	0.13	0.13
Avail Cap(c_a), veh/h	153	1539	474	596	2810	867	391	548	461	363	520	533
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	18.0	16.1	40.3	19.9	16.6	35.2	30.9	29.4	35.1	30.0	30.1
Incr Delay (d2), s/veh	12.9	1.0	0.1	0.9	0.2	0.0	2.5	0.9	0.2	1.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.7	0.3	8.3	5.4	0.3	4.0	3.1	0.6	2.0	1.6	1.7
LnGrp Delay(d),s/veh	66.4	19.0	16.2	41.2	20.1	16.6	37.8	31.8	29.6	36.3	30.5	30.6
LnGrp LOS	E	B	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		839			1016			286			208	
Approach Delay, s/veh		21.4			25.9			34.6			32.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	43.0	40.0		39.0	14.0	69.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		34.1	39.0	35.1		34.1	10.0	64.1
Max Q Clear Time (g_c+I1), s		16.1	18.6	12.1		13.1	4.8	13.4
Green Ext Time (p_c), s		2.1	0.9	5.3		2.2	0.5	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	44	776	89	281	719	32	140	121	213	72	162
v/c Ratio	0.37	0.53	0.17	0.55	0.27	0.04	0.38	0.21	0.34	0.19	0.15
Control Delay	73.9	9.0	3.2	17.9	4.6	0.1	38.2	33.8	6.1	34.6	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.9	9.0	3.2	17.9	4.6	0.1	38.2	33.8	6.1	34.6	26.4
Queue Length 50th (ft)	37	77	5	206	34	0	88	72	0	43	40
Queue Length 95th (ft)	m74	92	18	306	36	m0	130	107	32	74	60
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	145	1462	511	565	2671	817	370	578	624	374	1076
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.53	0.17	0.50	0.27	0.04	0.38	0.21	0.34	0.19	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	81	773	48	65	845	72	90	58	26	169	69	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	85	814	22	69	899	29	110	71	6	172	70	16
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.82	0.82	0.82	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	2241	690	90	2051	631	533	718	605	537	718	605
Arrive On Green	0.03	0.15	0.15	0.02	0.13	0.13	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1774	5085	1565	1774	5085	1564	1298	1863	1571	1309	1863	1571
Grp Volume(v), veh/h	85	814	22	69	899	29	110	71	6	172	70	16
Grp Sat Flow(s),veh/h/ln	1774	1695	1565	1774	1695	1564	1298	1863	1571	1309	1863	1571
Q Serve(g_s), s	5.3	16.2	1.3	4.3	18.2	1.8	6.6	2.7	0.3	10.8	2.7	0.7
Cycle Q Clear(g_c), s	5.3	16.2	1.3	4.3	18.2	1.8	9.3	2.7	0.3	13.5	2.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2241	690	90	2051	631	533	718	605	537	718	605
V/C Ratio(X)	0.60	0.36	0.03	0.77	0.44	0.05	0.21	0.10	0.01	0.32	0.10	0.03
Avail Cap(c_a), veh/h	303	2241	690	254	2051	631	533	718	605	537	718	605
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	33.6	27.3	54.3	36.8	29.7	24.9	22.0	21.2	26.3	22.0	21.3
Incr Delay (d2), s/veh	3.5	0.4	0.1	11.6	0.6	0.1	0.9	0.3	0.0	1.6	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	2.8	7.7	0.6	2.4	8.7	0.8	2.5	1.5	0.1	4.2	1.4	0.3
LnGrp Delay(d),s/veh	56.2	34.0	27.4	66.0	37.4	29.8	25.8	22.2	21.2	27.9	22.2	21.4
LnGrp LOS	E	C	C	E	D	C	C	C	C	C	C	C
Approach Vol, veh/h		921			997			187			258	
Approach Delay, s/veh		35.9			39.2			24.3			25.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		48.0	9.7	64.3		48.0	24.0	50.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		43.1	16.0	49.1		43.1	19.1	45.099998
Max Q Clear Time (g_c+I1), s		11.3	6.3	18.2		15.5	7.3	20.2
Green Ext Time (p_c), s		1.8	0.1	6.3		1.8	2.5	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	814	51	69	899	77	110	71	32	172	70	48
v/c Ratio	0.34	0.34	0.07	0.47	0.43	0.12	0.24	0.11	0.05	0.37	0.11	0.08
Control Delay	39.6	9.2	1.1	42.8	11.0	3.0	29.6	27.2	0.2	32.4	27.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	9.2	1.1	42.8	11.0	3.0	29.6	27.2	0.2	32.4	27.2	0.3
Queue Length 50th (ft)	70	43	1	37	184	5	61	37	0	100	37	0
Queue Length 95th (ft)	125	179	m4	68	242	26	97	65	0	164	71	1
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	290	2377	733	232	2079	661	460	658	606	460	658	606
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.34	0.07	0.30	0.43	0.12	0.24	0.11	0.05	0.37	0.11	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	880	83	108	952	83	64	20	88	219	35	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	58	917	34	116	1024	49	77	24	29	226	36	4
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.83	0.83	0.83	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1787	549	174	2111	652	618	746	663	612	785	663
Arrive On Green	0.01	0.12	0.12	0.20	0.83	0.83	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1774	5085	1561	1774	5085	1572	1353	1770	1572	1337	1863	1572
Grp Volume(v), veh/h	58	917	34	116	1024	49	77	24	29	226	36	4
Grp Sat Flow(s),veh/h/ln	1774	1695	1561	1774	1695	1572	1353	1770	1572	1337	1863	1572
Q Serve(g_s), s	3.7	19.3	2.2	6.9	6.5	0.6	4.1	0.9	1.2	13.7	1.3	0.2
Cycle Q Clear(g_c), s	3.7	19.3	2.2	6.9	6.5	0.6	5.4	0.9	1.2	14.9	1.3	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	1787	549	174	2111	652	618	746	663	612	785	663
V/C Ratio(X)	0.77	0.51	0.06	0.67	0.49	0.08	0.12	0.03	0.04	0.37	0.05	0.01
Avail Cap(c_a), veh/h	202	1787	549	297	2111	652	618	746	663	612	785	663
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	41.3	33.7	44.1	6.2	5.7	21.0	19.4	19.4	23.8	19.5	19.1
Incr Delay (d2), s/veh	14.4	1.0	0.2	3.7	0.7	0.2	0.4	0.1	0.1	1.7	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	2.1	9.3	1.0	3.5	3.0	0.3	1.6	0.5	0.6	5.3	0.7	0.1
LnGrp Delay(d),s/veh	70.1	42.3	33.9	47.9	6.9	5.9	21.5	19.4	19.6	25.6	19.6	19.2
LnGrp LOS	E	D	C	D	A	A	C	B	B	C	B	B
Approach Vol, veh/h		1009			1189			130			266	
Approach Delay, s/veh		43.6			10.9			20.7			24.6	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		53.0	24.0	45.0		53.0	8.8	60.2
Change Period (Y+Rc), s		4.9	*4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		48.1	*19.1	*40.099998		48.1	13.0	47.1
Max Q Clear Time (g_c+I1), s		7.4	8.9	21.3		16.9	5.7	8.5
Green Ext Time (p_c), s		1.5	2.7	6.0		1.4	0.0	9.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	58	917	86	116	1024	89	77	130	226	36	9
v/c Ratio	0.43	0.55	0.16	0.40	0.47	0.13	0.15	0.10	0.47	0.05	0.01
Control Delay	48.4	33.1	15.9	29.8	8.5	1.3	24.8	6.7	31.4	23.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	33.1	15.9	29.8	8.5	1.3	24.8	6.7	31.4	23.2	0.0
Queue Length 50th (ft)	48	242	36	86	100	1	39	5	131	17	0
Queue Length 95th (ft)	94	289	84	149	128	9	67	22	207	40	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	188	1671	545	290	2196	701	530	1261	485	734	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.55	0.16	0.40	0.47	0.13	0.15	0.10	0.47	0.05	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	187	911	103	127	709	63	187	367	253	177	356	317
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	208	1012	33	144	806	16	215	422	115	181	363	117
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.87	0.87	0.87	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	1949	602	204	1755	542	315	1165	517	245	1065	472
Arrive On Green	0.18	0.77	0.77	0.06	0.35	0.35	0.09	0.33	0.33	0.07	0.30	0.30
Sat Flow, veh/h	3442	5085	1571	3442	5085	1570	3442	3539	1569	3442	3539	1568
Grp Volume(v), veh/h	208	1012	33	144	806	16	215	422	115	181	363	117
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1570	1721	1770	1569	1721	1770	1568
Q Serve(g_s), s	6.4	8.7	0.4	4.7	14.0	0.6	6.9	10.3	6.0	5.8	9.1	6.4
Cycle Q Clear(g_c), s	6.4	8.7	0.4	4.7	14.0	0.6	6.9	10.3	6.0	5.8	9.1	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	1949	602	204	1755	542	315	1165	517	245	1065	472
V/C Ratio(X)	0.67	0.52	0.05	0.70	0.46	0.03	0.68	0.36	0.22	0.74	0.34	0.25
Avail Cap(c_a), veh/h	428	1949	602	334	1755	542	459	1165	517	395	1065	472
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	9.2	4.2	52.3	28.9	14.6	49.9	28.9	27.5	51.6	30.8	29.9
Incr Delay (d2), s/veh	2.1	0.8	0.1	4.4	0.9	0.1	2.6	0.9	1.0	4.4	0.9	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	3.1	4.0	0.3	2.3	6.7	0.3	3.4	5.2	2.7	2.9	4.6	2.9
LnGrp Delay(d),s/veh	47.1	10.0	4.3	56.7	29.7	14.7	52.5	29.8	28.5	56.0	31.7	31.2
LnGrp LOS	D	B	A	E	C	B	D	C	C	E	C	C
Approach Vol, veh/h		1253			966			752			661	
Approach Delay, s/veh		16.0			33.5			36.1			38.3	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	42.2	10.7	57.0	15.3	39.0	23.7	44.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.9000001	4.9
Max Green Setting (Gmax), s	13.0	37.1	11.0	43.1	15.3	34.099998	14.1	39.099998
Max Q Clear Time (g_c+I1), s	7.8	12.3	6.7	10.7	8.9	11.1	8.4	16.0
Green Ext Time (p_c), s	0.2	3.8	0.1	9.0	1.5	2.6	1.8	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	208	1012	114	144	806	72	215	422	291	181	363	323
v/c Ratio	0.49	0.55	0.18	0.52	0.49	0.12	0.48	0.38	0.45	0.57	0.37	0.51
Control Delay	32.4	11.9	1.0	60.6	34.7	0.4	53.1	33.8	11.0	60.0	36.6	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	11.9	1.0	60.6	34.7	0.4	53.1	33.8	11.0	60.0	36.6	9.5
Queue Length 50th (ft)	81	84	1	56	187	0	81	135	38	71	121	25
Queue Length 95th (ft)	123	108	6	88	223	0	118	178	105	108	166	107
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	422	1844	642	309	1629	588	450	1124	641	365	989	632
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.55	0.18	0.47	0.49	0.12	0.48	0.38	0.45	0.50	0.37	0.51

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	233	59	342	95	140	71	471	946	69	163	729	295
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	284	72	0	107	157	0	481	965	32	177	792	203
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	348	247	210	134	380	170	525	1767	790	211	1111	492
Arrive On Green	0.10	0.13	0.00	0.08	0.11	0.00	0.30	0.50	0.50	0.12	0.31	0.31
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1774	3539	1583	1774	3539	1568
Grp Volume(v), veh/h	284	72	0	107	157	0	481	965	32	177	792	203
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1774	1770	1583	1774	1770	1568
Q Serve(g_s), s	8.3	3.6	0.0	6.1	4.3	0.0	26.9	19.3	1.1	10.0	20.3	7.6
Cycle Q Clear(g_c), s	8.3	3.6	0.0	6.1	4.3	0.0	26.9	19.3	1.1	10.0	20.3	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	348	247	210	134	380	170	525	1767	790	211	1111	492
V/C Ratio(X)	0.82	0.29	0.00	0.80	0.41	0.00	0.92	0.55	0.04	0.84	0.71	0.41
Avail Cap(c_a), veh/h	369	418	355	173	759	339	624	1767	790	346	1111	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	40.1	0.0	46.7	42.8	0.0	34.9	17.7	13.1	44.2	31.1	14.6
Incr Delay (d2), s/veh	12.8	0.6	0.0	18.0	0.7	0.0	16.8	0.4	0.0	9.2	3.9	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	4.6	1.9	0.0	3.6	2.1	0.0	15.5	9.5	0.5	5.5	10.5	4.2
LnGrp Delay(d),s/veh	58.0	40.8	0.0	64.7	43.5	0.0	51.7	18.0	13.2	53.5	35.0	17.2
LnGrp LOS	E	D		E	D		D	B	B	D	D	B
Approach Vol, veh/h		356			264			1478			1172	
Approach Delay, s/veh		54.5			52.1			28.9			34.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	56.1	11.7	18.5	35.2	37.1	14.4	15.9
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	20.0	49.2	10.0	23.0	36.3	32.200001	11.0	22.0
Max Q Clear Time (g_c+I1), s	12.0	21.3	8.1	5.6	28.9	22.3	10.3	6.3
Green Ext Time (p_c), s	0.3	9.5	0.0	1.1	1.5	4.1	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	284	72	417	107	157	80	481	965	70	177	792	321
v/c Ratio	0.79	0.31	0.74	0.67	0.41	0.28	0.88	0.58	0.09	0.69	0.73	0.55
Control Delay	64.3	47.0	13.1	69.6	47.4	3.2	53.8	23.2	2.9	58.7	38.9	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	47.0	13.1	69.6	47.4	3.2	53.8	23.2	2.9	58.7	38.9	20.5
Queue Length 50th (ft)	99	47	0	72	54	0	299	236	0	116	256	90
Queue Length 95th (ft)	#166	82	51	#168	86	5	#545	388	19	205	383	209
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	359	408	672	168	741	429	624	1690	803	337	1086	581
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.18	0.62	0.64	0.21	0.19	0.77	0.57	0.09	0.53	0.73	0.55

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	543	22	91	13	8	16	93	995	28	32	782	373
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.97	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	624	25	20	14	9	1	95	1015	27	35	850	231
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	707	526	442	24	168	138	122	1423	38	50	1287	568
Arrive On Green	0.21	0.28	0.28	0.01	0.09	0.09	0.07	0.40	0.40	0.03	0.36	0.36
Sat Flow, veh/h	3442	1863	1567	1774	1863	1531	1774	3521	94	1774	3539	1562
Grp Volume(v), veh/h	624	25	20	14	9	1	95	510	532	35	850	231
Grp Sat Flow(s),veh/h/ln	1721	1863	1567	1774	1863	1531	1774	1770	1845	1774	1770	1562
Q Serve(g_s), s	12.7	0.7	0.7	0.6	0.3	0.0	3.8	17.4	17.4	1.4	14.5	8.0
Cycle Q Clear(g_c), s	12.7	0.7	0.7	0.6	0.3	0.0	3.8	17.4	17.4	1.4	14.5	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	707	526	442	24	168	138	122	715	746	50	1287	568
V/C Ratio(X)	0.88	0.05	0.05	0.58	0.05	0.01	0.78	0.71	0.71	0.71	0.66	0.41
Avail Cap(c_a), veh/h	721	775	652	175	569	467	175	715	746	175	1287	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	18.8	18.8	35.3	30.0	29.8	33.0	18.0	18.0	34.7	19.2	17.1
Incr Delay (d2), s/veh	12.2	0.0	0.0	20.3	0.1	0.0	13.1	6.0	5.7	16.7	2.7	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.4	0.3	0.4	0.2	0.0	2.3	9.7	10.1	0.9	7.6	3.7
LnGrp Delay(d),s/veh	40.0	18.9	18.8	55.6	30.1	29.9	46.1	23.9	23.7	51.4	21.9	19.3
LnGrp LOS	D	B	B	E	C	C	D	C	C	D	C	B
Approach Vol, veh/h		669			24			1137			1116	
Approach Delay, s/veh		38.6			45.0			25.7			22.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	34.0	5.9	25.2	9.9	31.1	19.7	11.4
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	26.2	7.1	30.0	7.1	26.2	15.1	22.0
Max Q Clear Time (g_c+I1), s	3.4	19.4	2.6	2.7	5.8	16.5	14.7	2.3
Green Ext Time (p_c), s	0.0	5.5	0.0	0.2	0.0	7.5	0.1	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	624	25	105	14	9	17	95	1044	35	850	405
v/c Ratio	0.82	0.04	0.18	0.09	0.04	0.05	0.53	0.65	0.21	0.62	0.55
Control Delay	39.9	18.4	2.6	36.5	29.0	0.2	47.2	21.6	37.7	23.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	18.4	2.6	36.5	29.0	0.2	47.2	21.6	37.7	23.2	11.5
Queue Length 50th (ft)	143	7	0	6	4	0	42	160	15	170	48
Queue Length 95th (ft)	#296	26	16	26	16	0	#127	#460	49	#314	171
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	762	822	761	184	603	635	184	1607	184	1364	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.03	0.14	0.08	0.01	0.03	0.52	0.65	0.19	0.62	0.55

Intersection Summary

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

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	33	199	976	55	150	769
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	95	95	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	226	1027	58	161	827

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1802	563	0	0	1095	0
Stage 1	1066	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	71	470	-	-	633	-
Stage 1	292	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	462	-	-	628	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	290	-	-	-	-	-
Stage 2	321	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	41.9	0	2.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	52	462	628	-
HCM Lane V/C Ratio	-	-	0.721	0.489	0.257	-
HCM Control Delay (s)	-	-	174	20	12.7	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	3	2.6	1	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	3	5	32	39	10	12	46	649	119
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	73	73	73	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	7	45	53	14	16	53	755	138

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1027	1536	254	1236	1469	467	478	0	0
Stage 1	526	526	-	941	941	-	-	-	-
Stage 2	501	1010	-	295	528	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	189	115	745	132	126	542	1081	-	-
Stage 1	503	527	-	283	340	-	-	-	-
Stage 2	521	316	-	689	526	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	161	104	733	111	114	533	1072	-	-
Mov Cap-2 Maneuver	279	203	-	207	221	-	-	-	-
Stage 1	474	505	-	267	320	-	-	-	-
Stage 2	456	298	-	611	504	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	12.7	24.3	0.5
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	279	542	207	325	743	-	-
HCM Lane V/C Ratio	0.05	-	-	0.015	0.096	0.258	0.093	0.033	-	-
HCM Control Delay (s)	8.5	-	-	18.1	12.3	28.3	17.2	10	-	-
HCM Lane LOS	A	-	-	C	B	D	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0	0.3	1	0.3	0.1	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	21	395	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	85	85	85
Heavy Vehicles, %	2	2	2
Mvmt Flow	25	465	4

Major/Minor	Major2		
Conflicting Flow All	903	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	749	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	743	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.5
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	81	90	53	80	248	65	828	63	182	625	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	94	4	58	87	27	70	890	60	196	672	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	578	254	315	304	254	88	1471	99	247	1880	28
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.05	0.44	0.44	0.14	0.53	0.53
Sat Flow, veh/h	1256	3539	1554	1273	1863	1554	1774	3364	227	1774	3569	53
Grp Volume(v), veh/h	14	94	4	58	87	27	70	468	482	196	333	349
Grp Sat Flow(s),veh/h/ln	1256	1770	1554	1273	1863	1554	1774	1770	1821	1774	1770	1853
Q Serve(g_s), s	0.5	1.2	0.1	2.2	2.2	0.8	2.1	10.7	10.7	5.7	5.8	5.8
Cycle Q Clear(g_c), s	2.7	1.2	0.1	3.4	2.2	0.8	2.1	10.7	10.7	5.7	5.8	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.03
Lane Grp Cap(c), veh/h	289	578	254	315	304	254	88	774	796	247	932	976
V/C Ratio(X)	0.05	0.16	0.02	0.18	0.29	0.11	0.79	0.61	0.61	0.79	0.36	0.36
Avail Cap(c_a), veh/h	605	1467	644	634	772	644	267	774	796	368	932	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	20.7	19.1	18.6	20.5	19.5	18.9	24.9	11.4	11.4	22.1	7.3	7.3
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.5	0.2	14.5	3.5	3.4	6.9	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.1	0.8	1.2	0.3	1.4	6.0	6.1	3.3	3.1	3.2
LnGrp Delay(d),s/veh	20.7	19.2	18.6	20.8	20.0	19.1	39.4	14.9	14.8	29.0	8.4	8.3
LnGrp LOS	C	B	B	C	B	B	D	B	B	C	A	A
Approach Vol, veh/h		112			172			1020			878	
Approach Delay, s/veh		19.4			20.1			16.6			13.0	
Approach LOS		B			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	11.4	28.1		13.6	6.6	32.9		13.6
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	11.0	23.2		22.0	8.0	26.2		22.0
Max Q Clear Time (g_c+I1), s	7.7	12.7		4.7	4.1	7.8		5.4
Green Ext Time (p_c), s	0.2	6.6		1.2	0.0	9.5		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	94	105	58	87	270	70	958	196	683
v/c Ratio	0.06	0.15	0.30	0.26	0.27	0.55	0.32	0.67	0.63	0.36
Control Delay	19.2	20.0	7.0	22.9	22.1	7.6	29.3	18.3	34.4	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	20.0	7.0	22.9	22.1	7.6	29.3	18.3	34.4	11.0
Queue Length 50th (ft)	4	14	0	18	27	0	21	126	60	71
Queue Length 95th (ft)	15	28	28	43	57	48	65	#276	#171	164
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	500	1368	663	494	720	764	248	1431	342	1899
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.07	0.16	0.12	0.12	0.35	0.28	0.67	0.57	0.36

Intersection Summary

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

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	237	62	30	198	151	63
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	269	70	33	215	170	71

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	279	0	452	289
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	173	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1284	-	551	749
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	840	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1273	-	528	737
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	811	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	634	-	-	1273	-
HCM Lane V/C Ratio	0.379	-	-	0.026	-
HCM Control Delay (s)	14.1	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	67	131	126	0	16	146	124	0	96	175	8
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.91	0.91	0.91	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	136	131	0	18	160	136	0	107	194	9
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	14.3	12.6	13.4
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	0%	100%	0%
Vol Thru, %	0%	96%	0%	51%	82%	37%	0%	74%
Vol Right, %	0%	4%	0%	49%	0%	63%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	183	67	257	89	197	47	138
LT Vol	0	175	0	131	73	73	0	102
Through Vol	0	8	0	126	0	124	0	36
RT Vol	96	0	67	0	16	0	47	0
Lane Flow Rate	107	203	70	268	98	216	52	153
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.221	0.391	0.142	0.481	0.189	0.387	0.111	0.297
Departure Headway (Hd)	7.46	6.919	7.334	6.474	6.974	6.432	7.681	6.982
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	482	521	490	557	515	561	467	515
Service Time	5.193	4.651	5.066	4.205	4.706	4.165	5.418	4.719
HCM Lane V/C Ratio	0.222	0.39	0.143	0.481	0.19	0.385	0.111	0.297
HCM Control Delay	12.3	14	11.3	15.1	11.3	13.2	11.4	12.7
HCM Lane LOS	B	B	B	C	B	B	B	B
HCM 95th-tile Q	0.8	1.8	0.5	2.6	0.7	1.8	0.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	47	102	36
Peak Hour Factor	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	113	40
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	12.4
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	58	26	785	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	63	29	882	93

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1452	1987	404	1556	1940	508	777	0	0
Stage 1	943	943	-	997	997	-	-	-	-
Stage 2	509	1044	-	559	943	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	92	60	596	77	65	510	835	-	-
Stage 1	282	339	-	262	320	-	-	-	-
Stage 2	515	304	-	481	339	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	70	50	586	67	54	502	828	-	-
Mov Cap-2 Maneuver	170	133	-	168	155	-	-	-	-
Stage 1	270	296	-	251	306	-	-	-	-
Stage 2	431	291	-	420	296	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	13.2	0.3
HCM LOS	A	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	828	-	-	-	502	691	-	-
HCM Lane V/C Ratio	0.035	-	-	-	0.126	0.12	-	-
HCM Control Delay (s)	9.5	-	-	0	13.2	10.9	-	-
HCM Lane LOS	A	-	-	A	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.4	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	78	721	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	94	94	94
Heavy Vehicles, %	2	2	2
Mvmt Flow	83	767	0

Major/Minor	Major2		
Conflicting Flow All	985	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	697	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	691	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.1
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	26	758	30	328	995	214	26	340	498	173	189	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	27	798	8	353	1070	179	30	395	292	180	197	3
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	957	423	385	1652	734	39	825	364	209	1165	516
Arrive On Green	0.02	0.27	0.27	0.22	0.47	0.47	0.02	0.23	0.23	0.12	0.33	0.33
Sat Flow, veh/h	1774	3539	1566	1774	3539	1573	1774	3539	1563	1774	3539	1569
Grp Volume(v), veh/h	27	798	8	353	1070	179	30	395	292	180	197	3
Grp Sat Flow(s),veh/h/ln	1774	1770	1566	1774	1770	1573	1774	1770	1563	1774	1770	1569
Q Serve(g_s), s	1.7	23.4	0.4	21.4	25.4	7.5	1.9	10.6	19.4	11.0	4.3	0.1
Cycle Q Clear(g_c), s	1.7	23.4	0.4	21.4	25.4	7.5	1.9	10.6	19.4	11.0	4.3	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	957	423	385	1652	734	39	825	364	209	1165	516
V/C Ratio(X)	0.74	0.83	0.02	0.92	0.65	0.24	0.77	0.48	0.80	0.86	0.17	0.01
Avail Cap(c_a), veh/h	129	1001	443	452	1652	734	129	1130	499	226	1323	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	37.8	29.4	42.1	22.4	17.6	53.5	36.4	39.8	47.6	26.2	24.8
Incr Delay (d2), s/veh	25.6	6.0	0.0	21.5	0.9	0.2	27.2	0.4	6.5	25.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	12.2	0.2	12.8	12.5	3.3	1.2	5.2	9.0	6.8	2.1	0.1
LnGrp Delay(d),s/veh	79.2	43.8	29.4	63.6	23.3	17.8	80.8	36.8	46.3	73.5	26.3	24.8
LnGrp LOS	E	D	C	E	C	B	F	D	D	E	C	C
Approach Vol, veh/h		833			1602			717			380	
Approach Delay, s/veh		44.8			31.6			42.5			48.6	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	30.5	27.9	34.6	6.4	41.1	6.2	56.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	14.0	35.1	28.0	31.1	8.0	41.1	8.0	51.1
Max Q Clear Time (g_c+I1), s	13.0	21.4	23.4	25.4	3.9	6.3	3.7	27.4
Green Ext Time (p_c), s	0.1	4.3	0.5	4.4	0.0	5.6	0.0	14.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	27	798	32	353	1070	230	30	395	579	180	197	9
v/c Ratio	0.26	0.89	0.06	0.89	0.66	0.30	0.28	0.45	0.92	0.85	0.16	0.01
Control Delay	62.4	56.6	0.2	71.0	29.6	12.4	63.2	38.9	39.0	86.4	28.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	56.6	0.2	71.0	29.6	12.4	63.2	38.9	39.0	86.4	28.7	0.0
Queue Length 50th (ft)	21	334	0	282	382	56	24	137	213	147	60	0
Queue Length 95th (ft)	53	#450	0	#457	470	120	54	176	#379	#288	90	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	123	956	528	430	1643	778	123	1079	699	215	1291	637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.83	0.06	0.82	0.65	0.30	0.24	0.37	0.83	0.84	0.15	0.01

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	319	851	15	19	1024	244	37	21	35	297	4	179
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	336	896	15	22	1164	58	40	23	5	349	0	8
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	1637	27	31	1364	417	325	271	59	653	0	287
Arrive On Green	0.21	0.46	0.46	0.03	0.54	0.54	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3561	60	1774	5085	1554	1774	1478	321	3548	0	1558
Grp Volume(v), veh/h	336	445	466	22	1164	58	40	0	28	349	0	8
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1695	1554	1774	0	1800	1774	0	1558
Q Serve(g_s), s	22.2	21.8	21.8	1.5	23.5	2.2	2.3	0.0	1.6	10.7	0.0	0.5
Cycle Q Clear(g_c), s	22.2	21.8	21.8	1.5	23.5	2.2	2.3	0.0	1.6	10.7	0.0	0.5
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	371	813	851	31	1364	417	325	0	330	653	0	287
V/C Ratio(X)	0.91	0.55	0.55	0.72	0.85	0.14	0.12	0.00	0.08	0.53	0.00	0.03
Avail Cap(c_a), veh/h	458	813	851	118	1364	417	325	0	330	653	0	287
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	23.4	23.4	57.7	25.8	20.9	41.0	0.0	40.7	44.3	0.0	40.2
Incr Delay (d2), s/veh	19.0	2.6	2.5	24.5	6.4	0.6	0.8	0.0	0.5	3.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	11.2	11.7	0.9	11.6	1.0	1.2	0.0	0.8	5.5	0.0	0.2
LnGrp Delay(d),s/veh	65.3	26.1	25.9	82.2	32.3	21.5	41.8	0.0	41.2	47.5	0.0	40.4
LnGrp LOS	E	C	C	F	C	C	D		D	D		D
Approach Vol, veh/h		1247			1244			68			357	
Approach Delay, s/veh		36.6			32.6			41.5			47.3	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	60.1		27.0	35.0	37.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	55.2		22.1	31.0	32.2
Max Q Clear Time (g_c+I1), s		4.3	3.5	23.8		12.7	24.2	25.5
Green Ext Time (p_c), s		0.2	0.5	6.1		0.9	0.6	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	336	912	22	1164	277	40	61	176	174	208
v/c Ratio	0.86	0.57	0.23	0.90	0.48	0.11	0.17	0.60	0.59	0.47
Control Delay	68.8	27.5	53.2	20.5	3.1	44.5	22.2	57.3	56.8	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	27.5	53.2	20.5	3.1	44.5	22.2	57.3	56.8	9.7
Queue Length 50th (ft)	259	290	20	40	0	28	16	141	138	0
Queue Length 95th (ft)	#389	358	m45	186	0	62	56	212	209	57
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	435	1593	112	1299	574	355	363	294	296	441
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.57	0.20	0.90	0.48	0.11	0.17	0.60	0.59	0.47

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	1075	18	43	1267	58	57	3	58	88	3	31
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	1108	11	47	1377	39	65	3	8	100	3	4
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2121	941	61	3176	981	402	111	296	398	179	239
Arrive On Green	0.00	1.00	1.00	0.03	0.62	0.62	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1386	446	1190	1382	720	960
Grp Volume(v), veh/h	14	1108	11	47	1377	39	65	0	11	100	0	7
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1386	0	1636	1382	0	1680
Q Serve(g_s), s	0.1	0.0	0.0	3.1	16.3	1.1	4.3	0.0	0.6	6.9	0.0	0.4
Cycle Q Clear(g_c), s	0.1	0.0	0.0	3.1	16.3	1.1	4.7	0.0	0.6	7.5	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.57
Lane Grp Cap(c), veh/h	2	2121	941	61	3176	981	402	0	407	398	0	418
V/C Ratio(X)	7.26	0.52	0.01	0.77	0.43	0.04	0.16	0.00	0.03	0.25	0.00	0.02
Avail Cap(c_a), veh/h	138	2121	941	197	3176	981	402	0	407	398	0	418
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	0.0	0.0	56.1	11.3	8.5	34.9	0.0	33.3	36.1	0.0	33.2
Incr Delay (d2), s/veh	2993.5	0.7	0.0	18.6	0.4	0.1	0.9	0.0	0.1	1.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.2	0.0	1.8	7.6	0.5	1.8	0.0	0.3	2.8	0.0	0.2
LnGrp Delay(d),s/veh	3052.0	0.7	0.0	74.7	11.7	8.5	35.8	0.0	33.4	37.6	0.0	33.2
LnGrp LOS	F	A	A	E	B	A	D		C	D		C
Approach Vol, veh/h		1133			1463			76			107	
Approach Delay, s/veh		38.4			13.7			35.5			37.3	
Approach LOS		D			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		34.0	8.0	84.0		34.0	14.0	78.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		29.1	13.0	70.1		29.1	9.1	73.099998
Max Q Clear Time (g_c+I1), s		6.7	5.1	2.0		9.5	2.1	18.3
Green Ext Time (p_c), s		0.5	0.0	10.2		0.5	1.9	13.7

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	1108	19	47	1377	63	65	69	100	38
v/c Ratio	0.13	0.52	0.02	0.39	0.42	0.06	0.21	0.17	0.33	0.10
Control Delay	41.6	3.7	0.2	52.8	13.4	3.7	41.4	10.8	44.1	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	3.7	0.2	52.8	13.4	3.7	41.4	10.8	44.1	13.9
Queue Length 50th (ft)	11	81	0	31	351	3	43	2	68	2
Queue Length 95th (ft)	m19	119	m0	m50	388	m25	83	39	119	30
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	140	2142	932	182	3289	995	309	409	301	387
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.52	0.02	0.26	0.42	0.06	0.21	0.17	0.33	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	237	1031	257	178	1157	169	235	521	123	308	340	130
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	255	1109	134	184	1193	89	247	548	26	346	382	28
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.97	0.97	0.97	0.95	0.95	0.95	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	2002	618	242	1924	594	311	890	394	416	1025	454
Arrive On Green	0.09	0.39	0.39	0.14	0.76	0.76	0.09	0.25	0.25	0.12	0.29	0.29
Sat Flow, veh/h	3442	5085	1571	3442	5085	1571	3442	3539	1564	3442	3539	1567
Grp Volume(v), veh/h	255	1109	134	184	1193	89	247	548	26	346	382	28
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1571	1721	1770	1564	1721	1770	1567
Q Serve(g_s), s	8.7	20.2	4.9	6.2	12.9	1.3	8.4	16.4	1.5	11.8	10.3	1.5
Cycle Q Clear(g_c), s	8.7	20.2	4.9	6.2	12.9	1.3	8.4	16.4	1.5	11.8	10.3	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	320	2002	618	242	1924	594	311	890	394	416	1025	454
V/C Ratio(X)	0.80	0.55	0.22	0.76	0.62	0.15	0.80	0.62	0.07	0.83	0.37	0.06
Avail Cap(c_a), veh/h	489	2002	618	319	1924	594	460	890	394	521	1025	454
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	28.1	12.8	50.5	10.6	4.2	53.3	39.7	34.1	51.4	33.8	30.7
Incr Delay (d2), s/veh	5.2	1.1	0.8	6.7	1.3	0.5	5.8	3.2	0.3	9.1	1.0	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	4.4	9.7	2.8	3.1	6.0	0.8	4.3	8.4	0.7	6.1	5.2	0.7
LnGrp Delay(d),s/veh	58.4	29.2	13.6	57.1	11.9	4.7	59.1	42.8	34.4	60.5	34.9	31.0
LnGrp LOS	E	C	B	E	B	A	E	D	C	E	C	C
Approach Vol, veh/h		1498			1466			821			756	
Approach Delay, s/veh		32.8			17.2			47.5			46.5	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	35.0	19.6	52.0	14.8	39.6	15.1	56.5
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	18.1	* 30.1	11.4	47.099998	16.0	33.1	17.0	42.1
Max Q Clear Time (g_c+I1), s	13.8	18.4	8.2	22.2	10.4	12.3	10.7	14.9
Green Ext Time (p_c), s	0.7	2.7	0.3	8.7	0.4	3.6	0.4	10.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	255	1109	276	184	1193	174	247	548	129	346	382	146
v/c Ratio	0.66	0.58	0.39	0.56	0.66	0.28	0.66	0.65	0.27	0.67	0.39	0.27
Control Delay	66.4	20.7	3.1	37.5	18.3	4.2	62.1	47.4	7.1	57.6	38.5	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	20.7	3.1	37.5	18.3	4.2	62.1	47.4	7.1	57.6	38.5	7.0
Queue Length 50th (ft)	103	181	25	58	112	3	100	213	0	139	133	0
Queue Length 95th (ft)	141	216	14	98	168	26	143	276	46	189	182	50
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	463	1900	707	326	1808	629	435	845	470	517	989	535
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.58	0.39	0.56	0.66	0.28	0.57	0.65	0.27	0.67	0.39	0.27

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	71	1188	90	264	1210	50	151	178	242	94	94	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	74	1238	32	284	1301	29	157	185	62	115	115	8
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.96	0.96	0.96	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	1941	600	437	2910	898	349	480	403	257	864	60
Arrive On Green	0.11	0.76	0.76	0.49	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5085	1571	1774	5085	1569	1252	1863	1565	1122	3357	231
Grp Volume(v), veh/h	74	1238	32	284	1301	29	157	185	62	115	60	63
Grp Sat Flow(s),veh/h/ln	1774	1695	1571	1774	1695	1569	1252	1863	1565	1122	1770	1819
Q Serve(g_s), s	4.9	13.6	0.6	14.4	0.0	0.0	13.3	9.9	3.7	11.4	3.2	3.2
Cycle Q Clear(g_c), s	4.9	13.6	0.6	14.4	0.0	0.0	16.5	9.9	3.7	21.3	3.2	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	99	1941	600	437	2910	898	349	480	403	257	456	468
V/C Ratio(X)	0.74	0.64	0.05	0.65	0.45	0.03	0.45	0.39	0.15	0.45	0.13	0.13
Avail Cap(c_a), veh/h	176	1941	600	514	2910	898	349	480	403	257	456	468
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)	0.79	0.79	0.79	0.79	0.79	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	10.4	8.9	26.7	0.0	0.0	40.8	37.0	34.7	45.7	34.5	34.5
Incr Delay (d2), s/veh	8.4	1.3	0.1	1.8	0.4	0.1	4.2	2.3	0.8	5.6	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	2.6	6.3	0.3	7.1	0.1	0.0	5.0	5.4	1.7	3.9	1.6	1.7
LnGrp Delay(d),s/veh	61.2	11.7	9.0	28.5	0.4	0.1	45.0	39.3	35.5	51.3	35.1	35.1
LnGrp LOS	E	B	A	C	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1344			1614			404			238	
Approach Delay, s/veh		14.4			5.3			40.9			42.9	
Approach LOS		B			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		36.0	39.0	51.0		36.0	16.0	74.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		31.1	35.0	46.1		31.1	12.0	69.1
Max Q Clear Time (g_c+I1), s		18.5	16.4	15.6		23.3	6.9	2.0
Green Ext Time (p_c), s		2.5	1.0	10.2		1.9	0.5	12.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	74	1238	94	284	1301	54	157	185	252	115	145
v/c Ratio	0.53	0.67	0.15	0.65	0.47	0.06	0.46	0.36	0.41	0.41	0.15
Control Delay	68.5	11.5	1.3	53.2	5.2	0.2	44.8	40.4	6.8	44.6	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	11.5	1.3	53.2	5.2	0.2	44.8	40.4	6.8	44.6	30.2
Queue Length 50th (ft)	64	125	5	246	50	0	110	125	0	79	40
Queue Length 95th (ft)	m106	165	m8	335	59	m1	185	199	67	127	62
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	168	1860	622	491	2788	849	338	520	611	278	970
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.67	0.15	0.58	0.47	0.06	0.46	0.36	0.41	0.41	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	132	1228	123	68	1311	114	146	96	90	152	101	59
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	135	1253	95	72	1380	71	151	99	25	177	117	12
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.97	0.97	0.97	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	2636	813	93	2362	728	394	583	490	404	583	490
Arrive On Green	0.20	1.00	1.00	0.02	0.15	0.15	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	5085	1568	1774	5085	1566	1248	1863	1568	1254	1863	1568
Grp Volume(v), veh/h	135	1253	95	72	1380	71	151	99	25	177	117	12
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1566	1248	1863	1568	1254	1863	1568
Q Serve(g_s), s	8.5	0.0	0.0	4.8	29.9	4.6	12.0	4.6	1.3	14.2	5.5	0.6
Cycle Q Clear(g_c), s	8.5	0.0	0.0	4.8	29.9	4.6	17.4	4.6	1.3	18.7	5.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	2636	813	93	2362	728	394	583	490	404	583	490
V/C Ratio(X)	0.77	0.48	0.12	0.77	0.58	0.10	0.38	0.17	0.05	0.44	0.20	0.02
Avail Cap(c_a), veh/h	286	2636	813	209	2362	728	394	583	490	404	583	490
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0	57.6	39.6	28.8	36.3	29.6	28.5	36.4	29.9	28.2
Incr Delay (d2), s/veh	5.4	0.5	0.2	9.9	0.8	0.2	2.8	0.6	0.2	3.4	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.1	0.1	2.6	14.3	2.1	4.4	2.5	0.6	5.3	3.0	0.3
LnGrp Delay(d),s/veh	51.7	0.5	0.2	67.5	40.4	29.0	39.1	30.2	28.7	39.8	30.7	28.3
LnGrp LOS	D	A	A	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		1483			1523			275			306	
Approach Delay, s/veh		5.1			41.1			34.9			35.9	
Approach LOS		A			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		42.0	10.2	73.8		42.0	24.0	60.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		37.1	14.0	61.1		37.1	19.1	55.099998
Max Q Clear Time (g_c+I1), s		19.4	6.8	2.0		20.7	10.5	31.9
Green Ext Time (p_c), s		2.3	0.1	13.0		2.3	1.4	10.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	135	1253	126	72	1380	120	151	99	93	177	117	69
v/c Ratio	0.48	0.46	0.15	0.50	0.62	0.17	0.43	0.18	0.18	0.48	0.21	0.13
Control Delay	29.3	8.6	2.0	56.6	13.0	3.1	40.4	34.3	7.1	41.7	34.8	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	8.6	2.0	56.6	13.0	3.1	40.4	34.3	7.1	41.7	34.8	3.5
Queue Length 50th (ft)	76	90	5	47	366	14	99	60	0	119	72	0
Queue Length 95th (ft)	m127	101	m7	m69	390	m31	166	106	40	182	116	16
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	280	2696	829	196	2223	705	355	548	519	371	548	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.46	0.15	0.37	0.62	0.17	0.43	0.18	0.18	0.48	0.21	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	112	1327	99	115	1400	120	97	57	100	201	36	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	118	1397	64	122	1489	91	105	62	30	212	38	7
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	2271	699	149	2317	717	507	817	369	482	644	543
Arrive On Green	0.03	0.15	0.15	0.17	0.91	0.91	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1774	5085	1566	1774	5085	1573	1345	2364	1069	1290	1863	1570
Grp Volume(v), veh/h	118	1397	64	122	1489	91	105	45	47	212	38	7
Grp Sat Flow(s),veh/h/ln	1774	1695	1566	1774	1695	1573	1345	1770	1663	1290	1863	1570
Q Serve(g_s), s	7.9	30.6	4.2	7.9	7.5	0.7	6.7	2.0	2.2	15.7	1.6	0.3
Cycle Q Clear(g_c), s	7.9	30.6	4.2	7.9	7.5	0.7	8.3	2.0	2.2	18.0	1.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	146	2271	699	149	2317	717	507	612	575	482	644	543
V/C Ratio(X)	0.81	0.62	0.09	0.82	0.64	0.13	0.21	0.07	0.08	0.44	0.06	0.01
Avail Cap(c_a), veh/h	269	2271	699	255	2317	717	507	612	575	482	644	543
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	41.1	29.8	48.6	3.2	2.9	28.8	26.1	26.2	32.2	26.0	25.6
Incr Delay (d2), s/veh	8.9	1.1	0.2	7.2	0.9	0.2	0.9	0.2	0.3	2.9	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	4.2	14.6	1.9	4.1	3.1	0.3	2.6	1.0	1.1	6.0	0.9	0.2
LnGrp Delay(d),s/veh	65.8	42.2	30.1	55.7	4.1	3.1	29.7	26.3	26.5	35.1	26.1	25.6
LnGrp LOS	E	D	C	E	A	A	C	C	C	D	C	C
Approach Vol, veh/h		1579			1702			197			257	
Approach Delay, s/veh		43.5			7.8			28.2			33.5	
Approach LOS		D			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		46.0	22.0	58.0		46.0	13.8	66.2
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		41.1	17.1	53.099998		41.1	18.0	53.1
Max Q Clear Time (g_c+I1), s		10.3	9.9	32.6		20.0	9.9	9.5
Green Ext Time (p_c), s		1.8	0.4	10.1		1.7	0.2	15.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	118	1397	104	122	1489	128	105	171	212	38	26
v/c Ratio	0.62	0.65	0.15	0.48	0.64	0.17	0.24	0.16	0.55	0.06	0.05
Control Delay	63.1	17.2	4.1	32.5	7.0	1.3	32.9	12.0	41.4	29.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	17.2	4.1	32.5	7.0	1.3	32.9	12.0	41.4	29.7	0.2
Queue Length 50th (ft)	77	279	0	97	136	5	62	18	142	21	0
Queue Length 95th (ft)	128	398	27	m137	169	m12	111	44	226	48	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	252	2142	673	252	2323	738	437	1098	385	607	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.65	0.15	0.48	0.64	0.17	0.24	0.16	0.55	0.06	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	352	1035	186	243	1149	129	341	400	129	161	364	297
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	387	1137	104	261	1235	42	363	426	37	185	418	55
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	481	2047	633	322	1774	548	511	1000	443	254	736	325
Arrive On Green	0.28	0.81	0.81	0.09	0.35	0.35	0.15	0.28	0.28	0.07	0.21	0.21
Sat Flow, veh/h	3442	5085	1572	3442	5085	1570	3442	3539	1567	3442	3539	1560
Grp Volume(v), veh/h	387	1137	104	261	1235	42	363	426	37	185	418	55
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1570	1721	1770	1567	1721	1770	1560
Q Serve(g_s), s	12.6	9.5	1.1	9.0	25.2	2.2	12.1	11.8	1.6	6.4	12.8	3.5
Cycle Q Clear(g_c), s	12.6	9.5	1.1	9.0	25.2	2.2	12.1	11.8	1.6	6.4	12.8	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	2047	633	322	1774	548	511	1000	443	254	736	325
V/C Ratio(X)	0.80	0.56	0.16	0.81	0.70	0.08	0.71	0.43	0.08	0.73	0.57	0.17
Avail Cap(c_a), veh/h	573	2047	633	428	1774	548	570	1000	443	314	736	325
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	8.0	2.8	53.6	33.8	26.3	48.9	35.3	18.7	54.7	42.9	39.2
Incr Delay (d2), s/veh	5.2	0.8	0.4	8.4	2.3	0.3	3.6	1.3	0.4	6.4	3.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	4.3	0.7	4.7	12.2	1.0	6.0	6.0	0.9	3.3	6.6	1.6
LnGrp Delay(d),s/veh	47.1	8.8	3.2	62.1	36.1	26.6	52.5	36.6	19.1	61.1	46.1	40.4
LnGrp LOS	D	A	A	E	D	C	D	D	B	E	D	D
Approach Vol, veh/h		1628			1538			826			658	
Approach Delay, s/veh		17.5			40.2			42.8			49.8	
Approach LOS		B			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	12.9	39.0	15.3	58.8	21.9	30.0	27.1	47.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.9	4.9000001
Max Green Setting (Gmax), s	11.0	34.1	15.0	48.1	20.0	25.1	20.1	42.099998
Max Q Clear Time (g_c+I1), s	8.4	13.8	11.0	11.5	14.1	14.8	14.6	27.2
Green Ext Time (p_c), s	0.6	2.6	0.3	12.3	1.1	2.0	2.3	7.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	387	1137	204	261	1235	139	363	426	137	185	418	341
v/c Ratio	0.68	0.57	0.29	0.70	0.72	0.23	0.68	0.45	0.27	0.65	0.59	0.61
Control Delay	33.9	9.7	1.5	64.3	39.4	6.1	57.6	39.9	8.3	67.0	49.8	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	9.7	1.5	64.3	39.4	6.1	57.6	39.9	8.3	67.0	49.8	12.1
Queue Length 50th (ft)	160	101	3	106	323	2	145	152	5	76	164	20
Queue Length 95th (ft)	218	136	8	152	379	48	198	202	55	111	211	99
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	572	2012	699	408	1720	610	544	957	510	299	704	555
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.57	0.29	0.64	0.72	0.23	0.67	0.45	0.27	0.62	0.59	0.61

Intersection Summary

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	51	38	586	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	55	40	623	88

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1354	1754	369	1359	1709	376	709	0	0
Stage 1	951	951	-	758	758	-	-	-	-
Stage 2	403	803	-	601	951	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	108	84	628	107	90	622	886	-	-
Stage 1	279	336	-	365	413	-	-	-	-
Stage 2	595	394	-	454	336	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	83	68	618	91	73	612	879	-	-
Mov Cap-2 Maneuver	180	153	-	200	169	-	-	-	-
Stage 1	264	287	-	345	391	-	-	-	-
Stage 2	512	373	-	388	287	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	11.5	0.5
HCM LOS	A	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	879	-	-	-	612	869	-	-
HCM Lane V/C Ratio	0.046	-	-	-	0.091	0.139	-	-
HCM Control Delay (s)	9.3	-	-	0	11.5	9.8	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.5	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	116	671	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	96	96	96
Heavy Vehicles, %	2	2	2
Mvmt Flow	121	699	0

Major/Minor	Major2		
Conflicting Flow All	722	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	876	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	869	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	865	27	313	1168	279	45	193	512	230	181	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	37	972	8	337	1256	252	49	210	177	256	201	5
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	1146	508	377	1806	803	63	626	275	183	865	382
Arrive On Green	0.03	0.32	0.32	0.21	0.51	0.51	0.04	0.18	0.18	0.10	0.24	0.24
Sat Flow, veh/h	1774	3539	1569	1774	3539	1574	1774	3539	1556	1774	3539	1564
Grp Volume(v), veh/h	37	972	8	337	1256	252	49	210	177	256	201	5
Grp Sat Flow(s),veh/h/ln	1774	1770	1569	1774	1770	1574	1774	1770	1556	1774	1770	1564
Q Serve(g_s), s	2.0	24.8	0.3	17.9	26.1	9.1	2.7	5.0	10.2	10.0	4.4	0.2
Cycle Q Clear(g_c), s	2.0	24.8	0.3	17.9	26.1	9.1	2.7	5.0	10.2	10.0	4.4	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	1146	508	377	1806	803	63	626	275	183	865	382
V/C Ratio(X)	0.80	0.85	0.02	0.89	0.70	0.31	0.78	0.34	0.64	1.40	0.23	0.01
Avail Cap(c_a), veh/h	146	1164	516	549	1967	875	146	1325	583	183	1398	618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	47.0	30.6	22.3	37.1	18.0	13.8	46.4	34.9	37.1	43.5	29.3	27.8
Incr Delay (d2), s/veh	25.6	6.0	0.0	12.5	1.0	0.2	18.7	0.3	2.5	209.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	13.1	0.1	10.1	13.0	3.9	1.6	2.5	4.6	15.5	2.2	0.1
LnGrp Delay(d),s/veh	72.6	36.5	22.3	49.6	19.0	14.1	65.1	35.2	39.6	252.8	29.5	27.8
LnGrp LOS	E	D	C	D	B	B	E	D	D	F	C	C
Approach Vol, veh/h		1017			1845			436			462	
Approach Delay, s/veh		37.7			23.9			40.4			153.2	
Approach LOS		D			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	14.0	22.0	24.6	36.3	7.4	28.6	6.5	54.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	36.3	30.0	31.9	8.0	38.3	8.0	53.9
Max Q Clear Time (g_c+I1), s	12.0	12.2	19.9	26.8	4.7	6.4	4.0	28.1
Green Ext Time (p_c), s	0.0	3.4	0.7	4.6	0.0	3.5	0.0	18.8

Intersection Summary	
HCM 2010 Ctrl Delay	45.4
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	37	972	30	337	1256	300	49	210	557	256	201	28
v/c Ratio	0.31	0.89	0.05	0.83	0.69	0.36	0.40	0.31	0.87	1.49	0.24	0.06
Control Delay	58.8	47.5	0.2	57.4	24.5	14.3	61.7	37.3	24.5	283.7	34.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.8	47.5	0.2	57.4	24.5	14.3	61.7	37.3	24.5	283.7	34.0	0.2
Queue Length 50th (ft)	24	325	0	210	345	83	32	64	78	~239	60	0
Queue Length 95th (ft)	65	#590	0	#402	566	192	82	101	236	#486	95	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	137	1098	560	516	1876	858	137	1249	823	172	1318	648
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.89	0.05	0.65	0.67	0.35	0.36	0.17	0.68	1.49	0.15	0.04

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	294	1058	17	24	1100	353	19	4	10	311	2	168
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	354	1275	19	25	1158	98	21	4	1	354	0	13
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	384	1625	24	48	1350	413	322	260	65	647	0	284
Arrive On Green	0.22	0.46	0.46	0.05	0.53	0.53	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3569	53	1774	5085	1554	1774	1434	358	3548	0	1557
Grp Volume(v), veh/h	354	632	662	25	1158	98	21	0	5	354	0	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1853	1774	1695	1554	1774	0	1792	1774	0	1557
Q Serve(g_s), s	23.7	36.7	36.7	1.7	23.8	4.1	1.2	0.0	0.3	11.0	0.0	0.8
Cycle Q Clear(g_c), s	23.7	36.7	36.7	1.7	23.8	4.1	1.2	0.0	0.3	11.0	0.0	0.8
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	384	806	843	48	1350	413	322	0	325	647	0	284
V/C Ratio(X)	0.92	0.78	0.78	0.53	0.86	0.24	0.07	0.00	0.02	0.55	0.00	0.05
Avail Cap(c_a), veh/h	454	806	843	117	1350	413	322	0	325	647	0	284
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.5	28.0	28.0	56.6	26.5	21.8	41.1	0.0	40.7	45.0	0.0	40.9
Incr Delay (d2), s/veh	22.2	7.5	7.2	7.8	6.5	1.2	0.4	0.0	0.1	3.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	19.6	20.5	0.9	11.8	1.9	0.6	0.0	0.1	5.7	0.0	0.4
LnGrp Delay(d),s/veh	68.7	35.5	35.2	64.4	32.9	23.0	41.5	0.0	40.8	48.3	0.0	41.2
LnGrp LOS	E	D	D	E	C	C	D		D	D		D
Approach Vol, veh/h		1648			1281			26			367	
Approach Delay, s/veh		42.5			32.8			41.4			48.1	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	60.1		27.0	35.0	37.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	55.2		22.1	31.0	32.2
Max Q Clear Time (g_c+I1), s		3.2	3.7	38.7		13.0	25.7	25.8
Green Ext Time (p_c), s		0.0	0.5	7.7		0.9	0.6	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	39.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	354	1295	25	1158	372	21	15	176	179	191
v/c Ratio	0.89	0.80	0.25	0.89	0.58	0.06	0.05	0.60	0.61	0.45
Control Delay	71.0	34.6	51.9	21.8	4.4	43.9	25.3	57.3	57.7	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.0	34.6	51.9	21.8	4.4	43.9	25.3	57.3	57.7	9.8
Queue Length 50th (ft)	274	483	22	39	0	14	3	141	143	0
Queue Length 95th (ft)	352	508	m48	#246	18	39	23	217	221	61
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	435	1611	112	1299	640	344	324	294	295	427
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.80	0.22	0.89	0.58	0.06	0.05	0.60	0.61	0.45

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	1318	24	65	1361	52	33	3	43	76	3	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	1533	15	70	1463	32	38	3	6	86	3	5
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	2085	925	90	3121	964	394	135	269	393	152	254
Arrive On Green	0.04	1.00	1.00	0.05	0.61	0.61	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3539	1570	1774	5085	1570	1385	551	1102	1384	624	1040
Grp Volume(v), veh/h	33	1533	15	70	1463	32	38	0	9	86	0	8
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1570	1385	0	1652	1384	0	1664
Q Serve(g_s), s	2.2	0.0	0.0	4.6	18.6	1.0	2.6	0.0	0.5	6.0	0.0	0.4
Cycle Q Clear(g_c), s	2.2	0.0	0.0	4.6	18.6	1.0	3.0	0.0	0.5	6.5	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.63
Lane Grp Cap(c), veh/h	33	2085	925	90	3121	964	394	0	404	393	0	407
V/C Ratio(X)	1.01	0.74	0.02	0.78	0.47	0.03	0.10	0.00	0.02	0.22	0.00	0.02
Avail Cap(c_a), veh/h	136	2085	925	194	3121	964	394	0	404	393	0	407
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.4	0.0	0.0	55.9	12.5	9.1	35.3	0.0	34.2	36.7	0.0	34.2
Incr Delay (d2), s/veh	55.4	1.3	0.0	13.4	0.5	0.1	0.5	0.0	0.1	1.3	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	1.6	0.4	0.0	2.6	8.8	0.4	1.0	0.0	0.2	2.4	0.0	0.2
LnGrp Delay(d),s/veh	112.8	1.3	0.0	69.2	13.0	9.1	35.8	0.0	34.3	37.9	0.0	34.3
LnGrp LOS	F	A	A	E	B	A	D		C	D		C
Approach Vol, veh/h		1581			1565			47			94	
Approach Delay, s/veh		3.6			15.4			35.5			37.6	
Approach LOS		A			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		34.0	10.0	82.0		34.0	14.0	78.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		29.1	13.0	70.1		29.1	9.1	73.099998
Max Q Clear Time (g_c+I1), s		5.0	6.6	2.0		8.5	4.2	20.6
Green Ext Time (p_c), s		0.4	0.1	18.4		0.4	0.7	15.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	1533	28	70	1463	56	38	52	86	36
v/c Ratio	0.28	0.73	0.03	0.50	0.46	0.06	0.12	0.13	0.28	0.09
Control Delay	36.3	4.4	0.2	51.7	14.5	3.4	39.8	12.2	42.9	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	4.4	0.2	51.7	14.5	3.4	39.8	12.2	42.9	14.3
Queue Length 50th (ft)	26	152	0	48	383	6	25	2	58	2
Queue Length 95th (ft)	m31	142	m0	m58	420	m13	54	34	105	29
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	140	2109	919	182	3176	963	310	397	306	386
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.73	0.03	0.38	0.46	0.06	0.12	0.13	0.28	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	226	1178	153	203	1405	147	265	313	97	374	267	153
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	195.1	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	263	1370	79	216	1495	68	294	348	17	382	272	40
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.90	0.90	0.90	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	330	1961	606	269	1930	596	355	872	385	445	991	439
Arrive On Green	0.09	0.39	0.39	0.16	0.76	0.76	0.10	0.25	0.25	0.13	0.28	0.28
Sat Flow, veh/h	3605	5085	1571	3442	5085	1571	3442	3539	1564	3442	3539	1566
Grp Volume(v), veh/h	263	1370	79	216	1495	68	294	348	17	382	272	40
Grp Sat Flow(s),veh/h/ln	1802	1695	1571	1721	1695	1571	1721	1770	1564	1721	1770	1566
Q Serve(g_s), s	8.7	27.7	2.8	7.4	21.0	0.9	10.2	10.0	1.0	13.3	7.3	2.3
Cycle Q Clear(g_c), s	8.7	27.7	2.8	7.4	21.0	0.9	10.2	10.0	1.0	13.3	7.3	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	1961	606	269	1930	596	355	872	385	445	991	439
V/C Ratio(X)	0.80	0.70	0.13	0.80	0.77	0.11	0.83	0.40	0.04	0.86	0.27	0.09
Avail Cap(c_a), veh/h	502	1961	606	313	1930	596	451	872	385	510	991	439
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	31.6	12.4	50.6	11.7	4.1	53.7	38.5	35.1	52.1	34.3	32.5
Incr Delay (d2), s/veh	5.1	2.1	0.4	10.3	2.6	0.3	9.9	1.4	0.2	12.4	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	13.3	1.7	3.9	9.8	0.6	5.3	5.1	0.5	7.1	3.7	1.0
LnGrp Delay(d),s/veh	59.5	33.7	12.8	60.9	14.2	4.4	63.6	39.8	35.3	64.5	35.0	32.9
LnGrp LOS	E	C	B	E	B	A	E	D	D	E	C	C
Approach Vol, veh/h		1712			1779			659			694	
Approach Delay, s/veh		36.7			19.5			50.3			51.1	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	35.0	18.3	52.0	16.6	39.1	15.2	55.1
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	18.1	* 30.1	11.4	47.099998	16.0	33.1	17.0	42.1
Max Q Clear Time (g_c+I1), s	15.3	12.0	9.4	29.7	12.2	9.3	10.7	23.0
Green Ext Time (p_c), s	0.5	2.0	0.2	9.0	0.4	3.1	0.5	11.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	263	1370	178	216	1495	156	294	348	108	382	272	156
v/c Ratio	0.65	0.72	0.27	0.66	0.83	0.25	0.73	0.41	0.23	0.74	0.28	0.29
Control Delay	70.0	21.8	4.0	46.6	26.5	5.7	64.7	42.3	4.2	60.7	37.5	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.0	21.8	4.0	46.6	26.5	5.7	64.7	42.3	4.2	60.7	37.5	7.0
Queue Length 50th (ft)	108	189	8	73	180	5	119	126	0	155	93	0
Queue Length 95th (ft)	134	280	m21	118	245	35	169	174	28	210	133	53
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	485	1900	660	326	1811	630	435	845	470	517	962	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.72	0.27	0.66	0.83	0.25	0.68	0.41	0.23	0.74	0.28	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	107	1262	118	314	1463	80	136	132	241	125	130	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	116	1372	63	327	1524	54	148	143	49	136	141	18
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1890	584	473	2832	874	319	467	392	280	792	100
Arrive On Green	0.11	0.49	0.49	0.53	1.00	1.00	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1571	1774	5085	1569	1213	1863	1564	1178	3160	397
Grp Volume(v), veh/h	116	1372	63	327	1524	54	148	143	49	136	78	81
Grp Sat Flow(s),veh/h/ln	1774	1695	1571	1774	1695	1569	1213	1863	1564	1178	1770	1787
Q Serve(g_s), s	7.9	26.4	2.7	16.9	0.0	0.0	13.5	7.7	3.0	13.1	4.3	4.4
Cycle Q Clear(g_c), s	7.9	26.4	2.7	16.9	0.0	0.0	18.0	7.7	3.0	20.9	4.3	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	144	1890	584	473	2832	874	319	467	392	280	444	448
V/C Ratio(X)	0.81	0.73	0.11	0.69	0.54	0.06	0.46	0.31	0.12	0.49	0.18	0.18
Avail Cap(c_a), veh/h	172	1890	584	500	2832	874	319	467	392	280	444	448
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.68	0.68	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	26.4	20.4	25.2	0.0	0.0	43.5	37.7	36.0	46.2	36.4	36.5
Incr Delay (d2), s/veh	14.4	1.6	0.2	2.6	0.5	0.1	4.8	1.7	0.7	5.9	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	12.5	1.2	8.5	0.1	0.0	4.9	4.2	1.4	4.7	2.2	2.3
LnGrp Delay(d),s/veh	68.8	28.0	20.6	27.8	0.5	0.1	48.3	39.4	36.6	52.1	37.3	37.4
LnGrp LOS	E	C	C	C	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1551			1905			340			295	
Approach Delay, s/veh		30.8			5.2			42.9			44.1	
Approach LOS		C			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		36.0	39.0	51.0		36.0	16.0	74.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		31.1	35.0	46.1		31.1	12.0	69.1
Max Q Clear Time (g_c+I1), s		20.0	18.9	28.4		22.9	9.9	2.0
Green Ext Time (p_c), s		2.3	1.2	9.1		2.0	0.3	16.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	116	1372	128	327	1524	83	148	143	262	136	209
v/c Ratio	0.73	0.74	0.21	0.68	0.55	0.10	0.53	0.30	0.45	0.49	0.24
Control Delay	75.0	15.1	2.1	52.9	6.7	0.6	49.4	40.7	7.1	47.7	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.0	15.1	2.1	52.9	6.7	0.6	49.4	40.7	7.1	47.7	27.3
Queue Length 50th (ft)	101	165	7	282	71	0	106	96	0	96	50
Queue Length 95th (ft)	m140	176	m8	378	85	m0	180	157	68	165	84
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	168	1860	622	491	2788	854	277	469	583	277	886
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.74	0.21	0.67	0.55	0.10	0.53	0.30	0.45	0.49	0.24

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	1350	119	85	1528	87	194	76	42	128	79	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	185	1421	96	89	1592	57	237	93	7	138	85	24
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.82	0.82	0.82	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	2631	811	113	2307	711	405	569	479	404	569	479
Arrive On Green	0.24	1.00	1.00	0.04	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	5085	1568	1774	5085	1566	1270	1863	1568	1281	1863	1568
Grp Volume(v), veh/h	185	1421	96	89	1592	57	237	93	7	138	85	24
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1566	1270	1863	1568	1281	1863	1568
Q Serve(g_s), s	12.2	0.0	0.0	6.0	33.5	3.2	20.3	4.4	0.4	10.7	4.0	1.3
Cycle Q Clear(g_c), s	12.2	0.0	0.0	6.0	33.5	3.2	24.3	4.4	0.4	15.2	4.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	2631	811	113	2307	711	405	569	479	404	569	479
V/C Ratio(X)	0.87	0.54	0.12	0.79	0.69	0.08	0.58	0.16	0.01	0.34	0.15	0.05
Avail Cap(c_a), veh/h	279	2631	811	205	2307	711	405	569	479	404	569	479
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	0.70	0.70	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	57.3	34.7	24.2	39.5	30.8	29.4	36.4	30.7	29.7
Incr Delay (d2), s/veh	14.7	0.5	0.2	8.3	1.2	0.2	6.1	0.6	0.1	2.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.1	0.0	3.2	15.9	1.4	7.8	2.4	0.2	4.1	2.2	0.6
LnGrp Delay(d),s/veh	60.0	0.5	0.2	65.7	35.9	24.3	45.6	31.4	29.5	38.7	31.2	29.9
LnGrp LOS	E	A	A	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		1702			1738			337			247	
Approach Delay, s/veh		7.0			37.1			41.3			35.3	
Approach LOS		A			D			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		42.0	11.7	72.3		42.0	24.0	60.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9000001	4.9
Max Green Setting (Gmax), s		37.1	14.0	61.1		37.1	19.1	55.099998
Max Q Clear Time (g_c+I1), s		26.3	8.0	2.0		17.2	14.2	35.5
Green Ext Time (p_c), s		1.9	0.1	16.3		2.3	0.4	11.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1421	125	89	1592	91	237	93	51	138	85	99
v/c Ratio	0.66	0.55	0.16	0.57	0.72	0.13	0.63	0.17	0.10	0.37	0.16	0.19
Control Delay	37.1	11.2	3.9	58.8	16.3	2.2	47.0	34.1	1.1	38.6	33.9	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	11.2	3.9	58.8	16.3	2.2	47.0	34.1	1.1	38.6	33.9	7.1
Queue Length 50th (ft)	119	102	5	57	446	13	167	56	0	89	51	0
Queue Length 95th (ft)	m185	150	m14	m85	515	m16	230	91	0	150	93	41
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	280	2579	792	196	2223	692	379	548	519	376	548	522
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.55	0.16	0.45	0.72	0.13	0.63	0.17	0.10	0.37	0.16	0.19

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	158	1275	116	165	1470	203	163	62	143	254	50	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	168	1356	73	179	1598	158	179	68	41	289	57	18
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.91	0.91	0.91	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	2194	675	204	2251	696	468	731	406	453	622	524
Arrive On Green	0.04	0.14	0.14	0.23	0.89	0.89	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1774	5085	1565	1774	5085	1573	1310	2188	1217	1271	1863	1569
Grp Volume(v), veh/h	168	1356	73	179	1598	158	179	54	55	289	57	18
Grp Sat Flow(s),veh/h/ln	1774	1695	1565	1774	1695	1573	1310	1770	1635	1271	1863	1569
Q Serve(g_s), s	11.6	30.9	5.0	12.0	12.0	1.8	13.4	2.6	2.9	25.0	2.6	1.0
Cycle Q Clear(g_c), s	11.6	30.9	5.0	12.0	12.0	1.8	16.0	2.6	2.9	27.8	2.6	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	198	2194	675	204	2251	696	468	591	546	453	622	524
V/C Ratio(X)	0.85	0.62	0.11	0.88	0.71	0.23	0.38	0.09	0.10	0.64	0.09	0.03
Avail Cap(c_a), veh/h	259	2194	675	246	2251	696	468	591	546	453	622	524
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.3	43.2	32.1	46.5	4.6	4.0	33.6	28.2	28.3	37.8	28.2	27.6
Incr Delay (d2), s/veh	15.8	1.1	0.3	17.1	1.2	0.5	2.4	0.3	0.4	6.7	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	6.6	14.7	2.2	6.8	5.1	0.8	5.1	1.3	1.3	9.6	1.4	0.4
LnGrp Delay(d),s/veh	74.1	44.3	32.4	63.6	5.8	4.5	36.0	28.5	28.6	44.6	28.5	27.7
LnGrp LOS	E	D	C	E	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1597			1935			288			364	
Approach Delay, s/veh		46.9			11.1			33.2			41.2	
Approach LOS		D			B			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		46.0	22.0	58.0		46.0	17.7	62.3
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		41.1	17.1	53.099998		41.1	18.0	53.1
Max Q Clear Time (g_c+I1), s		18.0	14.0	32.9		29.8	13.6	14.0
Green Ext Time (p_c), s		2.6	0.2	9.7		2.1	0.2	17.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	1356	123	179	1598	221	179	225	289	57	76
v/c Ratio	0.76	0.63	0.18	0.71	0.72	0.30	0.42	0.20	0.81	0.09	0.13
Control Delay	64.0	16.3	5.4	41.4	8.4	1.9	36.8	10.4	57.8	30.2	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	16.3	5.4	41.4	8.4	1.9	36.8	10.4	57.8	30.2	4.2
Queue Length 50th (ft)	110	298	11	146	164	18	114	20	215	32	0
Queue Length 95th (ft)	#189	411	36	m208	192	m23	184	50	#350	63	23
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	252	2142	681	252	2232	733	430	1118	357	607	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.63	0.18	0.71	0.72	0.30	0.42	0.20	0.81	0.09	0.13

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Long-Term (Year 2035) No-Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	480	125	735	80	66	168	242	694	31	116	1005	252
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.97	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	522	136	536	87	72	21	263	754	11	122	1058	170
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	618	418	350	111	379	165	294	1592	712	152	1277	566
Arrive On Green	0.18	0.22	0.22	0.06	0.11	0.11	0.17	0.45	0.45	0.09	0.36	0.36
Sat Flow, veh/h	3442	1863	1562	1774	3539	1539	1774	3539	1583	1774	3539	1570
Grp Volume(v), veh/h	522	136	536	87	72	21	263	754	11	122	1058	170
Grp Sat Flow(s),veh/h/ln	1721	1863	1562	1774	1770	1539	1774	1770	1583	1774	1770	1570
Q Serve(g_s), s	14.7	6.1	14.8	4.8	1.9	1.2	14.5	14.9	0.4	6.8	27.3	4.5
Cycle Q Clear(g_c), s	14.7	6.1	14.8	4.8	1.9	1.2	14.5	14.9	0.4	6.8	27.3	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	618	418	350	111	379	165	294	1592	712	152	1277	566
V/C Ratio(X)	0.85	0.33	1.53	0.79	0.19	0.13	0.89	0.47	0.02	0.80	0.83	0.30
Avail Cap(c_a), veh/h	860	746	626	142	817	355	303	1592	712	266	1277	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	32.5	16.9	46.3	40.7	40.5	40.9	19.3	15.3	44.9	29.2	7.7
Incr Delay (d2), s/veh	5.7	0.4	249.8	19.5	0.2	0.3	26.3	0.2	0.0	9.3	6.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	3.2	31.7	3.0	0.9	0.5	9.2	7.3	0.2	3.7	14.3	3.1
LnGrp Delay(d),s/veh	45.4	32.9	266.7	65.8	41.0	40.8	67.1	19.5	15.3	54.2	35.5	9.1
LnGrp LOS	D	C	F	E	D	D	E	B	B	D	D	A
Approach Vol, veh/h		1194			180			1028			1350	
Approach Delay, s/veh		143.3			53.0			31.6			33.9	
Approach LOS		F			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	49.9	10.2	27.3	21.5	41.0	22.0	15.6
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	15.0	39.1	8.0	40.1	17.1	36.099998	25.0	23.1
Max Q Clear Time (g_c+I1), s	8.8	16.9	6.8	16.8	16.5	29.3	16.7	3.9
Green Ext Time (p_c), s	0.1	5.9	0.0	3.3	0.1	4.0	1.3	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	69.0
HCM 2010 LOS	E

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	522	136	799	87	72	183	263	754	34	122	1058	265
v/c Ratio	0.81	0.22	1.05	0.74	0.10	0.39	0.99	0.62	0.05	0.65	0.99	0.48
Control Delay	57.3	29.9	69.1	90.2	39.6	8.5	104.5	35.8	0.2	67.8	68.1	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	29.9	69.1	90.2	39.6	8.5	104.5	35.8	0.2	67.8	68.1	19.4
Queue Length 50th (ft)	200	75	~482	67	24	0	206	256	0	91	430	78
Queue Length 95th (ft)	257	126	#728	#153	45	62	#379	331	0	155	#580	161
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	715	622	761	118	754	472	265	1223	629	221	1065	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.22	1.05	0.74	0.10	0.39	0.99	0.62	0.05	0.55	0.99	0.48

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	325	37	81	52	36	41	99	587	44	73	1131	547
Number	7	4	14	3	8	18	5	2	12	1	6	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		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	353	40	12	57	39	2	108	638	43	76	1178	399
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	347	290	72	184	152	138	1511	102	98	1511	668
Arrive On Green	0.13	0.19	0.19	0.04	0.10	0.10	0.08	0.45	0.45	0.06	0.43	0.43
Sat Flow, veh/h	3442	1863	1558	1774	1863	1535	1774	3363	226	1774	3539	1565
Grp Volume(v), veh/h	353	40	12	57	39	2	108	335	346	76	1178	399
Grp Sat Flow(s),veh/h/ln	1721	1863	1558	1774	1863	1535	1774	1770	1820	1774	1770	1565
Q Serve(g_s), s	7.3	1.3	0.5	2.3	1.4	0.1	4.4	9.4	9.4	3.1	20.9	14.3
Cycle Q Clear(g_c), s	7.3	1.3	0.5	2.3	1.4	0.1	4.4	9.4	9.4	3.1	20.9	14.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	442	347	290	72	184	152	138	795	818	98	1511	668
V/C Ratio(X)	0.80	0.12	0.04	0.79	0.21	0.01	0.78	0.42	0.42	0.78	0.78	0.60
Avail Cap(c_a), veh/h	476	637	533	172	561	462	172	795	818	221	1511	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	30.9	24.7	24.4	34.7	30.3	29.7	33.1	13.7	13.7	34.1	18.0	16.1
Incr Delay (d2), s/veh	8.7	0.1	0.1	16.9	0.6	0.0	16.8	1.6	1.6	12.2	4.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.7	0.2	1.5	0.8	0.0	2.8	4.9	5.1	1.9	11.0	6.8
LnGrp Delay(d),s/veh	39.7	24.9	24.4	51.7	30.9	29.8	49.9	15.3	15.3	46.3	22.0	20.0
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		405			98			789			1653	
Approach Delay, s/veh		37.7			43.0			20.0			22.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	37.7	7.9	18.5	10.6	36.1	14.3	12.1
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	9.1	29.2	7.1	25.0	7.1	31.2	10.1	22.0
Max Q Clear Time (g_c+I1), s	5.1	11.4	4.3	3.3	6.4	22.9	9.3	3.4
Green Ext Time (p_c), s	0.0	12.5	0.0	0.4	0.0	6.7	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	40	88	57	39	45	108	686	76	1178	570
v/c Ratio	0.76	0.11	0.21	0.36	0.17	0.14	0.64	0.44	0.41	0.80	0.71
Control Delay	45.7	26.8	2.3	42.1	31.2	1.0	55.3	18.7	41.1	26.3	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	26.8	2.3	42.1	31.2	1.0	55.3	18.7	41.1	26.3	16.5
Queue Length 50th (ft)	82	17	0	25	17	0	50	120	33	244	103
Queue Length 95th (ft)	#185	41	10	70	43	0	#148	226	85	#483	#341
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	464	624	611	168	549	555	168	1549	215	1479	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.06	0.14	0.34	0.07	0.08	0.64	0.44	0.35	0.80	0.71

Intersection Summary

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

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	71	125	600	18	127	1148
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	136	652	20	134	1208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1544	356	0	0	682	0
Stage 1	672	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	105	640	-	-	907	-
Stage 1	469	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	88	629	-	-	899	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	311	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	61.6	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	88	629	899	-
HCM Lane V/C Ratio	-	-	0.877	0.216	0.149	-
HCM Control Delay (s)	-	-	148.3	12.3	9.7	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	4.7	0.8	0.5	-

Intersection	
Int Delay, s/veh	386.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	138	510	263	63	18	32	26	370	142
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	150	554	286	68	20	35	28	402	154

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1270	1616	408	1429	1542	298	785	0	0
Stage 1	993	993	-	546	546	-	-	-	-
Stage 2	277	623	-	883	996	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	~ 125	~ 103	593	95	114	698	829	-	-
Stage 1	263	~ 322	-	490	516	-	-	-	-
Stage 2	706	~ 476	-	307	320	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 97	~ 87	583	-	97	686	822	-	-
Mov Cap-2 Maneuver	192	~ 183	-	~ -28	192	-	-	-	-
Stage 1	252	~ 286	-	469	494	-	-	-	-
Stage 2	617	~ 456	-	-	284	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 1005.6		0.5
HCM LOS	F	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	822	-	-	192	239	-	356	993	-	-
HCM Lane V/C Ratio	0.034	-	-	0.781	3.516	-	0.153	0.106	-	-
HCM Control Delay (s)	9.5	-	-	69.5	$ 1172.7	-	16.9	9.1	-	-
HCM Lane LOS	A	-	-	F	F	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.3	79.1	-	0.5	0.4	-	-

Notes

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

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	98	716	5
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	2	2	2
Mvmt Flow	105	770	5

Major/Minor	Major2		
Conflicting Flow All	567	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1001	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	993	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.1
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	673	192	145	143	187	58	373	66	289	1094	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	22	732	105	158	155	50	63	405	50	301	1140	14
Adj No. of Lanes	1	2	1	1	1	1	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	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	471	1382	613	231	727	613	81	850	104	334	1469	18
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.05	0.27	0.27	0.19	0.41	0.41
Sat Flow, veh/h	1167	3539	1571	653	1863	1571	1774	3170	389	1774	3580	44
Grp Volume(v), veh/h	22	732	105	158	155	50	63	225	230	301	563	591
Grp Sat Flow(s),veh/h/ln	1167	1770	1571	653	1863	1571	1774	1770	1789	1774	1770	1854
Q Serve(g_s), s	1.1	14.3	3.9	20.8	5.0	1.8	3.2	9.6	9.7	14.9	24.8	24.8
Cycle Q Clear(g_c), s	6.1	14.3	3.9	35.1	5.0	1.8	3.2	9.6	9.7	14.9	24.8	24.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.02
Lane Grp Cap(c), veh/h	471	1382	613	231	727	613	81	474	479	334	726	761
V/C Ratio(X)	0.05	0.53	0.17	0.68	0.21	0.08	0.78	0.47	0.48	0.90	0.78	0.78
Avail Cap(c_a), veh/h	471	1382	613	231	727	613	158	474	479	335	726	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	21.1	17.9	35.0	18.2	17.3	42.5	27.6	27.6	35.7	22.9	22.9
Incr Delay (d2), s/veh	0.0	0.4	0.1	8.0	0.1	0.1	14.6	3.4	3.4	26.1	7.9	7.6
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	0.4	7.0	1.7	4.4	2.6	0.8	1.9	5.1	5.2	9.7	13.7	14.2
LnGrp Delay(d),s/veh	20.3	21.5	18.0	43.0	18.4	17.3	57.1	31.0	31.1	61.8	30.9	30.5
LnGrp LOS	C	C	B	D	B	B	E	C	C	E	C	C
Approach Vol, veh/h		859			363			518			1455	
Approach Delay, s/veh		21.0			28.9			34.2			37.1	
Approach LOS		C			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	20.9	29.0		40.0	8.1	41.8		40.0
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	17.0	24.1		35.1	8.0	33.1		35.1
Max Q Clear Time (g_c+I1), s	16.9	11.7		16.3	5.2	26.8		37.1
Green Ext Time (p_c), s	0.0	7.4		8.0	0.0	4.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.4
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	732	209	158	155	203	63	477	301	1155
v/c Ratio	0.05	0.59	0.33	0.98	0.24	0.30	0.41	0.47	0.88	0.77
Control Delay	17.6	24.1	10.0	96.4	19.8	4.1	47.3	26.8	61.8	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	24.1	10.0	96.4	19.8	4.1	47.3	26.8	61.8	28.1
Queue Length 50th (ft)	8	164	32	82	57	0	35	115	169	318
Queue Length 95th (ft)	23	219	81	#204	101	41	75	163	#319	#445
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	503	1482	717	191	780	765	169	1006	359	1494
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.49	0.29	0.83	0.20	0.27	0.37	0.47	0.84	0.77

Intersection Summary

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

Intersection	
Int Delay, s/veh	9.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	720	227	69	248	219	43
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	766	241	75	270	238	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	776	0	1061	786
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	285	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	840	-	~ 233	391
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	833	-	~ 209	385
Mov Cap-2 Maneuver	-	-	-	-	335	-
Stage 1	-	-	-	-	449	-
Stage 2	-	-	-	-	667	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	51.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	342	-	-	833	-
HCM Lane V/C Ratio	0.833	-	-	0.09	-
HCM Control Delay (s)	51.1	-	-	9.7	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	7.4	-	-	0.3	-

Notes

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

Intersection	
Intersection Delay, s/veh	38.6
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	35	470	261	0	14	122	35	0	122	75	8
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	485	269	0	15	133	38	0	133	82	9
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	61.7	12	13.6
HCM LOS	F	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	19%	0%	100%	0%
Vol Thru, %	0%	90%	0%	64%	81%	64%	0%	67%
Vol Right, %	0%	10%	0%	36%	0%	36%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	83	35	731	75	96	87	221
LT Vol	0	75	0	470	61	61	0	147
Through Vol	0	8	0	261	0	35	0	74
RT Vol	122	0	35	0	14	0	87	0
Lane Flow Rate	133	90	36	754	82	104	95	240
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.303	0.192	0.074	1	0.174	0.212	0.21	0.485
Departure Headway (Hd)	8.23	7.665	7.364	6.599	7.675	7.326	7.996	7.264
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	438	468	486	550	467	489	450	497
Service Time	5.969	5.404	5.121	4.356	5.423	5.075	5.73	4.999
HCM Lane V/C Ratio	0.304	0.192	0.074	1.371	0.176	0.213	0.211	0.483
HCM Control Delay	14.5	12.2	10.7	64.1	12	12	12.9	16.7
HCM Lane LOS	B	B	B	F	B	B	B	C
HCM 95th-tile Q	1.3	0.7	0.2	14.2	0.6	0.8	0.8	2.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	87	147	74
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	160	80
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	15.6
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	19	1	465	33
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	21	1	505	36

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1916	2204	771	1436	2187	291	1512	0	0
Stage 1	1651	1651	-	536	536	-	-	-	-
Stage 2	265	553	-	900	1651	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	41	44	343	94	45	706	438	-	-
Stage 1	103	155	-	496	522	-	-	-	-
Stage 2	717	513	-	300	155	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	37	40	337	87	41	694	434	-	-
Mov Cap-2 Maneuver	87	111	-	197	113	-	-	-	-
Stage 1	102	143	-	491	516	-	-	-	-
Stage 2	688	508	-	277	143	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	10.3	0
HCM LOS	A	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	434	-	-	-	694	1007	-	-
HCM Lane V/C Ratio	0.003	-	-	-	0.03	0.069	-	-
HCM Control Delay (s)	13.3	-	-	0	10.3	8.8	-	-
HCM Lane LOS	B	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.2	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	64	1382	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	2	2	2
Mvmt Flow	70	1502	0

Major/Minor	Major2		
Conflicting Flow All	551	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1015	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1007	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	1363	327	345	1299	68	251	267	534	117	393	28
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	68	1466	167	375	1412	29	270	287	320	127	427	2
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	1354	601	344	1868	831	255	791	349	128	536	235
Arrive On Green	0.05	0.38	0.38	0.19	0.53	0.53	0.14	0.22	0.22	0.07	0.15	0.15
Sat Flow, veh/h	1774	3539	1571	1774	3539	1574	1774	3539	1562	1774	3539	1552
Grp Volume(v), veh/h	68	1466	167	375	1412	29	270	287	320	127	427	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1571	1774	1770	1574	1774	1770	1562	1774	1770	1552
Q Serve(g_s), s	5.3	53.2	10.2	27.0	43.6	1.2	20.0	9.5	27.8	10.0	16.2	0.2
Cycle Q Clear(g_c), s	5.3	53.2	10.2	27.0	43.6	1.2	20.0	9.5	27.8	10.0	16.2	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	1354	601	344	1868	831	255	791	349	128	536	235
V/C Ratio(X)	0.79	1.08	0.28	1.09	0.76	0.03	1.06	0.36	0.92	1.00	0.80	0.01
Avail Cap(c_a), veh/h	140	1354	601	344	1868	831	255	814	359	128	560	246
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	65.4	42.9	29.7	56.0	25.8	15.8	59.5	45.6	52.7	64.5	56.9	50.1
Incr Delay (d2), s/veh	14.4	50.2	0.2	74.4	1.8	0.0	72.6	0.3	27.2	78.3	7.6	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	2.9	35.4	4.5	20.3	21.6	0.5	14.9	4.7	14.6	7.6	8.5	0.1
LnGrp Delay(d),s/veh	79.8	93.1	29.9	130.4	27.6	15.8	132.1	45.9	80.0	142.8	64.5	50.1
LnGrp LOS	E	F	C	F	C	B	F	D	E	F	E	D
Approach Vol, veh/h		1701			1816			877			556	
Approach Delay, s/veh		86.4			48.6			84.9			82.3	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	36.0	31.0	58.1	24.0	26.0	10.8	78.3
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	32.0	27.0	53.2	20.0	22.0	11.0	69.2
Max Q Clear Time (g_c+I1), s	12.0	29.8	29.0	55.2	22.0	18.2	7.3	45.6
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	2.1	0.0	20.7

Intersection Summary	
HCM 2010 Ctrl Delay	71.8
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	68	1466	352	375	1412	74	270	287	574	127	427	30
v/c Ratio	0.56	1.09	0.45	1.10	0.77	0.09	1.07	0.36	0.98	1.01	0.77	0.08
Control Delay	80.3	94.1	6.4	129.6	31.4	1.3	132.3	46.8	59.0	145.5	66.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	94.1	6.4	129.6	31.4	1.3	132.3	46.8	59.0	145.5	66.7	0.5
Queue Length 50th (ft)	61	~789	18	~386	554	0	~271	116	288	~118	198	0
Queue Length 95th (ft)	113	#929	91	#590	655	10	#453	161	#542	#257	260	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	139	1344	782	341	1836	848	252	808	583	126	556	358
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	1.09	0.45	1.10	0.77	0.09	1.07	0.36	0.98	1.01	0.77	0.08

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	1516	40	38	1084	122	21	3	9	119	23	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		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	139	1563	40	41	1178	26	23	3	1	146	0	13
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1656	42	54	1985	610	312	234	78	623	0	273
Arrive On Green	0.11	0.47	0.47	0.06	0.78	0.78	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3525	90	1774	5085	1563	1774	1332	444	3548	0	1556
Grp Volume(v), veh/h	139	783	820	41	1178	26	23	0	4	146	0	13
Grp Sat Flow(s),veh/h/ln	1774	1770	1846	1774	1695	1563	1774	0	1775	1774	0	1556
Q Serve(g_s), s	9.5	52.9	53.3	2.9	11.9	0.5	1.4	0.0	0.2	4.5	0.0	0.9
Cycle Q Clear(g_c), s	9.5	52.9	53.3	2.9	11.9	0.5	1.4	0.0	0.2	4.5	0.0	0.9
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	195	831	867	54	1985	610	312	0	312	623	0	273
V/C Ratio(X)	0.71	0.94	0.95	0.76	0.59	0.04	0.07	0.00	0.01	0.23	0.00	0.05
Avail Cap(c_a), veh/h	254	831	867	113	1985	610	312	0	312	623	0	273
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.1	31.7	31.8	58.7	9.7	8.5	43.3	0.0	42.8	44.6	0.0	43.1
Incr Delay (d2), s/veh	6.4	19.9	19.9	18.9	1.2	0.1	0.5	0.0	0.1	0.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	30.5	31.9	1.7	5.5	0.2	0.7	0.0	0.1	2.3	0.0	0.4
LnGrp Delay(d),s/veh	60.5	51.7	51.7	77.6	11.0	8.6	43.8	0.0	42.9	45.5	0.0	43.4
LnGrp LOS	E	D	D	E	B	A	D		D	D		D
Approach Vol, veh/h		1742			1245			27			159	
Approach Delay, s/veh		52.4			13.1			43.6			45.3	
Approach LOS		D			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		27.0	12.0	64.0		27.0	22.0	54.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.1	8.0	59.1		22.1	18.0	49.1
Max Q Clear Time (g_c+I1), s		3.4	4.9	55.3		6.5	11.5	13.9
Green Ext Time (p_c), s		0.0	0.1	3.0		0.4	0.2	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	139	1604	41	1178	133	23	13	76	77	89
v/c Ratio	0.63	0.99	0.41	0.61	0.20	0.07	0.04	0.27	0.27	0.24
Control Delay	66.9	54.8	58.8	14.7	1.2	46.1	25.9	49.8	49.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	54.8	58.8	14.7	1.2	46.1	25.9	49.8	49.7	3.7
Queue Length 50th (ft)	111	~698	35	86	0	17	2	58	60	0
Queue Length 95th (ft)	182	#881	76	226	5	43	22	110	111	16
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	245	1622	108	1920	651	325	305	285	290	370
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.99	0.38	0.61	0.20	0.07	0.04	0.27	0.27	0.24

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	1464	49	45	1239	35	38	1	36	23	1	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.98		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	5	1574	30	48	1318	23	41	1	6	25	1	1
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	21	2394	1063	62	3521	1088	303	40	243	298	151	151
Arrive On Green	0.02	1.00	1.00	0.03	0.69	0.69	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	3539	1572	1774	5085	1572	1386	228	1366	1380	848	848
Grp Volume(v), veh/h	5	1574	30	48	1318	23	41	0	7	25	0	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1695	1572	1386	0	1594	1380	0	1696
Q Serve(g_s), s	0.3	0.0	0.0	3.3	13.4	0.6	3.1	0.0	0.5	1.9	0.0	0.1
Cycle Q Clear(g_c), s	0.3	0.0	0.0	3.3	13.4	0.6	3.2	0.0	0.5	2.3	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.50
Lane Grp Cap(c), veh/h	21	2394	1063	62	3521	1088	303	0	283	298	0	301
V/C Ratio(X)	0.24	0.66	0.03	0.78	0.37	0.02	0.14	0.00	0.02	0.08	0.00	0.01
Avail Cap(c_a), veh/h	101	2394	1063	143	3521	1088	303	0	283	298	0	301
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.2	0.0	0.0	59.5	7.9	6.0	43.4	0.0	42.2	43.2	0.0	42.1
Incr Delay (d2), s/veh	1.2	0.3	0.0	18.3	0.3	0.0	0.9	0.0	0.2	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	2.0	6.3	0.3	1.3	0.0	0.2	0.8	0.0	0.1
LnGrp Delay(d),s/veh	61.4	0.3	0.0	77.9	8.2	6.0	44.3	0.0	42.4	43.7	0.0	42.1
LnGrp LOS	E	A	A	E	A	A	D		D	D		D
Approach Vol, veh/h		1609			1389			48			27	
Approach Delay, s/veh		0.5			10.6			44.1			43.6	
Approach LOS		A			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		27.0	8.3	94.7		27.0	12.0	91.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		22.1	10.0	84.1		22.1	7.1	86.099998
Max Q Clear Time (g_c+I1), s		5.2	5.3	2.0		4.3	2.3	15.4
Green Ext Time (p_c), s		0.1	0.0	19.8		0.2	3.7	13.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	1574	53	48	1318	37	41	40	25	10
v/c Ratio	0.06	0.66	0.05	0.42	0.35	0.03	0.18	0.14	0.11	0.04
Control Delay	35.8	1.3	0.1	58.0	7.3	1.0	48.5	15.2	47.2	24.8
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	1.5	0.1	58.0	7.3	1.0	48.5	15.2	47.2	24.8
Queue Length 50th (ft)	4	46	0	30	283	3	30	1	18	1
Queue Length 95th (ft)	m6	m23	m0	m58	320	m5	65	34	45	17
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	108	2385	1031	136	3743	1123	233	295	227	274
Starvation Cap Reductn	0	191	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.72	0.05	0.35	0.35	0.03	0.18	0.14	0.11	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	105	1270	159	188	948	112	286	264	86	320	792	193
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	114	1380	61	204	1030	27	311	287	25	348	861	109
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	1806	558	254	1974	610	368	1006	445	456	1122	497
Arrive On Green	0.05	0.36	0.36	0.15	0.78	0.78	0.11	0.28	0.28	0.13	0.32	0.32
Sat Flow, veh/h	3442	5085	1570	3442	5085	1571	3442	3539	1567	3442	3539	1568
Grp Volume(v), veh/h	114	1380	61	204	1030	27	311	287	25	348	861	109
Grp Sat Flow(s),veh/h/ln	1721	1695	1570	1721	1695	1571	1721	1770	1567	1721	1770	1568
Q Serve(g_s), s	4.1	30.5	2.4	7.3	9.7	0.3	11.3	8.0	1.5	12.4	27.9	6.5
Cycle Q Clear(g_c), s	4.1	30.5	2.4	7.3	9.7	0.3	11.3	8.0	1.5	12.4	27.9	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	1806	558	254	1974	610	368	1006	445	456	1122	497
V/C Ratio(X)	0.69	0.76	0.11	0.80	0.52	0.04	0.85	0.29	0.06	0.76	0.77	0.22
Avail Cap(c_a), veh/h	217	1806	558	274	1974	610	434	1006	445	518	1122	497
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	36.2	14.5	53.2	9.8	3.8	55.7	35.4	33.1	53.2	39.1	31.8
Incr Delay (d2), s/veh	6.0	3.1	0.4	14.2	0.9	0.1	12.7	0.7	0.2	5.9	5.0	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	2.1	14.8	1.4	3.9	4.5	0.2	6.0	4.0	0.7	6.3	14.4	2.9
LnGrp Delay(d),s/veh	65.6	39.4	14.9	67.5	10.7	3.9	68.3	36.1	33.3	59.0	44.2	32.8
LnGrp LOS	E	D	B	E	B	A	E	D	C	E	D	C
Approach Vol, veh/h		1555			1261			623			1318	
Approach Delay, s/veh		40.3			19.7			52.1			47.2	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.7	41.0	17.3	50.0	17.6	45.2	10.1	57.2
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	19.1	36.099998	10.4	45.099998	16.0	40.1	8.0	48.1
Max Q Clear Time (g_c+I1), s	14.4	10.0	9.3	32.5	13.3	29.9	6.1	11.7
Green Ext Time (p_c), s	2.4	1.8	0.1	7.4	0.3	5.1	0.0	9.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	114	1380	173	204	1030	122	311	287	93	348	861	210
v/c Ratio	0.55	0.78	0.28	0.70	0.55	0.19	0.78	0.29	0.18	0.66	0.77	0.37
Control Delay	73.8	15.0	2.5	52.8	13.0	1.2	69.7	37.9	2.7	58.5	46.2	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.8	15.0	2.5	52.8	13.0	1.2	69.7	37.9	2.7	58.5	46.2	16.0
Queue Length 50th (ft)	44	230	14	93	239	0	132	100	0	144	348	52
Queue Length 95th (ft)	m71	315	27	#139	240	3	184	141	16	196	430	121
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	211	1764	619	290	1889	648	422	982	522	528	1114	570
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.78	0.28	0.70	0.55	0.19	0.74	0.29	0.18	0.66	0.77	0.37

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	1317	88	298	1035	33	112	117	239	58	117	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	43	1432	21	314	1089	17	122	127	65	63	127	14
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	2490	771	346	3300	1020	270	384	322	231	663	72
Arrive On Green	0.06	0.98	0.98	0.19	0.65	0.65	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	5085	1574	1774	5085	1571	1230	1863	1560	1176	3215	349
Grp Volume(v), veh/h	43	1432	21	314	1089	17	122	127	65	63	69	72
Grp Sat Flow(s),veh/h/ln	1774	1695	1574	1774	1695	1571	1230	1863	1560	1176	1770	1795
Q Serve(g_s), s	3.0	1.7	0.0	21.9	12.1	0.5	11.5	7.3	4.4	6.1	4.1	4.2
Cycle Q Clear(g_c), s	3.0	1.7	0.0	21.9	12.1	0.5	15.7	7.3	4.4	13.4	4.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	51	2490	771	346	3300	1020	270	384	322	231	365	370
V/C Ratio(X)	0.85	0.57	0.03	0.91	0.33	0.02	0.45	0.33	0.20	0.27	0.19	0.19
Avail Cap(c_a), veh/h	100	2490	771	519	3300	1020	270	384	322	231	365	370
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	0.7	0.7	49.8	9.9	7.9	48.0	42.8	41.6	48.5	41.5	41.5
Incr Delay (d2), s/veh	20.2	0.6	0.0	12.9	0.2	0.0	5.4	2.3	1.4	2.9	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.6	0.0	12.0	5.7	0.2	4.3	4.0	2.0	2.2	2.1	2.2
LnGrp Delay(d),s/veh	79.6	1.3	0.7	62.7	10.2	7.9	53.4	45.1	43.0	51.4	42.6	42.7
LnGrp LOS	E	A	A	E	B	A	D	D	D	D	D	D
Approach Vol, veh/h		1496			1420			314			204	
Approach Delay, s/veh		3.5			21.7			47.9			45.3	
Approach LOS		A			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		31.0	28.7	70.3		31.0	12.0	87.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	9.9000001
Max Green Setting (Gmax), s		26.1	37.0	53.1		26.1	7.1	82.099998
Max Q Clear Time (g_c+I1), s		17.7	23.9	3.7		15.4	5.0	14.1
Green Ext Time (p_c), s		1.6	0.7	14.5		1.8	0.0	9.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	1432	96	314	1089	35	122	127	260	63	159
v/c Ratio	0.43	0.59	0.13	0.82	0.33	0.04	0.51	0.34	0.50	0.29	0.23
Control Delay	48.1	6.5	2.1	37.2	8.4	1.5	55.0	47.6	8.8	48.3	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	6.5	2.1	37.2	8.4	1.5	55.0	47.6	8.8	48.3	38.6
Queue Length 50th (ft)	38	103	6	174	168	1	92	93	0	45	51
Queue Length 95th (ft)	m54	309	m12	255	202	m2	160	155	75	91	84
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	108	2418	759	503	3305	999	238	374	516	220	702
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.59	0.13	0.62	0.33	0.04	0.51	0.34	0.50	0.29	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	81	1503	54	82	1269	75	100	60	33	216	86	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	85	1582	25	87	1350	42	109	65	11	220	88	17
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	2511	774	112	2561	789	429	604	508	450	604	508
Arrive On Green	0.04	0.33	0.33	0.13	1.00	1.00	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	5085	1567	1774	5085	1568	1275	1863	1569	1308	1863	1569
Grp Volume(v), veh/h	85	1582	25	87	1350	42	109	65	11	220	88	17
Grp Sat Flow(s),veh/h/ln	1774	1695	1567	1774	1695	1568	1275	1863	1569	1308	1863	1569
Q Serve(g_s), s	5.9	32.5	1.3	5.9	0.0	0.0	8.2	3.0	0.6	17.5	4.1	0.9
Cycle Q Clear(g_c), s	5.9	32.5	1.3	5.9	0.0	0.0	12.4	3.0	0.6	20.5	4.1	0.9
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	108	2511	774	112	2561	789	429	604	508	450	604	508
V/C Ratio(X)	0.79	0.63	0.03	0.77	0.53	0.05	0.25	0.11	0.02	0.49	0.15	0.03
Avail Cap(c_a), veh/h	201	2511	774	202	2561	789	429	604	508	450	604	508
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	31.8	21.4	53.2	0.0	0.0	34.1	29.3	28.5	36.5	29.7	28.6
Incr Delay (d2), s/veh	9.7	1.0	0.1	7.9	0.6	0.1	1.4	0.4	0.1	3.8	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	15.5	0.6	3.1	0.1	0.0	3.0	1.6	0.3	6.8	2.2	0.4
LnGrp Delay(d),s/veh	68.3	32.8	21.5	61.0	0.6	0.1	35.5	29.7	28.5	40.2	30.2	28.7
LnGrp LOS	E	C	C	E	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1692			1479			185			325	
Approach Delay, s/veh		34.4			4.1			33.0			36.9	
Approach LOS		C			A			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		45.0	19.0	66.0		45.0	11.5	73.5
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		40.1	14.1	61.099998		40.1	14.0	62.1
Max Q Clear Time (g_c+I1), s		14.4	7.9	34.5		22.5	7.9	2.0
Green Ext Time (p_c), s		2.1	0.6	13.2		1.9	0.1	14.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	1582	57	87	1350	80	109	65	36	220	88	51
v/c Ratio	0.56	0.66	0.08	0.43	0.53	0.10	0.28	0.11	0.07	0.54	0.15	0.09
Control Delay	80.0	11.5	0.5	29.4	8.3	0.9	36.4	33.0	0.2	43.4	33.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	11.5	0.5	29.4	8.3	0.9	36.4	33.0	0.2	43.4	33.6	1.3
Queue Length 50th (ft)	54	345	0	55	63	1	69	39	0	154	54	0
Queue Length 95th (ft)	m103	77	m1	m85	85	m6	121	76	0	240	96	6
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	190	2389	738	204	2540	781	395	574	537	404	574	537
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.66	0.08	0.43	0.53	0.10	0.28	0.11	0.07	0.54	0.15	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	1326	104	136	1427	104	80	25	111	275	44	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	73	1381	64	146	1534	79	87	27	42	284	45	4
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	2044	628	180	2288	708	555	683	606	544	719	606
Arrive On Green	0.11	0.80	0.80	0.20	0.90	0.90	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1774	5085	1564	1774	5085	1573	1342	1770	1571	1318	1863	1571
Grp Volume(v), veh/h	73	1381	64	146	1534	79	87	27	42	284	45	4
Grp Sat Flow(s),veh/h/ln	1774	1695	1564	1774	1695	1573	1342	1770	1571	1318	1863	1571
Q Serve(g_s), s	5.0	14.5	1.1	9.8	9.5	0.7	5.4	1.2	2.1	21.6	1.9	0.2
Cycle Q Clear(g_c), s	5.0	14.5	1.1	9.8	9.5	0.7	7.3	1.2	2.1	23.7	1.9	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	2044	628	180	2288	708	555	683	606	544	719	606
V/C Ratio(X)	0.77	0.68	0.10	0.81	0.67	0.11	0.16	0.04	0.07	0.52	0.06	0.01
Avail Cap(c_a), veh/h	171	2044	628	256	2288	708	555	683	606	544	719	606
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)	0.73	0.73	0.73	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	8.7	7.4	48.5	3.9	3.5	26.4	23.9	24.2	31.6	24.1	23.6
Incr Delay (d2), s/veh	9.2	1.3	0.2	9.5	1.2	0.2	0.6	0.1	0.2	3.6	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	2.7	6.6	0.5	5.2	4.1	0.3	2.1	0.6	0.9	8.4	1.0	0.1
LnGrp Delay(d),s/veh	64.1	10.1	7.7	58.0	5.1	3.7	27.0	24.0	24.4	35.2	24.3	23.6
LnGrp LOS	E	B	A	E	A	A	C	C	C	D	C	C
Approach Vol, veh/h		1518			1759			156			333	
Approach Delay, s/veh		12.6			9.4			25.8			33.6	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		53.0	22.0	55.0		53.0	16.0	61.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		48.1	18.0	50.1		48.1	12.0	56.1
Max Q Clear Time (g_c+I1), s		9.3	11.8	16.5		25.7	7.0	11.5
Green Ext Time (p_c), s		1.9	0.3	12.4		1.8	0.3	15.9

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	73	1381	108	146	1534	112	87	148	284	45	11
v/c Ratio	0.54	0.70	0.17	0.69	0.68	0.16	0.17	0.12	0.61	0.06	0.02
Control Delay	57.4	7.3	0.4	58.3	11.3	1.5	28.1	7.2	39.2	26.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	7.3	0.4	58.3	11.3	1.5	28.1	7.2	39.2	26.5	0.1
Queue Length 50th (ft)	65	68	0	128	187	1	48	7	192	24	0
Queue Length 95th (ft)	m103	73	m0	m201	207	m11	90	31	300	52	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	163	1959	636	245	2257	712	518	1251	469	724	653
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.70	0.17	0.60	0.68	0.16	0.17	0.12	0.61	0.06	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	375	1393	154	144	868	94	237	544	292	199	387	393
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	408	1514	76	157	943	27	258	591	162	203	395	207
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	530	2184	675	212	1679	518	319	1027	455	260	941	416
Arrive On Green	0.31	0.86	0.86	0.06	0.33	0.33	0.09	0.29	0.29	0.08	0.27	0.27
Sat Flow, veh/h	3442	5085	1572	3442	5085	1569	3442	3539	1567	3442	3539	1565
Grp Volume(v), veh/h	408	1514	76	157	943	27	258	591	162	203	395	207
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1569	1721	1770	1567	1721	1770	1565
Q Serve(g_s), s	13.4	12.9	0.7	5.6	19.0	1.1	9.2	17.7	10.2	7.2	11.5	13.9
Cycle Q Clear(g_c), s	13.4	12.9	0.7	5.6	19.0	1.1	9.2	17.7	10.2	7.2	11.5	13.9
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	530	2184	675	212	1679	518	319	1027	455	260	941	416
V/C Ratio(X)	0.77	0.69	0.11	0.74	0.56	0.05	0.81	0.58	0.36	0.78	0.42	0.50
Avail Cap(c_a), veh/h	611	2184	675	304	1679	518	390	1027	455	359	941	416
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	5.9	2.5	57.4	34.3	17.3	55.4	37.7	35.0	56.5	37.8	38.7
Incr Delay (d2), s/veh	3.5	1.2	0.2	5.5	1.4	0.2	10.1	2.3	2.2	7.2	1.4	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	6.6	5.8	0.4	2.8	9.1	0.6	4.8	9.0	4.7	3.7	5.8	6.5
LnGrp Delay(d),s/veh	44.6	7.1	2.7	62.9	35.7	17.5	65.5	40.0	37.2	63.8	39.1	42.9
LnGrp LOS	D	A	A	E	D	B	E	D	D	E	D	D
Approach Vol, veh/h		1998			1127			1011			805	
Approach Delay, s/veh		14.6			39.0			46.1			46.3	
Approach LOS		B			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	13.4	41.0	11.7	63.9	16.4	38.0	29.6	46.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.9000001	4.9
Max Green Setting (Gmax), s	13.0	35.1	11.0	53.1	14.33.099998	33.1	22.41.099998	41.1
Max Q Clear Time (g_c+I1), s	9.2	19.7	7.6	14.9	11.2	15.9	15.4	21.0
Green Ext Time (p_c), s	0.2	4.7	0.1	17.7	0.4	2.9	3.8	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	408	1514	167	157	943	102	258	591	317	203	395	401
v/c Ratio	0.67	0.72	0.24	0.58	0.59	0.18	0.65	0.60	0.57	0.64	0.44	0.62
Control Delay	37.4	19.3	3.7	66.8	39.1	3.0	63.5	44.0	21.5	66.6	42.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	19.3	3.7	66.8	39.1	3.0	63.5	44.0	21.5	66.6	42.5	11.7
Queue Length 50th (ft)	137	180	2	66	244	0	108	230	97	85	147	36
Queue Length 95th (ft)	203	246	m22	104	291	22	155	294	198	127	197	141
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	607	2107	709	290	1607	576	396	983	557	343	901	649
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.72	0.24	0.54	0.59	0.18	0.65	0.60	0.57	0.59	0.44	0.62

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	322	73	576	131	175	120	723	1027	107	230	778	388
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99
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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	350	79	114	142	190	7	738	1048	58	250	846	271
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	229	190	149	361	157	724	1811	810	277	897	397
Arrive On Green	0.11	0.12	0.12	0.08	0.10	0.10	0.41	0.51	0.51	0.16	0.25	0.25
Sat Flow, veh/h	3442	1863	1545	1774	3539	1537	1774	3539	1583	1774	3539	1565
Grp Volume(v), veh/h	350	79	114	142	190	7	738	1048	58	250	846	271
Grp Sat Flow(s),veh/h/ln	1721	1863	1545	1774	1770	1537	1774	1770	1583	1774	1770	1565
Q Serve(g_s), s	14.4	5.5	4.5	11.3	7.3	0.6	58.1	29.3	2.6	19.7	33.4	17.3
Cycle Q Clear(g_c), s	14.4	5.5	4.5	11.3	7.3	0.6	58.1	29.3	2.6	19.7	33.4	17.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	229	190	149	361	157	724	1811	810	277	897	397
V/C Ratio(X)	0.97	0.34	0.60	0.95	0.53	0.04	1.02	0.58	0.07	0.90	0.94	0.68
Avail Cap(c_a), veh/h	362	328	272	149	549	238	724	1811	810	399	897	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	57.2	12.3	64.9	60.7	57.7	42.2	24.1	17.6	59.0	52.1	28.8
Incr Delay (d2), s/veh	38.1	0.9	3.0	58.5	1.2	0.1	38.5	0.5	0.0	17.9	19.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	2.9	4.1	8.0	3.6	0.3	36.1	14.4	1.2	11.0	18.7	8.8
LnGrp Delay(d),s/veh	101.5	58.1	15.3	123.4	61.9	57.8	80.7	24.6	17.7	76.9	71.2	38.0
LnGrp LOS	F	E	B	F	E	E	F	C	B	E	E	D
Approach Vol, veh/h		543			339			1844			1367	
Approach Delay, s/veh		77.1			87.6			46.8			65.7	
Approach LOS		E			F			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	26.2	77.8	16.0	22.4	63.0	41.0	19.0	19.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	32.0	63.1	12.0	25.1	58.3	36.099998	15.0	22.1
Max Q Clear Time (g_c+I1), s	21.7	31.3	13.3	7.5	60.1	35.4	16.4	9.3
Green Ext Time (p_c), s	0.5	12.8	0.0	1.7	0.0	0.5	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	60.5
HCM 2010 LOS	E

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	350	79	626	142	190	130	738	1048	109	250	846	422
v/c Ratio	0.97	0.33	0.84	0.96	0.50	0.46	1.01	0.60	0.13	0.82	0.95	0.85
Control Delay	104.9	60.2	15.0	129.2	64.7	14.4	78.4	30.0	9.9	78.1	72.7	49.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.9	60.2	15.0	129.2	64.7	14.4	78.4	30.0	9.9	78.1	72.7	49.6
Queue Length 50th (ft)	167	68	0	132	89	0	666	350	17	222	400	249
Queue Length 95th (ft)	#292	121	137	#290	131	62	#1040	522	61	326	#583	#466
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	359	326	793	148	545	346	729	1737	813	395	892	498
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.24	0.79	0.96	0.35	0.38	1.01	0.60	0.13	0.63	0.95	0.85

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	621	25	153	16	11	19	116	1200	32	108	958	404
Number	7	4	14	3	8	18	5	2	12	1	6	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		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	675	27	40	17	12	0	118	1224	31	117	1041	277
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	728	530	445	28	164	140	147	1369	35	147	1373	607
Arrive On Green	0.21	0.28	0.28	0.02	0.09	0.00	0.08	0.39	0.39	0.08	0.39	0.39
Sat Flow, veh/h	3442	1863	1567	1774	1863	1583	1774	3526	89	1774	3539	1563
Grp Volume(v), veh/h	675	27	40	17	12	0	118	614	641	117	1041	277
Grp Sat Flow(s),veh/h/ln	1721	1863	1567	1774	1863	1583	1774	1770	1846	1774	1770	1563
Q Serve(g_s), s	16.5	0.9	1.6	0.8	0.5	0.0	5.6	27.8	27.8	5.5	21.8	11.3
Cycle Q Clear(g_c), s	16.5	0.9	1.6	0.8	0.5	0.0	5.6	27.8	27.8	5.5	21.8	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	728	530	445	28	164	140	147	687	717	147	1373	607
V/C Ratio(X)	0.93	0.05	0.09	0.62	0.07	0.00	0.80	0.89	0.89	0.80	0.76	0.46
Avail Cap(c_a), veh/h	728	718	604	147	479	407	147	687	717	147	1373	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	22.2	22.5	41.9	35.8	0.0	38.5	24.5	24.5	38.5	22.7	19.5
Incr Delay (d2), s/veh	18.0	0.0	0.1	20.3	0.2	0.0	26.3	16.4	15.9	25.6	4.0	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	9.6	0.5	0.7	0.6	0.3	0.0	3.8	16.6	17.2	3.7	11.3	5.3
LnGrp Delay(d),s/veh	51.1	22.3	22.6	62.2	36.0	0.0	64.8	40.9	40.4	64.1	26.7	21.9
LnGrp LOS	D	C	C	E	D		E	D	D	E	C	C
Approach Vol, veh/h		742			29			1373			1435	
Approach Delay, s/veh		48.5			51.3			42.7			28.8	
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	12.0	38.1	6.2	29.2	12.0	38.1	23.0	12.5
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	33.2	7.1	33.0	7.1	33.2	18.1	22.0
Max Q Clear Time (g_c+I1), s	7.5	29.8	2.8	3.6	7.6	23.8	18.5	2.5
Green Ext Time (p_c), s	0.0	3.1	0.0	0.3	0.0	8.1	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	38.4
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	675	27	166	17	12	21	118	1257	117	1041	439
v/c Ratio	0.89	0.05	0.28	0.13	0.06	0.07	0.77	0.88	0.76	0.73	0.59
Control Delay	48.7	20.8	5.2	42.2	34.3	0.4	72.7	33.3	71.9	26.4	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	20.8	5.2	42.2	34.3	0.4	72.7	33.3	71.9	26.4	14.7
Queue Length 50th (ft)	180	9	0	9	6	0	62	319	62	241	85
Queue Length 95th (ft)	#362	31	44	32	21	0	#187	#607	#186	#446	235
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	759	751	721	153	500	546	153	1430	153	1435	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.04	0.23	0.11	0.02	0.04	0.77	0.88	0.76	0.73	0.59

Intersection Summary

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

Intersection	
Int Delay, s/veh	11.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	36	199	1198	61	156	1037
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	95	95	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	216	1261	64	168	1115

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2196	683	0	0	1335	0
Stage 1	1303	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 38	392	-	-	513	-
Stage 1	218	-	-	-	-	-
Stage 2	360	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 25	385	-	-	509	-
Mov Cap-2 Maneuver	~ 25	-	-	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	239	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	116.6	0	2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	25	385	509	-
HCM Lane V/C Ratio	-	-	1.565	0.562	0.33	-
HCM Control Delay (s)	-	-	$ 619.1	25.7	15.5	-
HCM Lane LOS	-	-	F	D	C	-
HCM 95th %tile Q(veh)	-	-	4.8	3.3	1.4	-

Notes

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

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	17	33	76	117	397	86	233	774	126
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	36	83	127	432	93	253	841	137

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1826	2168	289	1847	2124	509	548	0	0
Stage 1	673	673	-	1426	1426	-	-	-	-
Stage 2	1153	1495	-	421	698	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	48	46	708	~ 46	~ 49	509	1018	-	-
Stage 1	411	452	-	142	~ 199	-	-	-	-
Stage 2	210	185	-	581	440	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	~ 30	696	-	~ 32	501	1010	-	-
Mov Cap-2 Maneuver	-	~ 30	-	-	~ 32	-	-	-	-
Stage 1	305	399	-	~ 106	~ 148	-	-	-	-
Stage 2	-	138	-	412	~ 389	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s			2
HCM LOS	-	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	-	90	-	38	689	-	-
HCM Lane V/C Ratio	0.251	-	-	-	1.316	-	13.816	0.109	-	-
HCM Control Delay (s)	9.8	-	-	-	285.8	-	$ 5967.2	10.9	-	-
HCM Lane LOS	A	-	-	-	F	-	F	B	-	-
HCM 95th %tile Q(veh)	1	-	-	-	8.7	-	64	0.4	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	69	448	47
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	2	2	2
Mvmt Flow	75	487	51

Major/Minor	Major2		
Conflicting Flow All	988	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	695	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	689	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.3
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	189	94	93	533	439	166	1074	130	287	932	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	16	205	26	101	579	264	178	1155	126	309	1002	28
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	1101	488	378	579	488	209	1226	133	302	1522	43
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.12	0.38	0.38	0.17	0.43	0.43
Sat Flow, veh/h	650	3539	1568	1138	1863	1568	1774	3217	350	1774	3515	98
Grp Volume(v), veh/h	16	205	26	101	579	264	178	634	647	309	504	526
Grp Sat Flow(s),veh/h/ln	650	1770	1568	1138	1863	1568	1774	1770	1798	1774	1770	1844
Q Serve(g_s), s	0.0	4.2	1.2	7.1	31.1	13.9	9.8	34.6	34.8	17.0	22.6	22.6
Cycle Q Clear(g_c), s	31.1	4.2	1.2	11.4	31.1	13.9	9.8	34.6	34.8	17.0	22.6	22.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	72	1101	488	378	579	488	209	674	685	302	766	798
V/C Ratio(X)	0.22	0.19	0.05	0.27	1.00	0.54	0.85	0.94	0.94	1.02	0.66	0.66
Avail Cap(c_a), veh/h	72	1101	488	378	579	488	231	674	685	302	766	798
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	50.0	25.2	24.1	29.3	34.4	28.5	43.2	29.9	29.9	41.5	22.5	22.5
Incr Delay (d2), s/veh	1.5	0.1	0.0	0.4	37.2	1.2	23.3	22.8	23.1	58.3	4.4	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	0.5	2.1	0.5	2.3	21.9	6.2	6.1	21.0	21.6	13.2	12.0	12.5
LnGrp Delay(d),s/veh	51.5	25.3	24.2	29.7	71.7	29.8	66.5	52.7	53.1	99.8	26.9	26.7
LnGrp LOS	D	C	C	C	E	C	E	D	D	F	C	C
Approach Vol, veh/h		247			944			1459			1339	
Approach Delay, s/veh		26.9			55.5			54.5			43.6	
Approach LOS		C			E			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	21.0	43.0		36.0	15.8	48.2		36.0
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	17.0	38.1		31.1	13.0	42.1		31.1
Max Q Clear Time (g_c+I1), s	19.0	36.8		33.1	11.8	24.6		33.1
Green Ext Time (p_c), s	0.0	1.2		0.0	0.1	13.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	205	102	101	579	477	178	1295	309	1033
v/c Ratio	0.22	0.19	0.19	0.28	1.00	0.70	0.81	0.97	1.03	0.69
Control Delay	34.5	25.8	6.1	28.7	73.2	17.8	69.9	49.8	102.1	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	25.8	6.1	28.7	73.2	17.8	69.9	49.8	102.1	26.3
Queue Length 50th (ft)	8	50	0	48	367	101	111	416	~212	276
Queue Length 95th (ft)	28	78	37	93	#593	225	#219	#573	#378	351
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	74	1100	550	357	579	679	230	1332	300	1501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.19	0.19	0.28	1.00	0.70	0.77	0.97	1.03	0.69

Intersection Summary

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

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

Intersection	
Int Delay, s/veh	17.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	469	136	38	783	290	79
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	510	148	41	851	315	86

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	520	0	1028	530
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	508	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1046	-	~ 244	548
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	570	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1037	-	~ 230	539
Mov Cap-2 Maneuver	-	-	-	-	363	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	543	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	86.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	390	-	-	1037	-
HCM Lane V/C Ratio	1.028	-	-	0.04	-
HCM Control Delay (s)	86.3	-	-	8.6	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	13	-	-	0.1	-

Notes

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

Intersection	
Intersection Delay, s/veh	49.5
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	84	341	192	0	20	488	156	0	282	216	10
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	88	355	200	0	22	530	170	0	307	235	11
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	66.5	56.4	34.2
HCM LOS	F	F	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	8%	0%	100%	0%
Vol Thru, %	0%	96%	0%	64%	92%	61%	0%	74%
Vol Right, %	0%	4%	0%	36%	0%	39%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	282	226	84	533	264	400	59	171
LT Vol	0	216	0	341	244	244	0	126
Through Vol	0	10	0	192	0	156	0	45
RT Vol	282	0	84	0	20	0	59	0
Lane Flow Rate	307	246	88	555	287	435	64	186
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.805	0.609	0.234	1	0.709	1	0.182	0.498
Departure Headway (Hd)	9.56	9.03	9.638	8.854	8.892	8.58	10.326	9.641
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	380	403	376	416	407	426	350	375
Service Time	7.26	6.73	7.292	6.538	6.6	6.288	8.026	7.344
HCM Lane V/C Ratio	0.808	0.61	0.234	1.334	0.705	1.021	0.183	0.496
HCM Control Delay	41.8	24.8	15.2	74.6	30.5	73.5	15.3	21.5
HCM Lane LOS	E	C	C	F	D	F	C	C
HCM 95th-tile Q	7	3.9	0.9	12.4	5.4	12.5	0.7	2.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	59	126	45
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	64	137	49
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	19.9
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	73	33	1140	104
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	79	36	1239	113

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2027	2760	574	2149	2703	696	1117	0	0
Stage 1	1326	1326	-	1377	1377	-	-	-	-
Stage 2	701	1434	-	772	1326	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	34	19	462	27	21	384	621	-	-
Stage 1	164	223	-	153	211	-	-	-	-
Stage 2	395	198	-	358	223	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	21	14	454	21	15	378	616	-	-
Mov Cap-2 Maneuver	86	56	-	91	81	-	-	-	-
Stage 1	153	175	-	143	197	-	-	-	-
Stage 2	291	185	-	281	175	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	17	0.3
HCM LOS	A	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	616	-	-	-	378	497	-	-
HCM Lane V/C Ratio	0.058	-	-	-	0.21	0.21	-	-
HCM Control Delay (s)	11.2	-	-	0	17	14.2	-	-
HCM Lane LOS	B	-	-	A	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8	0.8	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	98	1041	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	94	94	94
Heavy Vehicles, %	2	2	2
Mvmt Flow	104	1107	0

Major/Minor	Major2		
Conflicting Flow All	1362	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	501	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	497	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.2
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	1744	134	408	1971	134	75	526	626	155	408	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	65	1836	60	439	2119	96	82	572	469	161	425	3
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1324	587	308	1773	789	102	923	408	130	979	433
Arrive On Green	0.05	0.37	0.37	0.17	0.50	0.50	0.06	0.26	0.26	0.07	0.28	0.28
Sat Flow, veh/h	1774	3539	1571	1774	3539	1574	1774	3539	1565	1774	3539	1566
Grp Volume(v), veh/h	65	1836	60	439	2119	96	82	572	469	161	425	3
Grp Sat Flow(s),veh/h/ln	1774	1770	1571	1774	1770	1574	1774	1770	1565	1774	1770	1566
Q Serve(g_s), s	5.4	56.1	3.7	26.0	75.2	4.9	6.9	21.4	39.1	11.0	14.8	0.2
Cycle Q Clear(g_c), s	5.4	56.1	3.7	26.0	75.2	4.9	6.9	21.4	39.1	11.0	14.8	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	1324	587	308	1773	789	102	923	408	130	979	433
V/C Ratio(X)	0.79	1.39	0.10	1.43	1.20	0.12	0.81	0.62	1.15	1.24	0.43	0.01
Avail Cap(c_a), veh/h	95	1324	587	308	1773	789	154	923	408	130	979	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	70.8	47.0	30.6	62.0	37.4	19.9	69.9	48.9	55.4	69.5	44.6	39.3
Incr Delay (d2), s/veh	31.6	178.9	0.1	210.3	93.6	0.1	16.5	1.3	92.1	156.2	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	3.4	60.3	1.6	30.7	59.7	2.1	3.8	10.7	27.3	11.0	7.3	0.1
LnGrp Delay(d),s/veh	102.4	225.9	30.6	272.3	131.0	20.0	86.3	50.2	147.5	225.7	44.9	39.3
LnGrp LOS	F	F	C	F	F	B	F	D	F	F	D	D
Approach Vol, veh/h		1961			2654			1123			589	
Approach Delay, s/veh		215.8			150.4			93.5			94.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	44.0	30.0	61.0	12.6	46.4	10.9	80.1
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	11.0	39.1	26.0	56.1	13.0	37.1	8.0	74.1
Max Q Clear Time (g_c+I1), s	13.0	41.1	28.0	58.1	8.9	16.8	7.4	77.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	8.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	155.3
HCM 2010 LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	65	1836	141	439	2119	144	82	572	680	161	425	18
v/c Ratio	0.71	1.39	0.22	1.43	1.21	0.18	0.62	0.62	1.21	1.25	0.46	0.04
Control Delay	106.6	215.7	11.2	256.2	134.3	10.9	87.1	52.4	141.8	214.0	49.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.6	215.7	11.2	256.2	134.3	10.9	87.1	52.4	141.8	214.0	49.2	0.2
Queue Length 50th (ft)	64	~1253	25	~579	~1328	37	79	261	~643	~195	187	0
Queue Length 95th (ft)	#142	#1389	75	#798	#1459	79	138	328	#892	#349	244	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	94	1323	636	306	1752	795	153	922	562	129	916	472
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	1.39	0.22	1.43	1.21	0.18	0.54	0.62	1.21	1.25	0.46	0.04

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	335	1659	16	20	1903	253	41	26	41	305	8	212
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	353	1746	16	22	2068	158	45	28	6	338	0	23
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	1779	16	90	1900	584	279	233	50	558	0	244
Arrive On Green	0.18	0.50	0.50	0.07	0.50	0.50	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1774	3593	33	1774	5085	1562	1774	1482	318	3548	0	1553
Grp Volume(v), veh/h	353	859	903	22	2068	158	45	0	34	338	0	23
Grp Sat Flow(s),veh/h/ln	1774	1770	1857	1774	1695	1562	1774	0	1799	1774	0	1553
Q Serve(g_s), s	25.0	66.7	67.0	1.6	52.3	8.2	3.1	0.0	2.3	12.4	0.0	1.8
Cycle Q Clear(g_c), s	25.0	66.7	67.0	1.6	52.3	8.2	3.1	0.0	2.3	12.4	0.0	1.8
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	317	876	919	90	1900	584	279	0	283	558	0	244
V/C Ratio(X)	1.11	0.98	0.98	0.24	1.09	0.27	0.16	0.00	0.12	0.61	0.00	0.09
Avail Cap(c_a), veh/h	317	876	919	90	1900	584	279	0	283	558	0	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	0.75	0.75	0.75	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.5	34.7	34.8	62.7	35.2	24.1	51.0	0.0	50.7	55.0	0.0	50.5
Incr Delay (d2), s/veh	85.0	26.1	25.8	1.1	47.3	0.9	1.2	0.0	0.9	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	19.7	38.8	40.7	0.8	32.7	3.7	1.6	0.0	1.2	6.5	0.0	0.8
LnGrp Delay(d),s/veh	142.5	60.7	60.6	63.8	82.5	25.0	52.3	0.0	51.6	59.8	0.0	51.2
LnGrp LOS	F	E	E	E	F	C	D		D	E		D
Approach Vol, veh/h		2115			2248			79			361	
Approach Delay, s/veh		74.3			78.3			52.0			59.3	
Approach LOS		E			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	74.2		26.9	29.0	57.2
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	7.1	69.300003		22.0	25.0	52.3
Max Q Clear Time (g_c+I1), s		5.1	3.6	69.0		14.4	27.0	54.3
Green Ext Time (p_c), s		0.2	3.1	0.3		0.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.7
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	1763	22	2068	275	45	73	169	172	230
v/c Ratio	1.12	0.94	0.24	1.09	0.42	0.16	0.24	0.64	0.65	0.53
Control Delay	137.3	42.9	52.4	74.4	8.9	52.9	25.7	67.4	67.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	137.3	42.9	52.4	74.4	8.9	52.9	25.7	67.4	67.8	11.0
Queue Length 50th (ft)	~368	~845	19	~773	96	36	22	153	156	0
Queue Length 95th (ft)	#569	#1023	m32	#867	158	75	70	238	244	77
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	316	1870	101	1899	656	278	298	264	265	435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	0.94	0.22	1.09	0.42	0.16	0.24	0.64	0.65	0.53

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	1960	23	54	2080	73	72	4	73	111	4	39
Number	7	4	14	3	8	18	5	2	12	1	6	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	0.98		0.98	0.98		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	19	2021	14	59	2261	55	78	4	13	121	4	7
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	2441	1084	76	3508	1084	275	64	207	269	101	176
Arrive On Green	0.07	1.00	1.00	0.04	0.69	0.69	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1774	3539	1572	1774	5085	1572	1374	381	1237	1367	602	1053
Grp Volume(v), veh/h	19	2021	14	59	2261	55	78	0	17	121	0	11
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1695	1572	1374	0	1618	1367	0	1654
Q Serve(g_s), s	1.4	0.0	0.0	4.5	34.2	1.6	7.0	0.0	1.2	11.3	0.0	0.8
Cycle Q Clear(g_c), s	1.4	0.0	0.0	4.5	34.2	1.6	7.7	0.0	1.2	12.5	0.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.76	1.00		0.64
Lane Grp Cap(c), veh/h	64	2441	1084	76	3508	1084	275	0	271	269	0	277
V/C Ratio(X)	0.30	0.83	0.01	0.78	0.64	0.05	0.28	0.00	0.06	0.45	0.00	0.04
Avail Cap(c_a), veh/h	91	2441	1084	103	3508	1084	275	0	271	269	0	277
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.28	0.28	0.28	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.3	0.0	0.0	65.4	11.9	6.9	51.3	0.0	48.3	53.5	0.0	48.1
Incr Delay (d2), s/veh	0.7	1.0	0.0	22.9	0.9	0.1	2.6	0.0	0.4	5.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	2.7	16.2	0.7	2.8	0.0	0.6	4.7	0.0	0.4
LnGrp Delay(d),s/veh	63.0	1.0	0.0	88.2	12.9	7.0	53.9	0.0	48.7	58.9	0.0	48.4
LnGrp LOS	E	A	A	F	B	A	D		D	E		D
Approach Vol, veh/h		2054			2375			95			132	
Approach Delay, s/veh		1.5			14.6			53.0			58.0	
Approach LOS		A			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		28.0	9.9	102.1		28.0	12.0	100.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		23.1	8.0	95.1		23.1	7.1	95.099998
Max Q Clear Time (g_c+I1), s		9.7	6.5	2.0		14.5	3.4	36.2
Green Ext Time (p_c), s		0.6	0.0	35.9		0.5	3.3	33.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	19	2021	24	59	2261	79	78	83	121	46
v/c Ratio	0.21	0.82	0.02	0.61	0.62	0.07	0.36	0.26	0.59	0.16
Control Delay	45.4	4.3	0.0	102.8	1.2	0.1	57.2	13.5	67.0	17.3
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	4.6	0.0	102.8	1.2	0.1	57.2	13.5	67.0	17.3
Queue Length 50th (ft)	16	12	0	52	18	0	64	3	103	3
Queue Length 95th (ft)	m19	m17	m0	m64	36	m0	118	51	175	41
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	101	2464	1060	101	3628	1087	219	321	205	292
Starvation Cap Reductn	0	111	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.86	0.02	0.58	0.62	0.07	0.36	0.26	0.59	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	354	1515	338	306	1740	263	520	637	161	385	444	203
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	381	1629	236	315	1794	183	547	671	60	418	483	44
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.97	0.97	0.97	0.95	0.95	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	428	2061	637	358	1991	615	599	779	344	447	645	284
Arrive On Green	0.12	0.41	0.41	0.21	0.78	0.78	0.17	0.22	0.22	0.13	0.18	0.18
Sat Flow, veh/h	3442	5085	1572	3442	5085	1571	3442	3539	1562	3442	3539	1557
Grp Volume(v), veh/h	381	1629	236	315	1794	183	547	671	60	418	483	44
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1571	1721	1770	1562	1721	1770	1557
Q Serve(g_s), s	15.2	39.1	8.8	12.4	36.2	3.1	21.8	25.4	4.3	16.8	18.0	3.3
Cycle Q Clear(g_c), s	15.2	39.1	8.8	12.4	36.2	3.1	21.8	25.4	4.3	16.8	18.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	2061	637	358	1991	615	599	779	344	447	645	284
V/C Ratio(X)	0.89	0.79	0.37	0.88	0.90	0.30	0.91	0.86	0.17	0.94	0.75	0.15
Avail Cap(c_a), veh/h	444	2061	637	373	1991	615	642	779	344	447	645	284
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.53	0.53	0.53	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	36.3	10.4	54.4	13.1	4.4	56.5	52.3	44.1	60.1	54.0	48.0
Incr Delay (d2), s/veh	19.2	3.2	1.7	12.0	4.0	0.6	16.9	12.0	1.1	27.1	7.8	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	8.4	18.9	5.6	6.5	16.8	1.6	11.7	13.8	2.0	9.7	9.5	1.5
LnGrp Delay(d),s/veh	79.3	39.5	12.1	66.3	17.1	5.0	73.4	64.3	45.2	87.2	61.7	49.1
LnGrp LOS	E	D	B	E	B	A	E	E	D	F	E	D
Approach Vol, veh/h		2246			2292			1278			945	
Approach Delay, s/veh		43.3			22.9			67.3			72.4	
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	23.0	35.6	20.0	61.4	28.3	30.3	21.3	60.1
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	18.1	30.700001	15.1	* 56.5	26.0	23.7	18.0	54.5
Max Q Clear Time (g_c+I1), s	18.8	27.4	14.4	41.1	23.8	20.0	17.2	38.2
Green Ext Time (p_c), s	0.0	1.4	0.1	10.3	0.5	1.7	0.1	12.2

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	381	1629	363	315	1794	271	547	671	169	418	483	221
v/c Ratio	0.88	0.79	0.50	0.80	0.90	0.40	0.89	0.86	0.39	0.90	0.78	0.53
Control Delay	67.4	29.2	10.9	73.2	48.2	25.9	73.5	65.2	17.5	82.3	64.8	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	29.2	10.9	73.2	48.2	25.9	73.5	65.2	17.5	82.3	64.8	16.5
Queue Length 50th (ft)	169	493	115	137	373	95	251	312	35	195	225	30
Queue Length 95th (ft)	m#239	547	m183	m#184	479	m140	#340	#407	103	#289	290	113
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	441	2052	725	392	1991	670	637	776	431	465	622	420
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.79	0.50	0.80	0.90	0.40	0.86	0.86	0.39	0.90	0.78	0.53

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	1841	118	292	2089	100	173	258	357	132	164	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	94	1918	61	314	2246	81	180	269	85	143	178	21
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.96	0.96	0.96	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	2200	680	334	2859	882	320	506	425	204	866	101
Arrive On Green	0.09	0.58	0.58	0.38	1.00	1.00	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1774	5085	1572	1774	5085	1569	1171	1863	1566	1021	3191	371
Grp Volume(v), veh/h	94	1918	61	314	2246	81	180	269	85	143	98	101
Grp Sat Flow(s),veh/h/ln	1774	1695	1572	1774	1695	1569	1171	1863	1566	1021	1770	1792
Q Serve(g_s), s	7.1	43.9	2.4	23.3	0.0	0.0	19.2	16.8	5.7	18.9	5.8	6.0
Cycle Q Clear(g_c), s	7.1	43.9	2.4	23.3	0.0	0.0	25.1	16.8	5.7	35.7	5.8	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	116	2200	680	334	2859	882	320	506	425	204	481	487
V/C Ratio(X)	0.81	0.87	0.09	0.94	0.79	0.09	0.56	0.53	0.20	0.70	0.20	0.21
Avail Cap(c_a), veh/h	169	2200	680	378	2859	882	320	506	425	204	481	487
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.39	0.39	0.39	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	25.8	17.0	41.8	0.0	0.0	48.1	42.4	38.3	57.6	38.4	38.4
Incr Delay (d2), s/veh	9.7	2.8	0.1	15.4	0.9	0.1	7.0	4.0	1.1	18.1	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	3.8	20.9	1.0	12.7	0.2	0.0	6.8	9.2	2.6	6.4	3.0	3.1
LnGrp Delay(d),s/veh	71.3	28.6	17.1	57.2	0.9	0.1	55.1	46.3	39.4	75.7	39.3	39.4
LnGrp LOS	E	C	B	E	A	A	E	D	D	E	D	D
Approach Vol, veh/h		2073			2641			534			342	
Approach Delay, s/veh		30.2			7.6			48.2			54.5	
Approach LOS		C			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		42.0	34.0	64.0		42.0	12.9	85.1
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		37.1	29.1	*59.099998		37.1	13.0	76.1
Max Q Clear Time (g_c+I1), s		27.1	25.3	45.9		37.7	9.1	2.0
Green Ext Time (p_c), s		3.3	0.4	10.0		0.0	0.1	41.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	94	1918	123	314	2246	108	180	269	372	143	213
v/c Ratio	0.65	0.89	0.18	0.83	0.80	0.13	0.63	0.55	0.55	0.76	0.23
Control Delay	94.7	14.4	2.7	38.7	4.1	0.4	56.8	49.1	7.1	74.1	37.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.7	14.4	2.7	38.7	4.1	0.4	56.8	49.1	7.1	74.1	37.9
Queue Length 50th (ft)	81	162	1	261	72	0	145	212	0	121	74
Queue Length 95th (ft)	m104	282	m4	m299	83	m1	234	306	83	#237	110
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	164	2146	678	379	2820	854	285	493	680	187	921
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.89	0.18	0.83	0.80	0.13	0.63	0.55	0.55	0.76	0.23

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	2019	126	90	2249	189	188	119	113	221	109	74
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	180	2060	103	95	2367	153	194	123	31	240	118	19
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.97	0.97	0.97	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	2773	856	164	2662	821	315	488	410	308	488	410
Arrive On Green	0.23	1.00	1.00	0.18	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5085	1569	1774	5085	1568	1239	1863	1565	1220	1863	1565
Grp Volume(v), veh/h	180	2060	103	95	2367	153	194	123	31	240	118	19
Grp Sat Flow(s),veh/h/ln	1774	1695	1569	1774	1695	1568	1239	1863	1565	1220	1863	1565
Q Serve(g_s), s	13.5	0.0	0.0	6.7	0.0	0.0	20.1	7.2	2.1	26.6	6.9	1.2
Cycle Q Clear(g_c), s	13.5	0.0	0.0	6.7	0.0	0.0	27.0	7.2	2.1	33.8	6.9	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	2773	856	164	2662	821	315	488	410	308	488	410
V/C Ratio(X)	0.89	0.74	0.12	0.58	0.89	0.19	0.62	0.25	0.08	0.78	0.24	0.05
Avail Cap(c_a), veh/h	232	2773	856	193	2662	821	315	488	410	308	488	410
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)	0.44	0.44	0.44	0.45	0.45	0.45	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	0.0	53.7	0.0	0.0	50.7	40.1	38.2	53.5	40.0	37.9
Incr Delay (d2), s/veh	15.6	0.8	0.1	1.5	2.3	0.2	8.7	1.2	0.4	17.4	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.2	0.0	3.3	0.6	0.1	7.7	3.9	0.9	10.5	3.7	0.6
LnGrp Delay(d),s/veh	67.9	0.8	0.1	55.2	2.3	0.2	59.4	41.4	38.6	70.9	41.2	38.2
LnGrp LOS	E	A	A	E	A	A	E	D	D	E	D	D
Approach Vol, veh/h		2343			2615			348			377	
Approach Delay, s/veh		5.9			4.1			51.2			60.0	
Approach LOS		A			A			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		41.0	19.0	80.0		41.0	22.0	77.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		36.1	15.0	75.1		36.1	18.0	72.1
Max Q Clear Time (g_c+I1), s		29.0	8.7	2.0		35.8	15.5	2.0
Green Ext Time (p_c), s		1.9	0.4	31.5		0.1	0.2	40.9

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	180	2060	129	95	2367	199	194	123	116	240	118	80
v/c Ratio	0.84	0.76	0.16	0.54	0.90	0.24	0.63	0.25	0.24	0.78	0.24	0.17
Control Delay	58.7	10.9	4.4	53.0	12.0	1.8	56.0	42.6	8.0	66.9	42.5	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	10.9	4.4	53.0	12.0	1.8	56.0	42.6	8.0	66.9	42.5	9.0
Queue Length 50th (ft)	174	182	5	87	112	1	158	90	0	206	86	0
Queue Length 95th (ft)	m206	200	m14	m110	158	m10	249	147	49	#346	142	42
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	227	2727	827	189	2618	813	310	494	491	306	494	465
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.76	0.16	0.50	0.90	0.24	0.63	0.25	0.24	0.78	0.24	0.17

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	141	1974	124	145	2077	151	122	72	126	253	45	31
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	148	2078	95	154	2210	128	133	78	37	266	47	10
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	2496	769	177	2545	788	431	721	321	403	565	476
Arrive On Green	0.10	0.49	0.49	0.13	0.67	0.67	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	5085	1567	1774	5085	1574	1330	2376	1057	1263	1863	1568
Grp Volume(v), veh/h	148	2078	95	154	2210	128	133	57	58	266	47	10
Grp Sat Flow(s),veh/h/ln	1774	1695	1567	1774	1695	1574	1330	1770	1664	1263	1863	1568
Q Serve(g_s), s	11.4	48.8	4.6	11.8	47.8	4.2	11.0	3.2	3.5	26.7	2.5	0.6
Cycle Q Clear(g_c), s	11.4	48.8	4.6	11.8	47.8	4.2	13.5	3.2	3.5	30.2	2.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	172	2496	769	177	2545	788	431	537	505	403	565	476
V/C Ratio(X)	0.86	0.83	0.12	0.87	0.87	0.16	0.31	0.11	0.12	0.66	0.08	0.02
Avail Cap(c_a), veh/h	192	2496	769	193	2545	788	431	537	505	403	565	476
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	0.36	0.36	0.36	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.8	30.4	19.1	59.3	19.6	12.3	39.4	34.8	34.9	45.8	34.5	33.9
Incr Delay (d2), s/veh	19.4	2.1	0.2	13.7	1.7	0.2	1.8	0.4	0.5	8.2	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	6.5	23.2	2.0	6.5	22.3	1.9	4.3	1.6	1.7	10.2	1.3	0.3
LnGrp Delay(d),s/veh	81.2	32.5	19.3	73.0	21.2	12.5	41.2	35.2	35.3	54.0	34.8	34.0
LnGrp LOS	F	C	B	E	C	B	D	D	D	D	C	C
Approach Vol, veh/h		2321			2492			248			323	
Approach Delay, s/veh		35.1			24.0			38.4			50.6	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		47.0	20.0	73.0		47.0	17.4	75.6
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		42.1	15.1	68.099998		42.1	15.0	69.1
Max Q Clear Time (g_c+I1), s		15.5	13.8	50.8		32.2	13.4	49.8
Green Ext Time (p_c), s		2.3	0.1	13.3		1.7	0.1	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	2078	131	154	2210	161	133	215	266	47	33
v/c Ratio	0.82	0.84	0.17	0.76	0.87	0.20	0.33	0.21	0.81	0.08	0.06
Control Delay	82.9	43.7	20.6	48.3	8.6	1.2	41.0	14.0	65.7	35.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.9	43.7	20.6	48.3	8.6	1.2	41.0	14.0	65.7	35.8	0.2
Queue Length 50th (ft)	142	560	62	141	238	3	94	26	225	31	0
Queue Length 95th (ft)	m#196	615	m91	m153	261	m6	156	58	#374	63	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	189	2473	759	202	2534	793	399	1039	327	560	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.84	0.17	0.76	0.87	0.20	0.33	0.21	0.81	0.08	0.06

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	482	1276	274	340	1516	169	405	444	136	203	514	415
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	524	1387	178	366	1630	85	431	472	46	221	559	187
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	561	2083	644	424	1849	571	480	833	368	356	706	311
Arrive On Green	0.33	0.82	0.82	0.12	0.36	0.36	0.14	0.24	0.24	0.10	0.20	0.20
Sat Flow, veh/h	3442	5085	1572	3442	5085	1570	3442	3539	1563	3442	3539	1560
Grp Volume(v), veh/h	524	1387	178	366	1630	85	431	472	46	221	559	187
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1570	1721	1770	1563	1721	1770	1560
Q Serve(g_s), s	20.5	15.1	2.4	14.5	41.7	5.1	17.1	16.3	2.4	8.5	20.9	15.2
Cycle Q Clear(g_c), s	20.5	15.1	2.4	14.5	41.7	5.1	17.1	16.3	2.4	8.5	20.9	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	561	2083	644	424	1849	571	480	833	368	356	706	311
V/C Ratio(X)	0.93	0.67	0.28	0.86	0.88	0.15	0.90	0.57	0.13	0.62	0.79	0.60
Avail Cap(c_a), veh/h	572	2083	644	545	1849	571	496	833	368	372	706	311
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	8.8	3.3	59.7	41.4	29.7	58.8	46.9	23.8	59.7	52.9	50.6
Incr Delay (d2), s/veh	12.2	0.7	0.5	11.0	6.5	0.6	18.6	2.8	0.7	3.0	8.9	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	6.7	1.3	7.6	20.6	2.3	9.4	8.3	1.4	4.2	11.0	7.3
LnGrp Delay(d),s/veh	58.3	9.5	3.8	70.7	47.9	30.3	77.4	49.6	24.5	62.6	61.7	58.9
LnGrp LOS	E	A	A	E	D	C	E	D	C	E	E	E
Approach Vol, veh/h		2089			2081			949			967	
Approach Delay, s/veh		21.3			51.2			61.0			61.4	
Approach LOS		C			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	18.4	37.6	21.1	62.9	23.4	32.6	28.6	55.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.9	4.9000001
Max Green Setting (Gmax), s	15.0	32.7	22.0	52.5	20.0	27.7	23.1	* 50.5
Max Q Clear Time (g_c+I1), s	10.5	18.3	16.5	17.1	19.1	22.9	22.5	43.7
Green Ext Time (p_c), s	1.1	2.6	0.6	16.9	0.3	1.8	0.1	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	524	1387	298	366	1630	182	431	472	145	221	559	451
v/c Ratio	0.89	0.69	0.42	0.77	0.88	0.29	0.89	0.57	0.33	0.62	0.80	0.83
Control Delay	45.6	14.1	3.0	69.2	48.7	12.3	80.8	50.6	14.0	67.9	63.1	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	14.1	3.0	69.2	48.7	12.3	80.8	50.6	14.0	67.9	63.1	31.4
Queue Length 50th (ft)	226	276	29	167	509	36	201	201	22	100	257	139
Queue Length 95th (ft)	m#319	328	m41	220	576	95	#291	261	82	145	327	#318
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	588	2011	703	539	1846	634	490	826	446	367	700	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.69	0.42	0.68	0.88	0.29	0.88	0.57	0.33	0.60	0.80	0.83

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	0	64	48	834	104
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	70	51	887	111

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1850	2404	510	1859	2349	519	990	0	0
Stage 1	1294	1294	-	1055	1055	-	-	-	-
Stage 2	556	1110	-	804	1294	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	46	33	509	45	36	502	694	-	-
Stage 1	172	231	-	241	301	-	-	-	-
Stage 2	483	283	-	343	231	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	30	23	501	35	25	494	688	-	-
Mov Cap-2 Maneuver	98	71	-	115	89	-	-	-	-
Stage 1	158	178	-	221	276	-	-	-	-
Stage 2	381	260	-	264	178	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	13.5	0.5
HCM LOS	A	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	688	-	-	-	494	677	-	-
HCM Lane V/C Ratio	0.074	-	-	-	0.141	0.225	-	-
HCM Control Delay (s)	10.7	-	-	0	13.5	11.9	-	-
HCM Lane LOS	B	-	-	A	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.9	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	146	941	0
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	96	96	96
Heavy Vehicles, %	2	2	2
Mvmt Flow	152	980	0

Major/Minor	Major2		
Conflicting Flow All	1008	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	683	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	677	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.6
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	1995	121	389	2312	121	130	238	644	152	292	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	74	2168	53	418	2486	81	141	259	537	165	317	10
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	1442	640	272	1800	800	164	875	387	130	808	357
Arrive On Green	0.05	0.41	0.41	0.15	0.51	0.51	0.09	0.25	0.25	0.07	0.23	0.23
Sat Flow, veh/h	1774	3539	1572	1774	3539	1574	1774	3539	1564	1774	3539	1563
Grp Volume(v), veh/h	74	2168	53	418	2486	81	141	259	537	165	317	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1770	1574	1774	1770	1564	1774	1770	1563
Q Serve(g_s), s	6.2	61.1	3.1	23.0	76.3	4.0	11.8	8.9	37.1	11.0	11.4	0.7
Cycle Q Clear(g_c), s	6.2	61.1	3.1	23.0	76.3	4.0	11.8	8.9	37.1	11.0	11.4	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1442	640	272	1800	800	164	875	387	130	808	357
V/C Ratio(X)	0.80	1.50	0.08	1.54	1.38	0.10	0.86	0.30	1.39	1.27	0.39	0.03
Avail Cap(c_a), veh/h	95	1442	640	272	1800	800	225	875	387	130	808	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	44.4	27.3	63.5	36.9	19.1	67.1	45.8	56.5	69.5	49.1	45.0
Incr Delay (d2), s/veh	36.6	230.4	0.1	259.1	175.1	0.1	21.0	0.2	189.9	167.8	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	4.0	76.0	1.4	30.8	81.0	1.7	6.7	4.4	36.4	11.4	5.6	0.3
LnGrp Delay(d),s/veh	106.9	274.8	27.3	322.6	211.9	19.1	88.1	46.0	246.4	237.3	49.4	45.0
LnGrp LOS	F	F	C	F	F	B	F	D	F	F	D	D
Approach Vol, veh/h		2295			2985			937			492	
Approach Delay, s/veh		263.7			222.2			167.2			112.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	42.0	27.0	66.0	17.9	39.1	11.8	81.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	11.0	37.1	23.0	61.1	19.0	29.1	8.0	76.1
Max Q Clear Time (g_c+I1), s	13.0	39.1	25.0	63.1	13.8	13.4	8.2	78.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	5.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	220.7
HCM 2010 LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	74	2168	132	418	2486	130	141	259	700	165	317	67
v/c Ratio	0.79	1.50	0.19	1.54	1.38	0.16	0.74	0.30	1.27	1.28	0.42	0.16
Control Delay	116.7	263.7	5.1	302.1	208.1	6.0	87.4	47.0	163.8	224.4	53.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	116.7	263.7	5.1	302.1	208.1	6.0	87.4	47.0	163.8	224.4	53.7	0.8
Queue Length 50th (ft)	73	~1545	1	~573	~1695	14	135	108	~680	~203	144	0
Queue Length 95th (ft)	#166	#1674	44	#790	#1816	50	210	151	#931	#359	196	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	94	1441	701	271	1795	827	224	875	553	129	754	429
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	1.50	0.19	1.54	1.38	0.16	0.63	0.30	1.27	1.28	0.42	0.16

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	305	1991	18	25	1943	366	21	5	12	320	4	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	332	2164	19	26	2045	225	23	5	2	351	0	21
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	1779	16	90	1936	595	279	198	79	558	0	244
Arrive On Green	0.17	0.50	0.50	0.07	0.51	0.51	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1774	3595	32	1774	5085	1563	1774	1259	504	3548	0	1553
Grp Volume(v), veh/h	332	1064	1119	26	2045	225	23	0	7	351	0	21
Grp Sat Flow(s),veh/h/ln	1774	1770	1857	1774	1695	1563	1774	0	1762	1774	0	1553
Q Serve(g_s), s	24.0	69.3	69.3	2.0	53.3	12.3	1.5	0.0	0.5	13.0	0.0	1.6
Cycle Q Clear(g_c), s	24.0	69.3	69.3	2.0	53.3	12.3	1.5	0.0	0.5	13.0	0.0	1.6
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	304	876	919	90	1936	595	279	0	277	558	0	244
V/C Ratio(X)	1.09	1.21	1.22	0.29	1.06	0.38	0.08	0.00	0.03	0.63	0.00	0.09
Avail Cap(c_a), veh/h	304	876	919	90	1936	595	279	0	277	558	0	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	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	35.3	35.4	62.9	34.6	24.4	50.4	0.0	49.9	55.2	0.0	50.4
Incr Delay (d2), s/veh	78.4	106.9	108.0	1.3	34.6	1.3	0.6	0.0	0.2	5.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	59.8	63.1	1.0	31.1	5.5	0.8	0.0	0.2	6.7	0.0	0.7
LnGrp Delay(d),s/veh	136.4	142.2	143.4	64.2	69.2	25.8	51.0	0.0	50.1	60.5	0.0	51.1
LnGrp LOS	F	F	F	E	F	C	D		D	E		D
Approach Vol, veh/h		2515			2296			30			372	
Approach Delay, s/veh		142.0			64.9			50.8			60.0	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	74.2		26.9	28.0	58.2
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	7.0	69.300003		22.0	24.0	53.3
Max Q Clear Time (g_c+I1), s		3.5	4.0	71.3		15.0	26.0	55.3
Green Ext Time (p_c), s		0.0	2.9	0.0		0.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.6
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	332	2184	26	2045	385	23	18	177	175	204
v/c Ratio	1.10	1.17	0.29	1.06	0.55	0.08	0.07	0.67	0.66	0.49
Control Delay	132.5	113.0	55.6	63.7	13.1	51.4	27.8	69.1	68.7	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.5	113.0	55.6	63.7	13.1	51.4	27.8	69.1	68.7	11.0
Queue Length 50th (ft)	~341	~1307	23	~752	170	18	4	162	160	0
Queue Length 95th (ft)	#537	#1442	m38	#847	302	46	28	250	248	73
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	303	1870	101	1935	706	278	266	264	264	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	1.17	0.26	1.06	0.55	0.08	0.07	0.67	0.66	0.49

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	2349	30	82	2147	65	41	4	54	96	4	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		0.99	1.00		0.99	0.98		0.98	0.98		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	38	2553	18	88	2309	44	45	4	10	104	4	6
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	2432	1080	101	3494	1080	260	73	183	256	105	157
Arrive On Green	0.07	0.91	0.91	0.06	0.69	0.69	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	3539	1572	1774	5085	1572	1373	466	1165	1369	665	998
Grp Volume(v), veh/h	38	2553	18	88	2309	44	45	0	14	104	0	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1695	1572	1373	0	1631	1369	0	1664
Q Serve(g_s), s	2.9	96.2	0.1	6.9	36.4	1.3	4.0	0.0	1.0	9.8	0.0	0.7
Cycle Q Clear(g_c), s	2.9	96.2	0.1	6.9	36.4	1.3	4.7	0.0	1.0	10.8	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.60
Lane Grp Cap(c), veh/h	90	2432	1080	101	3494	1080	260	0	256	256	0	261
V/C Ratio(X)	0.42	1.05	0.02	0.87	0.66	0.04	0.17	0.00	0.05	0.41	0.00	0.04
Avail Cap(c_a), veh/h	90	2432	1080	101	3494	1080	260	0	256	256	0	261
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.3	6.0	1.9	65.5	12.5	7.0	52.0	0.0	50.2	54.8	0.0	50.0
Incr Delay (d2), s/veh	0.3	23.7	0.0	50.2	1.0	0.1	1.4	0.0	0.4	4.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	50.3	0.1	4.8	17.2	0.6	1.6	0.0	0.5	4.0	0.0	0.3
LnGrp Delay(d),s/veh	63.6	29.8	1.9	115.7	13.5	7.1	53.5	0.0	50.6	59.5	0.0	50.3
LnGrp LOS	E	F	A	F	B	A	D		D	E		D
Approach Vol, veh/h		2609			2441			59			114	
Approach Delay, s/veh		30.1			17.1			52.8			58.7	
Approach LOS		C			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	101.1		26.9	12.0	101.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9000001
Max Green Setting (Gmax), s		22.0	8.0	96.2		22.0	7.9	96.199997
Max Q Clear Time (g_c+I1), s		6.7	8.9	98.2		12.8	4.9	38.4
Green Ext Time (p_c), s		0.4	0.0	0.0		0.3	2.2	34.2

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	2553	33	88	2309	70	45	63	104	43
v/c Ratio	0.40	1.05	0.03	0.87	0.64	0.07	0.22	0.21	0.51	0.15
Control Delay	41.2	36.5	0.0	104.4	2.0	0.1	54.6	15.5	63.6	18.2
Queue Delay	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	37.9	0.0	104.4	2.0	0.1	54.6	15.5	63.6	18.2
Queue Length 50th (ft)	32	~470	0	77	18	0	36	3	88	3
Queue Length 95th (ft)	m32	m137	m0	m82	m32	m0	76	46	152	39
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	101	2431	1046	101	3581	1073	209	294	205	278
Starvation Cap Reductn	0	8	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	1.05	0.03	0.87	0.64	0.07	0.22	0.21	0.51	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	340	1676	197	350	2055	226	579	371	126	457	342	242
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	370	1822	122	372	2186	150	629	403	24	466	349	61
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	369	2078	642	420	2187	676	615	632	278	519	556	244
Arrive On Green	0.11	0.41	0.41	0.24	0.86	0.86	0.18	0.18	0.18	0.15	0.16	0.16
Sat Flow, veh/h	3442	5085	1572	3442	5085	1572	3442	3539	1557	3442	3539	1553
Grp Volume(v), veh/h	370	1822	122	372	2186	150	629	403	24	466	349	61
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1572	1721	1770	1557	1721	1770	1553
Q Serve(g_s), s	15.0	46.2	4.1	14.6	60.1	1.4	25.0	14.8	1.8	18.6	12.9	4.8
Cycle Q Clear(g_c), s	15.0	46.2	4.1	14.6	60.1	1.4	25.0	14.8	1.8	18.6	12.9	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	369	2078	642	420	2187	676	615	632	278	519	556	244
V/C Ratio(X)	1.00	0.88	0.19	0.88	1.00	0.22	1.02	0.64	0.09	0.90	0.63	0.25
Avail Cap(c_a), veh/h	369	2078	642	420	2187	676	615	632	278	519	556	244
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.57	0.57	0.57	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	38.2	9.3	52.0	9.8	2.2	57.5	53.3	48.0	58.4	55.2	51.8
Incr Delay (d2), s/veh	47.7	5.6	0.7	12.4	14.4	0.4	42.4	4.9	0.6	18.4	5.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	22.7	2.9	7.6	28.4	0.9	15.5	7.6	0.8	10.2	6.7	2.2
LnGrp Delay(d),s/veh	110.2	43.8	9.9	64.3	24.2	2.6	99.9	58.2	48.6	76.8	60.5	54.2
LnGrp LOS	F	D	A	E	C	A	F	E	D	E	E	D
Approach Vol, veh/h		2314			2708			1056			876	
Approach Delay, s/veh		52.6			28.5			82.8			68.7	
Approach LOS		D			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	26.0	29.9	22.0	62.1	29.0	26.9	19.0	65.1
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	21.1	* 25	17.1	57.200001	25.0	22.0	15.0	60.2
Max Q Clear Time (g_c+I1), s	20.6	16.8	16.6	48.2	27.0	14.9	17.0	62.1
Green Ext Time (p_c), s	0.2	1.6	0.5	7.1	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.8
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	370	1822	214	372	2186	240	629	403	137	466	349	247
v/c Ratio	1.01	0.88	0.31	0.84	1.00	0.34	1.03	0.64	0.37	0.86	0.63	0.64
Control Delay	73.6	26.0	8.7	78.0	61.1	24.7	98.8	58.6	13.8	74.4	60.8	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	26.0	8.7	78.0	61.1	24.7	98.8	58.6	13.8	74.4	60.8	25.4
Queue Length 50th (ft)	~174	561	65	166	~601	97	~313	181	12	216	158	60
Queue Length 95th (ft)	m166	m521	m63	m#245	#832	m152	#436	238	73	#303	213	156
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	367	2077	683	441	2186	710	613	631	374	539	556	387
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.88	0.31	0.84	1.00	0.34	1.03	0.64	0.37	0.86	0.63	0.64

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	1841	118	349	2089	162	153	190	357	132	228	99
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	98	2001	63	364	2176	127	166	207	74	143	248	66
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	2223	687	379	3002	927	229	454	382	214	676	176
Arrive On Green	0.13	0.87	0.87	0.43	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	5085	1572	1774	5085	1570	1056	1863	1564	1090	2773	722
Grp Volume(v), veh/h	98	2001	63	364	2176	127	166	207	74	143	156	158
Grp Sat Flow(s),veh/h/ln	1774	1695	1572	1774	1695	1570	1056	1863	1564	1090	1770	1725
Q Serve(g_s), s	7.5	32.5	0.8	27.8	0.0	0.0	21.7	13.2	5.2	18.0	10.2	10.6
Cycle Q Clear(g_c), s	7.5	32.5	0.8	27.8	0.0	0.0	32.3	13.2	5.2	31.2	10.2	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	119	2223	687	379	3002	927	229	454	382	214	432	421
V/C Ratio(X)	0.82	0.90	0.09	0.96	0.72	0.14	0.73	0.46	0.19	0.67	0.36	0.37
Avail Cap(c_a), veh/h	178	2223	687	382	3002	927	229	454	382	214	432	421
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)	0.42	0.42	0.42	0.22	0.22	0.22	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	7.0	5.0	39.4	0.0	0.0	57.4	44.9	41.9	58.2	43.8	44.0
Incr Delay (d2), s/veh	8.0	2.9	0.1	13.3	0.3	0.1	18.1	3.3	1.1	15.3	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	14.3	0.3	15.0	0.1	0.0	7.5	7.2	2.4	6.3	5.3	5.4
LnGrp Delay(d),s/veh	67.7	9.9	5.1	52.8	0.3	0.1	75.5	48.2	43.1	73.5	46.2	46.5
LnGrp LOS	E	A	A	D	A	A	E	D	D	E	D	D
Approach Vol, veh/h		2162			2667			447			457	
Approach Delay, s/veh		12.3			7.5			57.5			54.8	
Approach LOS		B			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	35.0	66.0		39.0	13.4	87.6
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		34.1	30.1	61.099998		34.1	14.0	78.1
Max Q Clear Time (g_c+I1), s		34.3	29.8	34.5		33.2	9.5	2.0
Green Ext Time (p_c), s		0.0	0.0	17.5		0.5	0.1	40.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	98	2001	128	364	2176	169	166	207	388	143	356
v/c Ratio	0.64	0.90	0.18	0.93	0.75	0.19	0.88	0.46	0.59	0.69	0.42
Control Delay	92.0	12.1	2.2	50.1	10.9	3.5	91.4	49.0	8.6	66.5	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.0	12.1	2.2	50.1	10.9	3.5	91.4	49.0	8.6	66.5	40.3
Queue Length 50th (ft)	90	168	10	301	200	11	146	162	7	119	125
Queue Length 95th (ft)	m103	369	m10	m323	m210	m12	#286	242	99	#217	174
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	177	2219	699	391	2908	893	189	453	659	208	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.90	0.18	0.93	0.75	0.19	0.88	0.46	0.59	0.69	0.42

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	232	2161	115	113	2570	144	249	94	53	186	85	116
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	244	2275	94	118	2677	116	271	102	13	200	91	30
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	2830	873	215	2757	850	282	416	349	277	416	349
Arrive On Green	0.27	1.00	1.00	0.24	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1774	5085	1569	1774	5085	1569	1254	1863	1562	1261	1863	1562
Grp Volume(v), veh/h	244	2275	94	118	2677	116	271	102	13	200	91	30
Grp Sat Flow(s),veh/h/ln	1774	1695	1569	1774	1695	1569	1254	1863	1562	1261	1863	1562
Q Serve(g_s), s	19.0	0.0	0.0	8.1	0.0	0.0	25.7	6.3	0.9	21.7	5.6	2.1
Cycle Q Clear(g_c), s	19.0	0.0	0.0	8.1	0.0	0.0	31.3	6.3	0.9	28.0	5.6	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	2830	873	215	2757	850	282	416	349	277	416	349
V/C Ratio(X)	1.01	0.80	0.11	0.55	0.97	0.14	0.96	0.24	0.04	0.72	0.22	0.09
Avail Cap(c_a), veh/h	241	2830	873	215	2757	850	282	416	349	277	416	349
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)	0.43	0.43	0.43	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	0.0	0.0	49.6	0.0	0.0	59.1	44.6	42.6	56.1	44.4	43.0
Incr Delay (d2), s/veh	41.3	1.1	0.1	0.6	3.5	0.1	44.7	1.4	0.2	15.1	1.2	0.5
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	0.3	0.0	4.0	0.9	0.0	14.0	3.4	0.4	8.7	3.0	1.0
LnGrp Delay(d),s/veh	92.4	1.1	0.1	50.2	3.5	0.1	103.8	46.0	42.8	71.3	45.6	43.5
LnGrp LOS	F	A	A	D	A	A	F	D	D	E	D	D
Approach Vol, veh/h		2613			2911			386			321	
Approach Delay, s/veh		9.6			5.3			86.4			61.4	
Approach LOS		A			A			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.2	21.0	82.8		36.2	23.0	80.8
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		31.3	17.0	77.9		31.3	19.0	75.9
Max Q Clear Time (g_c+I1), s		33.3	10.1	2.0		30.0	21.0	2.0
Green Ext Time (p_c), s		0.0	0.6	38.8		0.5	0.0	51.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	244	2275	121	118	2677	150	271	102	58	200	91	125
v/c Ratio	1.02	0.80	0.14	0.55	0.97	0.18	0.98	0.25	0.15	0.75	0.22	0.28
Control Delay	101.8	5.6	0.8	56.3	14.7	1.0	102.5	46.6	11.3	68.7	46.1	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.8	5.6	0.8	56.3	14.7	1.0	102.5	46.6	11.3	68.7	46.1	8.9
Queue Length 50th (ft)	~240	115	2	113	147	3	247	77	0	171	68	0
Queue Length 95th (ft)	m#324	135	m6	m126	m145	m4	#431	131	38	#287	120	53
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	240	2829	856	214	2756	840	277	416	388	268	416	440
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.80	0.14	0.55	0.97	0.18	0.98	0.25	0.15	0.75	0.22	0.28

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	1826	146	207	2121	255	205	78	180	319	63	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	212	1943	111	225	2305	220	223	85	53	347	68	25
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	2212	681	228	2248	695	455	729	420	433	629	530
Arrive On Green	0.23	0.87	0.87	0.13	0.44	0.44	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1774	5085	1565	1774	5085	1573	1289	2157	1243	1239	1863	1569
Grp Volume(v), veh/h	212	1943	111	225	2305	220	223	69	69	347	68	25
Grp Sat Flow(s),veh/h/ln	1774	1695	1565	1774	1695	1573	1289	1770	1630	1239	1863	1569
Q Serve(g_s), s	16.1	29.5	1.5	17.7	61.9	12.7	20.1	3.7	4.1	37.7	3.5	1.5
Cycle Q Clear(g_c), s	16.1	29.5	1.5	17.7	61.9	12.7	23.6	3.7	4.1	41.8	3.5	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	204	2212	681	228	2248	695	455	598	551	433	629	530
V/C Ratio(X)	1.04	0.88	0.16	0.99	1.03	0.32	0.49	0.11	0.13	0.80	0.11	0.05
Avail Cap(c_a), veh/h	204	2212	681	228	2248	695	455	598	551	433	629	530
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	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	7.1	5.2	60.9	39.0	25.3	40.0	31.9	32.1	46.5	31.9	31.2
Incr Delay (d2), s/veh	56.2	2.9	0.3	55.6	25.7	1.2	3.7	0.4	0.5	14.4	0.3	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	11.0	13.2	0.7	12.2	34.3	5.7	7.7	1.9	1.9	14.6	1.9	0.7
LnGrp Delay(d),s/veh	110.1	10.0	5.5	116.5	64.7	26.5	43.7	32.3	32.5	60.9	32.2	31.4
LnGrp LOS	F	A	A	F	F	C	D	C	C	E	C	C
Approach Vol, veh/h		2266			2750			361			440	
Approach Delay, s/veh		19.1			65.9			39.4			54.8	
Approach LOS		B			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		52.2	22.0	65.8		52.2	21.0	66.8
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		47.3	18.0	60.9		47.3	16.1	61.900002
Max Q Clear Time (g_c+I1), s		25.6	19.7	31.5		43.8	18.1	63.9
Green Ext Time (p_c), s		3.3	0.0	19.2		1.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.2
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	212	1943	155	225	2305	277	223	281	347	68	91
v/c Ratio	0.99	0.88	0.22	0.99	1.03	0.38	0.51	0.24	1.04	0.11	0.16
Control Delay	91.5	24.8	8.8	117.7	64.2	19.4	42.0	10.8	104.6	32.6	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.5	24.8	8.8	117.7	64.2	19.4	42.0	10.8	104.6	32.6	6.7
Queue Length 50th (ft)	188	314	19	208	~817	113	162	27	~340	43	0
Queue Length 95th (ft)	m#298	455	m30	#380	#907	187	248	61	#538	79	40
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	214	2211	690	227	2248	726	440	1177	334	629	578
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.88	0.22	0.99	1.03	0.38	0.51	0.24	1.04	0.11	0.16

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX E

PROJECT INTERSECTION ANALYSIS SHEETS

Existing Plus Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	387	38	458	66	40	102	175	628	14	92	876	126
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99
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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	450	44	231	72	43	6	197	706	6	97	922	48
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	536	357	299	93	313	135	236	1772	793	124	1515	673
Arrive On Green	0.16	0.19	0.19	0.05	0.09	0.09	0.13	0.50	0.50	0.07	0.43	0.43
Sat Flow, veh/h	3442	1863	1559	1774	3539	1530	1774	3539	1583	1774	3539	1572
Grp Volume(v), veh/h	450	44	231	72	43	6	197	706	6	97	922	48
Grp Sat Flow(s),veh/h/ln	1721	1863	1559	1774	1770	1530	1774	1770	1583	1774	1770	1572
Q Serve(g_s), s	12.2	1.9	9.6	3.8	1.1	0.3	10.4	11.9	0.2	5.2	19.3	1.0
Cycle Q Clear(g_c), s	12.2	1.9	9.6	3.8	1.1	0.3	10.4	11.9	0.2	5.2	19.3	1.0
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	536	357	299	93	313	135	236	1772	793	124	1515	673
V/C Ratio(X)	0.84	0.12	0.77	0.78	0.14	0.04	0.83	0.40	0.01	0.78	0.61	0.07
Avail Cap(c_a), veh/h	681	681	570	148	888	384	316	1772	793	240	1515	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	32.1	18.5	45.0	40.4	40.1	40.6	15.0	12.0	43.9	21.2	5.2
Incr Delay (d2), s/veh	7.5	0.2	4.2	13.0	0.2	0.1	13.3	0.1	0.0	10.2	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	1.0	5.2	2.2	0.5	0.2	6.0	5.8	0.1	2.9	9.9	0.7
LnGrp Delay(d),s/veh	46.9	32.3	22.7	57.9	40.6	40.2	53.9	15.1	12.0	54.2	23.1	5.4
LnGrp LOS	D	C	C	E	D	D	D	B	B	D	C	A
Approach Vol, veh/h		725			121			909			1067	
Approach Delay, s/veh		38.3			50.9			23.5			25.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	53.0	9.0	23.3	17.7	46.0	18.9	13.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	46.1	8.0	35.1	17.41	41.099998	19.0	24.1
Max Q Clear Time (g_c+I1), s	7.2	13.9	5.8	11.6	12.4	21.3	14.2	3.1
Green Ext Time (p_c), s	0.1	5.7	0.0	1.2	0.5	6.3	0.7	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	450	44	533	72	43	111	197	706	16	97	922	133
v/c Ratio	0.79	0.10	0.84	0.56	0.10	0.33	0.75	0.43	0.02	0.55	0.66	0.19
Control Delay	54.6	33.1	27.3	67.8	41.3	3.6	62.9	22.4	0.1	59.7	30.9	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	33.1	27.3	67.8	41.3	3.6	62.9	22.4	0.1	59.7	30.9	5.2
Queue Length 50th (ft)	152	25	139	49	14	0	129	172	0	64	273	0
Queue Length 95th (ft)	#226	51	250	#119	31	9	#249	273	0	129	412	42
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	626	627	758	136	818	487	305	1656	808	220	1396	689
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.07	0.70	0.53	0.05	0.23	0.65	0.43	0.02	0.44	0.66	0.19

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	294	1	50	1	0	0	81	483	1	2	920	451
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	359	1	0	1	0	0	94	562	1	2	958	314
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	212	180	3	3	3	121	2011	4	4	1730	766
Arrive On Green	0.14	0.11	0.00	0.00	0.00	0.00	0.07	0.55	0.55	0.00	0.49	0.49
Sat Flow, veh/h	3442	1863	1583	1774	1863	1583	1774	3625	6	1774	3539	1567
Grp Volume(v), veh/h	359	1	0	1	0	0	94	274	289	2	958	314
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1863	1583	1774	1770	1862	1774	1770	1567
Q Serve(g_s), s	6.0	0.0	0.0	0.0	0.0	0.0	3.1	4.9	4.9	0.1	11.3	7.6
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	0.0	0.0	3.1	4.9	4.9	0.1	11.3	7.6
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	488	212	180	3	3	3	121	982	1033	4	1730	766
V/C Ratio(X)	0.74	0.00	0.00	0.34	0.00	0.00	0.78	0.28	0.28	0.52	0.55	0.41
Avail Cap(c_a), veh/h	697	842	716	211	686	583	211	982	1033	211	1730	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	23.5	0.0	29.8	0.0	0.0	27.4	7.0	7.0	29.8	10.7	9.8
Incr Delay (d2), s/veh	2.4	0.0	0.0	56.0	0.0	0.0	10.3	0.7	0.7	78.5	1.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	0.1	0.0	0.0	1.9	2.6	2.7	0.1	5.8	3.6
LnGrp Delay(d),s/veh	27.0	23.5	0.0	85.8	0.0	0.0	37.7	7.7	7.7	108.3	12.0	11.4
LnGrp LOS	C	C		F			D	A	A	F	B	B
Approach Vol, veh/h		360			1			657			1274	
Approach Delay, s/veh		27.0			85.7			12.0			12.0	
Approach LOS		C			F			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	38.0	5.0	11.7	9.0	34.1	13.4	3.3
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	29.2	7.1	27.0	7.1	29.2	12.1	22.0
Max Q Clear Time (g_c+I1), s	2.1	6.9	2.0	2.0	5.1	13.3	8.0	0.0
Green Ext Time (p_c), s	0.0	11.7	0.0	0.0	0.0	9.5	0.5	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	359	1	61	1	94	563	2	958	470
v/c Ratio	0.60	0.00	0.14	0.01	0.48	0.27	0.01	0.58	0.55
Control Delay	32.3	21.0	0.7	34.0	41.7	10.4	34.0	17.8	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	21.0	0.7	34.0	41.7	10.4	34.0	17.8	10.1
Queue Length 50th (ft)	64	0	0	0	35	38	1	134	43
Queue Length 95th (ft)	135	4	0	6	#117	171	8	#344	208
Internal Link Dist (ft)		385				1059		1165	
Turn Bay Length (ft)	200		150	130	265		265		100
Base Capacity (vph)	665	810	752	201	201	2068	201	1654	857
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.00	0.08	0.00	0.47	0.27	0.01	0.58	0.55

Intersection Summary

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

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	65	125	409	18	117	875
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	139	499	22	123	921

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1227	280	0	0	531	0
Stage 1	520	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	171	717	-	-	1033	-
Stage 1	561	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	705	-	-	1024	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	393	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.8	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	148	705	1024	-
HCM Lane V/C Ratio	-	-	0.488	0.197	0.12	-
HCM Control Delay (s)	-	-	50.6	11.4	9	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	2.3	0.7	0.4	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	10	19	58	53	17	18	21	237	34
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	24	74	62	20	21	26	296	42

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	890	1070	331	750	1050	189	632	0	0
Stage 1	669	669	-	380	380	-	-	-	-
Stage 2	221	401	-	370	670	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	237	220	665	300	226	821	947	-	-
Stage 1	413	454	-	614	612	-	-	-	-
Stage 2	761	599	-	622	454	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	209	207	654	238	213	807	939	-	-
Mov Cap-2 Maneuver	313	318	-	349	315	-	-	-	-
Stage 1	398	443	-	592	590	-	-	-	-
Stage 2	690	578	-	508	443	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	14	15.9	0.6
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	939	-	-	313	519	349	459	1197	-	-
HCM Lane V/C Ratio	0.028	-	-	0.041	0.19	0.179	0.09	0.016	-	-
HCM Control Delay (s)	8.9	-	-	17	13.6	17.5	13.6	8.1	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.7	0.6	0.3	0	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	18	575	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	2	2	2
Mvmt Flow	19	618	3

Major/Minor	Major2		
Conflicting Flow All	349	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1207	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1197	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.2
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	101	82	69	101	124	55	316	27	142	815	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	13	120	0	76	111	9	65	372	24	148	849	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.91	0.91	0.91	0.85	0.85	0.85	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	658	294	335	346	290	83	1489	96	192	1800	21
Arrive On Green	0.19	0.19	0.00	0.19	0.19	0.19	0.05	0.44	0.44	0.11	0.50	0.50
Sat Flow, veh/h	1252	3539	1583	1250	1863	1558	1774	3375	217	1774	3582	42
Grp Volume(v), veh/h	13	120	0	76	111	9	65	194	202	148	419	440
Grp Sat Flow(s),veh/h/ln	1252	1770	1583	1250	1863	1558	1774	1770	1823	1774	1770	1855
Q Serve(g_s), s	0.5	1.5	0.0	2.8	2.7	0.2	1.9	3.6	3.6	4.2	8.1	8.1
Cycle Q Clear(g_c), s	3.2	1.5	0.0	4.3	2.7	0.2	1.9	3.6	3.6	4.2	8.1	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	306	658	294	335	346	290	83	781	804	192	889	932
V/C Ratio(X)	0.04	0.18	0.00	0.23	0.32	0.03	0.78	0.25	0.25	0.77	0.47	0.47
Avail Cap(c_a), veh/h	602	1494	668	630	786	657	272	781	804	408	889	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	17.9	0.0	19.7	18.4	17.4	24.6	9.1	9.2	22.6	8.5	8.5
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.5	0.0	14.7	0.8	0.7	6.4	1.8	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	0.2	0.7	0.0	1.0	1.4	0.1	1.3	1.9	2.0	2.4	4.3	4.5
LnGrp Delay(d),s/veh	19.8	18.0	0.0	20.0	18.9	17.4	39.3	9.9	9.9	29.0	10.2	10.2
LnGrp LOS	B	B		C	B	B	D	A	A	C	B	B
Approach Vol, veh/h		133			196			461			1007	
Approach Delay, s/veh		18.2			19.3			14.0			13.0	
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	9.6	27.9		14.6	6.4	31.1		14.6
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	12.0	22.2		22.0	8.0	26.2		22.0
Max Q Clear Time (g_c+I1), s	6.2	5.6		5.2	3.9	10.1		6.3
Green Ext Time (p_c), s	0.2	6.8		1.5	0.0	6.7		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	13	120	98	76	111	136	65	404	148	860
v/c Ratio	0.06	0.19	0.27	0.33	0.33	0.35	0.29	0.23	0.50	0.41
Control Delay	19.0	20.0	6.9	24.1	22.6	6.8	28.7	12.5	29.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	20.0	6.9	24.1	22.6	6.8	28.7	12.5	29.2	11.5
Queue Length 50th (ft)	4	18	0	23	34	0	20	42	45	99
Queue Length 95th (ft)	14	34	26	54	70	35	57	95	112	215
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	503	1406	675	496	740	697	255	1794	383	2090
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.15	0.15	0.15	0.20	0.25	0.23	0.39	0.41

Intersection Summary

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	214	75	55	161	90	34
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	92	92	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	228	80	60	175	111	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	238	0	445	248
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1329	-	556	790
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	808	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1318	-	522	777
Mov Cap-2 Maneuver	-	-	-	-	594	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	765	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	635	-	-	1318	-
HCM Lane V/C Ratio	0.241	-	-	0.045	-
HCM Control Delay (s)	12.5	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	29	125	108	0	11	64	28	0	64	60	6
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.74	0.74	0.74	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	30	129	111	0	15	86	38	0	74	69	7
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	11.7	9.7	10.1
HCM LOS	B	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	26%	0%	100%	0%
Vol Thru, %	0%	91%	0%	54%	74%	53%	0%	66%
Vol Right, %	0%	9%	0%	46%	0%	47%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	66	29	233	43	60	69	177
LT Vol	0	60	0	125	32	32	0	117
Through Vol	0	6	0	108	0	28	0	60
RT Vol	64	0	29	0	11	0	69	0
Lane Flow Rate	74	76	30	240	58	81	85	219
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.137	0.129	0.054	0.382	0.103	0.133	0.153	0.347
Departure Headway (Hd)	6.68	6.108	6.557	5.723	6.38	5.919	6.459	5.714
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	537	586	546	629	561	605	555	629
Service Time	4.422	3.85	4.296	3.461	4.125	3.664	4.196	3.45
HCM Lane V/C Ratio	0.138	0.13	0.055	0.382	0.103	0.134	0.153	0.348
HCM Control Delay	10.5	9.8	9.7	12	9.9	9.6	10.4	11.5
HCM Lane LOS	B	A	A	B	A	A	B	B
HCM 95th-tile Q	0.5	0.4	0.2	1.8	0.3	0.5	0.5	1.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	69	117	60
Peak Hour Factor	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	144	74
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	11.2
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	109	0	0	15	135	295	26
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	118	0	0	16	173	378	33

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1851	2074	611	1466	2070	226	1193	0	0
Stage 1	1306	1306	-	751	751	-	-	-	-
Stage 2	545	768	-	715	1319	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	46	53	437	89	53	777	581	-	-
Stage 1	169	228	-	369	416	-	-	-	-
Stage 2	490	409	-	388	225	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	33	34	430	47	34	764	576	-	-
Mov Cap-2 Maneuver	87	115	-	75	35	-	-	-	-
Stage 1	117	213	-	256	289	-	-	-	-
Stage 2	333	284	-	263	211	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	16.5	9.8	4.1
HCM LOS	C	A	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	576	-	-	430	764	1125	-	-
HCM Lane V/C Ratio	0.3	-	-	0.276	0.021	0.056	-	-
HCM Control Delay (s)	13.9	-	-	16.5	9.8	8.4	-	-
HCM Lane LOS	B	-	-	C	A	A	-	-
HCM 95th %tile Q(veh)	1.3	-	-	1.1	0.1	0.2	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	51	938	20
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	81	81	81
Heavy Vehicles, %	2	2	2
Mvmt Flow	63	1158	25

Major/Minor	Major2		
Conflicting Flow All	422	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1134	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1125	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	569	51	279	706	57	29	163	442	96	263	5
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	15	612	13	340	861	29	31	175	48	110	302	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.82	0.82	0.82	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	1038	460	398	1780	792	46	544	239	142	737	330
Arrive On Green	0.01	0.29	0.29	0.22	0.50	0.50	0.03	0.15	0.15	0.08	0.21	0.00
Sat Flow, veh/h	1774	3539	1567	1774	3539	1574	1774	3539	1552	1774	3539	1583
Grp Volume(v), veh/h	15	612	13	340	861	29	31	175	48	110	302	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1567	1774	1770	1574	1774	1770	1552	1774	1770	1583
Q Serve(g_s), s	0.6	10.6	0.4	13.2	11.4	0.7	1.2	3.2	1.9	4.4	5.3	0.0
Cycle Q Clear(g_c), s	0.6	10.6	0.4	13.2	11.4	0.7	1.2	3.2	1.9	4.4	5.3	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	26	1038	460	398	1780	792	46	544	239	142	737	330
V/C Ratio(X)	0.59	0.59	0.03	0.85	0.48	0.04	0.68	0.32	0.20	0.77	0.41	0.00
Avail Cap(c_a), veh/h	198	1339	593	793	2525	1123	198	1487	652	322	1734	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.00
Uniform Delay (d), s/veh	35.1	21.6	18.0	26.7	11.7	9.0	34.6	27.0	26.5	32.3	24.5	0.0
Incr Delay (d2), s/veh	19.5	0.5	0.0	5.3	0.2	0.0	16.3	0.3	0.4	8.5	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.3	0.2	7.0	5.6	0.3	0.8	1.6	0.8	2.5	2.6	0.0
LnGrp Delay(d),s/veh	54.6	22.2	18.1	32.0	11.9	9.0	50.9	27.3	26.9	40.8	24.9	0.0
LnGrp LOS	D	C	B	C	B	A	D	C	C	D	C	
Approach Vol, veh/h		640			1230			254			412	
Approach Delay, s/veh		22.8			17.4			30.1			29.2	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	15.9	20.1	25.9	5.8	19.8	5.0	40.9
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	30.1	32.0	27.1	8.0	35.1	8.0	51.1
Max Q Clear Time (g_c+I1), s	6.4	5.2	15.2	12.6	3.2	7.3	2.6	13.4
Green Ext Time (p_c), s	0.1	3.4	0.9	8.2	0.0	3.5	0.0	13.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	15	612	55	340	861	70	31	175	475	110	302	6
v/c Ratio	0.10	0.68	0.11	0.72	0.46	0.08	0.20	0.31	0.74	0.48	0.38	0.01
Control Delay	47.0	34.8	0.4	40.4	15.9	0.4	47.4	36.2	11.3	47.9	31.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	34.8	0.4	40.4	15.9	0.4	47.4	36.2	11.3	47.9	31.6	0.0
Queue Length 50th (ft)	8	155	0	165	128	0	16	45	0	55	76	0
Queue Length 95th (ft)	33	287	0	293	265	0	54	88	96	133	130	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	185	1256	651	741	2321	1052	185	1395	894	301	1627	775
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.49	0.08	0.46	0.37	0.07	0.17	0.13	0.53	0.37	0.19	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	655	35	36	502	121	21	2	8	98	15	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	127	675	33	39	546	28	23	2	1	116	0	10
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	1336	65	51	1531	469	362	238	119	755	0	332
Arrive On Green	0.12	0.39	0.39	0.06	0.60	0.60	0.20	0.20	0.20	0.21	0.00	0.21
Sat Flow, veh/h	1774	3432	168	1774	5085	1557	1774	1166	583	3548	0	1561
Grp Volume(v), veh/h	127	348	360	39	546	28	23	0	3	116	0	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1774	1695	1557	1774	0	1750	1774	0	1561
Q Serve(g_s), s	7.7	16.9	16.9	2.5	6.2	0.8	1.2	0.0	0.2	3.0	0.0	0.6
Cycle Q Clear(g_c), s	7.7	16.9	16.9	2.5	6.2	0.8	1.2	0.0	0.2	3.0	0.0	0.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	208	689	713	51	1531	469	362	0	357	755	0	332
V/C Ratio(X)	0.61	0.50	0.51	0.76	0.36	0.06	0.06	0.00	0.01	0.15	0.00	0.03
Avail Cap(c_a), veh/h	313	689	713	157	1531	469	362	0	357	755	0	332
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.5	26.3	26.3	53.0	17.0	15.9	36.4	0.0	36.0	36.3	0.0	35.3
Incr Delay (d2), s/veh	2.9	2.6	2.6	19.9	0.6	0.2	0.3	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.7	9.0	1.5	3.0	0.4	0.6	0.0	0.1	1.5	0.0	0.3
LnGrp Delay(d),s/veh	50.4	28.9	28.9	72.9	17.6	16.2	36.7	0.0	36.0	36.7	0.0	35.5
LnGrp LOS	D	C	C	E	B	B	D		D	D		D
Approach Vol, veh/h		835			613			26			126	
Approach Delay, s/veh		32.2			21.1			36.6			36.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		28.0	14.0	49.0		29.0	24.0	39.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		23.1	10.0	44.1		24.1	20.0	34.1
Max Q Clear Time (g_c+I1), s		3.2	4.5	18.9		5.0	9.7	8.2
Green Ext Time (p_c), s		0.0	0.2	4.2		0.3	0.3	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	127	711	39	546	132	23	11	60	61	71
v/c Ratio	0.55	0.53	0.34	0.38	0.25	0.06	0.03	0.18	0.18	0.17
Control Delay	57.4	30.6	51.4	15.3	3.3	39.4	23.0	41.4	41.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	30.6	51.4	15.3	3.3	39.4	23.0	41.4	41.4	0.9
Queue Length 50th (ft)	91	226	32	107	2	14	1	41	42	0
Queue Length 95th (ft)	152	287	68	162	4	39	18	83	83	0
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	295	1339	147	1444	531	406	373	337	342	423
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.53	0.27	0.38	0.25	0.06	0.03	0.18	0.18	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	731	39	36	660	28	30	1	29	18	1	6
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	4	786	25	38	702	19	34	1	3	20	1	1
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2147	953	48	3271	1010	398	98	293	396	204	204
Arrive On Green	0.00	1.00	1.00	0.03	0.64	0.64	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1392	407	1222	1389	850	850
Grp Volume(v), veh/h	4	786	25	38	702	19	34	0	4	20	0	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1392	0	1629	1389	0	1700
Q Serve(g_s), s	0.1	0.0	0.0	2.3	6.2	0.5	2.1	0.0	0.2	1.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	2.3	6.2	0.5	2.2	0.0	0.2	1.4	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		0.50
Lane Grp Cap(c), veh/h	2	2147	953	48	3271	1010	398	0	390	396	0	407
V/C Ratio(X)	2.46	0.37	0.03	0.78	0.21	0.02	0.09	0.00	0.01	0.05	0.00	0.00
Avail Cap(c_a), veh/h	148	2147	953	228	3271	1010	398	0	390	396	0	407
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	52.7	8.0	7.0	32.4	0.0	31.6	32.1	0.0	31.6
Incr Delay (d2), s/veh	905.3	0.4	0.0	23.6	0.2	0.0	0.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	467.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.0	1.5	2.9	0.2	0.8	0.0	0.1	0.5	0.0	0.0
LnGrp Delay(d),s/veh	1427.2	0.4	0.0	76.3	8.2	7.1	32.8	0.0	31.6	32.4	0.0	31.6
LnGrp LOS	F	A	A	E	A	A	C		C	C		C
Approach Vol, veh/h		815			759			38			22	
Approach Delay, s/veh		7.4			11.6			32.7			32.3	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		31.0	7.0	82.0		31.0	14.0	75.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		26.1	14.0	66.1		26.1	9.1	70.099998
Max Q Clear Time (g_c+I1), s		4.2	4.3	2.0		3.4	2.1	8.2
Green Ext Time (p_c), s		0.1	0.0	6.2		0.1	0.4	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	4	786	42	38	702	30	34	34	20	8
v/c Ratio	0.04	0.35	0.04	0.32	0.20	0.03	0.11	0.09	0.07	0.02
Control Delay	32.5	1.6	0.2	43.1	3.7	0.2	39.0	13.5	38.2	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	1.6	0.2	43.1	3.7	0.2	39.0	13.5	38.2	22.3
Queue Length 50th (ft)	3	8	0	15	11	0	21	1	12	1
Queue Length 95th (ft)	m6	23	m0	34	18	m0	50	28	34	14
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	147	2244	976	206	3444	1042	299	362	293	348
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.35	0.04	0.18	0.20	0.03	0.11	0.09	0.07	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	103	599	70	96	495	111	132	258	45	238	597	159
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	112	651	16	107	550	25	148	290	12	317	796	77
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.89	0.89	0.89	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	1516	467	164	1549	478	211	1182	524	494	1503	668
Arrive On Green	0.05	0.30	0.30	0.10	0.61	0.61	0.06	0.33	0.33	0.14	0.42	0.42
Sat Flow, veh/h	3442	5085	1567	3442	5085	1568	3442	3539	1569	3442	3539	1572
Grp Volume(v), veh/h	112	651	16	107	550	25	148	290	12	317	796	77
Grp Sat Flow(s),veh/h/ln	1721	1695	1567	1721	1695	1568	1721	1770	1569	1721	1770	1572
Q Serve(g_s), s	3.6	11.4	0.6	3.3	6.0	0.5	4.7	6.6	0.6	9.6	18.5	3.3
Cycle Q Clear(g_c), s	3.6	11.4	0.6	3.3	6.0	0.5	4.7	6.6	0.6	9.6	18.5	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	1516	467	164	1549	478	211	1182	524	494	1503	668
V/C Ratio(X)	0.66	0.43	0.03	0.65	0.36	0.05	0.70	0.25	0.02	0.64	0.53	0.12
Avail Cap(c_a), veh/h	310	1516	467	282	1549	478	372	1182	524	654	1503	668
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	31.4	17.6	49.3	16.3	6.8	51.1	26.8	24.8	44.9	23.7	19.3
Incr Delay (d2), s/veh	4.3	0.9	0.1	4.2	0.6	0.2	4.2	0.5	0.1	1.4	1.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	5.5	0.4	1.7	2.9	0.3	2.3	3.3	0.3	4.7	9.3	1.5
LnGrp Delay(d),s/veh	56.2	32.3	17.8	53.5	16.9	7.0	55.4	27.3	24.9	46.2	25.1	19.7
LnGrp LOS	E	C	B	D	B	A	E	C	C	D	C	B
Approach Vol, veh/h		779			682			450			1190	
Approach Delay, s/veh		35.4			22.3			36.5			30.4	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	42.0	19.1	38.0	10.8	52.1	9.5	47.7
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	21.1	37.099998	9.1	33.099998	12.0	47.1	10.0	33.1
Max Q Clear Time (g_c+I1), s	11.6	8.6	5.3	13.4	6.7	20.5	5.6	8.0
Green Ext Time (p_c), s	4.3	1.8	0.2	4.1	0.2	7.3	0.1	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	112	651	76	107	550	123	148	290	51	317	796	212
v/c Ratio	0.44	0.46	0.14	0.37	0.38	0.23	0.51	0.27	0.09	0.50	0.55	0.29
Control Delay	49.4	15.8	1.4	66.3	45.2	21.1	58.4	32.0	0.3	47.3	29.3	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	15.8	1.4	66.3	45.2	21.1	58.4	32.0	0.3	47.3	29.3	7.1
Queue Length 50th (ft)	28	90	0	40	142	36	57	88	0	114	245	20
Queue Length 95th (ft)	56	110	0	68	178	84	90	124	0	131	247	43
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	286	1402	528	286	1451	535	343	1094	574	629	1441	727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.46	0.14	0.37	0.38	0.23	0.43	0.27	0.09	0.50	0.55	0.29

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	698	83	255	676	29	112	90	164	48	98	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	34	767	20	268	712	15	144	115	29	60	122	9
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.78	0.78	0.78	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	1625	501	471	2840	876	395	546	459	367	979	72
Arrive On Green	0.05	0.64	0.64	0.35	0.74	0.74	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	5085	1568	1774	5085	1569	1244	1863	1567	1231	3342	244
Grp Volume(v), veh/h	34	767	20	268	712	15	144	115	29	60	64	67
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1569	1244	1863	1567	1231	1770	1817
Q Serve(g_s), s	2.1	8.8	0.5	13.8	5.0	0.3	10.9	5.3	1.5	4.4	3.0	3.1
Cycle Q Clear(g_c), s	2.1	8.8	0.5	13.8	5.0	0.3	13.9	5.3	1.5	9.6	3.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	47	1625	501	471	2840	876	395	546	459	367	518	532
V/C Ratio(X)	0.72	0.47	0.04	0.57	0.25	0.02	0.36	0.21	0.06	0.16	0.12	0.13
Avail Cap(c_a), veh/h	157	1625	501	581	2840	876	395	546	459	367	518	532
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	15.5	14.0	31.3	7.1	6.5	34.4	30.1	28.8	33.7	29.3	29.3
Incr Delay (d2), s/veh	16.7	0.9	0.1	1.0	0.2	0.0	2.6	0.9	0.3	1.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.2	0.2	6.9	2.3	0.1	4.0	2.8	0.7	1.6	1.5	1.6
LnGrp Delay(d),s/veh	69.8	16.4	14.1	32.3	7.3	6.5	37.0	31.0	29.0	34.7	29.8	29.8
LnGrp LOS	E	B	B	C	A	A	D	C	C	C	C	C
Approach Vol, veh/h		821			995			288			191	
Approach Delay, s/veh		18.5			14.0			33.8			31.3	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		38.0	41.0	41.0		38.0	14.0	68.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		33.1	37.0	36.1		33.1	10.0	63.1
Max Q Clear Time (g_c+I1), s		15.9	15.8	10.8		11.6	4.1	7.0
Green Ext Time (p_c), s		2.0	0.8	5.4		2.1	0.4	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	34	767	91	268	712	31	144	115	210	60	147
v/c Ratio	0.30	0.50	0.17	0.59	0.27	0.04	0.36	0.19	0.33	0.15	0.13
Control Delay	71.4	9.6	3.7	26.3	4.2	0.1	36.1	32.0	5.9	32.5	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	9.6	3.7	26.3	4.2	0.1	36.1	32.0	5.9	32.5	26.5
Queue Length 50th (ft)	29	82	7	199	30	0	89	67	0	34	37
Queue Length 95th (ft)	m60	98	21	298	32	0	132	102	33	64	57
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	147	1529	531	545	2673	819	397	611	646	406	1139
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.50	0.17	0.49	0.27	0.04	0.36	0.19	0.33	0.15	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	78	769	46	65	842	72	89	58	26	169	69	40
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	82	809	22	69	896	30	109	71	6	172	70	13
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.82	0.82	0.82	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	2287	704	90	2180	671	521	697	588	523	697	588
Arrive On Green	0.06	0.45	0.45	0.02	0.14	0.14	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1774	5085	1566	1774	5085	1565	1301	1863	1571	1308	1863	1571
Grp Volume(v), veh/h	82	809	22	69	896	30	109	71	6	172	70	13
Grp Sat Flow(s),veh/h/ln	1774	1695	1566	1774	1695	1565	1301	1863	1571	1308	1863	1571
Q Serve(g_s), s	5.0	11.4	0.9	4.3	17.6	1.8	6.5	2.7	0.3	10.8	2.7	0.6
Cycle Q Clear(g_c), s	5.0	11.4	0.9	4.3	17.6	1.8	9.2	2.7	0.3	13.5	2.7	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	2287	704	90	2180	671	521	697	588	523	697	588
V/C Ratio(X)	0.73	0.35	0.03	0.77	0.41	0.04	0.21	0.10	0.01	0.33	0.10	0.02
Avail Cap(c_a), veh/h	276	2287	704	258	2180	671	521	697	588	523	697	588
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	19.8	16.9	53.4	34.5	27.7	25.4	22.4	21.6	26.8	22.4	21.7
Incr Delay (d2), s/veh	7.8	0.4	0.1	11.7	0.5	0.1	0.9	0.3	0.0	1.7	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	2.7	5.4	0.4	2.4	8.4	0.8	2.5	1.5	0.1	4.2	1.4	0.3
LnGrp Delay(d),s/veh	58.4	20.2	16.9	65.1	35.0	27.8	26.3	22.7	21.6	28.5	22.6	21.8
LnGrp LOS	E	C	B	E	D	C	C	C	C	C	C	C
Approach Vol, veh/h		913			995			186			255	
Approach Delay, s/veh		23.5			36.9			24.7			26.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		46.0	9.6	64.4		46.0	22.0	52.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		41.1	16.0	49.1		41.1	17.1	47.099998
Max Q Clear Time (g_c+I1), s		11.2	6.3	13.4		15.5	7.0	19.6
Green Ext Time (p_c), s		1.8	0.1	6.4		1.8	0.9	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	809	48	69	896	77	109	71	32	172	70	41
v/c Ratio	0.35	0.33	0.06	0.47	0.41	0.11	0.24	0.11	0.05	0.39	0.11	0.07
Control Delay	35.9	6.0	0.8	49.3	8.9	2.4	30.2	27.7	0.2	33.1	27.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	6.0	0.8	49.3	8.9	2.4	30.2	27.7	0.2	33.1	27.6	0.2
Queue Length 50th (ft)	65	39	0	41	107	5	60	37	0	100	37	0
Queue Length 95th (ft)	121	58	m2	73	178	21	96	66	0	165	71	0
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	265	2420	746	236	2182	691	446	638	591	446	638	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.33	0.06	0.29	0.41	0.11	0.24	0.11	0.05	0.39	0.11	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	873	85	108	945	83	66	20	88	219	35	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	60	909	34	116	1016	48	80	24	28	226	36	4
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.83	0.83	0.83	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	1832	562	190	2193	678	594	715	635	589	753	635
Arrive On Green	0.01	0.12	0.12	0.21	0.86	0.86	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	5085	1561	1774	5085	1572	1353	1770	1572	1338	1863	1572
Grp Volume(v), veh/h	60	909	34	116	1016	48	80	24	28	226	36	4
Grp Sat Flow(s),veh/h/ln	1774	1695	1561	1774	1695	1572	1353	1770	1572	1338	1863	1572
Q Serve(g_s), s	3.8	19.1	2.2	6.7	5.2	0.5	4.4	0.9	1.2	14.1	1.3	0.2
Cycle Q Clear(g_c), s	3.8	19.1	2.2	6.7	5.2	0.5	5.7	0.9	1.2	15.3	1.3	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	1832	562	190	2193	678	594	715	635	589	753	635
V/C Ratio(X)	0.77	0.50	0.06	0.61	0.46	0.07	0.13	0.03	0.04	0.38	0.05	0.01
Avail Cap(c_a), veh/h	171	1832	562	281	2193	678	594	715	635	589	753	635
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	40.6	33.1	42.7	4.8	4.5	22.4	20.5	20.6	25.3	20.7	20.3
Incr Delay (d2), s/veh	14.1	0.9	0.2	2.7	0.6	0.2	0.5	0.1	0.1	1.9	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	2.2	9.1	1.0	3.4	2.4	0.2	1.7	0.5	0.6	5.5	0.7	0.1
LnGrp Delay(d),s/veh	69.7	41.5	33.3	45.4	5.4	4.7	22.9	20.6	20.8	27.2	20.8	20.3
LnGrp LOS	E	D	C	D	A	A	C	C	C	C	C	C
Approach Vol, veh/h		1003			1180			132			266	
Approach Delay, s/veh		42.9			9.3			22.0			26.2	
Approach LOS		D			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		51.0	23.0	46.0		51.0	9.0	60.0
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		46.1	18.1	41.099998		46.1	11.0	49.1
Max Q Clear Time (g_c+I1), s		7.7	8.7	21.1		17.3	5.8	7.2
Green Ext Time (p_c), s		1.5	3.8	6.1		1.4	0.0	9.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	60	909	89	116	1016	89	80	130	226	36	11
v/c Ratio	0.45	0.52	0.16	0.41	0.45	0.12	0.15	0.11	0.48	0.05	0.02
Control Delay	47.7	29.7	13.8	30.1	7.6	0.9	25.3	6.8	32.1	23.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	29.7	13.8	30.1	7.6	0.9	25.3	6.8	32.1	23.6	0.1
Queue Length 50th (ft)	48	234	32	85	88	1	40	5	131	17	0
Queue Length 95th (ft)	95	280	82	147	120	3	70	22	208	40	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	162	1741	569	280	2247	718	517	1231	472	715	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.52	0.16	0.41	0.45	0.12	0.15	0.11	0.48	0.05	0.02

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	195	895	102	127	690	63	186	367	253	177	355	328
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	217	994	33	144	784	15	214	422	111	181	362	115
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.87	0.87	0.87	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	340	1936	598	205	1696	523	293	1162	515	246	1085	480
Arrive On Green	0.20	0.76	0.76	0.06	0.33	0.33	0.09	0.33	0.33	0.07	0.31	0.31
Sat Flow, veh/h	3442	5085	1571	3442	5085	1569	3442	3539	1569	3442	3539	1568
Grp Volume(v), veh/h	217	994	33	144	784	15	214	422	111	181	362	115
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1569	1721	1770	1569	1721	1770	1568
Q Serve(g_s), s	6.4	8.5	0.4	4.6	13.5	0.6	6.7	10.1	5.7	5.7	8.8	6.1
Cycle Q Clear(g_c), s	6.4	8.5	0.4	4.6	13.5	0.6	6.7	10.1	5.7	5.7	8.8	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	1936	598	205	1696	523	293	1162	515	246	1085	480
V/C Ratio(X)	0.64	0.51	0.06	0.70	0.46	0.03	0.73	0.36	0.22	0.74	0.33	0.24
Avail Cap(c_a), veh/h	467	1936	598	340	1696	523	436	1162	515	402	1085	480
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	9.2	4.3	51.3	29.2	14.9	49.7	28.5	27.0	50.6	29.8	28.9
Incr Delay (d2), s/veh	1.7	0.8	0.1	4.3	0.9	0.1	3.5	0.9	1.0	4.3	0.8	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.9	0.3	2.3	6.5	0.3	3.4	5.1	2.6	2.9	4.4	2.8
LnGrp Delay(d),s/veh	44.5	10.1	4.5	55.6	30.1	15.0	53.2	29.4	28.0	54.9	30.6	30.1
LnGrp LOS	D	B	A	E	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1244			943			747			658	
Approach Delay, s/veh		15.9			33.8			36.0			37.2	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	41.4	10.6	56.0	14.4	39.0	24.6	42.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.9000001	4.9
Max Green Setting (Gmax), s	13.0	36.1	11.0	42.1	14.099998	34.1	17.099998	37.1
Max Q Clear Time (g_c+I1), s	7.7	12.1	6.6	10.5	8.7	10.8	8.4	15.5
Green Ext Time (p_c), s	0.2	3.8	0.1	8.8	0.7	2.6	2.6	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	994	113	144	784	72	214	422	291	181	362	335
v/c Ratio	0.47	0.54	0.18	0.51	0.50	0.13	0.50	0.38	0.45	0.56	0.36	0.51
Control Delay	31.0	12.0	1.0	59.2	35.2	0.4	53.4	33.5	10.5	58.8	35.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	12.0	1.0	59.2	35.2	0.4	53.4	33.5	10.5	58.8	35.5	8.6
Queue Length 50th (ft)	83	83	1	55	181	0	80	134	34	70	117	19
Queue Length 95th (ft)	126	107	6	87	217	0	117	176	102	106	162	98
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	457	1833	641	314	1572	574	429	1115	642	371	1005	653
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.54	0.18	0.46	0.50	0.13	0.50	0.38	0.45	0.49	0.36	0.51

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	229	58	339	95	138	69	468	933	70	159	714	289
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	279	71	0	107	155	0	478	952	33	173	776	196
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	245	208	134	379	169	522	1777	795	207	1117	495
Arrive On Green	0.10	0.13	0.00	0.08	0.11	0.00	0.29	0.50	0.50	0.12	0.32	0.32
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1774	3539	1583	1774	3539	1568
Grp Volume(v), veh/h	279	71	0	107	155	0	478	952	33	173	776	196
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1774	1770	1583	1774	1770	1568
Q Serve(g_s), s	8.1	3.5	0.0	6.1	4.2	0.0	26.6	18.7	1.1	9.7	19.6	7.3
Cycle Q Clear(g_c), s	8.1	3.5	0.0	6.1	4.2	0.0	26.6	18.7	1.1	9.7	19.6	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	245	208	134	379	169	522	1777	795	207	1117	495
V/C Ratio(X)	0.81	0.29	0.00	0.80	0.41	0.00	0.92	0.54	0.04	0.84	0.70	0.40
Avail Cap(c_a), veh/h	371	420	357	174	763	341	627	1777	795	348	1117	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	40.0	0.0	46.4	42.6	0.0	34.8	17.3	12.9	44.1	30.6	14.4
Incr Delay (d2), s/veh	12.1	0.6	0.0	17.7	0.7	0.0	16.3	0.3	0.0	8.5	3.6	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	1.9	0.0	3.6	2.1	0.0	15.4	9.2	0.5	5.2	10.1	4.0
LnGrp Delay(d),s/veh	57.1	40.7	0.0	64.2	43.3	0.0	51.1	17.6	12.9	52.6	34.2	16.8
LnGrp LOS	E	D		E	D		D	B	B	D	C	B
Approach Vol, veh/h		350			262			1463			1145	
Approach Delay, s/veh		53.8			51.8			28.5			34.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	56.1	11.7	18.3	35.0	37.1	14.2	15.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	20.0	49.2	10.0	23.0	30.1	32.200001	11.0	22.0
Max Q Clear Time (g_c+I1), s	11.7	20.7	8.1	5.5	28.6	21.6	10.1	6.2
Green Ext Time (p_c), s	0.3	9.4	0.0	1.1	1.5	4.2	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	279	71	413	107	155	78	478	952	71	173	776	314
v/c Ratio	0.78	0.31	0.74	0.67	0.40	0.27	0.88	0.57	0.09	0.69	0.71	0.54
Control Delay	63.0	46.8	13.1	69.2	47.2	2.8	53.7	23.0	3.0	58.3	38.2	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	46.8	13.1	69.2	47.2	2.8	53.7	23.0	3.0	58.3	38.2	19.8
Queue Length 50th (ft)	96	46	0	71	53	0	296	231	0	113	247	85
Queue Length 95th (ft)	#161	82	51	#168	85	4	#540	381	19	202	374	202
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	361	409	670	169	744	430	626	1695	805	338	1089	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.17	0.62	0.63	0.21	0.18	0.76	0.56	0.09	0.51	0.71	0.54

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	532	7	93	1	0	2	95	1005	2	8	795	365
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99
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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	611	8	14	1	0	0	97	1026	2	9	864	238
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	752	246	204	3	3	3	125	1872	4	17	1613	714
Arrive On Green	0.22	0.13	0.13	0.00	0.00	0.00	0.07	0.52	0.52	0.01	0.46	0.46
Sat Flow, veh/h	3442	1863	1547	1774	1863	1583	1774	3624	7	1774	3539	1566
Grp Volume(v), veh/h	611	8	14	1	0	0	97	501	527	9	864	238
Grp Sat Flow(s),veh/h/ln	1721	1863	1547	1774	1863	1583	1774	1770	1861	1774	1770	1566
Q Serve(g_s), s	9.7	0.2	0.5	0.0	0.0	0.0	3.1	11.0	11.0	0.3	10.1	5.6
Cycle Q Clear(g_c), s	9.7	0.2	0.5	0.0	0.0	0.0	3.1	11.0	11.0	0.3	10.1	5.6
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	752	246	204	3	3	3	125	914	962	17	1613	714
V/C Ratio(X)	0.81	0.03	0.07	0.32	0.00	0.00	0.78	0.55	0.55	0.54	0.54	0.33
Avail Cap(c_a), veh/h	904	972	807	219	713	606	219	914	962	219	1613	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	21.7	21.9	28.7	0.0	0.0	26.3	9.4	9.4	28.4	11.3	10.0
Incr Delay (d2), s/veh	4.8	0.1	0.1	51.7	0.0	0.0	10.0	2.4	2.2	25.1	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.1	0.2	0.1	0.0	0.0	1.9	5.9	6.2	0.3	5.2	2.6
LnGrp Delay(d),s/veh	26.2	21.8	22.0	80.3	0.0	0.0	36.3	11.7	11.6	53.4	12.5	11.3
LnGrp LOS	C	C	C	F			D	B	B	D	B	B
Approach Vol, veh/h		633			1			1125			1111	
Approach Delay, s/veh		26.0			80.3			13.8			12.6	
Approach LOS		C			F			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	34.6	5.0	12.5	8.9	31.1	17.5	0.0
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	26.2	7.1	30.0	7.1	26.2	15.1	22.0
Max Q Clear Time (g_c+I1), s	2.3	13.0	2.0	2.5	5.1	12.1	11.7	0.0
Green Ext Time (p_c), s	0.0	9.6	0.0	0.0	0.0	10.1	0.9	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	611	8	107	1	2	97	1028	9	864	397
v/c Ratio	0.75	0.02	0.20	0.01	0.01	0.51	0.55	0.06	0.60	0.52
Control Delay	33.7	19.0	3.0	34.0	0.0	42.9	16.0	33.4	20.3	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.7	19.0	3.0	34.0	0.0	42.9	16.0	33.4	20.3	10.3
Queue Length 50th (ft)	111	2	0	0	0	36	100	3	129	36
Queue Length 95th (ft)	#287	12	17	6	0	#130	#447	20	#326	170
Internal Link Dist (ft)		385					1059		1165	
Turn Bay Length (ft)	200		150	130	85	265		265		100
Base Capacity (vph)	810	879	804	196	663	196	1854	196	1450	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.01	0.13	0.01	0.00	0.49	0.55	0.05	0.60	0.52

Intersection Summary

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

Intersection	
Int Delay, s/veh	5.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	35	199	962	57	150	773
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	95	95	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	226	1013	60	161	831

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1791	556	0	0	1083	0
Stage 1	1053	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	72	475	-	-	640	-
Stage 1	297	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	53	467	-	-	635	-
Mov Cap-2 Maneuver	53	-	-	-	-	-
Stage 1	295	-	-	-	-	-
Stage 2	321	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	43.4	0	2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	53	467	635	-
HCM Lane V/C Ratio	-	-	0.75	0.484	0.254	-
HCM Control Delay (s)	-	-	178.3	19.7	12.6	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	3.1	2.6	1	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	3	15	32	42	20	19	46	622	122
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	73	73	73	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	21	45	58	27	26	53	723	142

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1014	1504	244	1220	1435	453	458	0	0
Stage 1	522	522	-	911	911	-	-	-	-
Stage 2	492	982	-	309	524	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	193	120	757	136	133	554	1099	-	-
Stage 1	506	529	-	295	351	-	-	-	-
Stage 2	527	325	-	676	528	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	153	107	744	108	119	545	1090	-	-
Mov Cap-2 Maneuver	268	205	-	209	226	-	-	-	-
Stage 1	477	502	-	278	331	-	-	-	-
Stage 2	434	307	-	577	501	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	15.8	23.8	0.5
HCM LOS	C	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1090	-	-	268	405	209	316	761	-	-
HCM Lane V/C Ratio	0.049	-	-	0.016	0.163	0.275	0.169	0.043	-	-
HCM Control Delay (s)	8.5	-	-	18.6	15.6	28.6	18.7	9.9	-	-
HCM Lane LOS	A	-	-	C	C	D	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0	0.6	1.1	0.6	0.1	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	28	378	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	85	85	85
Heavy Vehicles, %	2	2	2
Mvmt Flow	33	445	4

Major/Minor	Major2		
Conflicting Flow All	875	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	767	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	761	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.7
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	81	95	52	80	248	80	817	70	182	631	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	94	4	57	87	27	86	878	66	196	678	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	576	253	314	303	253	110	1459	110	247	1838	27
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.06	0.44	0.44	0.14	0.51	0.51
Sat Flow, veh/h	1256	3539	1554	1273	1863	1554	1774	3335	251	1774	3570	53
Grp Volume(v), veh/h	14	94	4	57	87	27	86	466	478	196	336	352
Grp Sat Flow(s),veh/h/ln	1256	1770	1554	1273	1863	1554	1774	1770	1816	1774	1770	1853
Q Serve(g_s), s	0.5	1.2	0.1	2.1	2.2	0.8	2.5	10.7	10.7	5.7	6.0	6.0
Cycle Q Clear(g_c), s	2.7	1.2	0.1	3.3	2.2	0.8	2.5	10.7	10.7	5.7	6.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.03
Lane Grp Cap(c), veh/h	289	576	253	314	303	253	110	774	795	247	911	954
V/C Ratio(X)	0.05	0.16	0.02	0.18	0.29	0.11	0.78	0.60	0.60	0.79	0.37	0.37
Avail Cap(c_a), veh/h	605	1469	645	635	773	645	268	774	795	368	911	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	19.1	18.6	20.5	19.5	18.9	24.5	11.4	11.4	22.1	7.7	7.7
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.5	0.2	11.3	3.4	3.4	6.9	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.1	0.8	1.2	0.3	1.6	5.9	6.1	3.3	3.2	3.3
LnGrp Delay(d),s/veh	20.7	19.2	18.7	20.8	20.0	19.1	35.8	14.8	14.7	29.0	8.8	8.8
LnGrp LOS	C	B	B	C	C	B	D	B	B	C	A	A
Approach Vol, veh/h		112			171			1030			884	
Approach Delay, s/veh		19.4			20.1			16.5			13.3	
Approach LOS		B			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	11.4	28.1		13.5	7.3	32.2		13.5
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	11.0	23.2		22.0	8.0	26.2		22.0
Max Q Clear Time (g_c+I1), s	7.7	12.7		4.7	4.5	8.0		5.3
Green Ext Time (p_c), s	0.2	6.6		1.2	0.0	9.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	94	110	57	87	270	86	953	196	689
v/c Ratio	0.06	0.15	0.31	0.26	0.27	0.55	0.38	0.67	0.63	0.36
Control Delay	19.2	20.0	7.0	22.8	22.1	7.6	30.4	18.2	34.4	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	20.0	7.0	22.8	22.1	7.6	30.4	18.2	34.4	11.0
Queue Length 50th (ft)	4	14	0	17	27	0	26	125	60	73
Queue Length 95th (ft)	15	28	28	43	57	48	76	#271	#171	166
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	500	1368	666	494	720	764	249	1431	342	1893
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.07	0.17	0.12	0.12	0.35	0.35	0.67	0.57	0.36

Intersection Summary

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

Intersection	
Int Delay, s/veh	4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	243	61	30	203	149	63
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	276	69	33	221	167	71

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	286	0	462	296
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1276	-	543	743
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	837	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1265	-	520	731
Mov Cap-2 Maneuver	-	-	-	-	593	-
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	808	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	628	-	-	1265	-
HCM Lane V/C Ratio	0.379	-	-	0.026	-
HCM Control Delay (s)	14.2	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	69	134	124	0	16	149	124	0	94	172	8
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.91	0.91	0.91	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	72	140	129	0	18	164	136	0	104	191	9
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	14.1	12.5	13.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	0%	100%	0%
Vol Thru, %	0%	96%	0%	52%	82%	38%	0%	72%
Vol Right, %	0%	4%	0%	48%	0%	62%	0%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	180	69	258	91	199	47	138
LT Vol	0	172	0	134	75	75	0	100
Through Vol	0	8	0	124	0	124	0	38
RT Vol	94	0	69	0	16	0	47	0
Lane Flow Rate	104	200	72	269	99	218	52	153
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.214	0.379	0.144	0.475	0.192	0.383	0.111	0.297
Departure Headway (Hd)	7.482	6.94	7.334	6.48	6.959	6.433	7.682	6.973
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	483	522	492	559	518	563	469	518
Service Time	5.182	4.64	5.034	4.18	4.669	4.133	5.387	4.677
HCM Lane V/C Ratio	0.215	0.383	0.146	0.481	0.191	0.387	0.111	0.295
HCM Control Delay	12.2	13.8	11.3	14.9	11.3	13.1	11.3	12.6
HCM Lane LOS	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.8	1.8	0.5	2.5	0.7	1.8	0.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	47	100	38
Peak Hour Factor	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	111	42
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	12.3
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	280	0	0	58	288	717	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	304	0	0	63	324	806	93

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1952	2448	389	2033	2422	469	747	0	0
Stage 1	892	892	-	1509	1509	-	-	-	-
Stage 2	1060	1556	-	524	913	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	38	31	610	33	32	541	857	-	-
Stage 1	303	358	-	126	182	-	-	-	-
Stage 2	239	172	-	504	350	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	21	17	600	10	17	532	850	-	-
Mov Cap-2 Maneuver	39	21	-	156	~ -31	-	-	-	-
Stage 1	186	315	-	77	112	-	-	-	-
Stage 2	129	106	-	219	308	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	17	12.7	3.1
HCM LOS	C	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	850	-	-	600	532	739	-	-
HCM Lane V/C Ratio	0.381	-	-	0.507	0.119	0.112	-	-
HCM Control Delay (s)	11.8	-	-	17	12.7	10.5	-	-
HCM Lane LOS	B	-	-	C	B	B	-	-
HCM 95th %tile Q(veh)	1.8	-	-	2.9	0.4	0.4	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	78	654	39
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	94	94	94
Heavy Vehicles, %	2	2	2
Mvmt Flow	83	696	41

Major/Minor	Major2		
Conflicting Flow All	909	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	745	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	739	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.1
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	796	30	331	1040	116	26	310	501	98	145	5
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	20	838	8	356	1118	76	30	360	235	102	151	1
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	1089	482	395	1815	807	41	746	329	129	921	407
Arrive On Green	0.02	0.31	0.31	0.22	0.51	0.51	0.02	0.21	0.21	0.07	0.26	0.26
Sat Flow, veh/h	1774	3539	1568	1774	3539	1574	1774	3539	1561	1774	3539	1565
Grp Volume(v), veh/h	20	838	8	356	1118	76	30	360	235	102	151	1
Grp Sat Flow(s),veh/h/ln	1774	1770	1568	1774	1770	1574	1774	1770	1561	1774	1770	1565
Q Serve(g_s), s	1.1	20.5	0.3	18.6	21.5	2.4	1.6	8.5	13.3	5.4	3.1	0.0
Cycle Q Clear(g_c), s	1.1	20.5	0.3	18.6	21.5	2.4	1.6	8.5	13.3	5.4	3.1	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	31	1089	482	395	1815	807	41	746	329	129	921	407
V/C Ratio(X)	0.65	0.77	0.02	0.90	0.62	0.09	0.74	0.48	0.71	0.79	0.16	0.00
Avail Cap(c_a), veh/h	149	1154	511	502	1859	827	149	1339	591	149	1339	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	46.6	30.0	23.0	36.1	16.5	11.9	46.3	33.1	35.0	43.5	27.3	26.1
Incr Delay (d2), s/veh	21.1	3.1	0.0	16.6	0.6	0.1	22.3	0.5	2.9	22.0	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	0.7	10.5	0.1	10.9	10.6	1.0	1.0	4.2	6.0	3.4	1.5	0.0
LnGrp Delay(d),s/veh	67.7	33.0	23.0	52.7	17.1	11.9	68.6	33.6	37.9	65.6	27.3	26.1
LnGrp LOS	E	C	C	D	B	B	E	C	D	E	C	C
Approach Vol, veh/h		866			1550			625			254	
Approach Delay, s/veh		33.7			25.0			36.9			42.7	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	25.0	25.2	34.2	6.2	29.7	5.6	53.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	36.1	27.0	31.1	8.0	36.1	8.0	50.1
Max Q Clear Time (g_c+I1), s	7.4	15.3	20.6	22.5	3.6	5.1	3.1	23.5
Green Ext Time (p_c), s	0.0	4.2	0.6	6.9	0.0	4.6	0.0	16.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	838	32	356	1118	125	30	360	583	102	151	5
v/c Ratio	0.18	0.86	0.06	0.86	0.62	0.15	0.26	0.43	0.87	0.74	0.14	0.01
Control Delay	55.7	47.8	0.2	61.3	23.1	7.5	57.3	35.4	27.0	82.8	30.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	47.8	0.2	61.3	23.1	7.5	57.3	35.4	27.0	82.8	30.0	0.0
Queue Length 50th (ft)	14	295	0	240	254	11	21	114	136	73	44	0
Queue Length 95th (ft)	41	#450	0	#441	466	54	52	149	257	#185	72	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	137	1069	553	464	1857	850	137	1241	797	137	1241	621
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.78	0.06	0.77	0.60	0.15	0.22	0.29	0.73	0.74	0.12	0.01

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	315	821	15	19	1006	244	37	21	35	297	4	169
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	332	864	15	22	1143	43	40	23	4	349	0	10
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	1636	28	31	1364	417	325	283	49	653	0	287
Arrive On Green	0.21	0.46	0.46	0.02	0.27	0.27	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3559	62	1774	5085	1554	1774	1542	268	3548	0	1558
Grp Volume(v), veh/h	332	430	449	22	1143	43	40	0	27	349	0	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1695	1554	1774	0	1810	1774	0	1558
Q Serve(g_s), s	21.9	20.8	20.8	1.5	25.5	2.5	2.3	0.0	1.5	10.7	0.0	0.6
Cycle Q Clear(g_c), s	21.9	20.8	20.8	1.5	25.5	2.5	2.3	0.0	1.5	10.7	0.0	0.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	371	813	851	31	1364	417	325	0	332	653	0	287
V/C Ratio(X)	0.90	0.53	0.53	0.72	0.84	0.10	0.12	0.00	0.08	0.53	0.00	0.03
Avail Cap(c_a), veh/h	458	813	851	118	1364	417	325	0	332	653	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	23.1	23.1	58.7	41.5	33.1	41.0	0.0	40.7	44.3	0.0	40.2
Incr Delay (d2), s/veh	17.4	2.4	2.3	24.7	5.8	0.5	0.8	0.0	0.5	3.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	10.7	11.2	0.9	12.7	1.1	1.2	0.0	0.8	5.5	0.0	0.3
LnGrp Delay(d),s/veh	63.6	25.6	25.5	83.4	47.3	33.5	41.8	0.0	41.1	47.5	0.0	40.5
LnGrp LOS	E	C	C	F	D	C	D		D	D		D
Approach Vol, veh/h		1211			1208			67			359	
Approach Delay, s/veh		36.0			47.5			41.5			47.3	
Approach LOS		D			D			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		26.9	12.0	60.1		27.0	35.0	37.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	55.2		22.1	31.0	32.2
Max Q Clear Time (g_c+I1), s		4.3	3.5	22.8		12.7	23.9	27.5
Green Ext Time (p_c), s		0.2	0.5	5.8		0.9	0.6	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	332	880	22	1143	277	40	61	176	174	197
v/c Ratio	0.86	0.55	0.23	0.88	0.48	0.11	0.17	0.60	0.59	0.46
Control Delay	68.1	27.1	62.2	54.0	8.8	44.4	22.2	57.3	56.8	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	27.1	62.2	54.0	8.8	44.4	22.2	57.3	56.8	9.7
Queue Length 50th (ft)	255	276	17	329	11	28	16	141	138	0
Queue Length 95th (ft)	#382	342	44	376	77	62	56	212	209	56
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	435	1590	112	1299	577	356	364	294	296	432
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.55	0.20	0.88	0.48	0.11	0.17	0.60	0.59	0.46

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	1059	18	43	1249	58	57	3	58	88	3	31
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	1092	11	47	1358	38	65	3	8	100	3	4
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2124	942	61	3233	999	396	108	288	392	174	232
Arrive On Green	0.00	1.00	1.00	0.03	0.64	0.64	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1386	446	1189	1381	720	960
Grp Volume(v), veh/h	14	1092	11	47	1358	38	65	0	11	100	0	7
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1386	0	1635	1381	0	1679
Q Serve(g_s), s	0.1	0.0	0.0	2.9	14.8	1.0	4.2	0.0	0.6	6.7	0.0	0.4
Cycle Q Clear(g_c), s	0.1	0.0	0.0	2.9	14.8	1.0	4.5	0.0	0.6	7.2	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.57
Lane Grp Cap(c), veh/h	2	2124	942	61	3233	999	396	0	396	392	0	407
V/C Ratio(X)	8.83	0.51	0.01	0.78	0.42	0.04	0.16	0.00	0.03	0.26	0.00	0.02
Avail Cap(c_a), veh/h	113	2124	942	190	3233	999	396	0	396	392	0	407
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.9	0.0	0.0	53.6	10.1	7.6	34.0	0.0	32.3	35.1	0.0	32.2
Incr Delay (d2), s/veh	3731.2	0.7	0.0	18.8	0.4	0.1	0.9	0.0	0.1	1.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.2	0.0	1.8	7.0	0.5	1.7	0.0	0.3	2.7	0.0	0.2
LnGrp Delay(d),s/veh	3787.2	0.7	0.0	72.3	10.5	7.7	34.9	0.0	32.5	36.7	0.0	32.3
LnGrp LOS	F	A	A	E	B	A	C		C	D		C
Approach Vol, veh/h		1117			1443			76			107	
Approach Delay, s/veh		48.2			12.5			34.5			36.4	
Approach LOS		D			B			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		32.0	7.8	80.2		32.0	12.0	76.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		27.1	12.0	67.1		27.1	7.1	71.099998
Max Q Clear Time (g_c+I1), s		6.5	4.9	2.0		9.2	2.1	16.8
Green Ext Time (p_c), s		0.5	0.0	9.9		0.5	0.1	13.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	1092	19	47	1358	63	65	69	100	38
v/c Ratio	0.14	0.51	0.02	0.37	0.41	0.06	0.21	0.17	0.34	0.10
Control Delay	39.5	3.6	0.1	64.9	9.2	1.7	40.1	10.7	42.8	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	3.6	0.1	64.9	9.2	1.7	40.1	10.7	42.8	13.7
Queue Length 50th (ft)	11	14	0	29	72	1	41	2	65	2
Queue Length 95th (ft)	m18	71	m0	m45	169	m5	80	38	116	30
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	118	2135	932	177	3317	1006	303	402	295	380
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.51	0.02	0.27	0.41	0.06	0.21	0.17	0.34	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	303	953	253	174	1093	220	238	609	113	378	443	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	326	1025	115	179	1127	118	251	641	24	425	498	45
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.97	0.97	0.97	0.95	0.95	0.95	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	1862	575	237	1676	517	334	896	396	514	1080	479
Arrive On Green	0.11	0.37	0.37	0.14	0.66	0.66	0.10	0.25	0.25	0.15	0.31	0.31
Sat Flow, veh/h	3442	5085	1570	3442	5085	1569	3442	3539	1565	3442	3539	1568
Grp Volume(v), veh/h	326	1025	115	179	1127	118	251	641	24	425	498	45
Grp Sat Flow(s),veh/h/ln	1721	1695	1570	1721	1695	1569	1721	1770	1565	1721	1770	1568
Q Serve(g_s), s	10.7	18.4	5.8	5.8	15.6	2.3	8.2	19.0	1.3	13.8	13.1	1.7
Cycle Q Clear(g_c), s	10.7	18.4	5.8	5.8	15.6	2.3	8.2	19.0	1.3	13.8	13.1	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	1862	575	237	1676	517	334	896	396	514	1080	479
V/C Ratio(X)	0.84	0.55	0.20	0.75	0.67	0.23	0.75	0.72	0.06	0.83	0.46	0.09
Avail Cap(c_a), veh/h	479	1862	575	302	1676	517	419	896	396	599	1080	479
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	28.9	24.9	48.6	15.8	6.0	50.6	39.2	32.6	47.5	32.3	15.0
Incr Delay (d2), s/veh	10.3	1.2	0.8	7.0	1.9	0.9	5.7	4.9	0.3	8.3	1.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	8.8	2.6	2.9	7.5	1.4	4.1	9.9	0.6	7.1	6.6	1.0
LnGrp Delay(d),s/veh	60.2	30.1	25.7	55.6	17.7	6.9	56.3	44.0	32.9	55.8	33.7	15.4
LnGrp LOS	E	C	C	E	B	A	E	D	C	E	C	B
Approach Vol, veh/h		1466			1424			916			968	
Approach Delay, s/veh		36.5			21.6			47.1			42.5	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	34.0	17.8	47.0	15.2	40.0	17.0	47.8
Change Period (Y+Rc), s	4.0	4.9	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	20.0	29.1	10.1	42.099998	14.0	35.1	16.0	37.1
Max Q Clear Time (g_c+I1), s	15.8	21.0	7.8	20.4	10.2	15.1	12.7	17.6
Green Ext Time (p_c), s	1.1	2.6	0.2	7.5	1.0	3.1	0.4	8.6

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	326	1025	272	179	1127	227	251	641	119	425	498	219
v/c Ratio	0.76	0.56	0.39	0.57	0.68	0.37	0.68	0.75	0.23	0.79	0.48	0.36
Control Delay	52.1	22.7	5.1	40.9	22.6	6.0	61.2	48.3	2.1	59.6	36.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	22.7	5.1	40.9	22.6	6.0	61.2	48.3	2.1	59.6	36.8	6.0
Queue Length 50th (ft)	106	227	21	54	119	4	96	243	0	163	167	0
Queue Length 95th (ft)	164	260	47	95	206	50	141	311	10	217	217	55
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	457	1829	699	314	1660	608	400	858	508	572	1035	605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.56	0.39	0.57	0.68	0.37	0.63	0.75	0.23	0.74	0.48	0.36

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	1179	91	256	1198	49	156	175	241	87	92	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	65	1228	31	275	1288	27	162	182	62	106	112	6
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.96	0.96	0.96	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	1937	598	426	2904	896	357	484	407	265	888	47
Arrive On Green	0.03	0.26	0.26	0.48	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5085	1571	1774	5085	1569	1258	1863	1565	1125	3416	182
Grp Volume(v), veh/h	65	1228	31	275	1288	27	162	182	62	106	58	60
Grp Sat Flow(s),veh/h/ln	1774	1695	1571	1774	1695	1569	1258	1863	1565	1125	1770	1828
Q Serve(g_s), s	4.2	24.8	1.7	13.5	0.0	0.0	13.1	9.3	3.5	9.9	2.9	2.9
Cycle Q Clear(g_c), s	4.2	24.8	1.7	13.5	0.0	0.0	16.0	9.3	3.5	19.2	2.9	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	88	1937	598	426	2904	896	357	484	407	265	460	475
V/C Ratio(X)	0.74	0.63	0.05	0.65	0.44	0.03	0.45	0.38	0.15	0.40	0.13	0.13
Avail Cap(c_a), veh/h	153	1937	598	490	2904	896	357	484	407	265	460	475
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	35.9	27.3	26.4	0.0	0.0	38.9	35.1	33.0	43.0	32.8	32.8
Incr Delay (d2), s/veh	8.8	1.2	0.1	1.9	0.4	0.0	4.1	2.2	0.8	4.5	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	2.3	11.9	0.8	6.8	0.1	0.0	5.0	5.1	1.6	3.4	1.5	1.5
LnGrp Delay(d),s/veh	64.0	37.2	27.5	28.3	0.4	0.0	43.0	37.3	33.8	47.5	33.3	33.3
LnGrp LOS	E	D	C	C	A	A	D	D	C	D	C	C
Approach Vol, veh/h		1324			1590			406			224	
Approach Delay, s/veh		38.3			5.2			39.1			40.0	
Approach LOS		D			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		35.0	36.0	49.0		35.0	14.0	71.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		30.1	32.0	44.1		30.1	10.0	66.1
Max Q Clear Time (g_c+I1), s		18.0	15.5	26.8		21.2	6.2	2.0
Green Ext Time (p_c), s		2.4	0.9	7.9		2.0	0.4	12.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	65	1228	95	275	1288	53	162	182	251	106	133
v/c Ratio	0.50	0.66	0.15	0.65	0.46	0.06	0.48	0.35	0.41	0.38	0.14
Control Delay	57.9	12.5	1.4	42.8	3.3	0.2	43.3	38.5	6.6	41.7	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	12.5	1.4	42.8	3.3	0.2	43.3	38.5	6.6	41.7	30.2
Queue Length 50th (ft)	54	49	0	226	44	0	109	117	0	69	36
Queue Length 95th (ft)	m91	130	m0	317	51	m0	182	187	65	113	57
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	147	1868	627	472	2800	855	340	517	608	280	966
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.66	0.15	0.58	0.46	0.06	0.48	0.35	0.41	0.38	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	1230	120	68	1301	114	148	96	90	152	101	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	126	1255	90	72	1369	68	153	99	24	177	117	10
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.97	0.97	0.97	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	2685	828	93	2321	715	378	557	468	388	557	468
Arrive On Green	0.23	1.00	1.00	0.02	0.15	0.15	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	5085	1568	1774	5085	1566	1250	1863	1567	1254	1863	1567
Grp Volume(v), veh/h	126	1255	90	72	1369	68	153	99	24	177	117	10
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1566	1250	1863	1567	1254	1863	1567
Q Serve(g_s), s	7.3	0.0	0.0	4.6	28.6	4.3	11.9	4.5	1.2	13.9	5.4	0.5
Cycle Q Clear(g_c), s	7.3	0.0	0.0	4.6	28.6	4.3	17.3	4.5	1.2	18.4	5.4	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	2685	828	93	2321	715	378	557	468	388	557	468
V/C Ratio(X)	0.61	0.47	0.11	0.77	0.59	0.10	0.40	0.18	0.05	0.46	0.21	0.02
Avail Cap(c_a), veh/h	297	2685	828	187	2321	715	378	557	468	388	557	468
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	0.0	0.0	55.4	38.5	28.2	36.4	29.6	28.5	36.4	29.9	28.2
Incr Delay (d2), s/veh	2.3	0.5	0.2	10.1	0.9	0.2	3.2	0.7	0.2	3.8	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.1	0.0	2.5	13.6	1.9	4.5	2.4	0.6	5.2	2.9	0.2
LnGrp Delay(d),s/veh	43.8	0.5	0.2	65.5	39.4	28.4	39.6	30.3	28.7	40.3	30.8	28.3
LnGrp LOS	D	A	A	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		1471			1509			276			304	
Approach Delay, s/veh		4.1			40.1			35.3			36.2	
Approach LOS		A			D			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		39.0	10.0	71.0		39.0	24.0	57.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		34.1	12.0	60.1		34.1	19.1	52.099998
Max Q Clear Time (g_c+I1), s		19.3	6.6	2.0		20.4	9.3	30.6
Green Ext Time (p_c), s		2.2	0.1	12.9		2.1	4.3	10.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	126	1255	122	72	1369	120	153	99	93	177	117	59
v/c Ratio	0.43	0.46	0.15	0.50	0.62	0.17	0.44	0.19	0.18	0.49	0.22	0.12
Control Delay	25.4	6.5	1.4	63.4	9.9	2.2	40.2	33.7	6.7	41.3	34.2	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	6.5	1.4	63.4	9.9	2.2	40.2	33.7	6.7	41.3	34.2	2.0
Queue Length 50th (ft)	61	80	1	50	192	12	97	58	0	114	69	0
Queue Length 95th (ft)	m112	94	m8	m73	270	m19	164	104	37	177	113	7
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	295	2728	840	177	2207	703	344	529	507	360	529	507
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.46	0.15	0.41	0.62	0.17	0.44	0.19	0.18	0.49	0.22	0.12

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	1322	102	115	1383	120	100	57	100	201	36	28
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	121	1392	64	122	1471	89	109	62	29	212	38	8
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	2290	705	149	2328	720	496	803	351	473	626	527
Arrive On Green	0.03	0.15	0.15	0.17	0.92	0.92	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1774	5085	1566	1774	5085	1573	1344	2390	1046	1291	1863	1569
Grp Volume(v), veh/h	121	1392	64	122	1471	89	109	45	46	212	38	8
Grp Sat Flow(s),veh/h/ln	1774	1695	1566	1774	1695	1573	1344	1770	1667	1291	1863	1569
Q Serve(g_s), s	7.7	29.1	4.0	7.5	6.6	0.6	6.8	2.0	2.1	15.2	1.6	0.4
Cycle Q Clear(g_c), s	7.7	29.1	4.0	7.5	6.6	0.6	8.4	2.0	2.1	17.4	1.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	150	2290	705	149	2328	720	496	594	560	473	626	527
V/C Ratio(X)	0.80	0.61	0.09	0.82	0.63	0.12	0.22	0.08	0.08	0.45	0.06	0.02
Avail Cap(c_a), veh/h	266	2290	705	252	2328	720	496	594	560	473	626	527
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	38.9	28.2	46.3	2.9	2.6	28.4	25.7	25.7	31.7	25.5	25.2
Incr Delay (d2), s/veh	8.6	1.1	0.2	6.8	0.8	0.2	1.0	0.2	0.3	3.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	13.9	1.8	4.0	2.7	0.3	2.7	1.0	1.0	5.8	0.8	0.2
LnGrp Delay(d),s/veh	62.8	40.0	28.5	53.2	3.7	2.9	29.4	25.9	26.0	34.7	25.7	25.2
LnGrp LOS	E	D	C	D	A	A	C	C	C	C	C	C
Approach Vol, veh/h		1577			1682			200			258	
Approach Delay, s/veh		41.3			7.3			27.8			33.1	
Approach LOS		D			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		43.0	21.0	56.0		43.0	13.6	63.4
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		38.1	16.1	51.099998		38.1	17.0	51.1
Max Q Clear Time (g_c+I1), s		10.4	9.5	31.1		19.4	9.7	8.6
Green Ext Time (p_c), s		1.8	0.3	9.9		1.6	0.1	15.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	121	1392	107	122	1471	128	109	171	212	38	29
v/c Ratio	0.62	0.64	0.16	0.49	0.63	0.17	0.26	0.16	0.57	0.06	0.05
Control Delay	62.7	17.4	4.7	29.7	6.3	0.9	32.5	11.9	41.1	29.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	17.4	4.7	29.7	6.3	0.9	32.5	11.9	41.1	29.1	0.2
Queue Length 50th (ft)	95	238	11	87	94	1	63	17	136	21	0
Queue Length 95th (ft)	148	369	31	m119	146	m4	112	44	221	47	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	250	2165	683	250	2327	741	426	1071	375	591	555
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.64	0.16	0.49	0.63	0.17	0.26	0.16	0.57	0.06	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	371	1005	187	243	1112	129	342	400	129	161	362	313
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	408	1104	97	261	1196	38	364	426	32	185	416	68
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	473	1953	603	326	1697	523	471	1026	454	260	809	357
Arrive On Green	0.27	0.77	0.77	0.09	0.33	0.33	0.14	0.29	0.29	0.08	0.23	0.23
Sat Flow, veh/h	3442	5085	1571	3442	5085	1569	3442	3539	1567	3442	3539	1563
Grp Volume(v), veh/h	408	1104	97	261	1196	38	364	426	32	185	416	68
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1569	1721	1770	1567	1721	1770	1563
Q Serve(g_s), s	12.9	10.2	1.2	8.5	23.4	1.9	11.7	11.1	1.3	6.0	11.7	4.0
Cycle Q Clear(g_c), s	12.9	10.2	1.2	8.5	23.4	1.9	11.7	11.1	1.3	6.0	11.7	4.0
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	473	1953	603	326	1697	523	471	1026	454	260	809	357
V/C Ratio(X)	0.86	0.57	0.16	0.80	0.70	0.07	0.77	0.42	0.07	0.71	0.51	0.19
Avail Cap(c_a), veh/h	576	1953	603	452	1697	523	542	1026	454	331	809	357
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	9.3	3.6	50.6	33.2	26.0	47.6	32.7	16.8	51.6	38.5	35.5
Incr Delay (d2), s/veh	8.4	0.9	0.4	6.9	2.5	0.3	6.0	1.2	0.3	5.1	2.3	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	6.7	4.6	0.8	4.3	11.4	0.9	6.0	5.6	0.7	3.0	6.0	1.8
LnGrp Delay(d),s/veh	48.8	10.2	4.0	57.5	35.6	26.3	53.5	34.0	17.1	56.6	40.8	36.7
LnGrp LOS	D	B	A	E	D	C	D	C	B	E	D	D
Approach Vol, veh/h		1609			1495			822			669	
Approach Delay, s/veh		19.6			39.2			42.0			44.8	
Approach LOS		B			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	12.6	38.0	14.8	54.5	19.6	31.0	26.4	43.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.9	4.9000001
Max Green Setting (Gmax), s	11.0	33.1	15.0	43.1	18.0	26.1	19.1	38.099998
Max Q Clear Time (g_c+I1), s	8.0	13.1	10.5	12.2	13.7	13.7	14.9	25.4
Green Ext Time (p_c), s	0.6	2.6	0.4	11.4	0.9	2.2	0.8	6.4

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	408	1104	205	261	1196	139	364	426	137	185	416	360
v/c Ratio	0.71	0.58	0.30	0.67	0.73	0.23	0.73	0.44	0.26	0.62	0.54	0.61
Control Delay	33.6	10.7	1.6	60.1	39.3	5.5	58.5	37.5	6.8	62.6	44.7	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	10.7	1.6	60.1	39.3	5.5	58.5	37.5	6.8	62.6	44.7	11.5
Queue Length 50th (ft)	160	130	0	100	301	0	139	143	0	72	151	23
Queue Length 95th (ft)	219	167	7	145	357	43	192	193	48	107	196	101
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	572	1914	677	429	1640	593	514	976	523	314	769	588
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.58	0.30	0.61	0.73	0.23	0.71	0.44	0.26	0.59	0.54	0.61

Intersection Summary

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	377	0	0	51	405	521	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	410	0	0	55	431	554	88

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2042	2407	355	2028	2391	341	680	0	0
Stage 1	893	893	-	1470	1470	-	-	-	-
Stage 2	1149	1514	-	558	921	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	33	33	641	34	33	655	908	-	-
Stage 1	303	358	-	133	190	-	-	-	-
Stage 2	211	181	-	482	347	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	17	15	630	7	15	644	900	-	-
Mov Cap-2 Maneuver	~ -32	~ -31	-	78	188	-	-	-	-
Stage 1	157	308	-	69	98	-	-	-	-
Stage 2	100	94	-	145	299	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	20.7	11.1	5.1
HCM LOS	C	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	900	-	-	630	644	922	-	-
HCM Lane V/C Ratio	0.479	-	-	0.65	0.086	0.131	-	-
HCM Control Delay (s)	12.6	-	-	20.7	11.1	9.5	-	-
HCM Lane LOS	B	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	2.6	-	-	4.8	0.3	0.5	-	-

Notes

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

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	116	589	54
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	96	96	96
Heavy Vehicles, %	2	2	2
Mvmt Flow	121	614	56

Major/Minor	Major2		
Conflicting Flow All	653	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	930	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	922	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.5
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	926	27	318	1230	107	45	140	517	98	104	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		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	24	1040	8	342	1323	69	49	152	247	109	116	3
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	1145	508	382	1838	817	63	717	316	137	865	382
Arrive On Green	0.02	0.32	0.32	0.22	0.52	0.52	0.04	0.20	0.20	0.08	0.24	0.24
Sat Flow, veh/h	1774	3539	1569	1774	3539	1574	1774	3539	1560	1774	3539	1564
Grp Volume(v), veh/h	24	1040	8	342	1323	69	49	152	247	109	116	3
Grp Sat Flow(s),veh/h/ln	1774	1770	1569	1774	1770	1574	1774	1770	1560	1774	1770	1564
Q Serve(g_s), s	1.3	27.6	0.3	18.4	28.2	2.2	2.7	3.5	14.7	5.9	2.5	0.1
Cycle Q Clear(g_c), s	1.3	27.6	0.3	18.4	28.2	2.2	2.7	3.5	14.7	5.9	2.5	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	1145	508	382	1838	817	63	717	316	137	865	382
V/C Ratio(X)	0.69	0.91	0.02	0.90	0.72	0.08	0.78	0.21	0.78	0.80	0.13	0.01
Avail Cap(c_a), veh/h	145	1151	510	543	1945	865	145	1310	577	181	1382	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	31.8	22.6	37.4	18.1	11.9	46.9	32.6	37.1	44.5	29.0	28.1
Incr Delay (d2), s/veh	21.7	10.5	0.0	13.3	1.2	0.0	18.6	0.1	4.2	16.5	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	0.9	15.1	0.1	10.4	13.9	1.0	1.6	1.7	6.7	3.5	1.2	0.1
LnGrp Delay(d),s/veh	69.5	42.3	22.6	50.7	19.3	11.9	65.6	32.7	41.3	61.0	29.0	28.1
LnGrp LOS	E	D	C	D	B	B	E	C	D	E	C	C
Approach Vol, veh/h		1072			1734			448			228	
Approach Delay, s/veh		42.7			25.2			41.0			44.3	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	24.8	25.1	36.6	7.5	28.9	5.9	55.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	36.3	30.0	31.9	8.0	38.3	8.0	53.9
Max Q Clear Time (g_c+I1), s	7.9	16.7	20.4	29.6	4.7	4.5	3.3	30.2
Green Ext Time (p_c), s	0.0	2.5	0.7	2.1	0.0	2.7	0.0	17.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	24	1040	30	342	1323	115	49	152	562	109	116	20
v/c Ratio	0.21	0.93	0.05	0.83	0.68	0.13	0.39	0.24	0.88	0.66	0.14	0.05
Control Delay	56.2	51.8	0.2	56.7	22.6	6.8	61.0	36.6	24.6	68.6	33.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	51.8	0.2	56.7	22.6	6.8	61.0	36.6	24.6	68.6	33.5	0.2
Queue Length 50th (ft)	15	354	0	212	278	7	31	46	71	71	34	0
Queue Length 95th (ft)	48	#651	0	#414	614	50	82	76	227	#188	60	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	140	1118	568	525	1964	892	140	1272	839	175	1342	657
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.93	0.05	0.65	0.67	0.13	0.35	0.12	0.67	0.62	0.09	0.03

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	287	999	17	24	1049	353	19	4	10	311	2	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	346	1204	19	25	1104	74	21	4	1	354	0	12
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	374	1492	24	88	1308	399	331	268	67	662	0	291
Arrive On Green	0.21	0.42	0.42	0.10	0.51	0.51	0.19	0.19	0.19	0.19	0.00	0.19
Sat Flow, veh/h	1774	3565	56	1774	5085	1553	1774	1434	359	3548	0	1558
Grp Volume(v), veh/h	346	597	626	25	1104	74	21	0	5	354	0	12
Grp Sat Flow(s),veh/h/ln	1774	1770	1852	1774	1695	1553	1774	0	1793	1774	0	1558
Q Serve(g_s), s	22.5	34.9	35.0	1.5	22.0	3.0	1.1	0.0	0.3	10.6	0.0	0.7
Cycle Q Clear(g_c), s	22.5	34.9	35.0	1.5	22.0	3.0	1.1	0.0	0.3	10.6	0.0	0.7
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	374	740	775	88	1308	399	331	0	335	662	0	291
V/C Ratio(X)	0.93	0.81	0.81	0.28	0.84	0.19	0.06	0.00	0.01	0.53	0.00	0.04
Avail Cap(c_a), veh/h	406	740	775	120	1308	399	331	0	335	662	0	291
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.6	30.1	30.1	51.1	26.6	22.0	39.4	0.0	39.1	43.3	0.0	39.3
Incr Delay (d2), s/veh	25.8	9.2	8.8	1.6	6.3	0.9	0.4	0.0	0.1	3.1	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	13.7	19.0	19.8	0.8	10.8	1.4	0.6	0.0	0.1	5.5	0.0	0.3
LnGrp Delay(d),s/veh	71.4	39.3	38.9	52.8	32.9	22.9	39.8	0.0	39.2	46.4	0.0	39.5
LnGrp LOS	E	D	D	D	C	C	D		D	D		D
Approach Vol, veh/h		1569			1203			26			366	
Approach Delay, s/veh		46.2			32.7			39.7			46.1	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	54.2		26.9	31.0	35.2
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	49.3		22.0	27.0	30.3
Max Q Clear Time (g_c+I1), s		3.1	3.5	37.0		12.6	24.5	24.0
Green Ext Time (p_c), s		0.0	0.5	6.0		0.9	0.3	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	346	1224	25	1104	372	21	15	176	179	170
v/c Ratio	0.91	0.79	0.24	0.86	0.56	0.06	0.05	0.57	0.58	0.40
Control Delay	74.2	33.9	50.7	17.9	5.5	41.2	23.6	52.9	53.2	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	33.9	50.7	17.9	5.5	41.2	23.6	52.9	53.2	9.3
Queue Length 50th (ft)	260	442	21	128	0	14	3	132	134	0
Queue Length 95th (ft)	#367	472	m48	178	0	37	22	207	210	56
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	398	1558	118	1283	659	341	322	308	309	420
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.79	0.21	0.86	0.56	0.06	0.05	0.57	0.58	0.40

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	1283	24	65	1310	52	33	3	43	76	3	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	1492	16	70	1409	36	38	3	4	86	3	2
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	2233	991	90	3295	1018	335	143	191	333	207	138
Arrive On Green	0.05	1.00	1.00	0.05	0.65	0.65	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	3539	1571	1774	5085	1571	1385	718	958	1382	1037	691
Grp Volume(v), veh/h	33	1492	16	70	1409	36	38	0	7	86	0	5
Grp Sat Flow(s),veh/h/ln	1774	1770	1571	1774	1695	1571	1385	0	1676	1382	0	1728
Q Serve(g_s), s	2.1	0.0	0.0	4.5	15.6	1.0	2.6	0.0	0.4	6.2	0.0	0.3
Cycle Q Clear(g_c), s	2.1	0.0	0.0	4.5	15.6	1.0	2.9	0.0	0.4	6.6	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.40
Lane Grp Cap(c), veh/h	46	2233	991	90	3295	1018	335	0	334	333	0	345
V/C Ratio(X)	0.72	0.67	0.02	0.78	0.43	0.04	0.11	0.00	0.02	0.26	0.00	0.01
Avail Cap(c_a), veh/h	109	2233	991	153	3295	1018	335	0	334	333	0	345
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	54.4	9.9	7.3	38.4	0.0	37.3	39.9	0.0	37.3
Incr Delay (d2), s/veh	11.4	0.9	0.0	13.5	0.4	0.1	0.7	0.0	0.1	1.9	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	1.2	0.3	0.0	2.6	7.4	0.4	1.1	0.0	0.2	2.5	0.0	0.1
LnGrp Delay(d),s/veh	65.9	0.9	0.0	67.9	10.3	7.4	39.1	0.0	37.4	41.8	0.0	37.3
LnGrp LOS	E	A	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1541			1515			45			91	
Approach Delay, s/veh		2.3			12.9			38.8			41.6	
Approach LOS		A			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		28.0	9.9	82.1		28.0	12.0	80.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	9.9000001
Max Green Setting (Gmax), s		23.1	10.0	73.1		23.1	7.1	75.099998
Max Q Clear Time (g_c+I1), s		4.9	6.5	2.0		8.6	4.1	17.6
Green Ext Time (p_c), s		0.3	0.0	17.5		0.3	1.1	14.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	1492	28	70	1409	56	38	52	86	36
v/c Ratio	0.31	0.66	0.03	0.53	0.42	0.05	0.15	0.15	0.34	0.11
Control Delay	37.0	2.4	0.0	60.8	11.5	1.5	42.1	13.5	46.2	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	2.4	0.0	60.8	11.5	1.5	42.1	13.5	46.2	15.3
Queue Length 50th (ft)	25	1	0	41	353	1	25	2	58	2
Queue Length 95th (ft)	m31	2	m0	m64	316	m3	56	35	107	30
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	118	2247	978	147	3385	1025	259	339	255	327
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.66	0.03	0.48	0.42	0.05	0.15	0.15	0.34	0.11

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	325	1052	146	198	1294	228	265	443	86	464	408	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	378	1223	73	211	1377	122	294	492	12	473	416	67
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.90	0.90	0.90	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	2005	619	289	1738	536	385	715	315	565	900	398
Arrive On Green	0.14	0.39	0.39	0.06	0.23	0.23	0.11	0.20	0.20	0.16	0.25	0.25
Sat Flow, veh/h	3442	5085	1571	3442	5085	1569	3442	3539	1560	3442	3539	1565
Grp Volume(v), veh/h	378	1223	73	211	1377	122	294	492	12	473	416	67
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1569	1721	1770	1560	1721	1770	1565
Q Serve(g_s), s	12.2	21.9	3.4	6.9	29.2	7.2	9.5	14.7	0.7	15.2	11.4	3.8
Cycle Q Clear(g_c), s	12.2	21.9	3.4	6.9	29.2	7.2	9.5	14.7	0.7	15.2	11.4	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	2005	619	289	1738	536	385	715	315	565	900	398
V/C Ratio(X)	0.80	0.61	0.12	0.73	0.79	0.23	0.76	0.69	0.04	0.84	0.46	0.17
Avail Cap(c_a), veh/h	542	2005	619	361	1738	536	481	715	315	662	900	398
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	27.6	22.0	52.7	40.3	31.8	49.3	42.3	36.7	46.3	36.0	33.2
Incr Delay (d2), s/veh	7.7	1.4	0.4	4.6	3.1	0.8	5.6	5.4	0.2	8.1	1.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	10.6	1.5	3.5	14.2	3.3	4.8	7.7	0.3	7.9	5.8	1.7
LnGrp Delay(d),s/veh	55.6	29.0	22.4	57.3	43.4	32.6	55.0	47.7	36.9	54.4	37.7	34.1
LnGrp LOS	E	C	C	E	D	C	D	D	D	D	D	C
Approach Vol, veh/h		1674			1710			798			956	
Approach Delay, s/veh		34.7			44.3			50.2			45.8	
Approach LOS		C			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	22.8	28.0	19.2	50.0	16.8	34.0	25.2	44.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	22.0	23.1	12.0	45.1	16.0	29.1	18.0	39.1
Max Q Clear Time (g_c+I1), s	17.2	16.7	8.9	23.9	11.5	13.4	14.2	31.2
Green Ext Time (p_c), s	1.4	1.6	0.7	8.9	1.3	2.4	0.9	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	378	1223	170	211	1377	243	294	492	96	473	416	250
v/c Ratio	0.77	0.62	0.25	0.66	0.80	0.38	0.71	0.70	0.21	0.80	0.47	0.46
Control Delay	61.5	20.6	5.7	47.7	17.6	1.9	60.3	51.1	1.1	59.0	40.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	20.6	5.7	47.7	17.6	1.9	60.3	51.1	1.1	59.0	40.7	9.9
Queue Length 50th (ft)	160	299	24	85	113	1	113	190	0	181	146	17
Queue Length 95th (ft)	202	295	49	128	158	1	160	251	0	240	197	88
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	514	1972	679	343	1717	638	457	702	448	629	879	549
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.62	0.25	0.62	0.80	0.38	0.64	0.70	0.21	0.75	0.47	0.46

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	1228	116	306	1433	79	141	129	240	118	128	53
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	103	1335	73	319	1493	52	153	140	46	128	139	17
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	2183	675	358	2805	865	324	466	392	286	795	96
Arrive On Green	0.14	0.86	0.86	0.07	0.18	0.18	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1572	1774	5085	1569	1216	1863	1564	1184	3177	383
Grp Volume(v), veh/h	103	1335	73	319	1493	52	153	140	46	128	76	80
Grp Sat Flow(s),veh/h/ln	1774	1695	1572	1774	1695	1569	1216	1863	1564	1184	1770	1790
Q Serve(g_s), s	6.5	9.1	0.8	20.7	30.9	3.2	13.1	7.1	2.6	11.4	3.9	4.1
Cycle Q Clear(g_c), s	6.5	9.1	0.8	20.7	30.9	3.2	17.2	7.1	2.6	18.5	3.9	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	127	2183	675	358	2805	865	324	466	392	286	443	448
V/C Ratio(X)	0.81	0.61	0.11	0.89	0.53	0.06	0.47	0.30	0.12	0.45	0.17	0.18
Avail Cap(c_a), veh/h	185	2183	675	504	2805	865	324	466	392	286	443	448
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	5.3	4.7	53.0	34.0	22.6	40.9	35.3	33.6	42.8	34.1	34.2
Incr Delay (d2), s/veh	11.8	0.9	0.2	10.3	0.5	0.1	4.9	1.6	0.6	5.0	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	0.4	11.2	14.7	1.4	4.9	3.9	1.2	4.1	2.0	2.1
LnGrp Delay(d),s/veh	60.8	6.3	5.0	63.3	34.5	22.7	45.8	36.9	34.2	47.8	35.0	35.0
LnGrp LOS	E	A	A	E	C	C	D	D	C	D	C	D
Approach Vol, veh/h		1511			1864			339			284	
Approach Delay, s/veh		9.9			39.1			40.6			40.8	
Approach LOS		A			D			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		34.0	27.4	58.6		34.0	17.0	69.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	9.9000001
Max Green Setting (Gmax), s		29.1	33.0	44.1		29.1	12.1	64.099998
Max Q Clear Time (g_c+I1), s		19.2	22.7	11.1		20.5	8.5	32.9
Green Ext Time (p_c), s		2.1	0.7	12.3		2.0	0.2	13.3

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	103	1335	126	319	1493	82	153	140	261	128	197
v/c Ratio	0.54	0.62	0.18	0.82	0.55	0.10	0.56	0.31	0.46	0.48	0.23
Control Delay	36.6	7.8	2.0	44.7	8.3	1.8	48.9	39.5	7.2	45.9	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	7.8	2.0	44.7	8.3	1.8	48.9	39.5	7.2	45.9	27.8
Queue Length 50th (ft)	83	130	11	205	245	6	104	89	0	85	47
Queue Length 95th (ft)	m122	149	m25	247	269	m11	178	149	67	150	80
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	191	2148	695	486	2716	835	274	451	570	269	851
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.62	0.18	0.66	0.55	0.10	0.56	0.31	0.46	0.48	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	162	1336	112	85	1505	87	196	76	42	128	79	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	171	1406	84	89	1568	59	239	93	7	138	85	21
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.82	0.82	0.82	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	2545	784	110	2317	714	416	579	488	414	579	488
Arrive On Green	0.04	0.17	0.17	0.12	0.91	0.91	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	5085	1568	1774	5085	1566	1274	1863	1568	1281	1863	1568
Grp Volume(v), veh/h	171	1406	84	89	1568	59	239	93	7	138	85	21
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1566	1274	1863	1568	1281	1863	1568
Q Serve(g_s), s	11.1	29.5	5.3	5.7	8.3	0.4	19.4	4.2	0.4	10.2	3.8	1.1
Cycle Q Clear(g_c), s	11.1	29.5	5.3	5.7	8.3	0.4	23.2	4.2	0.4	14.4	3.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	2545	784	110	2317	714	416	579	488	414	579	488
V/C Ratio(X)	0.84	0.55	0.11	0.81	0.68	0.08	0.57	0.16	0.01	0.33	0.15	0.04
Avail Cap(c_a), veh/h	306	2545	784	170	2317	714	416	579	488	414	579	488
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	36.5	26.4	50.2	3.2	2.8	37.3	29.0	27.7	34.2	28.9	27.9
Incr Delay (d2), s/veh	10.0	0.7	0.2	9.6	1.0	0.1	5.7	0.6	0.1	2.2	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	14.0	2.3	3.1	3.4	0.2	7.5	2.3	0.2	3.9	2.0	0.5
LnGrp Delay(d),s/veh	64.8	37.2	26.6	59.8	4.2	3.0	42.9	29.6	27.7	36.4	29.4	28.1
LnGrp LOS	E	D	C	E	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1661			1716			339			244	
Approach Delay, s/veh		39.5			7.0			39.0			33.3	
Approach LOS		D			A			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		41.0	16.0	63.0		41.0	17.3	61.7
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		36.1	11.1	58.099998		36.1	20.0	50.1
Max Q Clear Time (g_c+I1), s		25.2	7.7	31.5		16.4	13.1	10.3
Green Ext Time (p_c), s		1.9	0.1	11.6		2.3	0.2	16.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	171	1406	118	89	1568	91	239	93	51	138	85	86
v/c Ratio	0.72	0.57	0.15	0.50	0.69	0.13	0.62	0.17	0.10	0.36	0.15	0.16
Control Delay	59.3	8.3	0.9	38.3	13.7	3.6	44.2	31.9	0.7	36.2	31.7	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	8.3	0.9	38.3	13.7	3.6	44.2	31.9	0.7	36.2	31.7	5.4
Queue Length 50th (ft)	103	182	1	55	137	4	159	53	0	84	48	0
Queue Length 95th (ft)	153	49	m2	m77	146	m4	221	87	0	144	89	31
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	295	2461	762	177	2283	708	387	560	531	385	560	531
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.57	0.15	0.50	0.69	0.13	0.62	0.17	0.10	0.36	0.15	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	163	1251	121	165	1438	203	168	62	143	254	50	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	173	1331	74	179	1563	150	185	68	48	289	57	24
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.91	0.91	0.91	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	1929	593	233	2017	623	519	764	492	501	691	582
Arrive On Green	0.23	0.76	0.76	0.13	0.40	0.40	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1774	5085	1562	1774	5085	1571	1304	2060	1326	1263	1863	1571
Grp Volume(v), veh/h	173	1331	74	179	1563	150	185	57	59	289	57	24
Grp Sat Flow(s),veh/h/ln	1774	1695	1562	1774	1695	1571	1304	1770	1616	1263	1863	1571
Q Serve(g_s), s	10.9	15.4	1.5	11.3	31.1	7.4	12.5	2.5	2.7	22.5	2.3	1.1
Cycle Q Clear(g_c), s	10.9	15.4	1.5	11.3	31.1	7.4	14.8	2.5	2.7	25.3	2.3	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.82	1.00		1.00
Lane Grp Cap(c), veh/h	202	1929	593	233	2017	623	519	656	599	501	691	582
V/C Ratio(X)	0.86	0.69	0.12	0.77	0.77	0.24	0.36	0.09	0.10	0.58	0.08	0.04
Avail Cap(c_a), veh/h	259	1929	593	290	2017	623	519	656	599	501	691	582
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	10.6	8.9	48.8	30.6	23.4	28.5	23.8	23.9	32.1	23.7	23.4
Incr Delay (d2), s/veh	16.7	1.7	0.4	5.9	1.8	0.5	1.9	0.3	0.3	4.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	7.2	0.7	5.9	14.8	3.3	4.7	1.2	1.3	8.5	1.2	0.5
LnGrp Delay(d),s/veh	60.6	12.3	9.2	54.7	32.4	23.9	30.4	24.0	24.2	36.9	24.0	23.5
LnGrp LOS	E	B	A	D	C	C	C	C	C	D	C	C
Approach Vol, veh/h		1578			1892			301			370	
Approach Delay, s/veh		17.4			33.8			28.0			34.0	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		48.0	23.0	49.0		48.0	21.0	51.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		43.1	19.0	44.1		43.1	17.0	46.1
Max Q Clear Time (g_c+I1), s		16.8	13.3	17.4		27.3	12.9	33.1
Green Ext Time (p_c), s		2.7	0.5	10.9		2.4	0.4	8.6

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	173	1331	129	179	1563	221	185	225	289	57	82
v/c Ratio	0.77	0.71	0.21	0.70	0.80	0.34	0.38	0.18	0.70	0.08	0.13
Control Delay	57.7	11.2	1.1	44.9	16.1	3.9	30.9	8.9	43.0	25.7	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	11.2	1.1	44.9	16.1	3.9	30.9	8.9	43.0	25.7	6.0
Queue Length 50th (ft)	137	76	1	144	188	3	106	17	192	29	0
Queue Length 95th (ft)	#227	90	3	m204	267	m28	173	45	294	58	32
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	250	1868	607	280	1953	655	492	1256	415	694	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.71	0.21	0.64	0.80	0.34	0.38	0.18	0.70	0.08	0.13

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

CITY OF FRESNO
TRAFFIC SIGNAL WARRANT SUMMARY

Council Dist: **DISTRICT# 2** Date: **October 3, 2007**

Major Street: **BRAWLEY/FIGARDEN** Lanes: **2** Critical Approach Speed: **44.8**
Minor Street: **BARSTOW** Lanes: **1**

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ☒ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ☐ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ☒ 70% ☐ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied. Satisfied: ☒ Yes ☐ No
Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied.

Condition A - Minimum Vehicular Volume 100% Satisfied: ☒ Yes ☐ No
80% Satisfied: ☒ Yes ☐ No

	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours (Beginning hour)							
Approach Lanes	**1**		**2 or more**		5:00 PM -	6:00 PM -	7:00 AM -	4:00 PM -	3:00 PM -	12:00 PM	7:00 PM -	2:00 PM -
Volume Level	**100%**	**70%**	**100%**	**70%**								
Both Approaches on Major Street	500 (400)	350 (280)	600 (480)	420 (336)	1,964	1,675	1,536	1,557	1,396	1,367	1,326	1,319
Highest Approach on Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	232	226	212	176	155	170	182	145

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met.

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay: ☒ Yes ☐ No
100% Satisfied: ☒ Yes ☐ No
80% Satisfied: ☒ Yes ☐ No

	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	**1**		**2 or more**		5:00 PM -	6:00 PM -	7:00 AM -	4:00 PM -	3:00 PM -	12:00 PM -	7:00 PM -	2:00 PM -
Volume Level	**100%**	**70%**	**100%**	**70%**								
Both Approaches on Major Street	750 (600)	525 (420)	900 (720)	630 (504)	1,964	1,675	1,536	1,557	1,396	1,367	1,326	1,319
Highest Approach on Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	232	226	212	176	155	170	182	145

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met.

Near-Term With-Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	393	39	469	68	41	104	185	657	15	94	905	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		0.98	1.00		0.97	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	457	45	236	74	45	6	208	738	7	99	953	48
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	541	358	299	95	313	135	247	1771	792	126	1496	664
Arrive On Green	0.16	0.19	0.19	0.05	0.09	0.09	0.14	0.50	0.50	0.07	0.42	0.42
Sat Flow, veh/h	3442	1863	1559	1774	3539	1530	1774	3539	1583	1774	3539	1572
Grp Volume(v), veh/h	457	45	236	74	45	6	208	738	7	99	953	48
Grp Sat Flow(s),veh/h/ln	1721	1863	1559	1774	1770	1530	1774	1770	1583	1774	1770	1572
Q Serve(g_s), s	12.6	1.9	9.9	4.0	1.1	0.3	11.1	12.8	0.2	5.3	20.7	1.0
Cycle Q Clear(g_c), s	12.6	1.9	9.9	4.0	1.1	0.3	11.1	12.8	0.2	5.3	20.7	1.0
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	541	358	299	95	313	135	247	1771	792	126	1496	664
V/C Ratio(X)	0.85	0.13	0.79	0.78	0.14	0.04	0.84	0.42	0.01	0.78	0.64	0.07
Avail Cap(c_a), veh/h	672	653	547	146	841	363	330	1771	792	237	1496	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	32.5	18.5	45.4	40.9	40.6	40.8	15.3	12.2	44.4	22.2	5.4
Incr Delay (d2), s/veh	8.1	0.2	4.6	13.3	0.2	0.1	13.5	0.2	0.0	10.2	2.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	1.0	5.4	2.3	0.6	0.2	6.4	6.3	0.1	3.0	10.5	0.8
LnGrp Delay(d),s/veh	48.0	32.7	23.1	58.8	41.1	40.7	54.3	15.5	12.2	54.6	24.3	5.6
LnGrp LOS	D	C	C	E	D	D	D	B	B	D	C	A
Approach Vol, veh/h		738			125			953			1100	
Approach Delay, s/veh		39.1			51.5			23.9			26.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	53.5	9.2	23.6	18.5	46.0	19.3	13.5
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	47.1	8.0	34.1	18.41.099998	41	19.0	23.1
Max Q Clear Time (g_c+I1), s	7.3	14.8	6.0	11.9	13.1	22.7	14.6	3.1
Green Ext Time (p_c), s	0.1	6.0	0.0	1.2	0.5	6.3	0.7	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	457	45	545	74	45	113	208	738	17	99	953	135
v/c Ratio	0.81	0.10	0.85	0.58	0.10	0.34	0.76	0.47	0.02	0.57	0.69	0.20
Control Delay	56.2	33.5	27.8	69.7	41.7	3.9	63.5	23.7	0.1	61.0	32.3	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	33.5	27.8	69.7	41.7	3.9	63.5	23.7	0.1	61.0	32.3	5.4
Queue Length 50th (ft)	158	25	143	51	15	0	138	186	0	67	294	0
Queue Length 95th (ft)	#238	52	259	#126	32	11	#259	284	0	132	430	43
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	619	603	747	134	776	471	319	1589	780	218	1381	683
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.07	0.73	0.55	0.06	0.24	0.65	0.46	0.02	0.45	0.69	0.20

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	299	5	51	27	17	23	82	497	6	10	946	460
Number	7	4	14	3	8	18	5	2	12	1	6	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		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	365	6	2	29	18	0	95	578	6	10	985	319
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	472	373	312	44	163	139	122	1727	18	18	1496	661
Arrive On Green	0.14	0.20	0.20	0.02	0.09	0.00	0.07	0.48	0.48	0.01	0.42	0.42
Sat Flow, veh/h	3442	1863	1560	1774	1863	1583	1774	3588	37	1774	3539	1565
Grp Volume(v), veh/h	365	6	2	29	18	0	95	285	299	10	985	319
Grp Sat Flow(s),veh/h/ln	1721	1863	1560	1774	1863	1583	1774	1770	1856	1774	1770	1565
Q Serve(g_s), s	7.1	0.2	0.1	1.1	0.6	0.0	3.6	6.9	6.9	0.4	15.4	10.2
Cycle Q Clear(g_c), s	7.1	0.2	0.1	1.1	0.6	0.0	3.6	6.9	6.9	0.4	15.4	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	472	373	312	44	163	139	122	852	893	18	1496	661
V/C Ratio(X)	0.77	0.02	0.01	0.66	0.11	0.00	0.78	0.33	0.33	0.56	0.66	0.48
Avail Cap(c_a), veh/h	603	728	610	182	593	504	182	852	893	182	1496	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	22.2	22.1	33.4	29.0	0.0	31.6	11.1	11.1	34.0	16.0	14.5
Incr Delay (d2), s/veh	4.7	0.0	0.0	15.7	0.3	0.0	11.6	1.1	1.0	24.3	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.1	0.0	0.7	0.3	0.0	2.2	3.6	3.7	0.3	7.9	4.8
LnGrp Delay(d),s/veh	33.5	22.2	22.1	49.1	29.3	0.0	43.2	12.1	12.1	58.4	18.2	17.0
LnGrp LOS	C	C	C	D	C		D	B	B	E	B	B
Approach Vol, veh/h		373			47			679			1314	
Approach Delay, s/veh		33.3			41.5			16.5			18.2	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	38.2	6.6	18.7	9.6	34.1	14.4	11.0
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	29.2	7.1	27.0	7.1	29.2	12.1	22.0
Max Q Clear Time (g_c+I1), s	2.4	8.9	3.1	2.2	5.6	17.4	9.1	2.6
Green Ext Time (p_c), s	0.0	11.5	0.0	0.1	0.0	8.0	0.4	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	365	6	62	29	18	25	95	585	10	985	479
v/c Ratio	0.65	0.01	0.14	0.17	0.08	0.07	0.52	0.31	0.06	0.63	0.58
Control Delay	36.6	23.2	0.6	37.3	29.5	0.3	46.7	12.8	36.3	21.4	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	23.2	0.6	37.3	29.5	0.3	46.7	12.8	36.3	21.4	12.0
Queue Length 50th (ft)	81	2	0	13	8	0	43	68	4	194	64
Queue Length 95th (ft)	#137	10	0	43	25	0	#119	181	21	#381	217
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	624	755	711	188	616	645	188	1913	188	1552	820
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.01	0.09	0.15	0.03	0.04	0.51	0.31	0.05	0.63	0.58

Intersection Summary

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

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	66	125	429	19	117	928
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	139	523	23	123	977

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1280	293	0	0	556	0
Stage 1	545	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	158	703	-	-	1011	-
Stage 1	545	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	136	691	-	-	1003	-
Mov Cap-2 Maneuver	136	-	-	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	378	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.8	0	1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	136	691	1003	-
HCM Lane V/C Ratio	-	-	0.539	0.201	0.123	-
HCM Control Delay (s)	-	-	58.8	11.5	9.1	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	2.6	0.7	0.4	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	10	19	58	53	17	18	21	247	34
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	85	85	85	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	24	74	62	20	21	26	309	42

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	925	1112	345	778	1092	196	661	0	0
Stage 1	698	698	-	393	393	-	-	-	-
Stage 2	227	414	-	385	699	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	224	207	651	286	213	812	923	-	-
Stage 1	397	440	-	603	604	-	-	-	-
Stage 2	755	591	-	610	440	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	197	195	640	226	200	799	915	-	-
Mov Cap-2 Maneuver	301	307	-	338	304	-	-	-	-
Stage 1	383	429	-	581	582	-	-	-	-
Stage 2	684	569	-	496	429	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	14.3	16.4	0.6
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	915	-	-	301	505	338	446	1184	-	-
HCM Lane V/C Ratio	0.029	-	-	0.043	0.195	0.184	0.092	0.016	-	-
HCM Control Delay (s)	9.1	-	-	17.5	13.9	18	13.9	8.1	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.7	0.7	0.3	0.1	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	18	602	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	2	2	2
Mvmt Flow	19	647	3

Major/Minor	Major2		
Conflicting Flow All	361	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1194	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1184	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.2
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	101	85	70	101	124	56	337	28	142	869	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	13	120	0	77	111	9	66	396	25	148	905	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.91	0.91	0.91	0.85	0.85	0.85	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	660	295	335	347	290	84	1490	94	192	1800	20
Arrive On Green	0.19	0.19	0.00	0.19	0.19	0.19	0.05	0.44	0.44	0.11	0.50	0.50
Sat Flow, veh/h	1252	3539	1583	1251	1863	1558	1774	3380	213	1774	3585	40
Grp Volume(v), veh/h	13	120	0	77	111	9	66	207	214	148	447	468
Grp Sat Flow(s),veh/h/ln	1252	1770	1583	1251	1863	1558	1774	1770	1824	1774	1770	1855
Q Serve(g_s), s	0.5	1.5	0.0	2.9	2.7	0.2	1.9	3.9	3.9	4.2	8.8	8.8
Cycle Q Clear(g_c), s	3.2	1.5	0.0	4.4	2.7	0.2	1.9	3.9	3.9	4.2	8.8	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	307	660	295	335	347	290	84	780	804	192	888	931
V/C Ratio(X)	0.04	0.18	0.00	0.23	0.32	0.03	0.79	0.26	0.27	0.77	0.50	0.50
Avail Cap(c_a), veh/h	601	1492	667	629	785	657	272	780	804	408	888	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	17.9	0.0	19.7	18.4	17.4	24.6	9.2	9.2	22.6	8.7	8.7
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.5	0.0	14.9	0.8	0.8	6.4	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.0	1.0	1.4	0.1	1.3	2.0	2.1	2.4	4.7	4.9
LnGrp Delay(d),s/veh	19.8	18.0	0.0	20.1	18.9	17.4	39.5	10.1	10.1	29.0	10.7	10.6
LnGrp LOS	B	B		C	B	B	D	B	B	C	B	B
Approach Vol, veh/h		133			197			487			1063	
Approach Delay, s/veh		18.2			19.3			14.1			13.2	
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	9.7	27.9		14.6	6.5	31.1		14.6
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	12.0	22.2		22.0	8.0	26.2		22.0
Max Q Clear Time (g_c+I1), s	6.2	5.9		5.2	3.9	10.8		6.4
Green Ext Time (p_c), s	0.2	7.2		1.5	0.0	7.0		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	13	120	101	77	111	136	66	429	148	916
v/c Ratio	0.06	0.19	0.28	0.34	0.33	0.35	0.30	0.24	0.50	0.44
Control Delay	19.0	20.0	6.8	24.2	22.6	6.8	28.8	12.6	29.2	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	20.0	6.8	24.2	22.6	6.8	28.8	12.6	29.2	11.8
Queue Length 50th (ft)	4	18	0	24	34	0	20	45	45	107
Queue Length 95th (ft)	14	34	26	55	70	35	58	101	112	234
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	502	1406	676	496	740	697	255	1794	383	2090
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.15	0.16	0.15	0.20	0.26	0.24	0.39	0.44

Intersection Summary

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	214	77	55	161	91	34
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	92	92	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	228	82	60	175	112	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	238	0	445	248
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1329	-	556	790
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	808	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1318	-	522	777
Mov Cap-2 Maneuver	-	-	-	-	594	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	765	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	635	-	-	1318	-
HCM Lane V/C Ratio	0.243	-	-	0.045	-
HCM Control Delay (s)	12.5	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	29	125	111	0	11	64	28	0	65	60	6
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.74	0.74	0.74	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	30	129	114	0	15	86	38	0	75	69	7
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	11.8	9.7	10.1
HCM LOS	B	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	26%	0%	100%	0%
Vol Thru, %	0%	91%	0%	53%	74%	53%	0%	66%
Vol Right, %	0%	9%	0%	47%	0%	47%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	66	29	236	43	60	69	179
LT Vol	0	60	0	125	32	32	0	119
Through Vol	0	6	0	111	0	28	0	60
RT Vol	65	0	29	0	11	0	69	0
Lane Flow Rate	75	76	30	243	58	81	85	221
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.139	0.129	0.055	0.388	0.103	0.134	0.153	0.352
Departure Headway (Hd)	6.697	6.125	6.573	5.734	6.401	5.94	6.474	5.731
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	535	585	545	628	560	602	554	628
Service Time	4.442	3.87	4.309	3.469	4.145	3.684	4.212	3.469
HCM Lane V/C Ratio	0.14	0.13	0.055	0.387	0.104	0.135	0.153	0.352
HCM Control Delay	10.5	9.8	9.7	12.1	9.9	9.6	10.4	11.6
HCM Lane LOS	B	A	A	B	A	A	B	B
HCM 95th-tile Q	0.5	0.4	0.2	1.8	0.3	0.5	0.5	1.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	69	119	60
Peak Hour Factor	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	147	74
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	11.3
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	109	0	0	15	135	318	26
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	118	0	0	16	173	408	33

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1938	2175	647	1532	2171	241	1264	0	0
Stage 1	1378	1378	-	781	781	-	-	-	-
Stage 2	560	797	-	751	1390	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	39	46	414	80	46	760	546	-	-
Stage 1	152	210	-	354	403	-	-	-	-
Stage 2	480	397	-	369	208	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	27	29	407	40	29	747	541	-	-
Mov Cap-2 Maneuver	77	105	-	62	19	-	-	-	-
Stage 1	103	196	-	239	272	-	-	-	-
Stage 2	317	268	-	245	194	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	17.4	9.9	4.2
HCM LOS	C	A	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	541	-	-	407	747	1097	-	-
HCM Lane V/C Ratio	0.32	-	-	0.291	0.022	0.057	-	-
HCM Control Delay (s)	14.8	-	-	17.4	9.9	8.5	-	-
HCM Lane LOS	B	-	-	C	A	A	-	-
HCM 95th %tile Q(veh)	1.4	-	-	1.2	0.1	0.2	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	51	996	20
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	81	81	81
Heavy Vehicles, %	2	2	2
Mvmt Flow	63	1230	25

Major/Minor	Major2		
Conflicting Flow All	451	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1106	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1097	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	590	51	280	769	57	29	177	442	123	284	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	15	634	12	341	938	26	31	190	48	141	326	2
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.82	0.82	0.82	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	1022	452	394	1758	782	45	547	240	179	815	360
Arrive On Green	0.01	0.29	0.29	0.22	0.50	0.50	0.03	0.15	0.15	0.10	0.23	0.23
Sat Flow, veh/h	1774	3539	1567	1774	3539	1574	1774	3539	1553	1774	3539	1563
Grp Volume(v), veh/h	15	634	12	341	938	26	31	190	48	141	326	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1567	1774	1770	1574	1774	1770	1553	1774	1770	1563
Q Serve(g_s), s	0.6	11.8	0.4	14.1	13.8	0.6	1.3	3.7	2.1	5.9	6.0	0.1
Cycle Q Clear(g_c), s	0.6	11.8	0.4	14.1	13.8	0.6	1.3	3.7	2.1	5.9	6.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	1022	452	394	1758	782	45	547	240	179	815	360
V/C Ratio(X)	0.59	0.62	0.03	0.86	0.53	0.03	0.69	0.35	0.20	0.79	0.40	0.01
Avail Cap(c_a), veh/h	186	1258	557	698	2280	1014	186	1397	613	349	1722	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	23.5	19.4	28.5	13.1	9.8	36.9	28.8	28.1	33.5	24.9	22.6
Incr Delay (d2), s/veh	20.1	0.6	0.0	5.8	0.3	0.0	17.3	0.4	0.4	7.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.8	0.2	7.5	6.7	0.3	0.9	1.8	0.9	3.3	2.9	0.0
LnGrp Delay(d),s/veh	57.4	24.1	19.5	34.3	13.4	9.8	54.2	29.2	28.5	40.9	25.2	22.6
LnGrp LOS	E	C	B	C	B	A	D	C	C	D	C	C
Approach Vol, veh/h		661			1305			269			469	
Approach Delay, s/veh		24.8			18.8			31.9			29.9	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	16.7	20.9	26.9	5.9	22.5	5.1	42.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	15.0	30.1	30.0	27.1	8.0	37.1	8.0	49.1
Max Q Clear Time (g_c+I1), s	7.9	5.7	16.1	13.8	3.3	8.0	2.6	15.8
Green Ext Time (p_c), s	0.2	3.7	0.9	8.2	0.0	3.8	0.0	13.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	15	634	55	341	938	70	31	190	475	141	326	10
v/c Ratio	0.11	0.72	0.11	0.76	0.52	0.08	0.22	0.36	0.75	0.58	0.35	0.02
Control Delay	48.6	37.8	0.4	44.4	18.0	0.4	49.3	38.1	12.0	50.3	30.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	37.8	0.4	44.4	18.0	0.4	49.3	38.1	12.0	50.3	30.8	0.1
Queue Length 50th (ft)	8	173	0	178	156	0	17	52	0	76	86	0
Queue Length 95th (ft)	33	298	0	301	305	0	54	95	96	162	136	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	167	1134	604	628	2070	952	167	1260	853	314	1553	746
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.56	0.09	0.54	0.45	0.07	0.19	0.15	0.56	0.45	0.21	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	125	701	35	36	559	121	21	2	8	98	15	69
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	129	723	33	39	608	29	23	2	1	116	0	11
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	1372	63	51	1576	483	346	227	114	755	0	332
Arrive On Green	0.12	0.40	0.40	0.06	0.62	0.62	0.20	0.20	0.20	0.21	0.00	0.21
Sat Flow, veh/h	1774	3445	157	1774	5085	1558	1774	1166	583	3548	0	1561
Grp Volume(v), veh/h	129	371	385	39	608	29	23	0	3	116	0	11
Grp Sat Flow(s),veh/h/ln	1774	1770	1833	1774	1695	1558	1774	0	1749	1774	0	1561
Q Serve(g_s), s	7.8	18.1	18.1	2.5	6.8	0.8	1.2	0.0	0.2	3.0	0.0	0.6
Cycle Q Clear(g_c), s	7.8	18.1	18.1	2.5	6.8	0.8	1.2	0.0	0.2	3.0	0.0	0.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	208	705	730	51	1576	483	346	0	341	755	0	332
V/C Ratio(X)	0.62	0.53	0.53	0.76	0.39	0.06	0.07	0.00	0.01	0.15	0.00	0.03
Avail Cap(c_a), veh/h	313	705	730	157	1576	483	346	0	341	755	0	332
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.6	26.0	26.0	53.0	16.2	15.0	37.2	0.0	36.8	36.3	0.0	35.4
Incr Delay (d2), s/veh	3.0	2.8	2.7	19.8	0.7	0.2	0.4	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	9.4	9.7	1.5	3.2	0.4	0.6	0.0	0.1	1.5	0.0	0.3
LnGrp Delay(d),s/veh	50.6	28.8	28.7	72.8	16.9	15.3	37.5	0.0	36.8	36.7	0.0	35.5
LnGrp LOS	D	C	C	E	B	B	D		D	D		D
Approach Vol, veh/h		885			676			26			127	
Approach Delay, s/veh		31.9			20.0			37.5			36.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		27.0	14.0	50.0		29.0	24.0	40.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.1	10.0	45.1		24.1	20.0	35.1
Max Q Clear Time (g_c+I1), s		3.2	4.5	20.1		5.0	9.8	8.8
Green Ext Time (p_c), s		0.0	0.2	4.6		0.3	0.3	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	129	759	39	608	132	23	11	60	61	74
v/c Ratio	0.56	0.55	0.34	0.41	0.24	0.06	0.03	0.18	0.18	0.17
Control Delay	57.7	30.4	50.1	14.4	2.5	40.2	23.5	41.4	41.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	30.4	50.1	14.4	2.5	40.2	23.5	41.4	41.4	0.9
Queue Length 50th (ft)	93	242	31	86	0	15	1	41	42	0
Queue Length 95th (ft)	154	305	69	149	2	39	18	83	83	0
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	295	1370	147	1487	542	391	360	337	342	423
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.55	0.27	0.41	0.24	0.06	0.03	0.18	0.18	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	767	39	36	717	28	30	1	29	18	1	6
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	4	825	25	38	763	19	34	1	3	20	1	1
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2147	953	48	3271	1010	398	98	293	396	204	204
Arrive On Green	0.00	1.00	1.00	0.03	0.64	0.64	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1392	407	1222	1389	850	850
Grp Volume(v), veh/h	4	825	25	38	763	19	34	0	4	20	0	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1392	0	1629	1389	0	1700
Q Serve(g_s), s	0.1	0.0	0.0	2.3	6.9	0.5	2.1	0.0	0.2	1.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	2.3	6.9	0.5	2.2	0.0	0.2	1.4	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		0.50
Lane Grp Cap(c), veh/h	2	2147	953	48	3271	1010	398	0	390	396	0	407
V/C Ratio(X)	2.46	0.38	0.03	0.78	0.23	0.02	0.09	0.00	0.01	0.05	0.00	0.00
Avail Cap(c_a), veh/h	148	2147	953	228	3271	1010	398	0	390	396	0	407
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	52.7	8.2	7.0	32.4	0.0	31.6	32.1	0.0	31.6
Incr Delay (d2), s/veh	901.1	0.4	0.0	23.6	0.2	0.0	0.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	467.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.0	1.5	3.2	0.2	0.8	0.0	0.1	0.5	0.0	0.0
LnGrp Delay(d),s/veh	1423.0	0.4	0.0	76.3	8.3	7.1	32.8	0.0	31.6	32.4	0.0	31.6
LnGrp LOS	F	A	A	E	A	A	C		C	C		C
Approach Vol, veh/h		854			820			38			22	
Approach Delay, s/veh		7.1			11.4			32.7			32.3	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		31.0	7.0	82.0		31.0	14.0	75.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		26.1	14.0	66.1		26.1	9.1	70.099998
Max Q Clear Time (g_c+I1), s		4.2	4.3	2.0		3.4	2.1	8.9
Green Ext Time (p_c), s		0.1	0.0	6.6		0.1	0.5	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	4	825	42	38	763	30	34	34	20	8
v/c Ratio	0.04	0.37	0.04	0.32	0.22	0.03	0.11	0.09	0.07	0.02
Control Delay	31.0	1.5	0.3	45.8	3.6	0.2	39.0	13.5	38.2	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	1.5	0.3	45.8	3.6	0.2	39.0	13.5	38.2	22.3
Queue Length 50th (ft)	3	7	0	16	12	0	21	1	12	1
Queue Length 95th (ft)	m7	33	m1	36	19	m0	50	28	34	14
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	147	2244	976	206	3444	1042	299	362	293	348
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.37	0.04	0.18	0.22	0.03	0.11	0.09	0.07	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	106	630	72	100	543	124	134	263	49	258	616	165
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	115	685	17	111	603	28	151	296	12	344	821	85
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.89	0.89	0.89	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	1509	465	169	1544	476	213	1177	522	502	1502	667
Arrive On Green	0.05	0.30	0.30	0.10	0.61	0.61	0.06	0.33	0.33	0.15	0.42	0.42
Sat Flow, veh/h	3442	5085	1567	3442	5085	1568	3442	3539	1569	3442	3539	1572
Grp Volume(v), veh/h	115	685	17	111	603	28	151	296	12	344	821	85
Grp Sat Flow(s),veh/h/ln	1721	1695	1567	1721	1695	1568	1721	1770	1569	1721	1770	1572
Q Serve(g_s), s	3.7	12.2	0.7	3.5	6.8	0.5	4.8	6.8	0.6	10.6	19.4	3.7
Cycle Q Clear(g_c), s	3.7	12.2	0.7	3.5	6.8	0.5	4.8	6.8	0.6	10.6	19.4	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	1509	465	169	1544	476	213	1177	522	502	1502	667
V/C Ratio(X)	0.67	0.45	0.04	0.66	0.39	0.06	0.71	0.25	0.02	0.69	0.55	0.13
Avail Cap(c_a), veh/h	309	1509	465	281	1544	476	370	1177	522	651	1502	667
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	31.9	17.8	49.4	16.6	6.8	51.3	27.1	25.0	45.2	24.0	19.5
Incr Delay (d2), s/veh	4.3	1.0	0.1	4.2	0.7	0.2	4.3	0.5	0.1	2.0	1.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	5.8	0.4	1.7	3.3	0.4	2.4	3.4	0.3	5.2	9.8	1.7
LnGrp Delay(d),s/veh	56.4	32.9	17.9	53.6	17.3	7.0	55.6	27.6	25.1	47.2	25.5	19.9
LnGrp LOS	E	C	B	D	B	A	E	C	C	D	C	B
Approach Vol, veh/h		817			742			459			1250	
Approach Delay, s/veh		35.9			22.3			36.7			31.1	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	42.0	18.8	38.0	10.9	52.2	9.6	47.2
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	21.1	37.099998	9.1	33.099998	12.0	47.1	10.0	33.1
Max Q Clear Time (g_c+I1), s	12.6	8.8	5.5	14.2	6.8	21.4	5.7	8.8
Green Ext Time (p_c), s	3.7	1.9	0.2	4.3	0.2	7.6	0.1	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	115	685	78	111	603	138	151	296	55	344	821	220
v/c Ratio	0.45	0.49	0.15	0.39	0.42	0.26	0.51	0.27	0.10	0.55	0.57	0.30
Control Delay	49.5	15.9	1.4	57.6	37.7	19.0	58.5	32.1	0.3	48.2	29.7	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	15.9	1.4	57.6	37.7	19.0	58.5	32.1	0.3	48.2	29.7	7.6
Queue Length 50th (ft)	29	102	0	40	149	44	58	91	0	125	255	23
Queue Length 95th (ft)	59	120	1	68	186	93	91	126	0	142	256	47
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	286	1402	528	286	1449	537	343	1094	574	629	1439	727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.49	0.15	0.39	0.42	0.26	0.44	0.27	0.10	0.55	0.57	0.30

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	744	84	267	731	30	113	94	166	58	101	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	44	818	21	281	769	16	145	121	23	72	126	10
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.78	0.78	0.78	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	1611	497	482	2817	869	388	541	455	360	965	76
Arrive On Green	0.07	0.63	0.63	0.09	0.18	0.18	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	5085	1568	1774	5085	1569	1239	1863	1567	1231	3322	261
Grp Volume(v), veh/h	44	818	21	281	769	16	145	121	23	72	66	70
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1569	1239	1863	1567	1231	1770	1813
Q Serve(g_s), s	2.8	9.9	0.6	17.3	14.8	1.0	11.1	5.6	1.2	5.4	3.2	3.2
Cycle Q Clear(g_c), s	2.8	9.9	0.6	17.3	14.8	1.0	14.4	5.6	1.2	11.0	3.2	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	61	1611	497	482	2817	869	388	541	455	360	514	527
V/C Ratio(X)	0.72	0.51	0.04	0.58	0.27	0.02	0.37	0.22	0.05	0.20	0.13	0.13
Avail Cap(c_a), veh/h	156	1611	497	576	2817	869	388	541	455	360	514	527
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	16.1	14.4	45.7	26.8	21.2	35.1	30.7	29.1	34.8	29.8	29.8
Incr Delay (d2), s/veh	12.9	1.0	0.1	1.0	0.2	0.0	2.7	1.0	0.2	1.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.7	0.3	8.7	7.0	0.4	4.1	3.0	0.5	1.9	1.6	1.7
LnGrp Delay(d),s/veh	65.4	17.1	14.5	46.7	27.0	21.2	37.9	31.6	29.3	36.1	30.3	30.3
LnGrp LOS	E	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		883			1066			289			208	
Approach Delay, s/veh		19.4			32.1			34.6			32.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		38.0	41.0	41.0		38.0	14.0	68.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		33.1	37.0	36.1		33.1	10.0	63.1
Max Q Clear Time (g_c+I1), s		16.4	19.3	11.9		13.0	4.8	16.8
Green Ext Time (p_c), s		2.1	0.8	5.7		2.2	0.5	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	44	818	92	281	769	32	145	121	213	72	162
v/c Ratio	0.37	0.53	0.17	0.57	0.29	0.04	0.40	0.21	0.34	0.19	0.15
Control Delay	73.7	10.1	3.6	19.2	5.8	0.1	38.4	33.6	6.0	34.4	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.7	10.1	3.6	19.2	5.8	0.1	38.4	33.6	6.0	34.4	26.2
Queue Length 50th (ft)	36	89	8	162	44	0	91	71	0	42	40
Queue Length 95th (ft)	m73	105	23	300	38	0	133	107	32	73	60
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	147	1529	531	545	2673	819	366	572	620	372	1066
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.53	0.17	0.52	0.29	0.04	0.40	0.21	0.34	0.19	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	81	808	51	65	889	72	94	58	26	169	69	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	85	851	25	69	946	31	115	71	6	172	70	15
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.82	0.82	0.82	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	2334	719	90	2226	685	507	680	573	510	680	573
Arrive On Green	0.02	0.15	0.15	0.02	0.14	0.14	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1774	5085	1566	1774	5085	1565	1299	1863	1570	1308	1863	1570
Grp Volume(v), veh/h	85	851	25	69	946	31	115	71	6	172	70	15
Grp Sat Flow(s),veh/h/ln	1774	1695	1566	1774	1695	1565	1299	1863	1570	1308	1863	1570
Q Serve(g_s), s	5.2	16.5	1.5	4.3	18.6	1.9	7.0	2.8	0.3	11.0	2.7	0.7
Cycle Q Clear(g_c), s	5.2	16.5	1.5	4.3	18.6	1.9	9.8	2.8	0.3	13.8	2.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	2334	719	90	2226	685	507	680	573	510	680	573
V/C Ratio(X)	0.75	0.36	0.03	0.77	0.43	0.05	0.23	0.10	0.01	0.34	0.10	0.03
Avail Cap(c_a), veh/h	276	2334	719	258	2226	685	507	680	573	510	680	573
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	32.2	25.9	53.4	34.4	27.2	26.3	23.0	22.2	27.6	23.0	22.4
Incr Delay (d2), s/veh	8.5	0.4	0.1	11.6	0.5	0.1	1.0	0.3	0.0	1.8	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	2.8	7.8	0.7	2.4	8.9	0.8	2.7	1.5	0.1	4.2	1.5	0.3
LnGrp Delay(d),s/veh	61.4	32.6	25.9	65.0	34.9	27.3	27.3	23.4	22.3	29.4	23.3	22.5
LnGrp LOS	E	C	C	E	C	C	C	C	C	C	C	C
Approach Vol, veh/h		961			1046			192			257	
Approach Delay, s/veh		35.0			36.7			25.7			27.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		45.0	9.6	65.4		45.0	22.0	53.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		40.1	16.0	50.1		40.1	17.1	48.099998
Max Q Clear Time (g_c+I1), s		11.8	6.3	18.5		15.8	7.2	20.6
Green Ext Time (p_c), s		1.8	0.1	6.7		1.8	0.6	7.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.2
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	851	54	69	946	77	115	71	32	172	70	48
v/c Ratio	0.37	0.35	0.07	0.47	0.43	0.11	0.26	0.11	0.06	0.39	0.11	0.08
Control Delay	44.9	10.5	1.5	53.0	8.5	2.3	31.2	28.4	0.2	34.0	28.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	10.5	1.5	53.0	8.5	2.3	31.2	28.4	0.2	34.0	28.4	0.3
Queue Length 50th (ft)	69	69	1	43	100	5	65	38	0	102	37	0
Queue Length 95th (ft)	124	270	m4	77	173	21	103	66	0	167	72	1
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	265	2462	758	236	2224	703	436	622	579	436	622	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.35	0.07	0.29	0.43	0.11	0.26	0.11	0.06	0.39	0.11	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	912	85	108	992	83	66	20	88	219	35	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	60	950	36	116	1067	49	80	24	26	226	36	4
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.83	0.83	0.83	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	1876	576	190	2238	692	581	699	621	579	736	621
Arrive On Green	0.01	0.12	0.12	0.21	0.88	0.88	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	5085	1562	1774	5085	1573	1352	1770	1571	1340	1863	1571
Grp Volume(v), veh/h	60	950	36	116	1067	49	80	24	26	226	36	4
Grp Sat Flow(s),veh/h/ln	1774	1695	1562	1774	1695	1573	1352	1770	1571	1340	1863	1571
Q Serve(g_s), s	3.8	20.0	2.3	6.7	4.9	0.5	4.4	0.9	1.2	14.2	1.4	0.2
Cycle Q Clear(g_c), s	3.8	20.0	2.3	6.7	4.9	0.5	5.8	0.9	1.2	15.4	1.4	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	1876	576	190	2238	692	581	699	621	579	736	621
V/C Ratio(X)	0.77	0.51	0.06	0.61	0.48	0.07	0.14	0.03	0.04	0.39	0.05	0.01
Avail Cap(c_a), veh/h	171	1876	576	281	2238	692	581	699	621	579	736	621
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	40.4	32.6	42.7	4.1	3.9	23.1	21.2	21.2	26.0	21.3	20.9
Incr Delay (d2), s/veh	14.0	0.9	0.2	2.7	0.6	0.2	0.5	0.1	0.1	2.0	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	2.2	9.6	1.0	3.4	2.3	0.2	1.7	0.5	0.5	5.6	0.7	0.1
LnGrp Delay(d),s/veh	69.7	41.3	32.8	45.4	4.7	4.0	23.6	21.3	21.4	27.9	21.4	20.9
LnGrp LOS	E	D	C	D	A	A	C	C	C	C	C	C
Approach Vol, veh/h		1046			1232			130			266	
Approach Delay, s/veh		42.7			8.5			22.7			26.9	
Approach LOS		D			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		50.0	23.0	47.0		50.0	9.0	61.0
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		45.1	18.1	42.099998		45.1	11.0	50.1
Max Q Clear Time (g_c+I1), s		7.8	8.7	22.0		17.4	5.8	6.9
Green Ext Time (p_c), s		1.4	3.8	6.4		1.4	0.0	9.6

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	60	950	89	116	1067	89	80	130	226	36	11
v/c Ratio	0.45	0.53	0.15	0.41	0.47	0.12	0.16	0.11	0.49	0.05	0.02
Control Delay	48.9	32.7	15.8	30.0	7.6	0.9	26.0	7.0	33.1	24.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	32.7	15.8	30.0	7.6	0.9	26.0	7.0	33.1	24.2	0.1
Queue Length 50th (ft)	49	246	36	85	83	1	41	6	133	18	0
Queue Length 95th (ft)	96	293	86	147	119	4	71	22	211	41	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	162	1783	580	280	2289	729	505	1207	462	700	639
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.53	0.15	0.41	0.47	0.12	0.16	0.11	0.49	0.05	0.02

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	198	928	105	127	731	63	189	367	253	177	356	331
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	220	1031	34	144	831	16	217	422	113	181	363	131
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.87	0.87	0.87	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	1938	599	205	1739	537	294	1161	515	246	1083	480
Arrive On Green	0.18	0.76	0.76	0.06	0.34	0.34	0.09	0.33	0.33	0.07	0.31	0.31
Sat Flow, veh/h	3442	5085	1571	3442	5085	1569	3442	3539	1569	3442	3539	1568
Grp Volume(v), veh/h	220	1031	34	144	831	16	217	422	113	181	363	131
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1569	1721	1770	1569	1721	1770	1568
Q Serve(g_s), s	6.7	9.0	0.4	4.6	14.3	0.6	6.9	10.1	5.8	5.7	8.8	7.1
Cycle Q Clear(g_c), s	6.7	9.0	0.4	4.6	14.3	0.6	6.9	10.1	5.8	5.7	8.8	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	1938	599	205	1739	537	294	1161	515	246	1083	480
V/C Ratio(X)	0.70	0.53	0.06	0.70	0.48	0.03	0.74	0.36	0.22	0.74	0.34	0.27
Avail Cap(c_a), veh/h	435	1938	599	340	1739	537	435	1161	515	402	1083	480
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	9.3	4.3	51.4	28.8	14.5	49.8	28.6	27.1	50.7	29.9	29.3
Incr Delay (d2), s/veh	2.5	0.9	0.2	4.3	0.9	0.1	3.6	0.9	1.0	4.3	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.2	0.3	2.3	6.8	0.3	3.4	5.1	2.6	2.9	4.5	3.2
LnGrp Delay(d),s/veh	46.7	10.1	4.4	55.7	29.8	14.6	53.4	29.4	28.1	55.0	30.7	30.7
LnGrp LOS	D	B	A	E	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1285			991			752			675	
Approach Delay, s/veh		16.3			33.3			36.2			37.2	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	41.5	10.6	55.9	14.4	39.0	23.6	43.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.9000001	4.9
Max Green Setting (Gmax), s	13.0	36.1	11.0	42.1	14.34.099998	14.3	18.099998	14.3
Max Q Clear Time (g_c+I1), s	7.7	12.1	6.6	11.0	8.9	10.8	8.7	16.3
Green Ext Time (p_c), s	0.2	3.8	0.1	9.2	0.7	2.6	1.5	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	220	1031	117	144	831	72	217	422	291	181	363	338
v/c Ratio	0.51	0.56	0.18	0.51	0.51	0.12	0.51	0.38	0.45	0.56	0.36	0.53
Control Delay	32.8	12.0	1.0	59.2	34.8	0.4	53.6	33.5	10.7	58.8	35.5	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	12.0	1.0	59.2	34.8	0.4	53.6	33.5	10.7	58.8	35.5	10.3
Queue Length 50th (ft)	84	84	1	55	191	0	81	134	36	70	117	32
Queue Length 95th (ft)	129	108	6	87	228	0	118	176	103	106	163	118
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	429	1833	641	314	1614	586	429	1115	640	371	1005	639
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.56	0.18	0.46	0.51	0.12	0.51	0.38	0.45	0.49	0.36	0.53

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	233	59	352	98	140	71	481	967	72	163	749	295
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	284	72	0	110	157	0	491	987	34	177	814	205
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	243	207	137	378	169	532	1774	794	211	1102	488
Arrive On Green	0.10	0.13	0.00	0.08	0.11	0.00	0.30	0.50	0.50	0.12	0.31	0.31
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1774	3539	1583	1774	3539	1568
Grp Volume(v), veh/h	284	72	0	110	157	0	491	987	34	177	814	205
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1774	1770	1583	1774	1770	1568
Q Serve(g_s), s	8.4	3.6	0.0	6.3	4.3	0.0	27.7	19.9	1.1	10.1	21.3	7.8
Cycle Q Clear(g_c), s	8.4	3.6	0.0	6.3	4.3	0.0	27.7	19.9	1.1	10.1	21.3	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	347	243	207	137	378	169	532	1774	794	211	1102	488
V/C Ratio(X)	0.82	0.30	0.00	0.80	0.41	0.00	0.92	0.56	0.04	0.84	0.74	0.42
Avail Cap(c_a), veh/h	366	414	352	172	753	337	619	1774	794	343	1102	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	40.7	0.0	46.9	43.2	0.0	35.0	17.8	13.1	44.6	31.9	15.0
Incr Delay (d2), s/veh	13.1	0.7	0.0	19.2	0.7	0.0	17.9	0.4	0.0	9.5	4.5	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	1.9	0.0	3.8	2.1	0.0	16.1	9.8	0.5	5.5	11.1	4.3
LnGrp Delay(d),s/veh	58.6	41.3	0.0	66.2	43.9	0.0	52.9	18.2	13.2	54.1	36.3	17.6
LnGrp LOS	E	D		E	D		D	B	B	D	D	B
Approach Vol, veh/h		356			267			1512			1196	
Approach Delay, s/veh		55.1			53.1			29.4			35.7	
Approach LOS		E			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	56.8	12.0	18.4	35.9	37.1	14.4	16.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	20.0	49.2	10.0	23.0	36.3	32.200001	11.0	22.0
Max Q Clear Time (g_c+I1), s	12.1	21.9	8.3	5.6	29.7	23.3	10.4	6.3
Green Ext Time (p_c), s	0.3	9.7	0.0	1.1	1.3	3.9	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.3
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	284	72	429	110	157	80	491	987	73	177	814	321
v/c Ratio	0.80	0.31	0.75	0.69	0.41	0.28	0.88	0.59	0.09	0.70	0.76	0.56
Control Delay	65.2	47.2	13.3	71.6	47.7	3.2	54.1	23.4	3.2	59.2	40.1	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	47.2	13.3	71.6	47.7	3.2	54.1	23.4	3.2	59.2	40.1	21.2
Queue Length 50th (ft)	101	47	0	75	55	0	307	244	0	118	270	94
Queue Length 95th (ft)	#166	82	51	#175	86	5	#563	400	21	205	#404	213
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	356	405	680	167	735	426	619	1693	804	334	1077	575
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.18	0.63	0.66	0.21	0.19	0.79	0.58	0.09	0.53	0.76	0.56

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	543	22	94	13	8	16	96	1030	28	32	815	373
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.97	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	624	25	19	14	9	1	98	1051	27	35	886	239
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	707	525	441	24	168	138	126	1429	37	50	1283	566
Arrive On Green	0.21	0.28	0.28	0.01	0.09	0.09	0.07	0.41	0.41	0.03	0.36	0.36
Sat Flow, veh/h	3442	1863	1566	1774	1863	1531	1774	3525	91	1774	3539	1562
Grp Volume(v), veh/h	624	25	19	14	9	1	98	528	550	35	886	239
Grp Sat Flow(s),veh/h/ln	1721	1863	1566	1774	1863	1531	1774	1770	1845	1774	1770	1562
Q Serve(g_s), s	12.7	0.7	0.6	0.6	0.3	0.0	3.9	18.2	18.3	1.4	15.4	8.3
Cycle Q Clear(g_c), s	12.7	0.7	0.6	0.6	0.3	0.0	3.9	18.2	18.3	1.4	15.4	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	707	525	441	24	168	138	126	718	748	50	1283	566
V/C Ratio(X)	0.88	0.05	0.04	0.58	0.05	0.01	0.78	0.74	0.74	0.71	0.69	0.42
Avail Cap(c_a), veh/h	719	773	650	174	567	466	174	718	748	174	1283	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	18.9	18.9	35.4	30.1	29.9	33.0	18.2	18.2	34.8	19.6	17.3
Incr Delay (d2), s/veh	12.3	0.0	0.0	20.3	0.1	0.0	14.0	6.6	6.3	16.7	3.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.4	0.3	0.4	0.2	0.0	2.4	10.1	10.5	0.9	8.1	4.0
LnGrp Delay(d),s/veh	40.2	18.9	18.9	55.7	30.2	30.0	47.0	24.8	24.5	51.6	22.6	19.6
LnGrp LOS	D	B	B	E	C	C	D	C	C	D	C	B
Approach Vol, veh/h		668			24			1176			1160	
Approach Delay, s/veh		38.8			45.1			26.5			22.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	34.2	5.9	25.3	10.0	31.1	19.7	11.4
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	26.2	7.1	30.0	7.1	26.2	15.1	22.0
Max Q Clear Time (g_c+I1), s	3.4	20.3	2.6	2.7	5.9	17.4	14.7	2.3
Green Ext Time (p_c), s	0.0	5.0	0.0	0.2	0.0	7.0	0.1	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	624	25	108	14	9	17	98	1080	35	886	405
v/c Ratio	0.82	0.04	0.19	0.09	0.04	0.05	0.54	0.67	0.21	0.65	0.55
Control Delay	39.9	18.4	2.8	36.5	29.0	0.2	47.8	22.1	37.7	23.8	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	18.4	2.8	36.5	29.0	0.2	47.8	22.1	37.7	23.8	12.1
Queue Length 50th (ft)	143	7	0	6	4	0	44	168	15	179	52
Queue Length 95th (ft)	#296	26	18	26	16	0	#133	#485	49	#352	179
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	762	822	761	184	603	635	184	1607	184	1364	736
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.03	0.14	0.08	0.01	0.03	0.53	0.67	0.19	0.65	0.55

Intersection Summary

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

Intersection	
Int Delay, s/veh	6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	36	199	1014	58	150	806
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	95	95	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	226	1067	61	161	867

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1864	584	0	0	1138	0
Stage 1	1108	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	64	455	-	-	610	-
Stage 1	278	-	-	-	-	-
Stage 2	424	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	46	447	-	-	605	-
Mov Cap-2 Maneuver	46	-	-	-	-	-
Stage 1	276	-	-	-	-	-
Stage 2	309	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	54.1	0	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	46	447	605	-
HCM Lane V/C Ratio	-	-	0.889	0.506	0.267	-
HCM Control Delay (s)	-	-	237.1	21	13.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	3.6	2.8	1.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	3	15	32	42	20	19	46	649	122
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	73	73	73	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	21	45	58	27	26	53	755	142

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1050	1555	254	1262	1487	468	478	0	0
Stage 1	542	542	-	943	943	-	-	-	-
Stage 2	508	1013	-	319	544	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	181	112	745	127	123	542	1081	-	-
Stage 1	492	518	-	282	339	-	-	-	-
Stage 2	516	315	-	667	517	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	142	100	733	100	110	533	1072	-	-
Mov Cap-2 Maneuver	257	197	-	200	217	-	-	-	-
Stage 1	464	491	-	266	320	-	-	-	-
Stage 2	423	297	-	568	490	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	16.2	24.9	0.5
HCM LOS	C	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	257	392	200	305	740	-	-
HCM Lane V/C Ratio	0.05	-	-	0.016	0.169	0.288	0.175	0.045	-	-
HCM Control Delay (s)	8.5	-	-	19.2	16	30.1	19.3	10.1	-	-
HCM Lane LOS	A	-	-	C	C	D	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.6	1.1	0.6	0.1	-	-

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	28	395	3
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	85	85	85
Heavy Vehicles, %	2	2	2
Mvmt Flow	33	465	4

Major/Minor	Major2		
Conflicting Flow All	907	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	746	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	740	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.7
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	81	110	63	80	248	86	870	73	182	665	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	94	5	68	87	28	92	935	70	196	715	10
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	291	594	261	316	313	261	119	1474	110	245	1834	26
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.07	0.44	0.44	0.14	0.51	0.51
Sat Flow, veh/h	1255	3539	1555	1272	1863	1555	1774	3336	250	1774	3573	50
Grp Volume(v), veh/h	14	94	5	68	87	28	92	496	509	196	354	371
Grp Sat Flow(s),veh/h/ln	1255	1770	1555	1272	1863	1555	1774	1770	1817	1774	1770	1853
Q Serve(g_s), s	0.5	1.2	0.1	2.6	2.2	0.8	2.8	11.9	11.9	5.9	6.7	6.7
Cycle Q Clear(g_c), s	2.8	1.2	0.1	3.9	2.2	0.8	2.8	11.9	11.9	5.9	6.7	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.03
Lane Grp Cap(c), veh/h	291	594	261	316	313	261	119	782	803	245	908	951
V/C Ratio(X)	0.05	0.16	0.02	0.22	0.28	0.11	0.78	0.63	0.63	0.80	0.39	0.39
Avail Cap(c_a), veh/h	585	1422	625	614	748	625	292	782	803	324	908	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	21.1	19.5	19.0	21.1	19.9	19.3	25.2	11.8	11.9	22.9	8.1	8.1
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.5	0.2	10.3	3.9	3.8	10.0	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.1	1.0	1.2	0.4	1.7	6.6	6.8	3.5	3.6	3.7
LnGrp Delay(d),s/veh	21.2	19.6	19.0	21.5	20.4	19.5	35.5	15.7	15.6	32.9	9.4	9.3
LnGrp LOS	C	B	B	C	C	B	D	B	B	C	A	A
Approach Vol, veh/h		113			183			1097			921	
Approach Delay, s/veh		19.8			20.6			17.4			14.4	
Approach LOS		B			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	11.6	29.1		14.1	7.7	33.0		14.1
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	10.0	24.2		22.0	9.0	25.2		22.0
Max Q Clear Time (g_c+I1), s	7.9	13.9		4.8	4.8	8.7		5.9
Green Ext Time (p_c), s	0.1	6.8		1.3	0.1	9.5		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	94	128	68	87	270	92	1013	196	726
v/c Ratio	0.06	0.15	0.34	0.30	0.27	0.55	0.39	0.69	0.67	0.42
Control Delay	19.1	19.9	6.9	23.7	22.0	7.5	29.9	18.3	38.3	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	19.9	6.9	23.7	22.0	7.5	29.9	18.3	38.3	12.9
Queue Length 50th (ft)	4	14	0	21	27	0	28	134	62	81
Queue Length 95th (ft)	15	28	30	49	57	48	79	#293	#182	181
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	493	1348	669	487	709	757	275	1470	306	1729
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.07	0.19	0.14	0.12	0.36	0.33	0.69	0.64	0.42

Intersection Summary

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

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	244	64	30	205	153	63
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	277	73	33	223	172	71

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	287	0	464	297
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1275	-	541	742
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	518	730
Mov Cap-2 Maneuver	-	-	-	-	592	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	807	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	627	-	-	1264	-
HCM Lane V/C Ratio	0.387	-	-	0.026	-
HCM Control Delay (s)	14.3	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	69	134	128	0	16	149	124	0	98	175	8
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.91	0.91	0.91	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	72	140	133	0	18	164	136	0	109	194	9
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	14.6	12.7	13.6
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	0%	100%	0%
Vol Thru, %	0%	96%	0%	51%	82%	38%	0%	73%
Vol Right, %	0%	4%	0%	49%	0%	62%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	183	69	262	91	199	47	140
LT Vol	0	175	0	134	75	75	0	102
Through Vol	0	8	0	128	0	124	0	38
RT Vol	98	0	69	0	16	0	47	0
Lane Flow Rate	109	203	72	273	99	218	52	156
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.227	0.393	0.147	0.493	0.194	0.392	0.112	0.303
Departure Headway (Hd)	7.504	6.962	7.364	6.505	7.01	6.473	7.728	7.021
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	516	487	554	512	556	464	512
Service Time	5.241	4.699	5.1	4.24	4.747	4.21	5.468	4.761
HCM Lane V/C Ratio	0.228	0.393	0.148	0.493	0.193	0.392	0.112	0.305
HCM Control Delay	12.4	14.2	11.4	15.4	11.4	13.3	11.4	12.8
HCM Lane LOS	B	B	B	C	B	B	B	B
HCM 95th-tile Q	0.9	1.9	0.5	2.7	0.7	1.9	0.4	1.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	47	102	38
Peak Hour Factor	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	113	42
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	12.4
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	280	0	0	58	288	779	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	304	0	0	63	324	875	93

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2052	2583	421	2135	2557	504	812	0	0
Stage 1	957	957	-	1579	1579	-	-	-	-
Stage 2	1095	1626	-	556	978	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	32	25	581	28	26	513	810	-	-
Stage 1	277	334	-	114	168	-	-	-	-
Stage 2	228	159	-	483	327	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	17	13	571	8	13	504	803	-	-
Mov Cap-2 Maneuver	30	10	-	103	~ -103	-	-	-	-
Stage 1	164	292	-	67	99	-	-	-	-
Stage 2	118	94	-	197	286	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	18.3	13.2	3.1
HCM LOS	C	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	803	-	-	571	504	695	-	-
HCM Lane V/C Ratio	0.403	-	-	0.533	0.125	0.119	-	-
HCM Control Delay (s)	12.5	-	-	18.3	13.2	10.9	-	-
HCM Lane LOS	B	-	-	C	B	B	-	-
HCM 95th %tile Q(veh)	2	-	-	3.1	0.4	0.4	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	78	715	39
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	94	94	94
Heavy Vehicles, %	2	2	2
Mvmt Flow	83	761	41

Major/Minor	Major2		
Conflicting Flow All	979	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	701	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	695	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	26	818	30	331	1058	217	26	340	501	176	189	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	27	861	8	356	1138	158	30	395	280	183	197	3
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.86	0.86	0.86	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	950	420	386	1648	732	39	802	354	212	1147	508
Arrive On Green	0.02	0.27	0.27	0.22	0.47	0.47	0.02	0.23	0.23	0.12	0.32	0.32
Sat Flow, veh/h	1774	3539	1566	1774	3539	1573	1774	3539	1562	1774	3539	1569
Grp Volume(v), veh/h	27	861	8	356	1138	158	30	395	280	183	197	3
Grp Sat Flow(s),veh/h/ln	1774	1770	1566	1774	1770	1573	1774	1770	1562	1774	1770	1569
Q Serve(g_s), s	1.6	25.0	0.4	20.9	26.9	6.3	1.8	10.3	17.9	10.8	4.2	0.1
Cycle Q Clear(g_c), s	1.6	25.0	0.4	20.9	26.9	6.3	1.8	10.3	17.9	10.8	4.2	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	950	420	386	1648	732	39	802	354	212	1147	508
V/C Ratio(X)	0.74	0.91	0.02	0.92	0.69	0.22	0.76	0.49	0.79	0.86	0.17	0.01
Avail Cap(c_a), veh/h	134	1036	458	418	1648	732	134	1103	487	217	1269	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	51.7	37.6	28.6	40.7	22.4	16.9	51.7	35.8	38.7	45.9	25.7	24.3
Incr Delay (d2), s/veh	24.5	10.7	0.0	24.8	1.2	0.1	25.9	0.5	6.0	27.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	13.6	0.2	12.8	13.4	2.8	1.2	5.1	8.3	6.9	2.1	0.1
LnGrp Delay(d),s/veh	76.2	48.2	28.6	65.5	23.6	17.0	77.5	36.2	44.7	73.5	25.8	24.3
LnGrp LOS	E	D	C	E	C	B	E	D	D	E	C	C
Approach Vol, veh/h		896			1652			705			383	
Approach Delay, s/veh		48.9			32.0			41.4			48.6	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	29.0	27.1	33.4	6.3	39.3	6.2	54.3
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	33.1	25.0	31.1	8.0	38.1	8.0	48.1
Max Q Clear Time (g_c+I1), s	12.8	19.9	22.9	27.0	3.8	6.2	3.6	28.9
Green Ext Time (p_c), s	0.0	4.1	0.3	1.5	0.0	5.5	0.0	13.5

Intersection Summary	
HCM 2010 Ctrl Delay	39.7
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	27	861	32	356	1138	233	30	395	583	183	197	9
v/c Ratio	0.25	0.92	0.06	0.92	0.70	0.30	0.28	0.46	0.92	0.90	0.17	0.02
Control Delay	59.0	56.7	0.2	75.0	29.5	11.7	59.8	38.2	37.3	92.4	28.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	56.7	0.2	75.0	29.5	11.7	59.8	38.2	37.3	92.4	28.3	0.0
Queue Length 50th (ft)	20	344	0	276	398	52	23	131	189	143	57	0
Queue Length 95th (ft)	51	#470	0	#465	494	115	52	169	#356	#289	87	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	126	980	544	393	1632	777	126	1043	699	204	1230	617
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.88	0.06	0.91	0.70	0.30	0.24	0.38	0.83	0.90	0.16	0.01

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	319	917	15	19	1094	244	37	21	35	297	4	179
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	336	965	15	22	1243	61	40	23	4	349	0	10
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	1639	25	31	1364	417	325	283	49	653	0	287
Arrive On Green	0.21	0.46	0.46	0.02	0.27	0.27	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3566	55	1774	5085	1554	1774	1542	268	3548	0	1558
Grp Volume(v), veh/h	336	479	501	22	1243	61	40	0	27	349	0	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1852	1774	1695	1554	1774	0	1810	1774	0	1558
Q Serve(g_s), s	22.2	24.1	24.1	1.5	28.4	3.6	2.3	0.0	1.5	10.7	0.0	0.6
Cycle Q Clear(g_c), s	22.2	24.1	24.1	1.5	28.4	3.6	2.3	0.0	1.5	10.7	0.0	0.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	371	813	851	31	1364	417	325	0	332	653	0	287
V/C Ratio(X)	0.91	0.59	0.59	0.72	0.91	0.15	0.12	0.00	0.08	0.53	0.00	0.03
Avail Cap(c_a), veh/h	458	813	851	118	1364	417	325	0	332	653	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	24.0	24.0	58.7	42.6	33.5	41.0	0.0	40.7	44.3	0.0	40.2
Incr Delay (d2), s/veh	19.0	3.1	3.0	24.3	9.9	0.7	0.8	0.0	0.5	3.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	12.4	13.0	0.9	14.6	1.6	1.2	0.0	0.8	5.5	0.0	0.3
LnGrp Delay(d),s/veh	65.3	27.1	27.0	83.0	52.4	34.1	41.8	0.0	41.1	47.5	0.0	40.5
LnGrp LOS	E	C	C	F	D	C	D		D	D		D
Approach Vol, veh/h		1316			1326			67			359	
Approach Delay, s/veh		36.8			52.1			41.5			47.3	
Approach LOS		D			D			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		26.9	12.0	60.1		27.0	35.0	37.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	55.2		22.1	31.0	32.2
Max Q Clear Time (g_c+I1), s		4.3	3.5	26.1		12.7	24.2	30.4
Green Ext Time (p_c), s		0.2	0.5	6.6		0.9	0.6	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	44.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	336	981	22	1243	277	40	61	176	174	208
v/c Ratio	0.86	0.62	0.23	0.96	0.49	0.11	0.17	0.60	0.59	0.47
Control Delay	68.8	28.5	62.2	62.9	10.8	44.5	22.2	57.3	56.8	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	28.5	62.2	62.9	10.8	44.5	22.2	57.3	56.8	9.7
Queue Length 50th (ft)	259	321	17	367	24	28	16	141	138	0
Queue Length 95th (ft)	#389	393	44	#445	95	62	56	212	209	57
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	435	1595	112	1299	562	355	363	294	296	441
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.62	0.20	0.96	0.49	0.11	0.17	0.60	0.59	0.47

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	1141	18	43	1337	58	57	3	58	88	3	31
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	14	1176	11	47	1453	41	65	3	8	100	3	4
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	2148	953	60	3175	980	388	106	283	385	171	228
Arrive On Green	0.02	1.00	1.00	0.03	0.62	0.62	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3539	1570	1774	5085	1571	1386	446	1189	1381	720	959
Grp Volume(v), veh/h	14	1176	11	47	1453	41	65	0	11	100	0	7
Grp Sat Flow(s),veh/h/ln	1774	1770	1570	1774	1695	1571	1386	0	1635	1381	0	1679
Q Serve(g_s), s	0.9	0.0	0.0	3.0	17.1	1.1	4.3	0.0	0.6	6.8	0.0	0.4
Cycle Q Clear(g_c), s	0.9	0.0	0.0	3.0	17.1	1.1	4.7	0.0	0.6	7.4	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.57
Lane Grp Cap(c), veh/h	15	2148	953	60	3175	980	388	0	389	385	0	400
V/C Ratio(X)	0.90	0.55	0.01	0.78	0.46	0.04	0.17	0.00	0.03	0.26	0.00	0.02
Avail Cap(c_a), veh/h	111	2148	953	156	3175	980	388	0	389	385	0	400
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.9	0.0	0.0	54.6	11.3	8.3	35.0	0.0	33.3	36.1	0.0	33.2
Incr Delay (d2), s/veh	68.6	0.8	0.0	18.8	0.5	0.1	0.9	0.0	0.1	1.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.2	0.0	1.8	8.1	0.5	1.7	0.0	0.3	2.8	0.0	0.2
LnGrp Delay(d),s/veh	124.5	0.8	0.0	73.4	11.7	8.3	35.9	0.0	33.4	37.8	0.0	33.3
LnGrp LOS	F	A	A	E	B	A	D		C	D		C
Approach Vol, veh/h		1201			1541			76			107	
Approach Delay, s/veh		2.2			13.5			35.6			37.5	
Approach LOS		A			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		32.0	7.9	80.1		32.0	12.0	76.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		27.1	10.0	69.1		27.1	7.1	71.099998
Max Q Clear Time (g_c+I1), s		6.7	5.0	2.0		9.4	2.9	19.1
Green Ext Time (p_c), s		0.5	0.0	11.2		0.5	1.7	14.8

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	14	1176	19	47	1453	63	65	69	100	38
v/c Ratio	0.14	0.55	0.02	0.39	0.44	0.06	0.21	0.17	0.34	0.10
Control Delay	37.2	3.8	0.1	70.2	6.9	1.0	40.1	10.7	42.8	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	3.8	0.1	70.2	6.9	1.0	40.1	10.7	42.8	13.7
Queue Length 50th (ft)	11	21	0	32	85	1	41	2	65	2
Queue Length 95th (ft)	m17	27	m0	m47	97	m4	80	38	116	30
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	118	2145	936	147	3317	1006	303	402	295	380
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.55	0.02	0.32	0.44	0.06	0.21	0.17	0.34	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	313	1023	256	177	1172	241	243	630	116	414	457	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	337	1100	127	182	1208	134	256	663	26	465	513	46
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.97	0.97	0.97	0.95	0.95	0.95	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	1821	562	258	1599	493	365	897	397	545	1082	479
Arrive On Green	0.12	0.36	0.36	0.05	0.21	0.21	0.11	0.25	0.25	0.16	0.31	0.31
Sat Flow, veh/h	3442	5085	1570	3442	5085	1568	3442	3539	1565	3442	3539	1568
Grp Volume(v), veh/h	337	1100	127	182	1208	134	256	663	26	465	513	46
Grp Sat Flow(s),veh/h/ln	1721	1695	1570	1721	1695	1568	1721	1770	1565	1721	1770	1568
Q Serve(g_s), s	11.0	20.3	6.5	6.0	25.6	8.2	8.2	19.7	1.4	15.1	13.5	2.4
Cycle Q Clear(g_c), s	11.0	20.3	6.5	6.0	25.6	8.2	8.2	19.7	1.4	15.1	13.5	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	1821	562	258	1599	493	365	897	397	545	1082	479
V/C Ratio(X)	0.83	0.60	0.23	0.71	0.76	0.27	0.70	0.74	0.07	0.85	0.47	0.10
Avail Cap(c_a), veh/h	480	1821	562	330	1599	493	450	897	397	630	1082	479
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	30.2	25.7	53.3	41.1	34.3	49.5	39.3	32.5	47.0	32.3	28.5
Incr Delay (d2), s/veh	10.0	1.5	0.9	4.2	3.0	1.2	3.6	5.4	0.3	9.8	1.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	9.7	3.0	3.0	12.5	3.7	4.1	10.3	0.7	7.9	6.9	1.1
LnGrp Delay(d),s/veh	59.4	31.7	26.7	57.5	44.1	35.5	53.2	44.8	32.8	56.8	33.8	28.9
LnGrp LOS	E	C	C	E	D	D	D	D	C	E	C	C
Approach Vol, veh/h		1564			1524			945			1024	
Approach Delay, s/veh		37.2			44.9			46.7			44.1	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.2	34.0	17.8	46.0	16.2	40.0	22.8	41.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	21.0	29.1	11.0	41.1	15.0	35.1	16.0	36.1
Max Q Clear Time (g_c+I1), s	17.1	21.7	8.0	22.3	10.2	15.5	13.0	27.6
Green Ext Time (p_c), s	1.1	2.5	0.6	7.6	1.3	3.2	0.6	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	42.7
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	337	1100	275	182	1208	248	256	663	122	465	513	224
v/c Ratio	0.77	0.61	0.40	0.62	0.76	0.41	0.65	0.76	0.24	0.82	0.49	0.37
Control Delay	70.2	30.7	11.9	46.1	19.1	2.5	58.8	48.4	2.3	61.3	36.6	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	30.7	11.9	46.1	19.1	2.5	58.8	48.4	2.3	61.3	36.6	7.2
Queue Length 50th (ft)	141	295	92	73	152	3	97	253	0	179	173	8
Queue Length 95th (ft)	190	341	162	114	187	5	142	323	13	236	224	65
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	457	1794	680	314	1582	602	429	877	516	600	1054	605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.61	0.40	0.58	0.76	0.41	0.60	0.76	0.24	0.78	0.49	0.37

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	71	1271	97	264	1290	50	158	178	242	94	94	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	74	1324	64	284	1387	29	165	185	53	115	115	6
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.96	0.96	0.96	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	2299	711	322	2917	900	340	463	389	249	851	44
Arrive On Green	0.10	0.90	0.90	0.06	0.19	0.19	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1573	1774	5085	1570	1254	1863	1564	1131	3421	177
Grp Volume(v), veh/h	74	1324	64	284	1387	29	165	185	53	115	59	62
Grp Sat Flow(s),veh/h/ln	1774	1695	1573	1774	1695	1570	1254	1863	1564	1131	1770	1829
Q Serve(g_s), s	4.8	6.1	0.5	18.6	28.4	1.8	13.8	9.7	3.1	11.0	3.0	3.1
Cycle Q Clear(g_c), s	4.8	6.1	0.5	18.6	28.4	1.8	16.9	9.7	3.1	20.7	3.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	92	2299	711	322	2917	900	340	463	389	249	440	455
V/C Ratio(X)	0.80	0.58	0.09	0.88	0.48	0.03	0.48	0.40	0.14	0.46	0.13	0.14
Avail Cap(c_a), veh/h	138	2299	711	485	2917	900	340	463	389	249	440	455
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	3.4	3.1	53.8	31.7	20.9	40.7	36.7	34.2	45.3	34.2	34.2
Incr Delay (d2), s/veh	13.5	0.8	0.2	10.1	0.5	0.1	4.9	2.6	0.7	6.0	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	2.7	2.7	0.2	10.1	13.5	0.8	5.2	5.3	1.4	3.9	1.6	1.6
LnGrp Delay(d),s/veh	65.3	4.1	3.3	63.8	32.2	21.0	45.6	39.2	34.9	51.3	34.8	34.8
LnGrp LOS	E	A	A	E	C	C	D	D	C	D	C	C
Approach Vol, veh/h		1462			1700			403			236	
Approach Delay, s/veh		7.2			37.3			41.3			42.9	
Approach LOS		A			D			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		34.0	25.2	60.8		34.0	14.0	72.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		29.1	32.0	45.1		29.1	9.1	67.099998
Max Q Clear Time (g_c+I1), s		18.9	20.6	8.1		22.7	6.8	30.4
Green Ext Time (p_c), s		2.2	0.6	12.4		1.7	0.1	12.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	74	1324	101	284	1387	54	165	185	252	115	145
v/c Ratio	0.54	0.59	0.14	0.79	0.47	0.06	0.56	0.41	0.45	0.50	0.17
Control Delay	40.1	5.3	1.3	49.6	7.6	1.8	48.4	41.5	7.2	47.8	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	5.3	1.3	49.6	7.6	1.8	48.4	41.5	7.2	47.8	30.0
Queue Length 50th (ft)	58	82	3	185	178	2	113	121	0	77	38
Queue Length 95th (ft)	m90	155	m16	234	238	m13	188	192	66	125	59
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	147	2232	711	472	2962	905	294	451	564	231	846
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.59	0.14	0.60	0.47	0.06	0.56	0.41	0.45	0.50	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	132	1304	129	68	1384	114	153	96	90	152	101	59
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	135	1331	99	72	1457	76	158	99	24	177	117	11
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.97	0.97	0.97	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	2711	836	88	2529	779	364	538	453	375	538	453
Arrive On Green	0.03	0.18	0.18	0.10	0.99	0.99	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	5085	1568	1774	5085	1567	1249	1863	1567	1254	1863	1567
Grp Volume(v), veh/h	135	1331	99	72	1457	76	158	99	24	177	117	11
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1567	1249	1863	1567	1254	1863	1567
Q Serve(g_s), s	8.7	27.1	6.1	4.6	0.4	0.0	12.6	4.6	1.3	14.1	5.5	0.6
Cycle Q Clear(g_c), s	8.7	27.1	6.1	4.6	0.4	0.0	18.1	4.6	1.3	18.7	5.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	2711	836	88	2529	779	364	538	453	375	538	453
V/C Ratio(X)	0.81	0.49	0.12	0.82	0.58	0.10	0.43	0.18	0.05	0.47	0.22	0.02
Avail Cap(c_a), veh/h	294	2711	836	172	2529	779	364	538	453	375	538	453
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	33.2	24.5	51.1	0.2	0.2	37.8	30.6	29.4	37.6	30.9	29.2
Incr Delay (d2), s/veh	7.6	0.5	0.2	12.3	0.7	0.2	3.7	0.8	0.2	4.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	12.8	2.7	2.5	0.2	0.1	4.7	2.5	0.6	5.4	2.9	0.3
LnGrp Delay(d),s/veh	62.1	33.7	24.8	63.4	0.9	0.3	41.5	31.4	29.7	41.9	31.8	29.3
LnGrp LOS	E	C	C	E	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1565			1605			281			305	
Approach Delay, s/veh		35.6			3.6			36.9			37.6	
Approach LOS		D			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		38.0	16.0	66.0		38.0	14.7	67.3
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		33.1	11.1	61.099998		33.1	19.0	54.1
Max Q Clear Time (g_c+I1), s		20.1	6.6	29.1		20.7	10.7	2.4
Green Ext Time (p_c), s		2.1	0.1	11.8		2.1	0.2	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	135	1331	132	72	1457	120	158	99	93	177	117	69
v/c Ratio	0.65	0.49	0.16	0.45	0.58	0.15	0.47	0.19	0.19	0.51	0.23	0.14
Control Delay	64.1	6.2	1.0	33.4	6.4	0.8	41.9	34.5	6.9	42.6	35.1	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	6.2	1.0	33.4	6.4	0.8	41.9	34.5	6.9	42.6	35.1	3.3
Queue Length 50th (ft)	95	143	5	42	46	1	102	59	0	116	70	0
Queue Length 95th (ft)	120	41	1	m72	83	m1	172	105	38	179	115	15
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	280	2725	840	177	2494	782	333	513	495	349	513	495
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.49	0.16	0.41	0.58	0.15	0.47	0.19	0.19	0.51	0.23	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	1397	102	115	1466	120	100	57	100	201	36	28
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	121	1471	65	122	1560	88	109	62	30	212	38	9
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	2396	738	151	2396	741	478	764	345	454	602	507
Arrive On Green	0.17	0.94	0.94	0.11	0.63	0.63	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	5085	1567	1774	5085	1573	1342	2364	1068	1289	1863	1569
Grp Volume(v), veh/h	121	1471	65	122	1560	88	109	45	47	212	38	9
Grp Sat Flow(s),veh/h/ln	1774	1695	1567	1774	1695	1573	1342	1770	1662	1289	1863	1569
Q Serve(g_s), s	7.5	4.5	0.3	7.7	22.2	2.6	7.0	2.0	2.2	15.7	1.6	0.4
Cycle Q Clear(g_c), s	7.5	4.5	0.3	7.7	22.2	2.6	8.6	2.0	2.2	18.0	1.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	151	2396	738	151	2396	741	478	572	537	454	602	507
V/C Ratio(X)	0.80	0.61	0.09	0.81	0.65	0.12	0.23	0.08	0.09	0.47	0.06	0.02
Avail Cap(c_a), veh/h	232	2396	738	232	2396	741	478	572	537	454	602	507
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	1.9	1.8	50.0	15.5	11.8	29.8	27.0	27.1	33.3	26.8	26.4
Incr Delay (d2), s/veh	9.4	1.0	0.2	7.3	0.9	0.2	1.1	0.3	0.3	3.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	1.7	0.2	4.1	10.5	1.2	2.8	1.0	1.1	6.0	0.9	0.2
LnGrp Delay(d),s/veh	56.0	2.9	2.0	57.2	16.3	12.0	30.9	27.3	27.4	36.7	27.0	26.5
LnGrp LOS	E	A	A	E	B	B	C	C	C	D	C	C
Approach Vol, veh/h		1657			1770			201			259	
Approach Delay, s/veh		6.8			18.9			29.3			35.0	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		42.0	19.0	59.0		42.0	19.0	59.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		37.1	15.0	54.1		37.1	15.0	54.1
Max Q Clear Time (g_c+I1), s		10.6	9.7	6.5		20.0	9.5	24.2
Green Ext Time (p_c), s		1.8	0.3	15.0		1.6	0.3	14.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	121	1471	107	122	1560	128	109	171	212	38	29
v/c Ratio	0.65	0.64	0.15	0.66	0.68	0.18	0.25	0.15	0.54	0.06	0.05
Control Delay	53.9	10.2	1.1	48.8	9.1	1.2	32.2	12.0	40.1	29.3	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	10.2	1.1	48.8	9.1	1.2	32.2	12.0	40.1	29.3	2.6
Queue Length 50th (ft)	96	106	1	99	79	1	62	17	135	20	0
Queue Length 95th (ft)	156	128	7	m141	126	m6	113	44	223	48	9
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	221	2292	719	221	2292	731	440	1105	389	612	542
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.64	0.15	0.55	0.68	0.18	0.25	0.15	0.54	0.06	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	376	1073	189	243	1186	129	344	400	129	161	364	320
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	413	1179	106	261	1275	41	366	426	31	185	418	94
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	2066	638	326	1812	559	438	954	422	259	770	340
Arrive On Green	0.27	0.81	0.81	0.09	0.36	0.36	0.13	0.27	0.27	0.08	0.22	0.22
Sat Flow, veh/h	3442	5085	1572	3442	5085	1570	3442	3539	1566	3442	3539	1562
Grp Volume(v), veh/h	413	1179	106	261	1275	41	366	426	31	185	418	94
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1570	1721	1770	1566	1721	1770	1562
Q Serve(g_s), s	13.2	9.4	1.1	8.6	24.8	2.0	12.0	11.5	1.3	6.1	12.1	5.8
Cycle Q Clear(g_c), s	13.2	9.4	1.1	8.6	24.8	2.0	12.0	11.5	1.3	6.1	12.1	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	2066	638	326	1812	559	438	954	422	259	770	340
V/C Ratio(X)	0.88	0.57	0.17	0.80	0.70	0.07	0.84	0.45	0.07	0.71	0.54	0.28
Avail Cap(c_a), veh/h	540	2066	638	448	1812	559	507	954	422	328	770	340
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	7.3	2.8	51.2	31.9	24.5	49.2	35.0	18.4	52.1	40.0	37.6
Incr Delay (d2), s/veh	10.7	0.8	0.4	7.2	2.3	0.3	10.3	1.5	0.3	5.3	2.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	4.2	0.7	4.4	12.0	0.9	6.3	5.8	0.7	3.1	6.2	2.7
LnGrp Delay(d),s/veh	51.7	8.2	3.2	58.3	34.2	24.8	59.5	36.5	18.7	57.4	42.8	39.6
LnGrp LOS	D	A	A	E	C	C	E	D	B	E	D	D
Approach Vol, veh/h		1698			1577			823			697	
Approach Delay, s/veh		18.4			38.0			46.0			46.2	
Approach LOS		B			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	12.7	36.0	14.9	56.4	18.7	30.0	25.3	46.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.9	4.9000001
Max Green Setting (Gmax), s	11.0	31.1	15.0	45.1	17.0	25.1	18.4	41.099998
Max Q Clear Time (g_c+I1), s	8.1	13.5	10.6	11.4	14.0	14.1	15.2	26.8
Green Ext Time (p_c), s	0.6	2.5	0.3	12.7	0.7	2.2	0.5	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	413	1179	208	261	1275	139	366	426	137	185	418	368
v/c Ratio	0.76	0.59	0.30	0.67	0.72	0.22	0.78	0.46	0.28	0.62	0.56	0.66
Control Delay	37.7	16.3	3.2	60.1	37.1	5.1	62.5	39.4	7.5	62.6	46.0	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	16.3	3.2	60.1	37.1	5.1	62.5	39.4	7.5	62.6	46.0	15.3
Queue Length 50th (ft)	128	112	2	100	315	0	142	146	1	72	154	43
Queue Length 95th (ft)	194	148	32	145	371	42	195	197	51	107	200	134
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	543	1999	697	429	1767	628	486	917	498	314	740	559
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.59	0.30	0.61	0.72	0.22	0.75	0.46	0.28	0.59	0.56	0.66

Intersection Summary

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	377	0	0	51	405	578	83
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	410	0	0	55	431	615	88

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2149	2545	393	2128	2530	372	757	0	0
Stage 1	970	970	-	1531	1531	-	-	-	-
Stage 2	1179	1575	-	597	999	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	27	27	606	28	27	625	850	-	-
Stage 1	272	330	-	122	177	-	-	-	-
Stage 2	202	169	-	456	319	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	13	11	596	5	11	615	843	-	-
Mov Cap-2 Maneuver	~ -54	~ -46	-	64	133	-	-	-	-
Stage 1	132	282	-	59	86	-	-	-	-
Stage 2	89	82	-	122	273	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	23.3	11.4	5.2
HCM LOS	C	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	843	-	-	596	615	876	-	-
HCM Lane V/C Ratio	0.511	-	-	0.688	0.09	0.138	-	-
HCM Control Delay (s)	13.6	-	-	23.3	11.4	9.8	-	-
HCM Lane LOS	B	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	3	-	-	5.4	0.3	0.5	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	116	663	54
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	96	96	96
Heavy Vehicles, %	2	2	2
Mvmt Flow	121	691	56

Major/Minor	Major2		
Conflicting Flow All	713	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	883	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	876	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	948	27	318	1251	283	45	193	517	234	181	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	37	1065	6	342	1345	231	49	210	183	260	201	6
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	1146	508	382	1814	807	63	632	278	180	867	383
Arrive On Green	0.03	0.32	0.32	0.22	0.51	0.51	0.04	0.18	0.18	0.10	0.24	0.24
Sat Flow, veh/h	1774	3539	1569	1774	3539	1574	1774	3539	1557	1774	3539	1564
Grp Volume(v), veh/h	37	1065	6	342	1345	231	49	210	183	260	201	6
Grp Sat Flow(s),veh/h/ln	1774	1770	1569	1774	1770	1574	1774	1770	1557	1774	1770	1564
Q Serve(g_s), s	2.0	28.6	0.3	18.4	29.4	8.2	2.7	5.1	10.8	10.0	4.5	0.3
Cycle Q Clear(g_c), s	2.0	28.6	0.3	18.4	29.4	8.2	2.7	5.1	10.8	10.0	4.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	1146	508	382	1814	807	63	632	278	180	867	383
V/C Ratio(X)	0.80	0.93	0.01	0.90	0.74	0.29	0.78	0.33	0.66	1.44	0.23	0.02
Avail Cap(c_a), veh/h	144	1148	509	541	1939	863	144	1306	575	180	1378	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	47.6	32.2	22.6	37.5	18.8	13.7	47.1	35.3	37.6	44.2	29.7	28.2
Incr Delay (d2), s/veh	25.5	13.0	0.0	13.4	1.5	0.2	18.6	0.3	2.7	227.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	16.0	0.1	10.4	14.6	3.6	1.6	2.5	4.8	16.2	2.2	0.1
LnGrp Delay(d),s/veh	73.1	45.2	22.6	50.9	20.3	13.9	65.7	35.6	40.3	271.4	29.9	28.2
LnGrp LOS	E	D	C	D	C	B	E	D	D	F	C	C
Approach Vol, veh/h		1108			1918			442			467	
Approach Delay, s/veh		46.0			25.0			40.9			164.3	
Approach LOS		D			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	14.0	22.5	25.2	36.7	7.5	29.0	6.6	55.3
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	36.3	30.0	31.9	8.0	38.3	8.0	53.9
Max Q Clear Time (g_c+I1), s	12.0	12.8	20.4	30.6	4.7	6.5	4.0	31.4
Green Ext Time (p_c), s	0.0	3.4	0.7	1.2	0.0	3.6	0.0	17.9

Intersection Summary	
HCM 2010 Ctrl Delay	49.2
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	37	1065	30	342	1345	304	49	210	562	260	201	28
v/c Ratio	0.31	0.97	0.05	0.84	0.73	0.36	0.40	0.31	0.87	1.53	0.24	0.06
Control Delay	59.6	58.0	0.2	59.1	26.0	14.8	62.5	37.6	25.4	300.8	34.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	58.0	0.2	59.1	26.0	14.8	62.5	37.6	25.4	300.8	34.3	0.2
Queue Length 50th (ft)	25	376	0	224	389	88	33	67	89	~258	62	0
Queue Length 95th (ft)	65	#673	0	#414	629	199	82	101	243	#495	95	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	136	1103	562	510	1858	848	136	1235	818	170	1303	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.97	0.05	0.67	0.72	0.36	0.36	0.17	0.69	1.53	0.15	0.04

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	294	1151	17	24	1193	353	19	4	10	311	2	168
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	354	1387	19	25	1256	107	21	4	1	354	0	14
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	1573	22	74	1357	414	322	261	65	645	0	283
Arrive On Green	0.22	0.44	0.44	0.04	0.27	0.27	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	3574	49	1774	5085	1554	1774	1434	358	3548	0	1557
Grp Volume(v), veh/h	354	686	720	25	1256	107	21	0	5	354	0	14
Grp Sat Flow(s),veh/h/ln	1774	1770	1853	1774	1695	1554	1774	0	1792	1774	0	1557
Q Serve(g_s), s	23.7	43.0	43.0	1.7	29.1	6.6	1.2	0.0	0.3	11.0	0.0	0.9
Cycle Q Clear(g_c), s	23.7	43.0	43.0	1.7	29.1	6.6	1.2	0.0	0.3	11.0	0.0	0.9
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	382	779	816	74	1357	414	322	0	326	645	0	283
V/C Ratio(X)	0.93	0.88	0.88	0.34	0.93	0.26	0.07	0.00	0.02	0.55	0.00	0.05
Avail Cap(c_a), veh/h	425	779	816	117	1357	414	322	0	326	645	0	283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	31.0	31.0	56.4	43.2	35.0	41.0	0.0	40.7	45.0	0.0	40.9
Incr Delay (d2), s/veh	25.0	13.6	13.2	2.3	11.1	1.3	0.4	0.0	0.1	3.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	23.9	25.0	0.9	15.0	3.0	0.6	0.0	0.1	5.7	0.0	0.4
LnGrp Delay(d),s/veh	71.5	44.6	44.2	58.7	54.3	36.3	41.4	0.0	40.7	48.4	0.0	41.2
LnGrp LOS	E	D	D	E	D	D	D		D	D		D
Approach Vol, veh/h		1760			1388			26			368	
Approach Delay, s/veh		49.9			53.0			41.3			48.1	
Approach LOS		D			D			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		26.9	12.0	58.2		26.9	33.0	37.2
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	53.3		22.0	29.0	32.3
Max Q Clear Time (g_c+I1), s		3.2	3.7	45.0		13.0	25.7	31.1
Green Ext Time (p_c), s		0.0	0.5	5.2		0.9	0.4	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	50.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	354	1407	25	1256	372	21	15	176	179	191
v/c Ratio	0.91	0.88	0.25	0.95	0.59	0.06	0.05	0.59	0.60	0.45
Control Delay	74.4	38.5	61.4	60.4	10.8	43.2	24.8	56.0	56.3	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.4	38.5	61.4	60.4	10.8	43.2	24.8	56.0	56.3	9.6
Queue Length 50th (ft)	274	553	19	363	30	14	3	137	141	0
Queue Length 95th (ft)	#375	576	49	#458	126	39	22	214	217	59
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	413	1608	114	1324	632	337	318	298	299	429
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.88	0.22	0.95	0.59	0.06	0.05	0.59	0.60	0.45

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	1411	24	65	1454	52	33	3	43	76	3	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.98		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	1641	16	70	1563	36	38	3	4	86	3	2
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	2264	1005	90	3339	1032	323	137	183	321	198	132
Arrive On Green	0.05	1.00	1.00	0.05	0.66	0.66	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3539	1571	1774	5085	1571	1384	718	958	1381	1037	691
Grp Volume(v), veh/h	33	1641	16	70	1563	36	38	0	7	86	0	5
Grp Sat Flow(s),veh/h/ln	1774	1770	1571	1774	1695	1571	1384	0	1676	1381	0	1728
Q Serve(g_s), s	2.1	0.0	0.0	4.5	17.7	0.9	2.7	0.0	0.4	6.3	0.0	0.3
Cycle Q Clear(g_c), s	2.1	0.0	0.0	4.5	17.7	0.9	2.9	0.0	0.4	6.6	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.40
Lane Grp Cap(c), veh/h	46	2264	1005	90	3339	1032	323	0	320	321	0	329
V/C Ratio(X)	0.72	0.72	0.02	0.78	0.47	0.03	0.12	0.00	0.02	0.27	0.00	0.02
Avail Cap(c_a), veh/h	109	2264	1005	153	3339	1032	323	0	320	321	0	329
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.41	0.41	0.41	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	0.0	54.4	9.9	7.0	39.2	0.0	38.1	40.8	0.0	38.1
Incr Delay (d2), s/veh	8.5	0.9	0.0	13.5	0.5	0.1	0.7	0.0	0.1	2.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	0.0	2.6	8.4	0.4	1.1	0.0	0.2	2.6	0.0	0.1
LnGrp Delay(d),s/veh	63.0	0.9	0.0	67.9	10.3	7.1	40.0	0.0	38.2	42.9	0.0	38.1
LnGrp LOS	E	A	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1690			1669			45			91	
Approach Delay, s/veh		2.1			12.7			39.7			42.6	
Approach LOS		A			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		27.0	9.9	83.1		27.0	12.0	81.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		22.1	10.0	74.1		22.1	7.1	76.099998
Max Q Clear Time (g_c+I1), s		4.9	6.5	2.0		8.6	4.1	19.7
Green Ext Time (p_c), s		0.3	0.0	21.3		0.3	1.1	17.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.7
HCM 2010 LOS	A

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	1641	28	70	1563	56	38	52	86	36
v/c Ratio	0.31	0.72	0.03	0.53	0.46	0.05	0.15	0.16	0.35	0.11
Control Delay	35.9	2.9	0.0	75.2	6.7	1.1	43.1	13.8	47.5	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	2.9	0.0	75.2	6.7	1.1	43.1	13.8	47.5	15.7
Queue Length 50th (ft)	24	1	0	46	156	1	25	2	59	2
Queue Length 95th (ft)	m30	1	m0	m65	146	m2	56	36	108	30
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	118	2276	990	147	3428	1037	247	326	244	314
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.72	0.03	0.48	0.46	0.05	0.15	0.16	0.35	0.11

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	332	1167	151	201	1427	248	274	465	89	514	424	248
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	386	1357	75	214	1518	164	304	517	9	524	433	55
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.90	0.90	0.90	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	2023	625	301	1853	572	470	661	291	586	780	344
Arrive On Green	0.13	0.40	0.40	0.17	0.73	0.73	0.14	0.19	0.19	0.17	0.22	0.22
Sat Flow, veh/h	3442	5085	1571	3442	5085	1570	3442	3539	1558	3442	3539	1562
Grp Volume(v), veh/h	386	1357	75	214	1518	164	304	517	9	524	433	55
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1570	1721	1770	1558	1721	1770	1562
Q Serve(g_s), s	13.0	26.0	3.6	6.9	23.8	2.6	9.9	16.5	0.6	17.6	12.9	2.5
Cycle Q Clear(g_c), s	13.0	26.0	3.6	6.9	23.8	2.6	9.9	16.5	0.6	17.6	12.9	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	2023	625	301	1853	572	470	661	291	586	780	344
V/C Ratio(X)	0.87	0.67	0.12	0.71	0.82	0.29	0.65	0.78	0.03	0.89	0.56	0.16
Avail Cap(c_a), veh/h	465	2023	625	323	1853	572	494	661	291	610	780	344
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	29.3	22.5	47.5	13.4	4.1	48.4	45.9	39.4	48.1	41.0	20.4
Incr Delay (d2), s/veh	16.2	1.8	0.4	5.1	3.2	1.0	2.7	9.0	0.2	15.3	2.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	12.5	1.6	3.5	11.2	1.6	4.9	8.9	0.3	9.6	6.6	1.5
LnGrp Delay(d),s/veh	66.8	31.1	22.9	52.6	16.6	5.0	51.2	54.8	39.6	63.4	43.8	21.4
LnGrp LOS	E	C	C	D	B	A	D	D	D	E	D	C
Approach Vol, veh/h		1818			1896			830			1012	
Approach Delay, s/veh		38.3			19.7			53.3			52.7	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	27.0	16.8	52.0	20.2	31.0	19.2	49.6
Change Period (Y+Rc), s	4.0	4.9	4.9000001	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	21.0	22.1	11.47.099998	17.0	26.1	16.0	43.1	
Max Q Clear Time (g_c+I1), s	19.6	18.5	8.9	28.0	11.9	14.9	15.0	25.8
Green Ext Time (p_c), s	0.5	1.1	1.4	9.4	1.5	2.1	0.2	10.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	386	1357	176	214	1518	264	304	517	99	524	433	253
v/c Ratio	0.86	0.67	0.26	0.62	0.82	0.40	0.64	0.79	0.25	0.89	0.56	0.48
Control Delay	67.0	15.1	3.1	40.0	20.0	4.9	55.7	56.8	4.3	67.4	45.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	15.1	3.1	40.0	20.0	4.9	55.7	56.8	4.3	67.4	45.2	8.0
Queue Length 50th (ft)	139	193	9	71	176	6	115	203	0	205	158	0
Queue Length 95th (ft)	#208	224	m22	116	324	42	163	267	23	#296	212	68
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	457	2015	681	343	1858	655	486	651	393	600	769	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.67	0.26	0.62	0.82	0.40	0.63	0.79	0.25	0.87	0.56	0.48

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	107	1373	127	314	1574	80	145	132	241	125	130	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	116	1492	73	327	1640	54	158	143	50	136	141	17
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	2041	631	415	2794	862	316	456	383	277	779	92
Arrive On Green	0.06	0.27	0.27	0.47	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	5085	1571	1774	5085	1569	1213	1863	1564	1177	3182	378
Grp Volume(v), veh/h	116	1492	73	327	1640	54	158	143	50	136	77	81
Grp Sat Flow(s),veh/h/ln	1774	1695	1571	1774	1695	1569	1213	1863	1564	1177	1770	1791
Q Serve(g_s), s	7.4	30.7	4.0	17.9	0.0	0.0	13.6	7.2	2.9	12.3	4.0	4.1
Cycle Q Clear(g_c), s	7.4	30.7	4.0	17.9	0.0	0.0	17.7	7.2	2.9	19.5	4.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	152	2041	631	415	2794	862	316	456	383	277	433	438
V/C Ratio(X)	0.76	0.73	0.12	0.79	0.59	0.06	0.50	0.31	0.13	0.49	0.18	0.18
Avail Cap(c_a), veh/h	232	2041	631	494	2794	862	316	456	383	277	433	438
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	36.3	26.6	28.2	0.0	0.0	41.3	35.5	33.8	43.5	34.3	34.3
Incr Delay (d2), s/veh	5.0	1.5	0.2	4.4	0.6	0.1	5.5	1.8	0.7	6.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	14.7	1.8	9.2	0.1	0.0	5.1	3.9	1.3	4.5	2.0	2.1
LnGrp Delay(d),s/veh	58.0	37.8	26.8	32.6	0.6	0.1	46.9	37.3	34.6	49.6	35.2	35.2
LnGrp LOS	E	D	C	C	A	A	D	D	C	D	D	D
Approach Vol, veh/h		1681			2021			351			294	
Approach Delay, s/veh		38.8			5.7			41.2			41.9	
Approach LOS		D			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		33.0	36.0	51.0		33.0	19.0	68.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		28.1	32.0	46.1		28.1	15.0	63.1
Max Q Clear Time (g_c+I1), s		19.7	19.9	32.7		21.5	9.4	2.0
Green Ext Time (p_c), s		2.0	1.1	8.3		1.7	0.7	19.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	116	1492	138	327	1640	83	158	143	262	136	209
v/c Ratio	0.63	0.76	0.21	0.75	0.61	0.10	0.56	0.30	0.45	0.48	0.23
Control Delay	48.0	24.5	7.9	45.7	3.9	0.5	48.6	39.0	7.1	45.6	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	24.5	7.9	45.7	3.9	0.5	48.6	39.0	7.1	45.6	25.9
Queue Length 50th (ft)	94	186	14	272	69	0	108	90	0	90	46
Queue Length 95th (ft)	m133	284	m37	m356	76	m0	187	153	68	161	82
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	221	1953	651	472	2673	820	283	475	588	284	898
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.76	0.21	0.69	0.61	0.10	0.56	0.30	0.45	0.48	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	1453	128	85	1630	87	204	76	42	128	79	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	185	1529	103	89	1698	55	249	93	7	138	85	24
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.82	0.82	0.82	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	2614	806	113	2288	704	405	565	475	403	565	475
Arrive On Green	0.24	1.00	1.00	0.04	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	5085	1568	1774	5085	1566	1270	1863	1568	1280	1863	1568
Grp Volume(v), veh/h	185	1529	103	89	1698	55	249	93	7	138	85	24
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1566	1270	1863	1568	1280	1863	1568
Q Serve(g_s), s	11.6	0.0	0.0	5.8	34.8	2.9	20.6	4.2	0.4	10.3	3.9	1.3
Cycle Q Clear(g_c), s	11.6	0.0	0.0	5.8	34.8	2.9	24.5	4.2	0.4	14.5	3.9	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	2614	806	113	2288	704	405	565	475	403	565	475
V/C Ratio(X)	0.87	0.58	0.13	0.79	0.74	0.08	0.62	0.16	0.01	0.34	0.15	0.05
Avail Cap(c_a), veh/h	277	2614	806	184	2288	704	405	565	475	403	565	475
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	0.0	54.7	34.4	23.3	38.4	29.6	28.2	34.9	29.5	28.6
Incr Delay (d2), s/veh	14.0	0.6	0.2	7.0	1.3	0.1	6.8	0.6	0.1	2.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.2	0.0	3.1	16.6	1.3	8.0	2.3	0.2	3.9	2.1	0.6
LnGrp Delay(d),s/veh	57.2	0.6	0.2	61.6	35.7	23.4	45.2	30.2	28.3	37.2	30.0	28.8
LnGrp LOS	E	A	A	E	D	C	D	C	C	D	C	C
Approach Vol, veh/h		1817			1842			349			247	
Approach Delay, s/veh		6.4			36.6			40.9			33.9	
Approach LOS		A			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		40.0	11.4	68.6		40.0	23.0	57.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		35.1	12.0	59.1		35.1	18.1	52.099998
Max Q Clear Time (g_c+I1), s		26.5	7.8	2.0		16.5	13.6	36.8
Green Ext Time (p_c), s		1.7	0.1	18.3		2.3	0.4	10.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1529	135	89	1698	91	249	93	51	138	85	99
v/c Ratio	0.66	0.59	0.17	0.58	0.77	0.13	0.66	0.17	0.10	0.37	0.16	0.19
Control Delay	35.4	9.6	2.4	58.6	16.0	2.0	47.0	32.7	0.7	37.2	32.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	9.6	2.4	58.6	16.0	2.0	47.0	32.7	0.7	37.2	32.5	7.1
Queue Length 50th (ft)	116	110	2	53	464	11	169	54	0	85	49	0
Queue Length 95th (ft)	m173	117	m7	m75	533	m13	234	88	0	146	90	41
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	280	2573	793	177	2207	690	377	544	519	374	544	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.59	0.17	0.50	0.77	0.13	0.66	0.17	0.10	0.37	0.16	0.19

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	163	1368	121	165	1563	203	168	62	143	254	50	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	173	1455	78	179	1699	157	185	68	45	289	57	22
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.91	0.91	0.91	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	2036	626	207	2087	645	502	756	458	485	667	562
Arrive On Green	0.04	0.13	0.13	0.23	0.82	0.82	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1774	5085	1564	1774	5085	1572	1306	2113	1281	1267	1863	1570
Grp Volume(v), veh/h	173	1455	78	179	1699	157	185	56	57	289	57	22
Grp Sat Flow(s),veh/h/ln	1774	1695	1564	1774	1695	1572	1306	1770	1624	1267	1863	1570
Q Serve(g_s), s	11.4	32.3	5.2	11.4	21.2	2.6	12.9	2.5	2.8	23.1	2.4	1.1
Cycle Q Clear(g_c), s	11.4	32.3	5.2	11.4	21.2	2.6	15.3	2.5	2.8	25.9	2.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	203	2036	626	207	2087	645	502	633	581	485	667	562
V/C Ratio(X)	0.85	0.71	0.12	0.86	0.81	0.24	0.37	0.09	0.10	0.60	0.09	0.04
Avail Cap(c_a), veh/h	241	2036	626	243	2087	645	502	633	581	485	667	562
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	44.6	32.9	44.2	8.1	6.5	30.1	25.0	25.1	33.8	25.0	24.6
Incr Delay (d2), s/veh	18.0	1.8	0.3	15.5	2.2	0.5	2.1	0.3	0.3	5.3	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	6.6	15.5	2.3	6.5	9.6	1.2	4.9	1.3	1.3	8.8	1.3	0.5
LnGrp Delay(d),s/veh	73.6	46.4	33.2	59.7	10.3	7.0	32.2	25.3	25.5	39.1	25.3	24.7
LnGrp LOS	E	D	C	E	B	A	C	C	C	D	C	C
Approach Vol, veh/h		1706			2035			298			368	
Approach Delay, s/veh		48.5			14.4			29.6			36.1	
Approach LOS		D			B			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		47.0	21.0	52.0		47.0	17.5	55.5
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		42.1	16.1	47.099998		42.1	16.0	48.1
Max Q Clear Time (g_c+I1), s		17.3	13.4	34.3		27.9	13.4	23.2
Green Ext Time (p_c), s		2.7	0.4	7.8		2.3	0.1	15.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	173	1455	129	179	1699	221	185	225	289	57	82
v/c Ratio	0.79	0.73	0.20	0.72	0.81	0.32	0.40	0.19	0.74	0.09	0.14
Control Delay	61.7	19.3	5.5	39.4	12.3	2.2	32.7	9.2	47.6	26.7	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	19.3	5.5	39.4	12.3	2.2	32.7	9.2	47.6	26.7	4.2
Queue Length 50th (ft)	117	321	14	131	189	16	107	18	195	29	0
Queue Length 95th (ft)	#229	454	39	m179	215	m21	175	46	299	58	24
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	236	1995	640	250	2087	690	463	1191	389	653	603
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.73	0.20	0.72	0.81	0.32	0.40	0.19	0.74	0.09	0.14

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Long-Term (Year 2035) With-Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	480	125	741	82	66	168	247	703	33	116	1017	252
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.97	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	522	136	548	89	72	26	268	764	10	122	1071	166
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	617	415	348	113	380	165	298	1594	713	152	1271	564
Arrive On Green	0.18	0.22	0.22	0.06	0.11	0.11	0.17	0.45	0.45	0.09	0.36	0.36
Sat Flow, veh/h	3442	1863	1562	1774	3539	1539	1774	3539	1583	1774	3539	1570
Grp Volume(v), veh/h	522	136	548	89	72	26	268	764	10	122	1071	166
Grp Sat Flow(s),veh/h/ln	1721	1863	1562	1774	1770	1539	1774	1770	1583	1774	1770	1570
Q Serve(g_s), s	14.8	6.2	14.8	5.0	1.9	1.5	14.9	15.2	0.4	6.8	28.0	4.4
Cycle Q Clear(g_c), s	14.8	6.2	14.8	5.0	1.9	1.5	14.9	15.2	0.4	6.8	28.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	617	415	348	113	380	165	298	1594	713	152	1271	564
V/C Ratio(X)	0.85	0.33	1.57	0.79	0.19	0.16	0.90	0.48	0.01	0.80	0.84	0.29
Avail Cap(c_a), veh/h	856	743	623	141	813	354	302	1594	713	265	1271	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	32.7	16.9	46.4	40.9	40.7	41.0	19.4	15.3	45.1	29.6	7.8
Incr Delay (d2), s/veh	5.7	0.5	269.1	20.4	0.2	0.4	27.5	0.2	0.0	9.4	6.9	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	7.5	3.2	33.5	3.1	0.9	0.7	9.6	7.5	0.2	3.7	14.9	3.1
LnGrp Delay(d),s/veh	45.7	33.2	286.0	66.8	41.1	41.2	68.4	19.6	15.3	54.5	36.5	9.1
LnGrp LOS	D	C	F	E	D	D	E	B	B	D	D	A
Approach Vol, veh/h		1206			187			1042			1359	
Approach Delay, s/veh		153.5			53.4			32.1			34.8	
Approach LOS		F			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	50.2	10.4	27.3	21.8	41.0	22.0	15.7
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	15.0	39.1	8.0	40.1	17.1	36.099998	25.0	23.1
Max Q Clear Time (g_c+I1), s	8.8	17.2	7.0	16.8	16.9	30.0	16.8	3.9
Green Ext Time (p_c), s	0.1	6.0	0.0	3.4	0.0	3.7	1.3	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	72.7
HCM 2010 LOS	E

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	522	136	805	89	72	183	268	764	36	122	1071	265
v/c Ratio	0.81	0.22	1.06	0.76	0.10	0.39	1.01	0.63	0.06	0.65	1.01	0.48
Control Delay	57.4	29.9	72.2	91.8	39.6	8.5	109.1	36.0	0.2	67.8	71.1	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	29.9	72.2	91.8	39.6	8.5	109.1	36.0	0.2	67.8	71.1	19.4
Queue Length 50th (ft)	200	75	~493	69	24	0	~213	261	0	91	~441	78
Queue Length 95th (ft)	257	126	#738	#158	45	62	#389	336	0	155	#591	161
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	715	622	760	118	755	472	265	1222	629	221	1064	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.22	1.06	0.75	0.10	0.39	1.01	0.63	0.06	0.55	1.01	0.48

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	325	37	83	52	36	41	101	603	44	73	1151	547
Number	7	4	14	3	8	18	5	2	12	1	6	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		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	353	40	10	57	39	2	110	655	43	76	1199	402
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	336	280	72	183	150	140	1546	101	98	1540	681
Arrive On Green	0.12	0.18	0.18	0.04	0.10	0.10	0.08	0.46	0.46	0.06	0.44	0.44
Sat Flow, veh/h	3442	1863	1557	1774	1863	1535	1774	3369	221	1774	3539	1565
Grp Volume(v), veh/h	353	40	10	57	39	2	110	344	354	76	1199	402
Grp Sat Flow(s),veh/h/ln	1721	1863	1557	1774	1863	1535	1774	1770	1821	1774	1770	1565
Q Serve(g_s), s	7.4	1.3	0.4	2.4	1.4	0.1	4.5	9.7	9.7	3.1	21.4	14.4
Cycle Q Clear(g_c), s	7.4	1.3	0.4	2.4	1.4	0.1	4.5	9.7	9.7	3.1	21.4	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	423	336	280	72	183	150	140	812	836	98	1540	681
V/C Ratio(X)	0.83	0.12	0.04	0.79	0.21	0.01	0.79	0.42	0.42	0.78	0.78	0.59
Avail Cap(c_a), veh/h	423	604	505	170	554	456	170	812	836	218	1540	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	25.4	25.0	35.2	30.7	30.1	33.5	13.4	13.4	34.5	17.8	15.9
Incr Delay (d2), s/veh	13.4	0.2	0.1	16.9	0.6	0.0	17.7	1.6	1.6	12.2	3.9	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.7	0.2	1.5	0.8	0.0	2.9	5.0	5.2	1.9	11.2	6.9
LnGrp Delay(d),s/veh	45.1	25.6	25.1	52.1	31.3	30.2	51.2	15.1	15.0	46.7	21.8	19.6
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		403			98			808			1677	
Approach Delay, s/veh		42.7			43.4			20.0			22.4	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	38.9	7.9	18.2	10.7	37.1	14.0	12.1
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	9.1	30.2	7.1	24.0	7.1	32.2	9.1	22.0
Max Q Clear Time (g_c+I1), s	5.1	11.7	4.4	3.3	6.5	23.4	9.4	3.4
Green Ext Time (p_c), s	0.0	13.1	0.0	0.4	0.0	7.2	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	40	90	57	39	45	110	703	76	1199	570
v/c Ratio	0.84	0.12	0.22	0.36	0.17	0.14	0.65	0.44	0.41	0.79	0.70
Control Delay	54.3	27.7	2.7	42.1	31.2	1.0	56.2	18.1	41.1	25.2	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.3	27.7	2.7	42.1	31.2	1.0	56.2	18.1	41.1	25.2	15.6
Queue Length 50th (ft)	84	17	0	25	17	0	50	121	33	244	100
Queue Length 95th (ft)	#196	42	12	70	43	0	#152	228	85	#484	#309
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	418	598	593	168	549	555	168	1596	215	1526	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.07	0.15	0.34	0.07	0.08	0.65	0.44	0.35	0.79	0.70

Intersection Summary

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

Intersection	
Int Delay, s/veh	7.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	73	125	617	20	127	1170
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	136	671	22	134	1232

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1575	366	0	0	702	0
Stage 1	692	-	-	-	-	-
Stage 2	883	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	101	631	-	-	891	-
Stage 1	458	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	84	621	-	-	884	-
Mov Cap-2 Maneuver	84	-	-	-	-	-
Stage 1	454	-	-	-	-	-
Stage 2	307	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	70.8	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	84	621	884	-
HCM Lane V/C Ratio	-	-	0.945	0.219	0.151	-
HCM Control Delay (s)	-	-	170.9	12.4	9.8	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	5.2	0.8	0.5	-

Intersection	
Int Delay, s/veh	401.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	138	516	263	65	23	36	26	370	144
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	150	561	286	71	25	39	28	402	157

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1282	1627	408	1442	1552	299	785	0	0
Stage 1	1002	1002	-	547	547	-	-	-	-
Stage 2	280	625	-	895	1005	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	~ 122	~ 101	593	93	112	697	829	-	-
Stage 1	260	~ 318	-	489	516	-	-	-	-
Stage 2	703	~ 475	-	302	317	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 91	~ 85	583	-	95	685	822	-	-
Mov Cap-2 Maneuver	187	~ 179	-	~ -28	189	-	-	-	-
Stage 1	249	~ 280	-	468	494	-	-	-	-
Stage 2	603	~ 455	-	-	279	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 1047.2		0.5
HCM LOS	F	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	822	-	-	187	234	-	339	991	-	-
HCM Lane V/C Ratio	0.034	-	-	0.802	3.619	-	0.189	0.111	-	-
HCM Control Delay (s)	9.5	-	-	74.2	$ 1219.6	-	18.1	9.1	-	-
HCM Lane LOS	A	-	-	F	F	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.5	80.5	-	0.7	0.4	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	102	716	5
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	93	93	93
Heavy Vehicles, %	2	2	2
Mvmt Flow	110	770	5

Major/Minor	Major2		
Conflicting Flow All	569	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	999	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	991	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.1
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	673	204	151	143	187	67	392	71	289	1118	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	22	732	132	164	155	62	73	426	60	301	1165	14
Adj No. of Lanes	1	2	1	1	1	1	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	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	467	1382	613	227	727	613	94	835	117	334	1444	17
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.05	0.27	0.27	0.19	0.40	0.40
Sat Flow, veh/h	1154	3539	1571	637	1863	1571	1774	3114	436	1774	3581	43
Grp Volume(v), veh/h	22	732	132	164	155	62	73	241	245	301	576	603
Grp Sat Flow(s),veh/h/ln	1154	1770	1571	637	1863	1571	1774	1770	1780	1774	1770	1855
Q Serve(g_s), s	1.2	14.3	5.0	20.8	5.0	2.3	3.7	10.4	10.5	14.9	25.9	25.9
Cycle Q Clear(g_c), s	6.1	14.3	5.0	35.1	5.0	2.3	3.7	10.4	10.5	14.9	25.9	25.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.02
Lane Grp Cap(c), veh/h	467	1382	613	227	727	613	94	474	477	334	714	748
V/C Ratio(X)	0.05	0.53	0.22	0.72	0.21	0.10	0.78	0.51	0.51	0.90	0.81	0.81
Avail Cap(c_a), veh/h	467	1382	613	227	727	613	158	474	477	335	714	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	20.3	21.1	18.2	35.6	18.2	17.4	42.1	27.9	27.9	35.7	23.7	23.7
Incr Delay (d2), s/veh	0.0	0.4	0.2	10.6	0.1	0.1	12.8	3.9	3.9	26.1	9.5	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.0	2.2	4.7	2.6	1.0	2.1	5.6	5.7	9.7	14.5	15.1
LnGrp Delay(d),s/veh	20.3	21.5	18.4	46.2	18.4	17.5	54.8	31.7	31.8	61.8	33.2	32.8
LnGrp LOS	C	C	B	D	B	B	D	C	C	E	C	C
Approach Vol, veh/h		886			381			559			1480	
Approach Delay, s/veh		21.0			30.2			34.8			38.9	
Approach LOS		C			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	20.9	29.0		40.0	8.8	41.2		40.0
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	17.0	24.1		35.1	8.0	33.1		35.1
Max Q Clear Time (g_c+I1), s	16.9	12.5		16.3	5.7	27.9		37.1
Green Ext Time (p_c), s	0.0	7.3		8.2	0.0	3.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	732	222	164	155	203	73	503	301	1180
v/c Ratio	0.05	0.57	0.35	0.98	0.23	0.30	0.48	0.51	0.89	0.80
Control Delay	17.6	23.8	10.0	96.5	19.7	4.0	49.8	27.6	63.3	29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	23.8	10.0	96.5	19.7	4.0	49.8	27.6	63.3	29.6
Queue Length 50th (ft)	8	164	34	86	57	0	40	122	169	329
Queue Length 95th (ft)	23	219	85	#211	101	41	84	173	#319	#462
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	497	1464	715	191	770	758	167	994	354	1472
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.50	0.31	0.86	0.20	0.27	0.44	0.51	0.85	0.80

Intersection Summary

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

Intersection	
Int Delay, s/veh	9.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	723	228	69	252	220	43
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	769	243	75	274	239	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	779	0	1066	789
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	287	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	838	-	~ 231	390
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	737	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	831	-	~ 207	384
Mov Cap-2 Maneuver	-	-	-	-	333	-
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	665	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	52.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	340	-	-	831	-
HCM Lane V/C Ratio	0.841	-	-	0.09	-
HCM Control Delay (s)	52.5	-	-	9.8	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	7.5	-	-	0.3	-

Notes

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

Intersection	
Intersection Delay, s/veh	38.6
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	36	472	263	0	14	124	35	0	124	75	8
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	487	271	0	15	135	38	0	135	82	9
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	61.7	12.1	13.6
HCM LOS	F	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	0%	100%	0%
Vol Thru, %	0%	90%	0%	64%	82%	64%	0%	66%
Vol Right, %	0%	10%	0%	36%	0%	36%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	83	36	735	76	97	87	222
LT Vol	0	75	0	472	62	62	0	147
Through Vol	0	8	0	263	0	35	0	75
RT Vol	124	0	36	0	14	0	87	0
Lane Flow Rate	135	90	37	758	83	105	95	241
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.309	0.192	0.076	1	0.176	0.215	0.21	0.488
Departure Headway (Hd)	8.241	7.675	7.38	6.615	7.688	7.343	8.009	7.275
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	437	468	484	553	467	488	449	497
Service Time	5.981	5.415	5.141	4.375	5.44	5.095	5.745	5.011
HCM Lane V/C Ratio	0.309	0.192	0.076	1.371	0.178	0.215	0.212	0.485
HCM Control Delay	14.6	12.2	10.8	64.2	12.1	12.1	12.9	16.8
HCM Lane LOS	B	B	B	F	B	B	B	C
HCM 95th-tile Q	1.3	0.7	0.2	14.2	0.6	0.8	0.8	2.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	87	147	75
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	160	82
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	15.7
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	109	0	0	19	135	465	33
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	118	0	0	21	147	505	36

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2218	2507	782	1727	2500	291	1534	0	0
Stage 1	1662	1662	-	827	827	-	-	-	-
Stage 2	556	845	-	900	1673	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	24	28	337	57	28	706	430	-	-
Stage 1	101	153	-	332	384	-	-	-	-
Stage 2	483	377	-	300	151	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	16	17	331	25	17	694	426	-	-
Mov Cap-2 Maneuver	52	79	-	28	~ -10	-	-	-	-
Stage 1	66	141	-	216	249	-	-	-	-
Stage 2	304	245	-	178	139	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	21.8	10.3	3.8
HCM LOS	C	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	426	-	-	331	694	1007	-	-
HCM Lane V/C Ratio	0.344	-	-	0.358	0.03	0.069	-	-
HCM Control Delay (s)	17.8	-	-	21.8	10.3	8.8	-	-
HCM Lane LOS	C	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	1.5	-	-	1.6	0.1	0.2	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	64	1382	20
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	2	2	2
Mvmt Flow	70	1502	22

Major/Minor	Major2		
Conflicting Flow All	551	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	1015	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1007	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.4
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	1399	327	347	1327	70	251	267	536	119	393	28
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	68	1504	168	377	1442	34	270	287	308	129	427	1
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	1409	625	346	1928	858	251	777	343	119	515	226
Arrive On Green	0.05	0.40	0.40	0.20	0.54	0.54	0.14	0.22	0.22	0.07	0.15	0.15
Sat Flow, veh/h	1774	3539	1571	1774	3539	1575	1774	3539	1562	1774	3539	1551
Grp Volume(v), veh/h	68	1504	168	377	1442	34	270	287	308	129	427	1
Grp Sat Flow(s),veh/h/ln	1774	1770	1571	1774	1770	1575	1774	1770	1562	1774	1770	1551
Q Serve(g_s), s	5.6	59.1	10.7	29.0	46.5	1.5	21.0	10.2	28.5	10.0	17.4	0.1
Cycle Q Clear(g_c), s	5.6	59.1	10.7	29.0	46.5	1.5	21.0	10.2	28.5	10.0	17.4	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	1409	625	346	1928	858	251	777	343	119	515	226
V/C Ratio(X)	0.79	1.07	0.27	1.09	0.75	0.04	1.08	0.37	0.90	1.08	0.83	0.00
Avail Cap(c_a), veh/h	143	1409	625	346	1928	858	251	813	359	119	551	241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	69.9	44.7	30.1	59.7	26.0	15.7	63.7	49.2	56.3	69.2	61.7	54.3
Incr Delay (d2), s/veh	14.7	44.3	0.2	74.0	1.7	0.0	78.5	0.3	23.8	105.4	9.8	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	3.1	37.4	4.7	21.3	23.1	0.7	15.7	5.1	14.6	8.4	9.2	0.0
LnGrp Delay(d),s/veh	84.6	89.0	30.4	133.8	27.6	15.7	142.3	49.5	80.1	174.7	71.4	54.3
LnGrp LOS	F	F	C	F	C	B	F	D	F	F	E	D
Approach Vol, veh/h		1740			1853			865			557	
Approach Delay, s/veh		83.2			49.0			89.4			95.3	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	37.5	33.0	64.0	25.0	26.5	11.2	85.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	34.1	29.0	59.1	21.0	23.1	12.0	76.1
Max Q Clear Time (g_c+I1), s	12.0	30.5	31.0	61.1	23.0	19.4	7.6	48.5
Green Ext Time (p_c), s	0.0	2.0	0.0	0.0	0.0	2.0	0.0	24.1

Intersection Summary	
HCM 2010 Ctrl Delay	73.0
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	68	1504	352	377	1442	76	270	287	576	129	427	30
v/c Ratio	0.57	1.08	0.45	1.10	0.76	0.09	1.09	0.36	0.99	1.09	0.78	0.09
Control Delay	85.3	91.4	6.9	133.3	31.9	1.7	142.2	50.2	63.5	171.9	72.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	91.4	6.9	133.3	31.9	1.7	142.2	50.2	63.5	171.9	72.1	0.5
Queue Length 50th (ft)	65	~861	26	~418	595	0	~296	125	319	~142	214	0
Queue Length 95th (ft)	119	#1001	101	#627	703	14	#483	172	#578	#284	278	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	141	1394	791	342	1887	864	247	804	579	118	545	346
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	1.08	0.45	1.10	0.76	0.09	1.09	0.36	0.99	1.09	0.78	0.09

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	1556	40	38	1116	122	21	3	9	119	23	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		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	139	1604	39	41	1213	47	23	3	1	146	0	9
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	1792	43	54	2171	668	288	216	72	576	0	252
Arrive On Green	0.11	0.51	0.51	0.06	0.85	0.85	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1774	3531	86	1774	5085	1565	1774	1331	444	3548	0	1554
Grp Volume(v), veh/h	139	802	841	41	1213	47	23	0	4	146	0	9
Grp Sat Flow(s),veh/h/ln	1774	1770	1847	1774	1695	1565	1774	0	1775	1774	0	1554
Q Serve(g_s), s	10.3	55.6	56.0	3.1	9.1	0.6	1.5	0.0	0.3	4.9	0.0	0.7
Cycle Q Clear(g_c), s	10.3	55.6	56.0	3.1	9.1	0.6	1.5	0.0	0.3	4.9	0.0	0.7
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	197	898	937	54	2171	668	288	0	288	576	0	252
V/C Ratio(X)	0.71	0.89	0.90	0.76	0.56	0.07	0.08	0.00	0.01	0.25	0.00	0.04
Avail Cap(c_a), veh/h	248	898	937	104	2171	668	288	0	288	576	0	252
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.4	30.2	30.3	63.5	6.4	5.8	48.4	0.0	47.9	49.8	0.0	48.0
Incr Delay (d2), s/veh	6.5	13.1	13.0	18.9	1.0	0.2	0.5	0.0	0.1	1.1	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	5.4	30.2	31.9	1.8	4.2	0.3	0.8	0.0	0.1	2.5	0.0	0.3
LnGrp Delay(d),s/veh	64.9	43.3	43.3	82.4	7.4	5.9	48.9	0.0	47.9	50.9	0.0	48.3
LnGrp LOS	E	D	D	F	A	A	D		D	D		D
Approach Vol, veh/h		1782			1301			27			155	
Approach Delay, s/veh		45.0			9.7			48.8			50.7	
Approach LOS		D			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		27.0	12.0	74.0		27.0	23.0	63.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.1	8.0	69.1		22.1	19.0	58.1
Max Q Clear Time (g_c+I1), s		3.5	5.1	58.0		6.9	12.3	11.1
Green Ext Time (p_c), s		0.0	0.1	7.6		0.4	0.2	11.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	139	1645	41	1213	133	23	13	76	77	89
v/c Ratio	0.64	0.94	0.44	0.57	0.19	0.08	0.05	0.29	0.29	0.26
Control Delay	72.1	44.4	71.8	13.6	1.1	51.2	28.4	55.4	55.3	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	44.4	71.8	13.6	1.1	51.2	28.4	55.4	55.3	5.0
Queue Length 50th (ft)	121	731	39	329	0	18	2	65	66	0
Queue Length 95th (ft)	193	#910	81	379	1	46	23	118	120	23
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	240	1756	101	2110	701	303	284	265	270	345
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.94	0.41	0.57	0.19	0.08	0.05	0.29	0.29	0.26

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	1504	49	45	1271	35	38	1	36	23	1	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.98		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	5	1617	36	48	1352	25	41	1	4	25	1	1
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	2439	1083	62	3618	1119	292	56	222	289	147	147
Arrive On Green	0.01	1.00	1.00	0.03	0.71	0.71	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1774	3539	1572	1774	5085	1572	1385	322	1287	1381	848	848
Grp Volume(v), veh/h	5	1617	36	48	1352	25	41	0	5	25	0	2
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1695	1572	1385	0	1609	1381	0	1696
Q Serve(g_s), s	0.4	0.0	0.0	3.6	14.0	0.6	3.4	0.0	0.3	2.0	0.0	0.1
Cycle Q Clear(g_c), s	0.4	0.0	0.0	3.6	14.0	0.6	3.5	0.0	0.3	2.4	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.80	1.00		0.50
Lane Grp Cap(c), veh/h	10	2439	1083	62	3618	1119	292	0	278	289	0	293
V/C Ratio(X)	0.49	0.66	0.03	0.77	0.37	0.02	0.14	0.00	0.02	0.09	0.00	0.01
Avail Cap(c_a), veh/h	94	2439	1083	146	3618	1119	292	0	278	289	0	293
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.9	0.0	0.0	64.0	7.6	5.7	47.2	0.0	45.9	46.9	0.0	45.8
Incr Delay (d2), s/veh	10.3	0.4	0.0	18.3	0.3	0.0	1.0	0.0	0.1	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	2.1	6.6	0.3	1.4	0.0	0.2	0.8	0.0	0.1
LnGrp Delay(d),s/veh	76.2	0.4	0.0	82.2	7.9	5.7	48.2	0.0	46.0	47.5	0.0	45.8
LnGrp LOS	E	A	A	F	A	A	D		D	D		D
Approach Vol, veh/h		1658			1425			46			27	
Approach Delay, s/veh		0.7			10.3			48.0			47.3	
Approach LOS		A			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		28.0	8.7	103.3		28.0	12.0	100.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		23.1	11.0	92.1		23.1	7.1	95.099998
Max Q Clear Time (g_c+I1), s		5.5	5.6	2.0		4.4	2.4	16.0
Green Ext Time (p_c), s		0.1	0.0	21.2		0.1	3.5	13.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	1617	53	48	1352	37	41	40	25	10
v/c Ratio	0.06	0.67	0.05	0.43	0.36	0.03	0.18	0.14	0.11	0.04
Control Delay	35.6	0.9	0.1	75.7	4.3	0.3	52.8	16.2	51.4	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	1.0	0.1	75.7	4.3	0.3	52.8	16.2	51.4	26.1
Queue Length 50th (ft)	4	1	1	33	86	0	33	1	20	1
Queue Length 95th (ft)	m6	m2	m0	m60	83	m0	70	36	48	18
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	101	2431	1046	139	3803	1136	226	287	220	266
Starvation Cap Reductn	0	61	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.68	0.05	0.35	0.36	0.03	0.18	0.14	0.11	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	1270	159	188	962	150	296	320	86	361	844	217
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	158	1380	77	204	1046	74	322	348	20	392	917	137
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	1798	555	252	1895	585	377	1017	450	489	1156	512
Arrive On Green	0.06	0.35	0.35	0.15	0.75	0.75	0.11	0.29	0.29	0.14	0.33	0.33
Sat Flow, veh/h	3442	5085	1570	3442	5085	1571	3442	3539	1567	3442	3539	1569
Grp Volume(v), veh/h	158	1380	77	204	1046	74	322	348	20	392	917	137
Grp Sat Flow(s),veh/h/ln	1721	1695	1570	1721	1695	1571	1721	1770	1567	1721	1770	1569
Q Serve(g_s), s	6.2	32.8	3.3	7.8	12.1	1.2	12.5	10.6	1.3	15.0	32.0	8.8
Cycle Q Clear(g_c), s	6.2	32.8	3.3	7.8	12.1	1.2	12.5	10.6	1.3	15.0	32.0	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	209	1798	555	252	1895	585	377	1017	450	489	1156	512
V/C Ratio(X)	0.76	0.77	0.14	0.81	0.55	0.13	0.86	0.34	0.04	0.80	0.79	0.27
Avail Cap(c_a), veh/h	278	1798	555	281	1895	585	455	1017	450	559	1156	512
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	39.0	15.9	57.2	12.4	4.8	59.5	38.3	35.0	56.5	41.6	33.8
Incr Delay (d2), s/veh	8.1	3.2	0.5	14.1	1.1	0.4	12.8	0.9	0.2	7.3	5.6	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	3.2	15.9	1.9	4.2	5.6	0.8	6.6	5.3	0.6	7.6	16.6	4.0
LnGrp Delay(d),s/veh	71.0	42.2	16.4	71.3	13.5	5.2	72.3	39.2	35.2	63.8	47.3	35.1
LnGrp LOS	E	D	B	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1615			1324			690			1446	
Approach Delay, s/veh		43.8			22.0			54.5			50.6	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	44.0	18.8	53.0	18.9	49.3	12.2	59.5
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	22.3	39.099998	11.4	48.099998	18.0	44.1	11.0	49.1
Max Q Clear Time (g_c+I1), s	17.0	12.6	9.8	34.8	14.5	34.0	8.2	14.1
Green Ext Time (p_c), s	2.3	2.2	0.1	7.7	0.4	5.5	0.1	9.8

Intersection Summary	
HCM 2010 Ctrl Delay	41.5
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	158	1380	173	204	1046	163	322	348	93	392	917	236
v/c Ratio	0.62	0.79	0.29	0.69	0.58	0.26	0.78	0.35	0.18	0.70	0.80	0.41
Control Delay	71.5	18.6	3.7	60.2	21.5	5.4	73.6	41.6	3.5	62.6	49.9	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.5	18.6	3.7	60.2	21.5	5.4	73.6	41.6	3.5	62.6	49.9	19.4
Queue Length 50th (ft)	67	323	26	101	344	45	147	134	0	175	406	76
Queue Length 95th (ft)	105	364	46	145	391	78	201	180	23	232	492	155
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	269	1747	607	294	1806	619	441	988	516	563	1145	581
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.79	0.29	0.69	0.58	0.26	0.73	0.35	0.18	0.70	0.80	0.41

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	1355	91	298	1083	33	116	117	239	58	117	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	43	1473	67	314	1140	22	126	127	34	63	127	14
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	2492	771	344	3301	1020	276	399	335	243	689	75
Arrive On Green	0.06	0.98	0.98	0.19	0.65	0.65	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	5085	1574	1774	5085	1571	1230	1863	1561	1210	3216	349
Grp Volume(v), veh/h	43	1473	67	314	1140	22	126	127	34	63	69	72
Grp Sat Flow(s),veh/h/ln	1774	1695	1574	1774	1695	1571	1230	1863	1561	1210	1770	1795
Q Serve(g_s), s	3.3	1.8	0.1	23.5	13.8	0.7	12.7	7.8	2.4	6.3	4.3	4.5
Cycle Q Clear(g_c), s	3.3	1.8	0.1	23.5	13.8	0.7	17.1	7.8	2.4	14.1	4.3	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	50	2492	771	344	3301	1020	276	399	335	243	379	385
V/C Ratio(X)	0.86	0.59	0.09	0.91	0.35	0.02	0.46	0.32	0.10	0.26	0.18	0.19
Avail Cap(c_a), veh/h	106	2492	771	523	3301	1020	276	399	335	243	379	385
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	0.7	0.7	53.6	10.8	8.5	50.6	45.0	42.8	50.9	43.6	43.6
Incr Delay (d2), s/veh	20.9	0.6	0.1	13.1	0.2	0.0	5.3	2.1	0.6	2.6	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.7	0.1	12.8	6.5	0.3	4.7	4.3	1.1	2.3	2.2	2.3
LnGrp Delay(d),s/veh	84.6	1.3	0.8	66.7	11.0	8.5	56.0	47.0	43.4	53.5	44.6	44.7
LnGrp LOS	F	A	A	E	B	A	E	D	D	D	D	D
Approach Vol, veh/h		1583			1476			287			204	
Approach Delay, s/veh		3.6			22.8			50.5			47.4	
Approach LOS		A			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		34.0	30.3	75.7		34.0	13.0	93.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		29.1	40.0	57.1		29.1	8.1	88.099998
Max Q Clear Time (g_c+I1), s		19.1	25.5	3.8		16.1	5.3	15.8
Green Ext Time (p_c), s		1.7	0.8	15.7		1.9	0.1	10.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	1473	99	314	1140	35	126	127	260	63	159
v/c Ratio	0.41	0.61	0.13	0.83	0.35	0.04	0.52	0.33	0.50	0.28	0.22
Control Delay	46.8	5.4	1.9	39.7	9.8	1.8	57.8	49.9	8.7	50.6	41.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	5.4	1.9	39.7	9.8	1.8	57.8	49.9	8.7	50.6	41.0
Queue Length 50th (ft)	41	121	10	185	189	2	103	99	0	49	55
Queue Length 95th (ft)	m54	215	m15	277	249	m6	173	162	77	95	89
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	113	2432	760	505	3294	991	244	387	525	226	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.61	0.13	0.62	0.35	0.04	0.52	0.33	0.50	0.28	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	81	1538	57	82	1313	75	104	60	33	216	86	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	85	1619	28	87	1397	50	113	65	9	220	88	15
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	2546	785	108	2581	796	432	613	516	453	613	516
Arrive On Green	0.02	0.17	0.17	0.12	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1774	5085	1568	1774	5085	1568	1278	1863	1569	1311	1863	1569
Grp Volume(v), veh/h	85	1619	28	87	1397	50	113	65	9	220	88	15
Grp Sat Flow(s),veh/h/ln	1774	1695	1568	1774	1695	1568	1278	1863	1569	1311	1863	1569
Q Serve(g_s), s	6.4	39.8	2.0	6.4	0.0	0.0	9.2	3.3	0.5	18.8	4.5	0.9
Cycle Q Clear(g_c), s	6.4	39.8	2.0	6.4	0.0	0.0	13.6	3.3	0.5	22.0	4.5	0.9
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	107	2546	785	108	2581	796	432	613	516	453	613	516
V/C Ratio(X)	0.79	0.64	0.04	0.81	0.54	0.06	0.26	0.11	0.02	0.49	0.14	0.03
Avail Cap(c_a), veh/h	199	2546	785	187	2581	796	432	613	516	453	613	516
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	44.6	28.8	58.1	0.0	0.0	36.5	31.3	30.3	38.9	31.7	30.5
Incr Delay (d2), s/veh	9.8	1.0	0.1	9.6	0.6	0.1	1.5	0.3	0.1	3.7	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	18.9	0.9	3.4	0.1	0.0	3.4	1.7	0.2	7.2	2.4	0.4
LnGrp Delay(d),s/veh	74.7	45.5	28.8	67.8	0.6	0.1	37.9	31.6	30.4	42.6	32.2	30.6
LnGrp LOS	E	D	C	E	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1732			1534			187			323	
Approach Delay, s/veh		46.7			4.4			35.4			39.2	
Approach LOS		D			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		49.0	19.0	72.0		49.0	12.1	78.9
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		44.1	14.1	67.099998		44.1	15.0	67.1
Max Q Clear Time (g_c+I1), s		15.6	8.4	41.8		24.0	8.4	2.0
Green Ext Time (p_c), s		2.1	0.2	13.2		2.0	0.1	15.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	1619	60	87	1397	80	113	65	36	220	88	51
v/c Ratio	0.58	0.66	0.08	0.46	0.55	0.10	0.28	0.11	0.07	0.53	0.15	0.09
Control Delay	80.3	11.8	0.7	33.6	7.2	0.5	38.4	34.8	0.2	45.2	35.4	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	11.8	0.7	33.6	7.2	0.5	38.4	34.8	0.2	45.2	35.4	2.0
Queue Length 50th (ft)	66	420	4	66	62	1	77	42	0	165	58	0
Queue Length 95th (ft)	m107	136	m0	m98	69	m2	132	79	0	254	101	10
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	189	2437	747	189	2557	781	403	586	541	412	586	541
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.66	0.08	0.46	0.55	0.10	0.28	0.11	0.07	0.53	0.15	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	1358	106	136	1467	104	82	25	111	275	44	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	75	1415	52	146	1577	80	89	27	41	284	45	5
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	2070	637	201	2371	733	539	668	593	529	703	593
Arrive On Green	0.11	0.81	0.81	0.23	0.93	0.93	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1774	5085	1564	1774	5085	1573	1340	1770	1571	1319	1863	1571
Grp Volume(v), veh/h	75	1415	52	146	1577	80	89	27	41	284	45	5
Grp Sat Flow(s),veh/h/ln	1774	1695	1564	1774	1695	1573	1340	1770	1571	1319	1863	1571
Q Serve(g_s), s	5.6	15.8	0.9	10.3	7.5	0.5	6.1	1.3	2.3	23.7	2.1	0.3
Cycle Q Clear(g_c), s	5.6	15.8	0.9	10.3	7.5	0.5	8.2	1.3	2.3	26.0	2.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	2070	637	201	2371	733	539	668	593	529	703	593
V/C Ratio(X)	0.78	0.68	0.08	0.73	0.67	0.11	0.17	0.04	0.07	0.54	0.06	0.01
Avail Cap(c_a), veh/h	157	2070	637	262	2371	733	539	668	593	529	703	593
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)	0.73	0.73	0.73	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	8.9	7.5	50.4	2.7	2.5	29.5	26.6	26.9	35.2	26.9	26.3
Incr Delay (d2), s/veh	9.5	1.4	0.2	5.2	1.1	0.2	0.7	0.1	0.2	3.9	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	3.0	7.1	0.4	5.3	3.2	0.2	2.4	0.7	1.0	9.2	1.1	0.1
LnGrp Delay(d),s/veh	69.0	10.3	7.7	55.6	3.8	2.7	30.1	26.7	27.1	39.1	27.0	26.3
LnGrp LOS	E	B	A	E	A	A	C	C	C	D	C	C
Approach Vol, veh/h		1542			1803			157			334	
Approach Delay, s/veh		13.0			8.0			28.8			37.3	
Approach LOS		B			A			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		56.0	24.0	60.0		56.0	16.0	68.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		51.1	20.0	55.1		51.1	12.0	63.1
Max Q Clear Time (g_c+I1), s		10.2	12.3	17.8		28.0	7.6	9.5
Green Ext Time (p_c), s		1.9	0.3	13.2		1.8	0.2	17.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	75	1415	110	146	1577	112	89	148	284	45	13
v/c Ratio	0.58	0.71	0.17	0.63	0.69	0.16	0.18	0.12	0.63	0.06	0.02
Control Delay	62.0	9.5	0.5	56.0	11.7	1.6	31.0	7.7	43.4	29.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	9.5	0.5	56.0	11.7	1.6	31.0	7.7	43.4	29.1	0.1
Queue Length 50th (ft)	71	86	0	138	187	1	55	8	212	26	0
Queue Length 95th (ft)	m110	100	m1	212	206	m13	98	32	323	55	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	151	2001	642	252	2291	719	501	1215	454	701	630
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.71	0.17	0.58	0.69	0.16	0.18	0.12	0.63	0.06	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	386	1411	156	144	890	94	239	544	292	199	387	407
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	420	1534	90	157	967	25	260	591	176	203	395	152
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	552	2218	686	208	1676	517	323	1046	463	257	955	422
Arrive On Green	0.32	0.87	0.87	0.06	0.33	0.33	0.09	0.30	0.30	0.07	0.27	0.27
Sat Flow, veh/h	3442	5085	1572	3442	5085	1569	3442	3539	1567	3442	3539	1566
Grp Volume(v), veh/h	420	1534	90	157	967	25	260	591	176	203	395	152
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1569	1721	1770	1567	1721	1770	1566
Q Serve(g_s), s	14.7	13.0	0.8	6.0	21.1	1.1	9.9	18.9	11.9	7.8	12.3	10.5
Cycle Q Clear(g_c), s	14.7	13.0	0.8	6.0	21.1	1.1	9.9	18.9	11.9	7.8	12.3	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	552	2218	686	208	1676	517	323	1046	463	257	955	422
V/C Ratio(X)	0.76	0.69	0.13	0.75	0.58	0.05	0.81	0.56	0.38	0.79	0.41	0.36
Avail Cap(c_a), veh/h	620	2218	686	283	1676	517	414	1046	463	360	955	422
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	5.7	2.4	61.9	37.1	19.0	59.4	39.9	37.4	60.9	40.2	39.5
Incr Delay (d2), s/veh	3.3	1.2	0.3	7.5	1.5	0.2	8.7	2.2	2.4	7.7	1.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	5.7	0.5	3.1	10.1	0.6	5.1	9.6	5.4	4.0	6.2	4.8
LnGrp Delay(d),s/veh	46.4	6.8	2.7	69.3	38.6	19.2	68.2	42.1	39.8	68.6	41.5	41.9
LnGrp LOS	D	A	A	E	D	B	E	D	D	E	D	D
Approach Vol, veh/h		2044			1149			1027			750	
Approach Delay, s/veh		14.8			42.4			48.3			48.9	
Approach LOS		B			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	14.0	44.5	12.1	69.4	17.5	41.0	32.5	49.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.9000001	4.9
Max Green Setting (Gmax), s	14.0	39.1	11.0	58.1	16.36.099998	36.1	24.44.099998	44.1
Max Q Clear Time (g_c+I1), s	9.8	20.9	8.0	15.0	11.9	14.3	16.7	23.1
Green Ext Time (p_c), s	0.2	5.1	0.1	19.1	0.6	2.9	4.8	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.2
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	420	1534	170	157	967	102	260	591	317	203	395	415
v/c Ratio	0.69	0.72	0.24	0.62	0.60	0.18	0.62	0.58	0.56	0.65	0.43	0.64
Control Delay	37.7	17.3	2.9	73.8	42.5	4.2	65.8	45.5	23.9	71.7	45.2	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	17.3	2.9	73.8	42.5	4.2	65.8	45.5	23.9	71.7	45.2	13.5
Queue Length 50th (ft)	155	167	3	72	273	0	118	245	115	92	158	50
Queue Length 95th (ft)	223	228	m19	111	322	29	166	311	219	136	210	167
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	613	2133	710	269	1601	567	416	1021	562	343	912	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.72	0.24	0.58	0.60	0.18	0.63	0.58	0.56	0.59	0.43	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	322	73	586	134	175	120	733	1048	110	230	798	388
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.97	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	350	79	74	146	190	6	748	1069	62	250	867	275
Adj No. of Lanes	2	1	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	215	178	150	359	156	724	1838	822	277	923	408
Arrive On Green	0.10	0.12	0.12	0.08	0.10	0.10	0.41	0.52	0.52	0.16	0.26	0.26
Sat Flow, veh/h	3442	1863	1542	1774	3539	1536	1774	3539	1583	1774	3539	1565
Grp Volume(v), veh/h	350	79	74	146	190	6	748	1069	62	250	867	275
Grp Sat Flow(s),veh/h/ln	1721	1863	1542	1774	1770	1536	1774	1770	1583	1774	1770	1565
Q Serve(g_s), s	14.0	5.6	2.9	11.7	7.3	0.5	58.1	29.6	2.8	19.7	34.1	17.5
Cycle Q Clear(g_c), s	14.0	5.6	2.9	11.7	7.3	0.5	58.1	29.6	2.8	19.7	34.1	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	215	178	150	359	156	724	1838	822	277	923	408
V/C Ratio(X)	1.03	0.37	0.42	0.98	0.53	0.04	1.03	0.58	0.08	0.90	0.94	0.67
Avail Cap(c_a), veh/h	339	315	261	150	550	239	724	1838	822	399	923	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	64.2	58.2	12.4	65.0	60.7	57.7	42.1	23.6	17.1	59.0	51.5	28.9
Incr Delay (d2), s/veh	57.9	1.0	1.5	66.1	1.2	0.1	42.2	0.5	0.0	17.9	18.2	8.6
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	9.4	2.9	2.6	8.5	3.6	0.2	36.8	14.5	1.2	11.0	19.1	8.8
LnGrp Delay(d),s/veh	122.1	59.2	14.0	131.2	61.9	57.8	84.3	24.0	17.2	76.9	69.7	37.5
LnGrp LOS	F	E	B	F	E	E	F	C	B	E	E	D
Approach Vol, veh/h		503			342			1879			1392	
Approach Delay, s/veh		96.3			91.4			47.8			64.6	
Approach LOS		F			F			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	26.2	78.8	16.0	21.3	63.0	42.0	18.0	19.3
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.9000001	4.9	4.0	4.9
Max Green Setting (Gmax), s	32.0	64.1	12.0	24.1	58.1	37.099998	14.0	22.1
Max Q Clear Time (g_c+I1), s	21.7	31.6	13.7	7.6	60.1	36.1	16.0	9.3
Green Ext Time (p_c), s	0.5	13.3	0.0	1.6	0.0	0.6	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	63.0
HCM 2010 LOS	E

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	350	79	637	146	190	130	748	1069	112	250	867	422
v/c Ratio	1.04	0.35	0.86	0.99	0.50	0.46	1.03	0.61	0.14	0.82	0.95	0.83
Control Delay	122.2	61.6	17.5	135.9	64.7	14.4	81.7	29.5	9.9	78.1	71.4	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.2	61.6	17.5	135.9	64.7	14.4	81.7	29.5	9.9	78.1	71.4	47.9
Queue Length 50th (ft)	~175	69	10	136	89	0	~691	354	18	222	410	248
Queue Length 95th (ft)	#304	122	159	#301	131	62	#1061	529	63	326	#594	#461
Internal Link Dist (ft)		621			1405			521			795	
Turn Bay Length (ft)	235		195	100		100	250		75	250		100
Base Capacity (vph)	335	313	786	148	545	346	729	1762	824	395	916	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.25	0.81	0.99	0.35	0.38	1.03	0.61	0.14	0.63	0.95	0.83

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	621	25	156	16	11	19	119	1235	32	108	991	404
Number	7	4	14	3	8	18	5	2	12	1	6	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		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	675	27	35	17	12	0	121	1260	31	117	1077	313
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	741	529	445	27	156	133	150	1486	37	132	1455	643
Arrive On Green	0.22	0.28	0.28	0.02	0.08	0.00	0.08	0.42	0.42	0.07	0.41	0.41
Sat Flow, veh/h	3442	1863	1567	1774	1863	1583	1774	3529	87	1774	3539	1564
Grp Volume(v), veh/h	675	27	35	17	12	0	121	632	659	117	1077	313
Grp Sat Flow(s),veh/h/ln	1721	1863	1567	1774	1863	1583	1774	1770	1846	1774	1770	1564
Q Serve(g_s), s	18.3	1.0	1.6	0.9	0.6	0.0	6.4	30.7	30.7	6.2	24.6	14.1
Cycle Q Clear(g_c), s	18.3	1.0	1.6	0.9	0.6	0.0	6.4	30.7	30.7	6.2	24.6	14.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	741	529	445	27	156	133	150	745	778	132	1455	643
V/C Ratio(X)	0.91	0.05	0.08	0.63	0.08	0.00	0.81	0.85	0.85	0.89	0.74	0.49
Avail Cap(c_a), veh/h	761	703	591	132	429	365	151	745	778	132	1455	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	24.8	25.0	46.7	40.3	0.0	42.9	24.9	24.9	43.8	23.8	20.7
Incr Delay (d2), s/veh	14.9	0.0	0.1	21.7	0.2	0.0	26.7	11.5	11.1	46.1	3.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.5	0.7	0.6	0.3	0.0	4.2	17.3	18.0	4.7	12.7	6.5
LnGrp Delay(d),s/veh	51.5	24.9	25.1	68.5	40.5	0.0	69.7	36.3	36.0	89.8	27.2	23.3
LnGrp LOS	D	C	C	E	D		E	D	D	F	C	C
Approach Vol, veh/h		737			29			1412			1507	
Approach Delay, s/veh		49.2			56.9			39.0			31.3	
Approach LOS		D			E			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	12.0	45.1	6.4	32.0	13.0	44.1	25.4	12.9
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	40.2	7.1	36.0	8.1	39.2	21.1	22.0
Max Q Clear Time (g_c+I1), s	8.2	32.7	2.9	3.6	8.4	26.6	20.3	2.6
Green Ext Time (p_c), s	0.0	6.7	0.0	0.3	0.0	10.7	0.3	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	675	27	170	17	12	21	121	1293	117	1077	439
v/c Ratio	0.86	0.05	0.31	0.14	0.07	0.07	0.78	0.84	0.86	0.71	0.58
Control Delay	48.1	26.0	6.0	47.6	39.4	0.5	76.4	31.1	93.1	27.0	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	26.0	6.0	47.6	39.4	0.5	76.4	31.1	93.1	27.0	15.8
Queue Length 50th (ft)	201	11	0	10	7	0	72	355	70	276	104
Queue Length 95th (ft)	#377	33	47	35	24	0	#203	#640	#206	456	258
Internal Link Dist (ft)		385			248			1059		1165	
Turn Bay Length (ft)	200		150	130		85	265		265		100
Base Capacity (vph)	787	729	706	136	445	494	155	1540	136	1508	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.04	0.24	0.13	0.03	0.04	0.78	0.84	0.86	0.71	0.58

Intersection Summary

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

Intersection	
Int Delay, s/veh	13.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	199	1236	64	156	1074
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	265	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	95	95	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	216	1301	67	168	1155

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2258	704	0	0	1378	0
Stage 1	1345	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 35	379	-	-	493	-
Stage 1	207	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 23	373	-	-	489	-
Mov Cap-2 Maneuver	~ 23	-	-	-	-	-
Stage 1	205	-	-	-	-	-
Stage 2	229	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	146.9	0	2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	23	373	489	-
HCM Lane V/C Ratio	-	-	1.843	0.58	0.343	-
HCM Control Delay (s)	-	-	$ 758.4	27.1	16.2	-
HCM Lane LOS	-	-	F	D	C	-
HCM 95th %tile Q(veh)	-	-	5.4	3.5	1.5	-

Notes

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

Intersection	
Int Delay, s/veh	520.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	17	43	76	121	407	93	233	774	129
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	450	-	-	500	-	-	265	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	47	83	132	442	101	253	841	140

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1846	2186	289	1870	2141	511	548	0	0
Stage 1	688	688	-	1428	1428	-	-	-	-
Stage 2	1158	1498	-	442	713	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	46	~ 45	708	~ 44	~ 48	508	1018	-	-
Stage 1	403	445	-	142	~ 199	-	-	-	-
Stage 2	208	184	-	564	~ 434	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	~ 29	696	~ 3	~ 31	500	1010	-	-
Mov Cap-2 Maneuver	~ -106	48	-	~ 54	~ 76	-	-	-	-
Stage 1	300	388	-	~ 106	~ 148	-	-	-	-
Stage 2	-	137	-	381	~ 378	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s		$ 2058.7	2
HCM LOS	-	F	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	-	118	54	90	687	-	-
HCM Lane V/C Ratio	0.251	-	-	-	1.096	2.436	6.039	0.12	-	-
HCM Control Delay (s)	9.8	-	-	-	181.7	$ 815.9	$ 2359.4	11	-	-
HCM Lane LOS	A	-	-	-	F	F	F	B	-	-
HCM 95th %tile Q(veh)	1	-	-	-	7.7	13.4	60.1	0.4	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	76	448	47
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	497	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	2	2	2
Mvmt Flow	83	487	51

Major/Minor	Major2		
Conflicting Flow All	992	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	693	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	687	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.5
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	189	114	103	533	439	187	1116	140	287	972	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	16	205	29	112	579	228	201	1200	139	309	1045	29
Adj No. of Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	1066	472	373	561	472	236	1210	140	296	1450	40
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.13	0.38	0.38	0.17	0.41	0.41
Sat Flow, veh/h	672	3539	1568	1134	1863	1568	1774	3195	369	1774	3516	98
Grp Volume(v), veh/h	16	205	29	112	579	228	201	663	676	309	526	548
Grp Sat Flow(s),veh/h/ln	672	1770	1568	1134	1863	1568	1774	1770	1794	1774	1770	1844
Q Serve(g_s), s	0.0	3.9	1.2	7.3	27.1	10.7	10.0	33.5	33.8	15.0	22.4	22.4
Cycle Q Clear(g_c), s	27.1	3.9	1.2	11.2	27.1	10.7	10.0	33.5	33.8	15.0	22.4	22.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.05
Lane Grp Cap(c), veh/h	80	1066	472	373	561	472	236	670	680	296	730	760
V/C Ratio(X)	0.20	0.19	0.06	0.30	1.03	0.48	0.85	0.99	0.99	1.05	0.72	0.72
Avail Cap(c_a), veh/h	80	1066	472	373	561	472	276	670	680	296	730	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	23.3	22.4	27.5	31.5	25.7	38.1	27.8	27.9	37.5	22.1	22.1
Incr Delay (d2), s/veh	1.2	0.1	0.1	0.4	46.6	0.8	19.3	32.2	33.1	64.6	6.1	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.9	0.5	2.3	21.1	4.7	6.1	22.2	23.0	12.6	12.0	12.5
LnGrp Delay(d),s/veh	46.2	23.4	22.4	27.9	78.0	26.5	57.4	60.0	61.0	102.1	28.2	28.0
LnGrp LOS	D	C	C	C	F	C	E	E	E	F	C	C
Approach Vol, veh/h		250			919			1540			1383	
Approach Delay, s/veh		24.8			59.1			60.1			44.6	
Approach LOS		C			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	39.0		32.0	16.0	42.0		32.0
Change Period (Y+Rc), s	4.0	4.9		4.9	4.0	4.9		4.9
Max Green Setting (Gmax), s	15.0	34.1		27.1	14.0	35.1		27.1
Max Q Clear Time (g_c+I1), s	17.0	35.8		29.1	12.0	24.4		29.1
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	8.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.5
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	205	124	112	579	477	201	1351	309	1076
v/c Ratio	0.19	0.19	0.23	0.32	1.03	0.69	0.78	1.02	1.05	0.76
Control Delay	30.4	23.9	5.7	27.6	79.9	14.5	58.3	58.4	104.1	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	23.9	5.7	27.6	79.9	14.5	58.3	58.4	104.1	27.9
Queue Length 50th (ft)	7	45	0	49	~357	66	110	~412	~193	275
Queue Length 95th (ft)	25	73	39	96	#556	183	#211	#564	#353	356
Internal Link Dist (ft)		801			1249			562		1032
Turn Bay Length (ft)	180		60	100			265		265	
Base Capacity (vph)	83	1065	551	346	560	693	275	1325	295	1409
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.19	0.23	0.32	1.03	0.69	0.73	1.02	1.05	0.76

Intersection Summary

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

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

Intersection	
Int Delay, s/veh	18.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	476	138	38	790	292	79
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	517	150	41	859	317	86

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	527	0	1039	537
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	512	-
Critical Hdwy	-	-	4.12	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.218	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1040	-	~ 240	543
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	567	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1031	-	~ 227	534
Mov Cap-2 Maneuver	-	-	-	-	360	-
Stage 1	-	-	-	-	586	-
Stage 2	-	-	-	-	540	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	90.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	387	-	-	1031	-
HCM Lane V/C Ratio	1.042	-	-	0.04	-
HCM Control Delay (s)	90.5	-	-	8.6	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	13.4	-	-	0.1	-

Notes

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

Intersection	
Intersection Delay, s/veh	49.8
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	86	344	194	0	20	491	156	0	284	216	10
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	90	358	202	0	22	534	170	0	309	235	11
Number of Lanes	0	1	1	0	0	0	2	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	66.5	56.6	34.9
HCM LOS	F	F	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	8%	0%	100%	0%
Vol Thru, %	0%	96%	0%	64%	92%	61%	0%	73%
Vol Right, %	0%	4%	0%	36%	0%	39%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	284	226	86	538	266	402	59	173
LT Vol	0	216	0	344	246	246	0	126
Through Vol	0	10	0	194	0	156	0	47
RT Vol	284	0	86	0	20	0	59	0
Lane Flow Rate	309	246	90	560	289	436	64	188
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.813	0.611	0.241	1	0.715	1	0.183	0.499
Departure Headway (Hd)	9.48	8.951	9.673	8.888	8.915	8.605	10.247	9.558
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	380	403	376	415	407	423	349	376
Service Time	7.268	6.738	7.308	6.554	6.615	6.305	8.042	7.354
HCM Lane V/C Ratio	0.813	0.61	0.239	1.349	0.71	1.031	0.183	0.5
HCM Control Delay	42.8	24.9	15.3	74.7	31	73.5	15.3	21.6
HCM Lane LOS	E	C	C	F	D	F	C	C
HCM 95th-tile Q	7.2	3.9	0.9	12.3	5.5	12.5	0.7	2.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	59	126	47
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	64	137	51
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	20
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	280	0	0	73	295	1134	104
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	304	0	0	79	321	1233	113

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2608	3337	591	2709	3301	693	1153	0	0
Stage 1	1340	1340	-	1940	1940	-	-	-	-
Stage 2	1268	1997	-	769	1361	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	12	8	450	10	8	386	602	-	-
Stage 1	161	220	-	67	111	-	-	-	-
Stage 2	178	104	-	360	215	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	5	3	443	2	3	380	597	-	-
Mov Cap-2 Maneuver	~ -106	~ -80	-	32	66	-	-	-	-
Stage 1	74	173	-	31	51	-	-	-	-
Stage 2	65	48	-	88	169	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	29.1	17	3.4
HCM LOS	D	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	597	-	-	443	380	499	-	-
HCM Lane V/C Ratio	0.537	-	-	0.687	0.209	0.209	-	-
HCM Control Delay (s)	17.8	-	-	29.1	17	14.1	-	-
HCM Lane LOS	C	-	-	D	C	B	-	-
HCM 95th %tile Q(veh)	3.2	-	-	5.1	0.8	0.8	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	98	1035	39
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	94	94	94
Heavy Vehicles, %	2	2	2
Mvmt Flow	104	1101	41

Major/Minor	Major2		
Conflicting Flow All	1356	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	503	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	499	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.2
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	1804	134	411	2034	138	75	526	629	158	408	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	65	1899	61	442	2187	100	82	572	483	165	425	3
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1347	598	308	1797	799	102	899	397	130	955	423
Arrive On Green	0.05	0.38	0.38	0.17	0.51	0.51	0.06	0.25	0.25	0.07	0.27	0.27
Sat Flow, veh/h	1774	3539	1571	1774	3539	1574	1774	3539	1565	1774	3539	1566
Grp Volume(v), veh/h	65	1899	61	442	2187	100	82	572	483	165	425	3
Grp Sat Flow(s),veh/h/ln	1774	1770	1571	1774	1770	1574	1774	1770	1565	1774	1770	1566
Q Serve(g_s), s	5.4	57.1	3.8	26.0	76.2	5.0	6.9	21.6	38.1	11.0	14.9	0.2
Cycle Q Clear(g_c), s	5.4	57.1	3.8	26.0	76.2	5.0	6.9	21.6	38.1	11.0	14.9	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	1347	598	308	1797	799	102	899	397	130	955	423
V/C Ratio(X)	0.79	1.41	0.10	1.44	1.22	0.13	0.81	0.64	1.22	1.27	0.44	0.01
Avail Cap(c_a), veh/h	95	1347	598	308	1797	799	154	899	397	130	955	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	46.4	29.9	62.0	36.9	19.4	69.9	49.8	56.0	69.5	45.4	40.1
Incr Delay (d2), s/veh	31.6	188.8	0.1	214.5	103.1	0.1	16.5	1.5	117.9	167.8	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	3.4	63.2	1.6	31.0	62.9	2.2	3.8	10.8	29.5	11.4	7.4	0.1
LnGrp Delay(d),s/veh	102.4	235.2	30.0	276.5	140.0	19.5	86.3	51.3	173.9	237.3	45.8	40.1
LnGrp LOS	F	F	C	F	F	B	F	D	F	F	D	D
Approach Vol, veh/h		2025			2729			1137			593	
Approach Delay, s/veh		224.8			157.7			105.9			99.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	43.0	30.0	62.0	12.6	45.4	10.9	81.1
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	11.0	38.1	26.0	57.1	13.0	36.1	8.0	75.1
Max Q Clear Time (g_c+I1), s	13.0	40.1	28.0	59.1	8.9	16.9	7.4	78.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	8.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	164.2
HCM 2010 LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	65	1899	141	442	2187	148	82	572	684	165	425	18
v/c Ratio	0.71	1.41	0.22	1.44	1.23	0.18	0.62	0.64	1.24	1.28	0.48	0.04
Control Delay	106.6	224.6	11.0	260.1	143.2	10.9	87.1	53.6	153.7	224.4	50.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.6	224.6	11.0	260.1	143.2	10.9	87.1	53.6	153.7	224.4	50.1	0.2
Queue Length 50th (ft)	64	~1308	25	~585	~1388	38	79	264	~660	~203	189	0
Queue Length 95th (ft)	#142	#1442	74	#805	#1518	80	138	331	#911	#359	246	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	94	1347	646	306	1775	805	153	898	552	129	893	462
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	1.41	0.22	1.44	1.23	0.18	0.54	0.64	1.24	1.28	0.48	0.04

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	335	1725	16	20	1972	253	41	26	41	305	8	212
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	353	1816	16	22	2143	175	45	28	4	338	0	19
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	1779	16	90	1936	595	279	250	36	558	0	244
Arrive On Green	0.17	0.50	0.50	0.10	0.76	0.76	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1774	3595	32	1774	5085	1563	1774	1590	227	3548	0	1553
Grp Volume(v), veh/h	353	893	939	22	2143	175	45	0	32	338	0	19
Grp Sat Flow(s),veh/h/ln	1774	1770	1857	1774	1695	1563	1774	0	1817	1774	0	1553
Q Serve(g_s), s	24.0	69.3	69.3	1.6	53.3	4.8	3.1	0.0	2.1	12.4	0.0	1.5
Cycle Q Clear(g_c), s	24.0	69.3	69.3	1.6	53.3	4.8	3.1	0.0	2.1	12.4	0.0	1.5
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	304	876	919	90	1936	595	279	0	286	558	0	244
V/C Ratio(X)	1.16	1.02	1.02	0.24	1.11	0.29	0.16	0.00	0.11	0.61	0.00	0.08
Avail Cap(c_a), veh/h	304	876	919	90	1936	595	279	0	286	558	0	244
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	35.3	35.4	60.4	16.7	10.9	51.0	0.0	50.6	55.0	0.0	50.3
Incr Delay (d2), s/veh	102.5	35.3	35.3	1.0	54.4	0.9	1.2	0.0	0.8	4.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	42.4	44.5	0.8	33.4	2.2	1.6	0.0	1.1	6.5	0.0	0.7
LnGrp Delay(d),s/veh	160.5	70.7	70.7	61.5	71.1	11.8	52.3	0.0	51.4	59.8	0.0	51.0
LnGrp LOS	F	F	F	E	F	B	D		D	E		D
Approach Vol, veh/h		2185			2340			77			357	
Approach Delay, s/veh		85.2			66.6			51.9			59.3	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	74.2		26.9	28.0	58.2
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	7.1	69.300003		22.0	24.0	53.3
Max Q Clear Time (g_c+I1), s		5.1	3.6	71.3		14.4	26.0	55.3
Green Ext Time (p_c), s		0.2	3.2	0.0		0.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.0
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	1833	22	2143	275	45	73	169	172	230
v/c Ratio	1.17	0.98	0.24	1.11	0.41	0.16	0.24	0.64	0.65	0.53
Control Delay	153.9	49.2	50.2	79.8	7.0	52.9	25.7	67.4	67.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	153.9	49.2	50.2	79.8	7.0	52.9	25.7	67.4	67.8	11.0
Queue Length 50th (ft)	~380	~953	19	~809	72	36	22	153	156	0
Queue Length 95th (ft)	#581	#1093	m31	#903	143	75	70	238	244	77
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	303	1870	101	1935	663	278	298	264	265	435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.17	0.98	0.22	1.11	0.41	0.16	0.24	0.64	0.65	0.53

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	2026	23	54	2150	73	72	4	73	111	4	39
Number	7	4	14	3	8	18	5	2	12	1	6	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	0.98		0.98	0.98		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	19	2089	17	59	2337	63	78	4	6	121	4	4
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	2467	1096	76	3545	1096	267	107	160	265	136	136
Arrive On Green	0.07	1.00	1.00	0.04	0.70	0.70	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	3539	1572	1774	5085	1572	1376	666	998	1374	847	847
Grp Volume(v), veh/h	19	2089	17	59	2337	63	78	0	10	121	0	8
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1695	1572	1376	0	1664	1374	0	1694
Q Serve(g_s), s	1.4	0.0	0.0	4.5	35.5	1.7	7.0	0.0	0.7	11.3	0.0	0.5
Cycle Q Clear(g_c), s	1.4	0.0	0.0	4.5	35.5	1.7	7.5	0.0	0.7	11.9	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.50
Lane Grp Cap(c), veh/h	64	2467	1096	76	3545	1096	267	0	267	265	0	272
V/C Ratio(X)	0.30	0.85	0.02	0.78	0.66	0.06	0.29	0.00	0.04	0.46	0.00	0.03
Avail Cap(c_a), veh/h	91	2467	1096	103	3545	1096	267	0	267	265	0	272
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	0.20	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.3	0.0	0.0	65.4	11.7	6.6	52.0	0.0	48.9	53.9	0.0	48.8
Incr Delay (d2), s/veh	0.5	0.8	0.0	22.9	1.0	0.1	2.8	0.0	0.3	5.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	2.7	16.8	0.8	2.9	0.0	0.3	4.7	0.0	0.3
LnGrp Delay(d),s/veh	62.8	0.8	0.0	88.2	12.7	6.7	54.8	0.0	49.2	59.5	0.0	49.0
LnGrp LOS	E	A	A	F	B	A	D		D	E		D
Approach Vol, veh/h		2125			2459			88			129	
Approach Delay, s/veh		1.4			14.3			54.1			58.9	
Approach LOS		A			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		27.0	9.9	103.1		27.0	12.0	101.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		22.1	8.0	96.1		22.1	7.1	96.099998
Max Q Clear Time (g_c+I1), s		9.5	6.5	2.0		13.9	3.4	37.5
Green Ext Time (p_c), s		0.5	0.0	39.1		0.4	3.4	35.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	19	2089	24	59	2337	79	78	83	121	46
v/c Ratio	0.21	0.84	0.02	0.61	0.64	0.07	0.37	0.27	0.62	0.16
Control Delay	46.1	4.9	0.0	102.7	1.3	0.1	58.6	13.9	69.8	17.6
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	5.5	0.0	102.7	1.3	0.1	58.6	13.9	69.8	17.6
Queue Length 50th (ft)	17	12	0	56	24	0	64	3	104	3
Queue Length 95th (ft)	m18	m16	m0	m61	m45	m0	119	52	176	41
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	101	2490	1070	101	3664	1097	209	311	196	281
Starvation Cap Reductn	0	135	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.89	0.02	0.58	0.64	0.07	0.37	0.27	0.62	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	430	1507	337	305	1755	335	528	746	154	490	561	272
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	462	1620	247	314	1809	254	556	785	63	533	610	121
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.97	0.97	0.97	0.95	0.95	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	1929	596	371	1856	573	565	811	358	494	761	336
Arrive On Green	0.13	0.38	0.38	0.22	0.73	0.73	0.16	0.23	0.23	0.14	0.22	0.22
Sat Flow, veh/h	3442	5085	1571	3442	5085	1570	3442	3539	1563	3442	3539	1561
Grp Volume(v), veh/h	462	1620	247	314	1809	254	556	785	63	533	610	121
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1570	1721	1770	1563	1721	1770	1561
Q Serve(g_s), s	18.0	40.6	10.3	12.3	46.6	6.0	22.5	30.8	4.5	20.1	22.9	9.2
Cycle Q Clear(g_c), s	18.0	40.6	10.3	12.3	46.6	6.0	22.5	30.8	4.5	20.1	22.9	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	1929	596	371	1856	573	565	811	358	494	761	336
V/C Ratio(X)	1.04	0.84	0.41	0.85	0.97	0.44	0.98	0.97	0.18	1.08	0.80	0.36
Avail Cap(c_a), veh/h	442	1929	596	371	1856	573	565	811	358	494	761	336
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.51	0.51	0.51	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	39.6	12.8	53.8	18.3	5.8	58.3	53.4	43.3	59.9	52.1	46.8
Incr Delay (d2), s/veh	54.7	4.6	2.1	9.0	10.0	1.3	33.5	24.6	1.1	63.3	8.7	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	19.9	6.2	6.2	22.8	2.8	13.4	17.8	2.1	13.9	12.1	4.3
LnGrp Delay(d),s/veh	115.7	44.2	14.9	62.8	28.3	7.1	91.8	78.0	44.4	123.3	60.8	49.8
LnGrp LOS	F	D	B	E	C	A	F	E	D	F	E	D
Approach Vol, veh/h		2329			2377			1404			1264	
Approach Delay, s/veh		55.3			30.6			82.0			86.1	
Approach LOS		E			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	58.0	27.0	35.0	22.0	56.0
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	20.1	*32.099998	15.1	*53.099998	23.0	30.1	18.0	51.1
Max Q Clear Time (g_c+I1), s	22.1	32.8	14.3	42.6	24.5	24.9	20.0	48.6
Green Ext Time (p_c), s	0.0	0.0	0.8	7.6	0.0	2.8	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	57.7
HCM 2010 LOS	E

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	462	1620	362	314	1809	345	556	785	162	533	610	296
v/c Ratio	1.05	0.84	0.53	0.80	0.97	0.53	0.99	0.97	0.36	1.04	0.80	0.60
Control Delay	96.9	32.9	12.5	76.9	61.8	32.3	92.9	77.9	15.6	106.5	61.3	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.9	32.9	12.5	76.9	61.8	32.3	92.9	77.9	15.6	106.5	61.3	21.1
Queue Length 50th (ft)	~231	534	131	136	480	148	263	375	29	~268	280	71
Queue Length 95th (ft)	m#325	581	m196	m178	#694	m210	#385	#508	94	#385	351	175
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	441	1928	688	392	1856	648	563	811	445	514	760	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.84	0.53	0.80	0.97	0.53	0.99	0.97	0.36	1.04	0.80	0.60

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	1925	125	292	2169	100	179	258	357	132	164	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	94	2005	100	314	2332	85	186	269	103	143	178	22
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.96	0.96	0.96	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	2274	703	332	2928	904	304	484	407	188	825	101
Arrive On Green	0.09	0.59	0.59	0.37	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5085	1573	1774	5085	1570	1170	1863	1565	1005	3172	387
Grp Volume(v), veh/h	94	2005	100	314	2332	85	186	269	103	143	98	102
Grp Sat Flow(s),veh/h/ln	1774	1695	1573	1774	1695	1570	1170	1863	1565	1005	1770	1789
Q Serve(g_s), s	7.2	46.6	3.9	23.8	0.0	0.0	20.6	17.3	7.2	18.8	6.0	6.2
Cycle Q Clear(g_c), s	7.2	46.6	3.9	23.8	0.0	0.0	26.8	17.3	7.2	36.1	6.0	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	115	2274	703	332	2928	904	304	484	407	188	460	465
V/C Ratio(X)	0.82	0.88	0.14	0.95	0.80	0.09	0.61	0.56	0.25	0.76	0.21	0.22
Avail Cap(c_a), veh/h	141	2274	703	346	2928	904	304	484	407	188	460	465
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.41	0.41	0.41	0.37	0.37	0.37	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	25.0	16.3	42.8	0.0	0.0	50.8	44.4	40.7	60.5	40.3	40.3
Incr Delay (d2), s/veh	11.9	2.3	0.2	17.5	0.9	0.1	8.9	4.5	1.5	25.0	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	22.1	1.7	13.2	0.2	0.0	7.4	9.5	3.3	6.7	3.1	3.2
LnGrp Delay(d),s/veh	74.5	27.3	16.5	60.3	0.9	0.1	59.7	49.0	42.2	85.5	41.3	41.4
LnGrp LOS	E	C	B	E	A	A	E	D	D	F	D	D
Approach Vol, veh/h		2199			2731			558			343	
Approach Delay, s/veh		28.8			7.7			51.3			59.8	
Approach LOS		C			A			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		41.0	32.0	67.0		41.0	13.0	86.0
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		36.1	27.1	62.099998		36.1	11.0	79.1
Max Q Clear Time (g_c+I1), s		28.8	25.8	48.6		38.1	9.2	2.0
Green Ext Time (p_c), s		2.8	0.1	10.5		0.0	0.0	44.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	94	2005	130	314	2332	108	186	269	372	143	213
v/c Ratio	0.71	0.89	0.18	0.89	0.81	0.12	0.67	0.56	0.57	0.81	0.24
Control Delay	95.7	10.8	1.2	46.6	3.8	0.4	60.3	50.4	9.3	81.3	38.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.7	10.8	1.2	46.6	3.8	0.4	60.3	50.4	9.3	81.3	38.7
Queue Length 50th (ft)	83	209	7	282	74	0	153	214	17	123	74
Queue Length 95th (ft)	m99	m239	m9	m309	85	m1	245	309	109	#246	111
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	139	2255	710	354	2893	875	276	480	654	177	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.89	0.18	0.89	0.81	0.12	0.67	0.56	0.57	0.81	0.24

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	2096	133	90	2322	189	195	119	113	221	109	74
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	180	2139	115	95	2444	158	201	123	27	240	118	16
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.97	0.97	0.97	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	2774	856	176	2701	833	307	477	400	301	477	400
Arrive On Green	0.23	1.00	1.00	0.20	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5085	1569	1774	5085	1568	1242	1863	1565	1224	1863	1565
Grp Volume(v), veh/h	180	2139	115	95	2444	158	201	123	27	240	118	16
Grp Sat Flow(s),veh/h/ln	1774	1695	1569	1774	1695	1568	1242	1863	1565	1224	1863	1565
Q Serve(g_s), s	13.7	0.0	0.0	6.7	0.0	0.0	21.3	7.3	1.8	27.0	7.0	1.1
Cycle Q Clear(g_c), s	13.7	0.0	0.0	6.7	0.0	0.0	28.3	7.3	1.8	34.3	7.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	2774	856	176	2701	833	307	477	400	301	477	400
V/C Ratio(X)	0.89	0.77	0.13	0.54	0.90	0.19	0.65	0.26	0.07	0.80	0.25	0.04
Avail Cap(c_a), veh/h	217	2774	856	192	2701	833	307	477	400	301	477	400
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)	0.43	0.43	0.43	0.40	0.40	0.40	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	0.0	0.0	52.8	0.0	0.0	52.2	41.1	39.1	54.8	41.0	38.8
Incr Delay (d2), s/veh	17.5	0.9	0.1	1.0	2.4	0.2	10.4	1.3	0.3	19.5	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.2	0.0	3.3	0.6	0.0	8.2	3.9	0.8	10.8	3.8	0.5
LnGrp Delay(d),s/veh	70.3	0.9	0.1	53.8	2.4	0.2	62.7	42.4	39.4	74.3	42.3	39.0
LnGrp LOS	E	A	A	D	A	A	E	D	D	E	D	D
Approach Vol, veh/h		2434			2697			351			374	
Approach Delay, s/veh		6.0			4.1			53.8			62.7	
Approach LOS		A			A			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		40.4	19.0	80.6		40.4	21.0	78.6
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		35.5	15.0	75.7		35.5	17.0	73.7
Max Q Clear Time (g_c+I1), s		30.3	8.7	2.0		36.3	15.7	2.0
Green Ext Time (p_c), s		1.6	0.4	34.2		0.0	0.1	43.9

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	180	2139	136	95	2444	199	201	123	116	240	118	80
v/c Ratio	0.87	0.78	0.16	0.52	0.91	0.24	0.67	0.26	0.24	0.81	0.25	0.18
Control Delay	63.3	10.3	4.5	53.2	10.8	1.0	59.3	43.4	8.1	70.7	43.2	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.3	10.3	4.5	53.2	10.8	1.0	59.3	43.4	8.1	70.7	43.2	9.1
Queue Length 50th (ft)	173	155	4	88	102	1	166	90	0	207	86	0
Queue Length 95th (ft)	m206	237	m15	m107	126	m4	260	148	49	#352	143	43
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	214	2749	833	189	2676	829	300	480	481	296	480	454
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.78	0.16	0.50	0.91	0.24	0.67	0.26	0.24	0.81	0.25	0.18

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	144	2044	128	145	2143	151	125	72	126	253	45	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		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	152	2152	104	154	2280	131	136	78	32	266	47	10
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	2525	778	177	2562	793	424	740	287	399	555	467
Arrive On Green	0.10	0.50	0.50	0.13	0.67	0.67	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	5085	1567	1774	5085	1574	1330	2486	964	1269	1863	1567
Grp Volume(v), veh/h	152	2152	104	154	2280	131	136	54	56	266	47	10
Grp Sat Flow(s),veh/h/ln	1774	1695	1567	1774	1695	1574	1330	1770	1681	1269	1863	1567
Q Serve(g_s), s	11.7	51.2	5.0	11.8	50.9	4.3	11.4	3.1	3.3	26.7	2.5	0.6
Cycle Q Clear(g_c), s	11.7	51.2	5.0	11.8	50.9	4.3	13.9	3.1	3.3	30.1	2.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	176	2525	778	177	2562	793	424	527	500	399	555	467
V/C Ratio(X)	0.86	0.85	0.13	0.87	0.89	0.17	0.32	0.10	0.11	0.67	0.08	0.02
Avail Cap(c_a), veh/h	205	2525	778	193	2562	793	424	527	500	399	555	467
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	30.5	18.8	59.3	19.8	12.1	40.1	35.3	35.4	46.3	35.1	34.4
Incr Delay (d2), s/veh	17.3	2.3	0.2	12.4	1.8	0.1	2.0	0.4	0.5	8.5	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	6.6	24.4	2.2	6.4	23.9	1.9	4.4	1.6	1.6	10.3	1.3	0.3
LnGrp Delay(d),s/veh	78.9	32.7	19.0	71.7	21.5	12.2	42.1	35.7	35.8	54.9	35.4	34.5
LnGrp LOS	E	C	B	E	C	B	D	D	D	D	D	C
Approach Vol, veh/h		2408			2565			246			323	
Approach Delay, s/veh		35.1			24.1			39.3			51.4	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		46.2	20.0	73.8		46.2	17.8	76.0
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		41.3	15.1	68.900002		41.3	16.0	68.9
Max Q Clear Time (g_c+I1), s		15.9	13.8	53.2		32.1	13.7	52.9
Green Ext Time (p_c), s		2.2	0.1	12.6		1.6	0.1	13.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	152	2152	135	154	2280	161	136	215	266	47	37
v/c Ratio	0.80	0.86	0.18	0.76	0.90	0.20	0.35	0.21	0.83	0.09	0.07
Control Delay	78.4	45.4	21.5	47.5	10.2	1.4	41.9	14.2	68.5	36.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	45.4	21.5	47.5	10.2	1.4	41.9	14.2	68.5	36.4	0.3
Queue Length 50th (ft)	147	604	68	140	254	4	98	27	227	31	0
Queue Length 95th (ft)	m191	658	m95	m146	276	m7	161	59	#381	64	0
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	202	2502	768	202	2539	794	391	1022	320	549	512
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.86	0.18	0.76	0.90	0.20	0.35	0.21	0.83	0.09	0.07

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	507	1314	277	340	1553	169	409	444	136	203	514	439
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	551	1428	198	366	1670	99	435	472	51	221	559	227
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	568	1930	596	417	1675	517	467	827	365	477	837	370
Arrive On Green	0.33	0.76	0.76	0.12	0.33	0.33	0.14	0.23	0.23	0.14	0.24	0.24
Sat Flow, veh/h	3442	5085	1571	3442	5085	1569	3442	3539	1563	3442	3539	1563
Grp Volume(v), veh/h	551	1428	198	366	1670	99	435	472	51	221	559	227
Grp Sat Flow(s),veh/h/ln	1721	1695	1571	1721	1695	1569	1721	1770	1563	1721	1770	1563
Q Serve(g_s), s	22.1	21.6	3.9	14.6	45.9	6.3	17.5	16.5	2.7	8.3	20.1	18.2
Cycle Q Clear(g_c), s	22.1	21.6	3.9	14.6	45.9	6.3	17.5	16.5	2.7	8.3	20.1	18.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	568	1930	596	417	1675	517	467	827	365	477	837	370
V/C Ratio(X)	0.97	0.74	0.33	0.88	1.00	0.19	0.93	0.57	0.14	0.46	0.67	0.61
Avail Cap(c_a), veh/h	568	1930	596	467	1675	517	467	827	365	477	837	370
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	13.1	5.1	60.5	46.9	33.6	59.9	47.4	24.5	55.5	48.5	47.7
Incr Delay (d2), s/veh	17.2	1.0	0.6	15.9	21.4	0.8	25.5	2.9	0.8	0.7	4.2	7.4
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	11.8	10.0	1.9	7.9	24.8	2.9	10.0	8.4	1.6	4.0	10.3	8.6
LnGrp Delay(d),s/veh	63.8	14.1	5.7	76.4	68.3	34.4	85.4	50.3	25.3	56.2	52.7	55.2
LnGrp LOS	E	B	A	E	E	C	F	D	C	E	D	E
Approach Vol, veh/h		2177			2135			958			1007	
Approach Delay, s/veh		25.9			68.1			64.9			54.0	
Approach LOS		C			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	37.6	21.0	58.0	23.0	38.0	28.0	51.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.9	4.9000001
Max Green Setting (Gmax), s	19.4	32.7	19.0	51.1	19.0	33.1	23.1	46.099998
Max Q Clear Time (g_c+I1), s	10.3	18.5	16.6	23.6	19.5	22.1	24.1	47.9
Green Ext Time (p_c), s	1.7	2.6	0.3	15.6	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.7
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	551	1428	301	366	1670	182	435	472	145	221	559	477
v/c Ratio	0.94	0.76	0.45	0.82	1.00	0.32	0.94	0.57	0.33	0.47	0.67	0.80
Control Delay	50.8	17.2	4.2	75.2	68.1	18.8	88.0	50.6	14.0	59.1	53.1	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	17.2	4.2	75.2	68.1	18.8	88.0	50.6	14.0	59.1	53.1	29.5
Queue Length 50th (ft)	243	360	51	168	556	59	205	201	22	96	244	160
Queue Length 95th (ft)	m#339	361	m54	#229	#673	125	#306	261	82	140	310	312
Internal Link Dist (ft)		1359			798			523			1092	
Turn Bay Length (ft)	250		140	265		175	220		110	250		240
Base Capacity (vph)	588	1887	666	465	1674	566	465	826	446	475	836	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.76	0.45	0.79	1.00	0.32	0.94	0.57	0.33	0.47	0.67	0.80

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Intersection	
Int Delay, s/veh	9.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	377	0	0	64	415	826	104
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	185	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	410	0	0	70	441	879	111

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2646	3196	534	2627	3169	515	1038	0	0
Stage 1	1314	1314	-	1827	1827	-	-	-	-
Stage 2	1332	1882	-	800	1342	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	11	10	491	12	10	505	665	-	-
Stage 1	167	226	-	79	126	-	-	-	-
Stage 2	163	118	-	345	219	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	4	3	483	1	3	497	659	-	-
Mov Cap-2 Maneuver	90	~ -326	-	25	43	-	-	-	-
Stage 1	55	174	-	26	41	-	-	-	-
Stage 2	46	39	-	40	169	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	41.7	13.4	6.4
HCM LOS	E	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	659	-	-	483	497	683	-	-
HCM Lane V/C Ratio	0.67	-	-	0.848	0.14	0.223	-	-
HCM Control Delay (s)	20.8	-	-	41.7	13.4	11.8	-	-
HCM Lane LOS	C	-	-	E	B	B	-	-
HCM 95th %tile Q(veh)	5.1	-	-	8.6	0.5	0.8	-	-

Notes

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

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	146	933	54
Conflicting Peds, #/hr	10	0	10
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	96	96	96
Heavy Vehicles, %	2	2	2
Mvmt Flow	152	972	56

Major/Minor	Major2		
Conflicting Flow All	999	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	689	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	683	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.5
HCM LOS	

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	2079	121	394	2396	126	130	238	649	157	292	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	74	2260	50	424	2576	83	141	259	517	171	317	7
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	1465	651	272	1824	811	164	852	376	130	784	346
Arrive On Green	0.05	0.41	0.41	0.15	0.52	0.52	0.09	0.24	0.24	0.07	0.22	0.22
Sat Flow, veh/h	1774	3539	1572	1774	3539	1574	1774	3539	1564	1774	3539	1562
Grp Volume(v), veh/h	74	2260	50	424	2576	83	141	259	517	171	317	7
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1770	1574	1774	1770	1564	1774	1770	1562
Q Serve(g_s), s	6.2	62.1	2.9	23.0	77.3	4.0	11.8	9.0	36.1	11.0	11.5	0.5
Cycle Q Clear(g_c), s	6.2	62.1	2.9	23.0	77.3	4.0	11.8	9.0	36.1	11.0	11.5	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1465	651	272	1824	811	164	852	376	130	784	346
V/C Ratio(X)	0.80	1.54	0.08	1.56	1.41	0.10	0.86	0.30	1.37	1.31	0.40	0.02
Avail Cap(c_a), veh/h	95	1465	651	272	1824	811	225	852	376	130	784	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	70.3	44.0	26.6	63.5	36.4	18.6	67.1	46.7	57.0	69.5	49.9	45.6
Incr Delay (d2), s/veh	36.6	247.5	0.0	268.7	189.0	0.1	21.0	0.2	184.3	185.6	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	4.0	80.7	1.3	31.6	85.6	1.8	6.7	4.4	34.8	12.1	5.7	0.2
LnGrp Delay(d),s/veh	106.9	291.5	26.7	332.2	225.4	18.7	88.1	46.9	241.2	255.1	50.3	45.7
LnGrp LOS	F	F	C	F	F	B	F	D	F	F	D	D
Approach Vol, veh/h		2384			3083			917			495	
Approach Delay, s/veh		280.2			234.5			162.8			120.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	41.0	27.0	67.0	17.9	38.1	11.8	82.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	11.0	36.1	23.0	62.1	19.0	28.1	8.0	77.1
Max Q Clear Time (g_c+I1), s	13.0	38.1	25.0	64.1	13.8	13.5	8.2	79.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	5.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	232.6
HCM 2010 LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	74	2260	132	424	2576	135	141	259	705	171	317	67
v/c Ratio	0.79	1.54	0.19	1.56	1.42	0.16	0.74	0.30	1.30	1.33	0.43	0.16
Control Delay	116.7	279.8	5.0	311.1	221.2	6.2	87.4	47.8	178.5	240.4	54.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	116.7	279.8	5.0	311.1	221.2	6.2	87.4	47.8	178.5	240.4	54.8	0.8
Queue Length 50th (ft)	73	~1630	1	~585	~1778	16	135	110	~703	~215	145	0
Queue Length 95th (ft)	#166	#1757	44	#802	#1897	52	210	153	#954	#371	198	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	94	1465	710	271	1819	837	224	851	542	129	730	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	1.54	0.19	1.56	1.42	0.16	0.63	0.30	1.30	1.33	0.43	0.16

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	305	2084	18	25	2036	366	21	5	12	320	4	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	332	2265	19	26	2143	249	23	5	1	351	0	17
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1780	15	90	2045	629	279	236	47	558	0	244
Arrive On Green	0.15	0.50	0.50	0.10	0.80	0.80	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1774	3597	30	1774	5085	1564	1774	1502	300	3548	0	1553
Grp Volume(v), veh/h	332	1113	1171	26	2143	249	23	0	6	351	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1857	1774	1695	1564	1774	0	1803	1774	0	1553
Q Serve(g_s), s	21.0	69.3	69.3	1.9	56.3	6.4	1.5	0.0	0.4	13.0	0.0	1.3
Cycle Q Clear(g_c), s	21.0	69.3	69.3	1.9	56.3	6.4	1.5	0.0	0.4	13.0	0.0	1.3
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	266	876	919	90	2045	629	279	0	283	558	0	244
V/C Ratio(X)	1.25	1.27	1.27	0.29	1.05	0.40	0.08	0.00	0.02	0.63	0.00	0.07
Avail Cap(c_a), veh/h	266	876	919	90	2045	629	279	0	283	558	0	244
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	35.3	35.4	60.6	13.7	8.8	50.4	0.0	49.9	55.2	0.0	50.3
Incr Delay (d2), s/veh	138.8	130.6	131.9	1.2	30.9	1.3	0.6	0.0	0.1	5.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.5	65.6	69.2	1.0	30.8	2.8	0.8	0.0	0.2	6.7	0.0	0.6
LnGrp Delay(d),s/veh	198.3	166.0	167.2	61.8	44.6	10.1	51.0	0.0	50.0	60.5	0.0	50.8
LnGrp LOS	F	F	F	E	F	B	D		D	E		D
Approach Vol, veh/h		2616			2418			29			368	
Approach Delay, s/veh		170.6			41.2			50.8			60.1	
Approach LOS		F			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	74.2		26.9	25.0	61.2
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	7.1	69.300003		22.0	21.0	56.3
Max Q Clear Time (g_c+I1), s		3.5	3.9	71.3		15.0	23.0	58.3
Green Ext Time (p_c), s		0.0	3.0	0.0		0.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	104.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	332	2285	26	2143	385	23	18	177	175	204
v/c Ratio	1.25	1.22	0.29	1.05	0.53	0.08	0.07	0.67	0.66	0.49
Control Delay	188.3	135.6	49.5	54.3	6.3	51.4	27.8	69.1	68.7	11.0
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	188.3	135.9	49.5	54.3	6.3	51.4	27.8	69.1	68.7	11.0
Queue Length 50th (ft)	~377	~1410	23	~773	105	18	4	162	160	0
Queue Length 95th (ft)	#573	#1542	m34	#865	149	46	28	250	248	73
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	265	1870	101	2044	732	278	266	264	264	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	148	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.25	1.33	0.26	1.05	0.53	0.08	0.07	0.67	0.66	0.49

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	2442	30	82	2240	65	41	4	54	96	4	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		0.99	1.00		0.99	0.98		0.98	0.98		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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	38	2654	22	88	2409	53	45	4	5	104	4	3
Adj No. of Lanes	1	2	1	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	2432	1080	101	3494	1080	263	117	146	261	154	116
Arrive On Green	0.10	1.00	1.00	0.06	0.69	0.69	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	3539	1572	1774	5085	1572	1377	745	932	1374	981	735
Grp Volume(v), veh/h	38	2654	22	88	2409	53	45	0	9	104	0	7
Grp Sat Flow(s),veh/h/ln	1774	1770	1572	1774	1695	1572	1377	0	1677	1374	0	1716
Q Serve(g_s), s	2.8	0.0	0.0	6.9	39.4	1.5	4.0	0.0	0.6	9.7	0.0	0.5
Cycle Q Clear(g_c), s	2.8	0.0	0.0	6.9	39.4	1.5	4.5	0.0	0.6	10.3	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.43
Lane Grp Cap(c), veh/h	90	2432	1080	101	3494	1080	263	0	264	261	0	270
V/C Ratio(X)	0.42	1.09	0.02	0.87	0.69	0.05	0.17	0.00	0.03	0.40	0.00	0.03
Avail Cap(c_a), veh/h	90	2432	1080	101	3494	1080	263	0	264	261	0	270
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	0.0	65.5	13.0	7.1	51.8	0.0	50.0	54.4	0.0	49.9
Incr Delay (d2), s/veh	0.3	41.9	0.0	50.2	1.1	0.1	1.4	0.0	0.2	4.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	14.1	0.0	4.8	18.7	0.7	1.6	0.0	0.3	4.0	0.0	0.2
LnGrp Delay(d),s/veh	61.3	41.9	0.0	115.7	14.2	7.2	53.2	0.0	50.2	58.9	0.0	50.1
LnGrp LOS	E	F	A	F	B	A	D		D	E		D
Approach Vol, veh/h		2714			2550			54			111	
Approach Delay, s/veh		41.8			17.5			52.7			58.3	
Approach LOS		D			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	101.1		26.9	12.0	101.1
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9000001
Max Green Setting (Gmax), s		22.0	8.0	96.2		22.0	7.9	96.199997
Max Q Clear Time (g_c+I1), s		6.5	8.9	2.0		12.3	4.8	41.4
Green Ext Time (p_c), s		0.4	0.0	66.5		0.3	2.2	35.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	2654	33	88	2409	70	45	63	104	43
v/c Ratio	0.40	1.09	0.03	0.87	0.67	0.07	0.22	0.21	0.51	0.15
Control Delay	50.0	52.1	0.1	86.5	4.9	0.3	54.6	15.5	63.6	18.2
Queue Delay	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	55.9	0.1	86.5	4.9	0.3	54.6	15.5	63.6	18.2
Queue Length 50th (ft)	37	~1471	0	78	225	1	36	3	88	3
Queue Length 95th (ft)	m36	m108	m0	m76	m237	m1	76	46	152	39
Internal Link Dist (ft)		851			656			457		177
Turn Bay Length (ft)	150		75	210		85	60		80	
Base Capacity (vph)	101	2431	1046	101	3581	1073	209	294	205	278
Starvation Cap Reductn	0	274	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	1.23	0.03	0.87	0.67	0.07	0.22	0.21	0.51	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	446	1665	195	348	2076	327	588	523	118	597	499	337
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	485	1810	151	370	2209	270	639	568	17	609	509	163
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	2114	653	420	2114	653	590	581	255	543	556	244
Arrive On Green	0.13	0.42	0.42	0.24	0.83	0.83	0.17	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	3442	5085	1572	3442	5085	1572	3442	3539	1554	3442	3539	1553
Grp Volume(v), veh/h	485	1810	151	370	2209	270	639	568	17	609	509	163
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1572	1721	1770	1554	1721	1770	1553
Q Serve(g_s), s	18.0	45.2	5.2	14.5	58.2	3.8	24.0	22.4	1.3	22.1	19.8	13.8
Cycle Q Clear(g_c), s	18.0	45.2	5.2	14.5	58.2	3.8	24.0	22.4	1.3	22.1	19.8	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	2114	653	420	2114	653	590	581	255	543	556	244
V/C Ratio(X)	1.10	0.86	0.23	0.88	1.04	0.41	1.08	0.98	0.07	1.12	0.92	0.67
Avail Cap(c_a), veh/h	442	2114	653	420	2114	653	590	581	255	543	556	244
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	37.1	9.4	51.9	11.8	2.8	58.0	58.2	49.4	58.9	58.1	55.6
Incr Delay (d2), s/veh	71.3	4.7	0.8	11.1	27.8	1.0	61.5	32.1	0.5	76.3	22.1	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	22.0	3.5	7.5	30.9	1.9	16.4	13.6	0.6	16.2	11.4	6.9
LnGrp Delay(d),s/veh	132.3	41.8	10.3	63.0	39.6	3.8	119.5	90.3	49.9	135.3	80.2	69.2
LnGrp LOS	F	D	B	E	F	A	F	F	D	F	F	E
Approach Vol, veh/h		2446			2849			1224			1281	
Approach Delay, s/veh		57.8			39.2			105.0			105.0	
Approach LOS		E			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	27.0	27.9	22.0	63.1	28.0	26.9	22.0	63.1
Change Period (Y+Rc), s	4.9	4.9000001	4.9	4.9000001	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	22.1	* 23	17.1	58.200001	24.0	22.0	18.0	58.2
Max Q Clear Time (g_c+I1), s	24.1	24.4	16.5	47.2	26.0	21.8	20.0	60.2
Green Ext Time (p_c), s	0.0	0.0	0.6	8.4	0.0	0.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.2
HCM 2010 LOS	E

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	485	1810	212	370	2209	348	639	568	128	609	509	344
v/c Ratio	1.10	0.86	0.31	0.84	1.05	0.49	1.09	0.98	0.36	1.08	0.92	0.82
Control Delay	101.6	20.2	6.0	73.8	71.3	24.8	116.1	90.0	12.6	115.7	80.1	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.6	20.2	6.0	73.8	71.3	24.8	116.1	90.0	12.6	115.7	80.1	38.8
Queue Length 50th (ft)	~256	464	49	165	~790	124	~335	274	5	~318	243	123
Queue Length 95th (ft)	m#225	m403	m46	m#244	#882	m178	#458	#397	63	#440	#346	#282
Internal Link Dist (ft)		933			1257			1901			580	
Turn Bay Length (ft)	250		145	255		140	255		100	260		145
Base Capacity (vph)	441	2113	694	441	2113	711	588	581	354	563	556	418
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.86	0.31	0.84	1.05	0.49	1.09	0.98	0.36	1.08	0.92	0.82

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	1953	127	349	2200	162	162	190	357	132	228	99
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	98	2123	106	364	2292	134	176	207	99	143	248	70
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	2292	709	356	3004	927	226	454	381	210	666	184
Arrive On Green	0.09	0.60	0.60	0.40	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	5085	1573	1774	5085	1570	1053	1863	1564	1065	2734	754
Grp Volume(v), veh/h	98	2123	106	364	2292	134	176	207	99	143	158	160
Grp Sat Flow(s),veh/h/ln	1774	1695	1573	1774	1695	1570	1053	1863	1564	1065	1770	1719
Q Serve(g_s), s	7.6	52.6	4.2	28.1	0.0	0.0	23.3	13.2	7.2	18.5	10.4	10.8
Cycle Q Clear(g_c), s	7.6	52.6	4.2	28.1	0.0	0.0	34.1	13.2	7.2	31.7	10.4	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	119	2292	709	356	3004	927	226	454	381	210	431	419
V/C Ratio(X)	0.82	0.93	0.15	1.02	0.76	0.14	0.78	0.46	0.26	0.68	0.37	0.38
Avail Cap(c_a), veh/h	139	2292	709	356	3004	927	226	454	381	210	431	419
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	0.14	0.14	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	25.9	16.2	41.9	0.0	0.0	58.4	45.1	42.8	58.6	44.0	44.2
Incr Delay (d2), s/veh	11.2	3.1	0.2	23.7	0.3	0.0	22.7	3.3	1.7	16.4	2.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	25.0	1.8	16.0	0.1	0.0	8.2	7.3	3.3	6.4	5.4	5.4
LnGrp Delay(d),s/veh	74.1	29.0	16.4	65.6	0.3	0.0	81.1	48.3	44.4	74.9	46.4	46.8
LnGrp LOS	E	C	B	F	A	A	F	D	D	E	D	D
Approach Vol, veh/h		2327			2790			482			461	
Approach Delay, s/veh		30.4			8.8			59.5			55.4	
Approach LOS		C			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	33.0	68.0		39.0	13.4	87.6
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		34.1	28.1	63.099998		34.1	11.0	81.1
Max Q Clear Time (g_c+I1), s		36.1	30.1	54.6		33.7	9.6	2.0
Green Ext Time (p_c), s		0.0	0.0	7.3		0.2	0.0	45.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	98	2123	138	364	2292	169	176	207	388	143	356
v/c Ratio	0.74	0.93	0.19	0.99	0.77	0.19	0.93	0.46	0.61	0.69	0.42
Control Delay	92.5	17.7	3.7	56.7	5.5	0.7	101.6	49.0	10.9	66.5	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.5	17.7	3.7	56.7	5.5	0.7	101.6	49.0	10.9	66.5	40.3
Queue Length 50th (ft)	85	273	5	315	129	0	158	162	26	119	125
Queue Length 95th (ft)	m97	m421	m12	m318	m135	m0	#309	242	127	#217	174
Internal Link Dist (ft)		1257			1260			1272			1221
Turn Bay Length (ft)	215		135	260		140	150			145	
Base Capacity (vph)	139	2291	720	366	2963	909	189	453	640	208	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.93	0.19	0.99	0.77	0.19	0.93	0.46	0.61	0.69	0.42

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	232	2263	124	113	2672	144	258	94	53	186	85	116
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	244	2382	111	118	2783	110	280	102	9	200	91	21
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	2946	909	177	2764	853	282	414	347	276	414	347
Arrive On Green	0.27	1.00	1.00	0.20	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1774	5085	1570	1774	5085	1569	1264	1863	1562	1266	1863	1562
Grp Volume(v), veh/h	244	2382	111	118	2783	110	280	102	9	200	91	21
Grp Sat Flow(s),veh/h/ln	1774	1695	1570	1774	1695	1569	1264	1863	1562	1266	1863	1562
Q Serve(g_s), s	19.0	0.0	0.0	8.6	76.1	0.0	25.5	6.3	0.6	21.6	5.6	1.5
Cycle Q Clear(g_c), s	19.0	0.0	0.0	8.6	76.1	0.0	31.1	6.3	0.6	27.9	5.6	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	2946	909	177	2764	853	282	414	347	276	414	347
V/C Ratio(X)	1.01	0.81	0.12	0.67	1.01	0.13	0.99	0.25	0.03	0.73	0.22	0.06
Avail Cap(c_a), veh/h	241	2946	909	177	2764	853	282	414	347	276	414	347
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)	0.38	0.38	0.38	0.18	0.18	0.18	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	0.0	0.0	53.8	0.0	0.0	59.5	44.8	42.6	56.3	44.5	42.9
Incr Delay (d2), s/veh	39.1	1.0	0.1	1.7	9.0	0.1	52.1	1.4	0.1	15.4	1.2	0.3
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.3	0.0	4.3	2.3	0.0	14.9	3.4	0.3	8.7	3.0	0.7
LnGrp Delay(d),s/veh	90.2	1.0	0.1	55.6	9.0	0.1	111.6	46.2	42.7	71.7	45.8	43.3
LnGrp LOS	F	A	A	E	F	A	F	D	D	E	D	D
Approach Vol, veh/h		2737			3011			391			312	
Approach Delay, s/veh		8.9			10.5			93.0			62.2	
Approach LOS		A			B			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	18.0	86.0		36.0	23.0	81.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		31.1	14.0	81.1		31.1	19.0	76.1
Max Q Clear Time (g_c+I1), s		33.1	10.6	2.0		29.9	21.0	78.1
Green Ext Time (p_c), s		0.0	0.4	43.5		0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	244	2382	131	118	2783	150	280	102	58	200	91	125
v/c Ratio	1.02	0.81	0.15	0.67	1.01	0.18	1.02	0.25	0.14	0.75	0.22	0.29
Control Delay	93.7	6.1	1.0	64.9	20.6	0.5	112.1	46.8	4.3	69.4	46.2	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.7	6.1	1.0	64.9	20.6	0.5	112.1	46.8	4.3	69.4	46.2	8.9
Queue Length 50th (ft)	~239	127	3	114	~147	0	~263	77	0	171	68	0
Queue Length 95th (ft)	m#309	156	m5	m126	m143	m1	#454	131	19	#288	120	53
Internal Link Dist (ft)		1260			1173			687			1218	
Turn Bay Length (ft)	265		80	310		145	145		75	150		150
Base Capacity (vph)	240	2945	889	177	2764	854	275	413	406	266	413	438
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.81	0.15	0.67	1.01	0.18	1.02	0.25	0.14	0.75	0.22	0.29

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	204	1919	151	207	2214	255	210	78	180	319	63	89
Number	7	4	14	3	8	18	5	2	12	1	6	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	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	217	2041	122	225	2407	228	228	85	54	347	68	26
Adj No. of Lanes	1	3	1	1	3	1	1	2	0	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	2256	694	228	2328	720	443	705	414	422	613	517
Arrive On Green	0.22	0.89	0.89	0.13	0.46	0.46	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1774	5085	1565	1774	5085	1573	1288	2141	1256	1237	1863	1569
Grp Volume(v), veh/h	217	2041	122	225	2407	228	228	69	70	347	68	26
Grp Sat Flow(s),veh/h/ln	1774	1695	1565	1774	1695	1573	1288	1770	1628	1237	1863	1569
Q Serve(g_s), s	15.1	32.1	1.5	17.7	64.1	12.9	21.0	3.8	4.2	38.2	3.6	1.6
Cycle Q Clear(g_c), s	15.1	32.1	1.5	17.7	64.1	12.9	24.5	3.8	4.2	42.5	3.6	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	191	2256	694	228	2328	720	443	583	536	422	613	517
V/C Ratio(X)	1.13	0.90	0.18	0.99	1.03	0.32	0.51	0.12	0.13	0.82	0.11	0.05
Avail Cap(c_a), veh/h	191	2256	694	228	2328	720	443	583	536	422	613	517
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	6.2	4.5	60.9	38.0	24.1	41.2	32.8	32.9	47.8	32.7	32.0
Incr Delay (d2), s/veh	88.4	3.6	0.3	55.6	28.0	1.2	4.2	0.4	0.5	16.5	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	12.0	14.0	0.7	12.2	36.0	5.8	8.0	1.9	2.0	15.0	1.9	0.7
LnGrp Delay(d),s/veh	143.3	9.8	4.8	116.5	66.0	25.2	45.4	33.2	33.4	64.2	33.0	32.2
LnGrp LOS	F	A	A	F	F	C	D	C	C	E	C	C
Approach Vol, veh/h		2380			2860			367			441	
Approach Delay, s/veh		21.7			66.7			40.8			57.5	
Approach LOS		C			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		51.0	22.0	67.0		51.0	20.0	69.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.9	4.9000001
Max Green Setting (Gmax), s		46.1	18.0	62.1		46.1	15.1	64.099998
Max Q Clear Time (g_c+I1), s		26.5	19.7	34.1		44.5	17.1	66.1
Green Ext Time (p_c), s		3.2	0.0	19.6		0.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	217	2041	161	225	2407	277	228	281	347	68	97
v/c Ratio	1.07	0.91	0.23	0.99	1.03	0.37	0.53	0.24	1.07	0.11	0.17
Control Delay	120.8	34.5	14.8	117.7	65.3	18.5	43.6	11.1	114.6	33.4	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	120.8	34.5	14.8	117.7	65.3	18.5	43.6	11.1	114.6	33.4	6.7
Queue Length 50th (ft)	~215	420	37	208	~860	111	169	27	~349	43	0
Queue Length 95th (ft)	m#318	508	m52	#380	#948	182	258	62	#548	80	41
Internal Link Dist (ft)		1173			1359			229		88	
Turn Bay Length (ft)	300		140	260		115	150		160		160
Base Capacity (vph)	202	2255	702	227	2328	747	429	1152	324	613	570
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.91	0.23	0.99	1.03	0.37	0.53	0.24	1.07	0.11	0.17

Intersection Summary

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

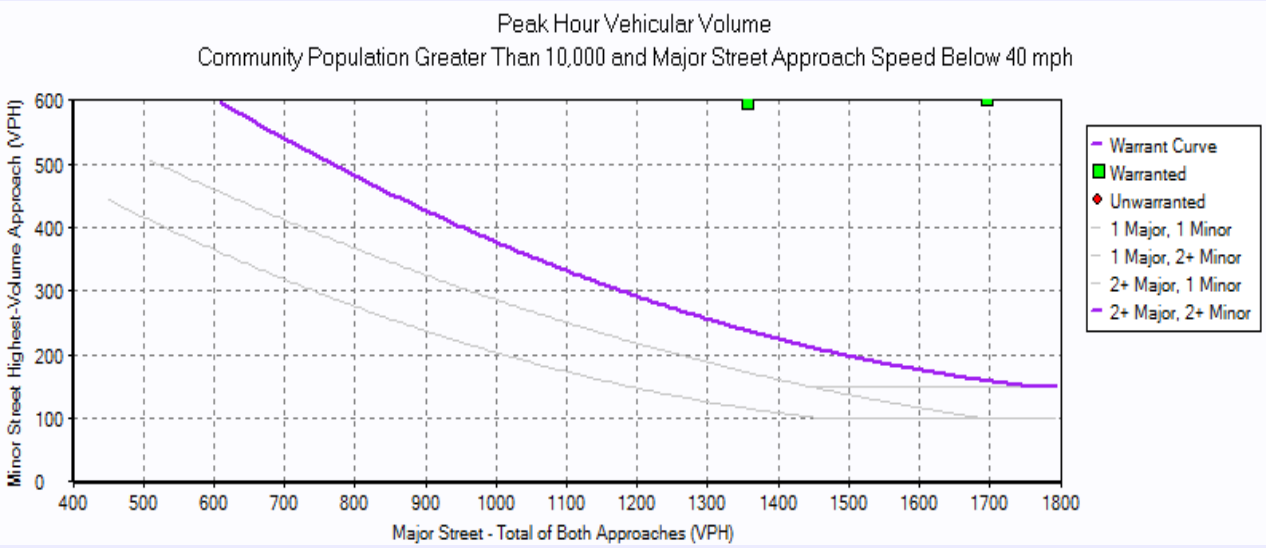
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Warrant 3: Peak Hour

4: Gates Ave. & San Jose Ave. 2035 With Project

Warrant 3



Note: Please turn over for volume information.

APPENDIX F

MITIGATED INTERSECTION ANALYSIS SHEETS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	65	125	409	18	117	875
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	186.3
Adj Flow Rate, veh/h	72	139	499	22	123	921
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.90	0.90	0.82	0.82	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	239	213	1410	62	159	2140
Arrive On Green	0.13	0.13	0.41	0.41	0.09	0.60
Sat Flow, veh/h	1774	1583	3545	152	1774	3632
Grp Volume(v), veh/h	72	139	255	266	123	921
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1834	1774	1770
Q Serve(g_s), s	1.4	3.1	3.8	3.8	2.5	5.2
Cycle Q Clear(g_c), s	1.4	3.1	3.8	3.8	2.5	5.2
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	239	213	723	749	159	2140
V/C Ratio(X)	0.30	0.65	0.35	0.35	0.77	0.43
Avail Cap(c_a), veh/h	1043	931	1134	1175	472	3586
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	14.7	15.4	7.7	7.7	16.7	4.0
Incr Delay (d2), s/veh	0.7	3.3	0.3	0.3	7.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.6	1.8	1.9	1.6	2.5
LnGrp Delay(d),s/veh	15.4	18.8	8.0	8.0	24.4	4.1
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	211		521			1044
Approach Delay, s/veh	17.6		8.0			6.5
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.4	20.3				27.6		10.0
Change Period (Y+Rc), s	4.0	4.9				4.9		4.9
Max Green Setting (Gmax), s	10.0	24.1				38.1		22.1
Max Q Clear Time (g_c+I1), s	4.5	5.8				7.2		5.1
Green Ext Time (p_c), s	0.1	8.8				11.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	8.3
HCM 2010 LOS	A

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	72	139	521	123	921
v/c Ratio	0.19	0.32	0.34	0.36	0.40
Control Delay	17.0	6.1	13.7	22.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.0	6.1	13.7	22.6	6.4
Queue Length 50th (ft)	14	0	51	24	50
Queue Length 95th (ft)	48	34	115	95	162
Internal Link Dist (ft)	988		160		223
Turn Bay Length (ft)				265	
Base Capacity (vph)	975	916	2114	441	3073
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.07	0.15	0.25	0.28	0.30

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	35	199	962	57	150	773
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	186.3
Adj Flow Rate, veh/h	40	226	1013	60	161	831
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.88	0.88	0.95	0.95	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	326	291	1466	87	206	2214
Arrive On Green	0.18	0.18	0.43	0.43	0.12	0.63
Sat Flow, veh/h	1774	1583	3486	201	1774	3632
Grp Volume(v), veh/h	40	226	528	545	161	831
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1825	1774	1770
Q Serve(g_s), s	1.0	7.0	12.4	12.4	4.5	5.9
Cycle Q Clear(g_c), s	1.0	7.0	12.4	12.4	4.5	5.9
Prop In Lane	1.00	1.00		0.11	1.00	
Lane Grp Cap(c), veh/h	326	291	765	788	206	2214
V/C Ratio(X)	0.12	0.78	0.69	0.69	0.78	0.38
Avail Cap(c_a), veh/h	758	677	866	893	310	2626
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	17.5	20.0	11.8	11.8	22.1	4.7
Incr Delay (d2), s/veh	0.2	4.4	2.0	2.0	7.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.4	6.4	6.6	2.6	2.8
LnGrp Delay(d),s/veh	17.7	24.4	13.9	13.8	29.3	4.8
LnGrp LOS	B	C	B	B	C	A
Approach Vol, veh/h	266		1073			992
Approach Delay, s/veh	23.4		13.8			8.8
Approach LOS	C		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.0	27.1				37.1		14.4
Change Period (Y+Rc), s	4.0	4.9				4.9		4.9
Max Green Setting (Gmax), s	9.0	25.2				38.2		22.0
Max Q Clear Time (g_c+I1), s	6.5	14.4				7.9		9.0
Green Ext Time (p_c), s	0.1	7.8				15.7		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	40	226	1073	161	831
v/c Ratio	0.14	0.51	0.73	0.57	0.36
Control Delay	20.4	7.7	18.1	34.1	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	7.7	18.1	34.1	5.7
Queue Length 50th (ft)	12	0	131	47	41
Queue Length 95th (ft)	31	41	#326	#152	141
Internal Link Dist (ft)	988		160		223
Turn Bay Length (ft)				265	
Base Capacity (vph)	727	769	1653	297	2524
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.06	0.29	0.65	0.54	0.33

Intersection Summary

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	66	125	429	19	117	928
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	186.3
Adj Flow Rate, veh/h	73	139	523	23	123	977
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.90	0.90	0.82	0.82	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	238	213	1439	63	159	2161
Arrive On Green	0.13	0.13	0.42	0.42	0.09	0.61
Sat Flow, veh/h	1774	1583	3545	152	1774	3632
Grp Volume(v), veh/h	73	139	268	278	123	977
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1834	1774	1770
Q Serve(g_s), s	1.4	3.2	4.0	4.0	2.6	5.7
Cycle Q Clear(g_c), s	1.4	3.2	4.0	4.0	2.6	5.7
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	238	213	737	764	159	2161
V/C Ratio(X)	0.31	0.65	0.36	0.36	0.77	0.45
Avail Cap(c_a), veh/h	1020	910	1109	1150	462	3508
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	15.0	15.8	7.7	7.7	17.1	4.0
Incr Delay (d2), s/veh	0.7	3.4	0.3	0.3	7.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.6	2.0	2.1	1.6	2.8
LnGrp Delay(d),s/veh	15.7	19.2	8.0	8.0	24.8	4.2
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	212		546			1100
Approach Delay, s/veh	18.0		8.0			6.5
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.5	20.9				28.4		10.1
Change Period (Y+Rc), s	4.0	4.9				4.9		4.9
Max Green Setting (Gmax), s	10.0	24.1				38.1		22.1
Max Q Clear Time (g_c+I1), s	4.6	6.0				7.7		5.2
Green Ext Time (p_c), s	0.1	9.3				12.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	8.2
HCM 2010 LOS	A

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	73	139	546	123	977
v/c Ratio	0.20	0.32	0.35	0.36	0.42
Control Delay	17.3	6.1	13.8	22.9	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	6.1	13.8	22.9	6.6
Queue Length 50th (ft)	15	0	54	25	54
Queue Length 95th (ft)	48	34	120	95	175
Internal Link Dist (ft)	988		160		223
Turn Bay Length (ft)				265	
Base Capacity (vph)	956	901	2073	433	3043
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.15	0.26	0.28	0.32

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	36	199	1014	58	150	806
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	186.3
Adj Flow Rate, veh/h	41	226	1067	61	161	867
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.88	0.88	0.95	0.95	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	325	290	1505	86	204	2240
Arrive On Green	0.18	0.18	0.44	0.44	0.12	0.63
Sat Flow, veh/h	1774	1583	3494	194	1774	3632
Grp Volume(v), veh/h	41	226	555	573	161	867
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1826	1774	1770
Q Serve(g_s), s	1.0	7.2	13.6	13.6	4.7	6.3
Cycle Q Clear(g_c), s	1.0	7.2	13.6	13.6	4.7	6.3
Prop In Lane	1.00	1.00		0.11	1.00	
Lane Grp Cap(c), veh/h	325	290	783	808	204	2240
V/C Ratio(X)	0.13	0.78	0.71	0.71	0.79	0.39
Avail Cap(c_a), veh/h	733	654	871	899	267	2540
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	18.2	20.7	12.0	12.0	22.9	4.8
Incr Delay (d2), s/veh	0.2	4.6	2.4	2.3	11.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.5	7.0	7.2	2.9	3.0
LnGrp Delay(d),s/veh	18.4	25.3	14.4	14.3	34.1	4.9
LnGrp LOS	B	C	B	B	C	A
Approach Vol, veh/h	267		1128			1028
Approach Delay, s/veh	24.2		14.4			9.4
Approach LOS	C		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.1	28.5				38.6		14.6
Change Period (Y+Rc), s	4.0	4.9				4.9		4.9
Max Green Setting (Gmax), s	8.0	26.2				38.2		22.0
Max Q Clear Time (g_c+I1), s	6.7	15.6				8.3		9.2
Green Ext Time (p_c), s	0.1	8.0				16.5		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	41	226	1128	161	867
v/c Ratio	0.14	0.51	0.74	0.62	0.37
Control Delay	20.4	7.8	18.0	38.1	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	7.8	18.0	38.1	5.8
Queue Length 50th (ft)	12	0	134	48	43
Queue Length 95th (ft)	32	41	#343	#164	149
Internal Link Dist (ft)	988		160		223
Turn Bay Length (ft)				265	
Base Capacity (vph)	725	768	1713	263	2517
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.06	0.29	0.66	0.61	0.34

Intersection Summary

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	73	125	617	20	127	1170
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	186.3
Adj Flow Rate, veh/h	79	109	671	22	134	1232
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	198	177	1580	52	175	2295
Arrive On Green	0.11	0.11	0.45	0.45	0.10	0.65
Sat Flow, veh/h	1774	1583	3589	115	1774	3632
Grp Volume(v), veh/h	79	109	339	354	134	1232
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1841	1774	1770
Q Serve(g_s), s	1.7	2.7	5.3	5.3	3.0	7.7
Cycle Q Clear(g_c), s	1.7	2.7	5.3	5.3	3.0	7.7
Prop In Lane	1.00	1.00		0.06	1.00	
Lane Grp Cap(c), veh/h	198	177	800	832	175	2295
V/C Ratio(X)	0.40	0.62	0.42	0.42	0.77	0.54
Avail Cap(c_a), veh/h	960	857	1001	1041	478	3301
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	16.9	17.3	7.6	7.6	18.0	3.9
Incr Delay (d2), s/veh	1.3	3.5	0.4	0.3	6.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.3	2.6	2.7	1.8	3.7
LnGrp Delay(d),s/veh	18.2	20.8	7.9	7.9	24.8	4.1
LnGrp LOS	B	C	A	A	C	A
Approach Vol, veh/h	188		693			1366
Approach Delay, s/veh	19.7		7.9			6.1
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.0	23.4				31.4		9.5
Change Period (Y+Rc), s	4.0	4.9				4.9		4.9
Max Green Setting (Gmax), s	11.0	23.1				38.1		22.1
Max Q Clear Time (g_c+I1), s	5.0	7.3				9.7		4.7
Green Ext Time (p_c), s	0.1	10.7				15.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	79	136	693	134	1232
v/c Ratio	0.23	0.33	0.42	0.40	0.51
Control Delay	19.1	6.5	14.5	24.7	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	6.5	14.5	24.7	7.2
Queue Length 50th (ft)	18	0	76	30	78
Queue Length 95th (ft)	53	35	180	104	240
Internal Link Dist (ft)	988		160		223
Turn Bay Length (ft)				265	
Base Capacity (vph)	879	838	2012	437	2876
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.16	0.34	0.31	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	516	263	65	23	36	26	370	144	102	716	5
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	150	561	228	71	25	37	28	402	130	110	770	5
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	600	244	91	287	425	39	555	177	138	965	6
Arrive On Green	0.10	0.48	0.48	0.05	0.42	0.42	0.02	0.21	0.21	0.08	0.27	0.27
Sat Flow, veh/h	1774	1258	511	1774	676	1001	1774	2623	837	1774	3604	23
Grp Volume(v), veh/h	150	0	789	71	0	62	28	269	263	110	378	397
Grp Sat Flow(s),veh/h/ln	1774	0	1769	1774	0	1678	1774	1770	1691	1774	1770	1858
Q Serve(g_s), s	8.1	0.0	41.2	3.9	0.0	2.2	1.5	13.8	14.2	6.0	19.4	19.4
Cycle Q Clear(g_c), s	8.1	0.0	41.2	3.9	0.0	2.2	1.5	13.8	14.2	6.0	19.4	19.4
Prop In Lane	1.00		0.29	1.00		0.60	1.00		0.50	1.00		0.01
Lane Grp Cap(c), veh/h	184	0	843	91	0	713	39	375	358	138	474	497
V/C Ratio(X)	0.82	0.00	0.94	0.78	0.00	0.09	0.72	0.72	0.73	0.80	0.80	0.80
Avail Cap(c_a), veh/h	309	0	911	145	0	713	145	433	414	182	474	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	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	42.9	0.0	24.1	45.8	0.0	16.8	47.5	35.8	35.9	44.3	33.3	33.3
Incr Delay (d2), s/veh	8.6	0.0	15.8	13.2	0.0	0.1	22.4	4.8	5.6	16.6	9.3	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	23.7	2.2	0.0	1.0	1.0	7.2	7.2	3.6	10.7	11.2
LnGrp Delay(d),s/veh	51.4	0.0	40.0	58.9	0.0	16.8	69.9	40.7	41.6	60.9	42.6	42.2
LnGrp LOS	D		D	E		B	E	D	D	E	D	D
Approach Vol, veh/h		939			133			560			885	
Approach Delay, s/veh		41.8			39.3			42.5			44.7	
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	11.6	25.6	9.0	51.5	6.1	31.1	14.1	46.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	23.9	8.0	50.3	8.0	25.9	17.0	41.3
Max Q Clear Time (g_c+I1), s	8.0	16.2	5.9	43.2	3.5	21.4	10.1	4.2
Green Ext Time (p_c), s	0.0	4.2	0.0	3.4	0.0	2.9	0.2	7.8

Intersection Summary	
HCM 2010 Ctrl Delay	42.9
HCM 2010 LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	847	71	64	28	559	110	775
v/c Ratio	0.67	0.97	0.55	0.09	0.24	0.79	0.69	0.83
Control Delay	59.2	52.9	65.8	11.3	53.5	45.5	70.0	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	52.9	65.8	11.3	53.5	45.5	70.0	46.3
Queue Length 50th (ft)	101	~623	49	10	19	178	76	279
Queue Length 95th (ft)	167	#876	#104	40	49	241	#158	#401
Internal Link Dist (ft)		560		800		395		508
Turn Bay Length (ft)	450		500		265		497	
Base Capacity (vph)	291	870	137	748	137	812	171	942
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.97	0.52	0.09	0.20	0.69	0.64	0.82

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	1399	327	347	1327	70	251	267	536	119	393	28
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	68	1504	168	377	1442	34	270	287	308	129	427	1
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1876	579	447	2361	730	349	933	413	193	773	341
Arrive On Green	0.03	0.37	0.37	0.13	0.46	0.46	0.10	0.26	0.26	0.06	0.22	0.22
Sat Flow, veh/h	3442	5085	1570	3442	5085	1573	3442	3539	1565	3442	3539	1562
Grp Volume(v), veh/h	68	1504	168	377	1442	34	270	287	308	129	427	1
Grp Sat Flow(s),veh/h/ln	1721	1695	1570	1721	1695	1573	1721	1770	1565	1721	1770	1562
Q Serve(g_s), s	1.9	26.0	7.4	10.5	20.8	1.2	7.5	6.4	17.7	3.6	10.5	0.0
Cycle Q Clear(g_c), s	1.9	26.0	7.4	10.5	20.8	1.2	7.5	6.4	17.7	3.6	10.5	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	118	1876	579	447	2361	730	349	933	413	193	773	341
V/C Ratio(X)	0.57	0.80	0.29	0.84	0.61	0.05	0.77	0.31	0.75	0.67	0.55	0.00
Avail Cap(c_a), veh/h	281	1976	610	491	2361	730	526	1520	672	281	1267	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	27.7	21.9	41.7	19.6	14.4	43.0	28.9	33.1	45.4	34.1	30.0
Incr Delay (d2), s/veh	4.3	2.4	0.3	11.9	0.5	0.0	4.0	0.2	2.7	3.9	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	12.5	3.3	5.7	9.8	0.5	3.8	3.1	7.9	1.8	5.2	0.0
LnGrp Delay(d),s/veh	51.0	30.1	22.1	53.6	20.1	14.4	47.0	29.1	35.8	49.3	34.7	30.0
LnGrp LOS	D	C	C	D	C	B	D	C	D	D	C	C
Approach Vol, veh/h		1740			1853			865			557	
Approach Delay, s/veh		30.1			26.8			37.1			38.1	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	30.7	16.7	41.1	13.9	26.3	7.4	50.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	42.1	14.0	38.1	15.0	35.1	8.0	44.1
Max Q Clear Time (g_c+I1), s	5.6	19.7	12.5	28.0	9.5	12.5	3.9	22.8
Green Ext Time (p_c), s	0.1	6.2	0.2	8.2	0.4	6.2	0.0	18.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	68	1504	352	377	1442	76	270	287	576	129	427	30
v/c Ratio	0.31	0.89	0.49	0.88	0.69	0.11	0.67	0.26	0.92	0.55	0.45	0.06
Control Delay	56.9	44.5	8.2	73.3	31.5	1.0	57.8	29.0	45.1	62.4	36.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	44.5	8.2	73.3	31.5	1.0	57.8	29.0	45.1	62.4	36.1	0.2
Queue Length 50th (ft)	26	411	24	151	355	0	104	82	284	51	139	0
Queue Length 95th (ft)	50	#508	104	#246	417	7	149	117	#499	84	188	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	243	1717	723	426	2100	709	456	1320	701	243	1102	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.88	0.49	0.88	0.69	0.11	0.59	0.22	0.82	0.53	0.39	0.05

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	1556	40	38	1116	122	21	3	9	119	23	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		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	139	1604	39	41	1213	47	23	3	1	146	0	9
Adj No. of Lanes	1	3	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	2398	58	54	1985	610	312	234	78	623	0	273
Arrive On Green	0.11	0.47	0.47	0.06	0.78	0.78	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	5105	124	1774	5085	1563	1774	1332	444	3548	0	1556
Grp Volume(v), veh/h	139	1065	578	41	1213	47	23	0	4	146	0	9
Grp Sat Flow(s),veh/h/ln	1774	1695	1839	1774	1695	1563	1774	0	1775	1774	0	1556
Q Serve(g_s), s	9.5	30.6	30.6	2.9	12.6	0.9	1.4	0.0	0.2	4.5	0.0	0.6
Cycle Q Clear(g_c), s	9.5	30.6	30.6	2.9	12.6	0.9	1.4	0.0	0.2	4.5	0.0	0.6
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	195	1593	864	54	1985	610	312	0	312	623	0	273
V/C Ratio(X)	0.71	0.67	0.67	0.76	0.61	0.08	0.07	0.00	0.01	0.23	0.00	0.03
Avail Cap(c_a), veh/h	254	1593	864	113	1985	610	312	0	312	623	0	273
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.1	25.8	25.8	58.7	9.8	8.5	43.3	0.0	42.8	44.6	0.0	43.0
Incr Delay (d2), s/veh	6.4	2.2	4.1	18.7	1.3	0.2	0.5	0.0	0.1	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	14.7	16.4	1.7	5.9	0.4	0.7	0.0	0.1	2.3	0.0	0.3
LnGrp Delay(d),s/veh	60.5	28.0	29.9	77.4	11.1	8.7	43.8	0.0	42.9	45.5	0.0	43.2
LnGrp LOS	E	C	C	E	B	A	D		D	D		D
Approach Vol, veh/h		1782			1301			27			155	
Approach Delay, s/veh		31.2			13.1			43.6			45.3	
Approach LOS		C			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		27.0	12.0	64.0		27.0	22.0	54.0
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.1	8.0	59.1		22.1	18.0	49.1
Max Q Clear Time (g_c+I1), s		3.4	4.9	32.6		6.5	11.5	14.6
Green Ext Time (p_c), s		0.0	0.1	12.9		0.4	0.2	10.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	139	1645	41	1213	133	23	13	76	77	89
v/c Ratio	0.63	0.71	0.41	0.63	0.20	0.07	0.04	0.27	0.27	0.24
Control Delay	66.9	30.2	58.3	11.9	0.9	46.1	25.9	49.8	49.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	30.2	58.3	11.9	0.9	46.1	25.9	49.8	49.7	3.7
Queue Length 50th (ft)	111	401	35	53	0	17	2	58	60	0
Queue Length 95th (ft)	182	458	76	112	3	43	22	110	111	16
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	245	2331	108	1920	651	325	305	285	290	370
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.71	0.38	0.63	0.20	0.07	0.04	0.27	0.27	0.24

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	39	199	1236	64	156	1074
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	186.3
Adj Flow Rate, veh/h	42	162	1301	67	168	1155
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.92	0.92	0.95	0.95	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	235	210	1876	96	210	2565
Arrive On Green	0.13	0.13	0.55	0.55	0.12	0.72
Sat Flow, veh/h	1774	1583	3516	176	1774	3632
Grp Volume(v), veh/h	42	162	672	696	168	1155
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1830	1774	1770
Q Serve(g_s), s	1.4	6.8	19.0	19.1	6.3	9.1
Cycle Q Clear(g_c), s	1.4	6.8	19.0	19.1	6.3	9.1
Prop In Lane	1.00	1.00		0.10	1.00	
Lane Grp Cap(c), veh/h	235	210	970	1003	210	2565
V/C Ratio(X)	0.18	0.77	0.69	0.69	0.80	0.45
Avail Cap(c_a), veh/h	572	510	1086	1123	310	2998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	28.7	11.3	11.3	29.4	3.9
Incr Delay (d2), s/veh	0.4	5.9	1.7	1.6	8.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.3	9.6	9.9	3.6	4.4
LnGrp Delay(d),s/veh	26.8	34.7	13.0	12.9	38.2	4.0
LnGrp LOS	C	C	B	B	D	A
Approach Vol, veh/h	204		1368			1323
Approach Delay, s/veh	33.1		13.0			8.3
Approach LOS	C		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.1	42.5				54.6		14.0
Change Period (Y+Rc), s	4.0	4.9				4.9		4.9
Max Green Setting (Gmax), s	12.0	42.1				58.1		22.1
Max Q Clear Time (g_c+I1), s	8.3	21.1				11.1		8.8
Green Ext Time (p_c), s	0.1	16.5				29.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	42	216	1368	168	1155
v/c Ratio	0.18	0.55	0.78	0.59	0.45
Control Delay	30.0	10.3	18.7	40.6	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	10.3	18.7	40.6	5.3
Queue Length 50th (ft)	16	0	220	65	68
Queue Length 95th (ft)	45	54	436	#185	208
Internal Link Dist (ft)	988		160		223
Turn Bay Length (ft)				265	
Base Capacity (vph)	588	658	2226	319	2983
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.07	0.33	0.61	0.53	0.39

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	43	76	121	407	93	233	774	129	76	448	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	18	47	76	132	442	79	253	841	118	83	487	46
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	163	263	168	512	92	297	1125	158	107	831	78
Arrive On Green	0.02	0.26	0.26	0.09	0.33	0.33	0.17	0.36	0.36	0.06	0.25	0.25
Sat Flow, veh/h	1774	637	1030	1774	1537	275	1774	3112	437	1774	3264	307
Grp Volume(v), veh/h	18	0	123	132	0	521	253	478	481	83	263	270
Grp Sat Flow(s),veh/h/ln	1774	0	1667	1774	0	1811	1774	1770	1779	1774	1770	1801
Q Serve(g_s), s	0.8	0.0	4.6	5.7	0.0	21.0	10.8	18.5	18.5	3.6	10.2	10.2
Cycle Q Clear(g_c), s	0.8	0.0	4.6	5.7	0.0	21.0	10.8	18.5	18.5	3.6	10.2	10.2
Prop In Lane	1.00		0.62	1.00		0.15	1.00		0.25	1.00		0.17
Lane Grp Cap(c), veh/h	29	0	425	168	0	604	297	640	643	107	451	459
V/C Ratio(X)	0.61	0.00	0.29	0.78	0.00	0.86	0.85	0.75	0.75	0.78	0.58	0.59
Avail Cap(c_a), veh/h	182	0	557	341	0	768	386	751	754	182	546	556
HCM Platoon Ratio	1.00	1.00	1.00	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	38.1	0.0	23.4	34.5	0.0	24.3	31.6	21.8	21.8	36.2	25.5	25.5
Incr Delay (d2), s/veh	18.9	0.0	0.4	7.8	0.0	8.2	13.4	3.5	3.5	11.4	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	0.5	0.0	2.2	3.2	0.0	11.8	6.4	9.7	9.7	2.1	5.1	5.2
LnGrp Delay(d),s/veh	57.0	0.0	23.7	42.3	0.0	32.5	45.0	25.3	25.3	47.5	26.7	26.7
LnGrp LOS	E		C	D		C	D	C	C	D	C	C
Approach Vol, veh/h		141			653			1212			616	
Approach Delay, s/veh		28.0			34.5			29.4			29.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	33.1	11.4	24.8	17.0	24.8	5.3	30.9
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	33.1	15.0	26.1	17.0	24.1	8.0	33.1
Max Q Clear Time (g_c+I1), s	5.6	20.5	7.7	6.6	12.8	12.2	2.8	23.0
Green Ext Time (p_c), s	0.0	7.4	0.2	4.2	0.3	7.1	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	130	132	543	253	981	83	538
v/c Ratio	0.13	0.33	0.41	0.85	0.76	0.75	0.51	0.63
Control Delay	44.2	15.1	41.4	41.0	51.4	29.6	53.6	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	15.1	41.4	41.0	51.4	29.6	53.6	33.3
Queue Length 50th (ft)	10	22	69	254	132	239	44	132
Queue Length 95th (ft)	33	70	139	#522	#292	#387	#114	216
Internal Link Dist (ft)		560		800		395		508
Turn Bay Length (ft)	450		500		265		497	
Base Capacity (vph)	175	591	361	744	372	1422	175	1043
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.22	0.37	0.73	0.68	0.69	0.47	0.52

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	1804	134	411	2034	138	75	526	629	158	408	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	65	1899	61	442	2187	100	82	572	483	165	425	3
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1875	579	441	2374	734	124	1165	516	186	1228	545
Arrive On Green	0.03	0.37	0.37	0.13	0.47	0.47	0.04	0.33	0.33	0.05	0.35	0.35
Sat Flow, veh/h	3442	5085	1570	3442	5085	1573	3442	3539	1569	3442	3539	1570
Grp Volume(v), veh/h	65	1899	61	442	2187	100	82	572	483	165	425	3
Grp Sat Flow(s),veh/h/ln	1721	1695	1570	1721	1695	1573	1721	1770	1569	1721	1770	1570
Q Serve(g_s), s	2.8	54.7	3.8	19.0	59.7	5.4	3.5	19.2	44.3	7.1	13.2	0.2
Cycle Q Clear(g_c), s	2.8	54.7	3.8	19.0	59.7	5.4	3.5	19.2	44.3	7.1	13.2	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	1875	579	441	2374	734	124	1165	516	186	1228	545
V/C Ratio(X)	0.63	1.01	0.11	1.00	0.92	0.14	0.66	0.49	0.94	0.89	0.35	0.01
Avail Cap(c_a), veh/h	186	1875	579	441	2374	734	186	1205	534	186	1228	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	71.1	46.8	30.7	64.7	37.0	22.5	70.6	39.8	48.2	69.7	35.9	31.7
Incr Delay (d2), s/veh	6.1	23.9	0.1	43.5	6.6	0.1	5.9	0.3	23.6	36.9	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	29.7	1.6	11.7	29.4	2.4	1.8	9.4	22.5	4.3	6.5	0.1
LnGrp Delay(d),s/veh	77.2	70.7	30.8	108.1	43.6	22.6	76.5	40.1	71.9	106.6	36.1	31.7
LnGrp LOS	E	F	C	F	D	C	E	D	E	F	D	C
Approach Vol, veh/h		2025			2729			1137			593	
Approach Delay, s/veh		69.7			53.3			56.2			55.7	
Approach LOS		E			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	53.7	23.0	59.6	9.3	56.4	8.5	74.1
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	50.5	19.0	54.7	8.0	50.5	8.0	65.7
Max Q Clear Time (g_c+I1), s	9.1	46.3	21.0	56.7	5.5	15.2	4.8	61.7
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	11.1	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.1
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	65	1899	141	442	2187	148	82	572	684	165	425	18
v/c Ratio	0.38	1.02	0.22	1.02	0.95	0.20	0.47	0.48	1.04	0.90	0.35	0.03
Control Delay	75.4	73.8	6.4	111.2	49.2	13.8	77.9	41.0	79.7	114.3	38.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	73.8	6.4	111.2	49.2	13.8	77.9	41.0	79.7	114.3	38.4	0.1
Queue Length 50th (ft)	32	~721	4	~235	764	44	40	233	~576	84	165	0
Queue Length 95th (ft)	59	#815	51	#347	#887	91	71	292	#826	#157	214	0
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	183	1854	644	434	2313	736	183	1191	656	183	1198	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	1.02	0.22	1.02	0.95	0.20	0.45	0.48	1.04	0.90	0.35	0.03

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	335	1725	16	20	1972	253	41	26	41	305	8	212
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98	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	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	353	1816	17	22	2143	175	45	28	4	338	0	19
Adj No. of Lanes	1	3	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	2370	22	97	1850	568	300	269	38	600	0	263
Arrive On Green	0.15	0.46	0.46	0.11	0.73	0.73	0.17	0.17	0.17	0.17	0.00	0.17
Sat Flow, veh/h	1774	5195	49	1774	5085	1562	1774	1591	227	3548	0	1555
Grp Volume(v), veh/h	353	1185	648	22	2143	175	45	0	32	338	0	19
Grp Sat Flow(s),veh/h/ln	1774	1695	1854	1774	1695	1562	1774	0	1818	1774	0	1555
Q Serve(g_s), s	20.0	38.0	38.0	1.5	47.3	5.1	2.8	0.0	1.9	11.4	0.0	1.3
Cycle Q Clear(g_c), s	20.0	38.0	38.0	1.5	47.3	5.1	2.8	0.0	1.9	11.4	0.0	1.3
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	273	1546	845	97	1850	568	300	0	308	600	0	263
V/C Ratio(X)	1.29	0.77	0.77	0.23	1.16	0.31	0.15	0.00	0.10	0.56	0.00	0.07
Avail Cap(c_a), veh/h	273	1546	845	97	1850	568	300	0	308	600	0	263
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.71	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	29.6	29.6	55.4	17.7	12.0	46.0	0.0	45.7	49.6	0.0	45.4
Incr Delay (d2), s/veh	156.5	3.7	6.6	0.8	76.0	1.0	1.1	0.0	0.7	3.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	18.6	21.0	0.7	34.2	2.3	1.5	0.0	1.0	5.9	0.0	0.6
LnGrp Delay(d),s/veh	211.5	33.2	36.1	56.2	93.7	13.0	47.1	0.0	46.3	53.4	0.0	45.9
LnGrp LOS	F	C	D	E	F	B	D		D	D		D
Approach Vol, veh/h		2186			2340			77			357	
Approach Delay, s/veh		62.9			87.3			46.8			53.0	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	64.2		26.9	24.0	52.2
Change Period (Y+Rc), s		4.9	4.9	4.9000001		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	7.1	59.299999		22.0	20.0	47.3
Max Q Clear Time (g_c+I1), s		4.8	3.5	40.0		13.4	22.0	49.3
Green Ext Time (p_c), s		0.2	3.3	12.1		0.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.4
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	1833	22	2143	275	45	73	169	172	230
v/c Ratio	1.30	0.73	0.23	1.16	0.43	0.15	0.23	0.60	0.60	0.51
Control Delay	201.6	29.2	42.0	98.6	5.7	47.7	23.4	59.5	59.7	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	201.6	29.2	42.0	98.6	5.7	47.7	23.4	59.5	59.7	10.1
Queue Length 50th (ft)	~380	472	17	~781	65	33	20	140	143	0
Queue Length 95th (ft)	#574	535	m28	#874	96	70	65	223	226	73
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	272	2504	108	1850	647	299	318	284	286	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.73	0.20	1.16	0.43	0.15	0.23	0.60	0.60	0.51

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	2079	121	394	2396	126	130	238	649	157	292	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		0.99	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	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	74	2260	50	424	2576	83	141	259	408	171	317	7
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	2124	656	365	2491	771	190	1041	461	195	1046	463
Arrive On Green	0.03	0.42	0.42	0.11	0.49	0.49	0.06	0.29	0.29	0.06	0.30	0.30
Sat Flow, veh/h	3442	5085	1572	3442	5085	1574	3442	3539	1567	3442	3539	1567
Grp Volume(v), veh/h	74	2260	50	424	2576	83	141	259	408	171	317	7
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1574	1721	1770	1567	1721	1770	1567
Q Serve(g_s), s	3.0	59.1	2.7	15.0	69.3	4.0	5.7	7.9	35.2	7.0	9.8	0.4
Cycle Q Clear(g_c), s	3.0	59.1	2.7	15.0	69.3	4.0	5.7	7.9	35.2	7.0	9.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	2124	656	365	2491	771	190	1041	461	195	1046	463
V/C Ratio(X)	0.64	1.06	0.08	1.16	1.03	0.11	0.74	0.25	0.89	0.88	0.30	0.02
Avail Cap(c_a), veh/h	195	2124	656	365	2491	771	268	1253	555	195	1178	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	67.5	41.2	24.8	63.3	36.1	19.4	65.9	38.0	47.7	66.3	38.6	35.3
Incr Delay (d2), s/veh	5.7	39.2	0.0	99.1	27.5	0.1	6.7	0.1	13.9	33.7	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	1.5	35.2	1.2	12.1	38.6	1.7	2.9	3.9	17.0	4.2	4.8	0.2
LnGrp Delay(d),s/veh	73.2	80.5	24.8	162.4	63.6	19.5	72.6	38.2	61.6	99.9	38.7	35.3
LnGrp LOS	E	F	C	F	F	B	E	D	E	F	D	D
Approach Vol, veh/h		2384			3083			808			495	
Approach Delay, s/veh		79.1			76.0			56.0			59.8	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	46.5	19.0	64.0	11.8	46.7	8.8	74.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	50.1	15.0	59.1	11.0	47.1	8.0	66.1
Max Q Clear Time (g_c+I1), s	9.0	37.2	17.0	61.1	7.7	11.8	5.0	71.3
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.1	6.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.5
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	74	2260	132	424	2576	135	141	259	705	171	317	67
v/c Ratio	0.43	1.13	0.20	1.24	1.14	0.19	0.60	0.22	1.15	0.93	0.28	0.12
Control Delay	76.6	106.5	7.9	182.1	108.7	12.7	78.7	36.5	118.8	120.6	39.3	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.6	106.5	7.9	182.1	108.7	12.7	78.7	36.5	118.8	120.6	39.3	2.3
Queue Length 50th (ft)	37	~934	13	~263	~1081	36	70	95	~701	87	123	0
Queue Length 95th (ft)	65	#1023	58	#375	#1164	80	108	133	#952	#163	166	13
Internal Link Dist (ft)		2377			793			1866			1146	
Turn Bay Length (ft)	175		415	150		75	155		50	200		55
Base Capacity (vph)	183	2003	671	343	2254	719	251	1182	615	183	1127	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	1.13	0.20	1.24	1.14	0.19	0.56	0.22	1.15	0.93	0.28	0.12

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	305	2084	18	25	2036	366	21	5	12	320	4	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	186.3
Adj Flow Rate, veh/h	332	2265	20	26	2143	385	23	5	13	351	0	204
Adj No. of Lanes	1	3	0	1	3	1	1	1	0	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	291	2573	23	101	1972	606	279	71	185	558	0	244
Arrive On Green	0.16	0.50	0.50	0.11	0.78	0.78	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1774	5198	46	1774	5085	1563	1774	452	1176	3548	0	1553
Grp Volume(v), veh/h	332	1476	809	26	2143	385	23	0	18	351	0	204
Grp Sat Flow(s),veh/h/ln	1774	1695	1854	1774	1695	1563	1774	0	1628	1774	0	1553
Q Serve(g_s), s	23.0	54.5	54.7	1.9	54.3	15.2	1.5	0.0	1.3	13.0	0.0	17.8
Cycle Q Clear(g_c), s	23.0	54.5	54.7	1.9	54.3	15.2	1.5	0.0	1.3	13.0	0.0	17.8
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	291	1678	918	101	1972	606	279	0	256	558	0	244
V/C Ratio(X)	1.14	0.88	0.88	0.26	1.09	0.64	0.08	0.00	0.07	0.63	0.00	0.84
Avail Cap(c_a), veh/h	291	1678	918	101	1972	606	279	0	256	558	0	244
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	31.6	31.7	59.3	15.7	11.3	50.4	0.0	50.3	55.2	0.0	57.2
Incr Delay (d2), s/veh	95.7	7.0	11.9	0.9	45.7	3.5	0.6	0.0	0.5	5.3	0.0	27.4
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	19.0	27.0	30.9	0.9	32.5	6.8	0.8	0.0	0.6	6.7	0.0	9.5
LnGrp Delay(d),s/veh	154.2	38.6	43.5	60.2	61.4	14.8	51.0	0.0	50.8	60.5	0.0	84.6
LnGrp LOS	F	D	D	E	F	B	D		D	E		F
Approach Vol, veh/h		2617			2554			41			555	
Approach Delay, s/veh		54.8			54.4			50.9			69.4	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.9	12.0	74.2		26.9	27.0	59.2
Change Period (Y+Rc), s		4.9	4.0	4.9		4.9	4.0	4.9
Max Green Setting (Gmax), s		22.0	8.0	69.3		22.0	23.0	54.3
Max Q Clear Time (g_c+I1), s		3.5	3.9	56.7		19.8	25.0	56.3
Green Ext Time (p_c), s		0.1	0.4	10.4		0.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.0
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	332	2285	26	2143	385	23	18	177	175	204
v/c Ratio	1.14	0.85	0.29	1.09	0.54	0.08	0.07	0.67	0.66	0.49
Control Delay	148.8	33.0	56.6	72.2	5.2	51.4	27.8	69.1	68.7	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	148.8	33.0	56.6	72.2	5.2	51.4	27.8	69.1	68.7	11.0
Queue Length 50th (ft)	~353	684	24	~799	22	18	4	162	160	0
Queue Length 95th (ft)	#549	758	m37	#879	37	46	28	250	248	73
Internal Link Dist (ft)		763		851			231		181	
Turn Bay Length (ft)	235		275		230	75		75		
Base Capacity (vph)	290	2688	101	1972	711	278	266	264	264	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.85	0.26	1.09	0.54	0.08	0.07	0.67	0.66	0.49

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Appendix I:
Urban Decay Study

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URBAN DECAY STUDY
FOR
NORTHWEST FRESNO WALMART

February 28, 2014
(Updated January 2016)

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APPENDIX A: RETAIL DEMAND ANALYSIS – NORTHWEST FRESNO RETAIL TRADE AREA

APPENDIX B: RETAIL INVENTORY – NORTHWEST FRESNO RETAIL TRADE AREA

I. INTRODUCTION

This report evaluates the potential for economic effects the proposed Walmart store at the northwest corner of W. Shaw Avenue and N. Brawley Avenue in the City of Fresno. In particular, the study evaluates the extent to which the proposed project would have lead to the type of economic effects to existing retail facilities in the trade area that could potentially result in urban decay. In addition to addressing the potential impacts of the proposed project, the study also considers the project's potential to result in a cumulative impact, taking into account the economic effects from other planned and proposed retail projects in the trade area.

The project site totals approximately 17.6 acres located at the northwest corner of the intersection of W. Shaw Avenue and N. Brawley Avenue and West San Jose Avenue, at 4080 West Shaw Avenue. The proposed project will retenant an existing vacant 193,361 square foot building that was previously occupied by a Super K-Mart store from approximately 1992 until 2000 when the store closed. Several years later, the Super K-Mart store was reoccupied by a Recreational Vehicle (RV) superstore in 2004, which subsequently closed in 2008. The existing Walmart Store No. 1815 is located directly across N. Brawley Avenue from the project site.

For purposes of this analysis, the project is assumed to include a 199,156 square foot Walmart store, including 38,231 square feet devoted to grocery sales and 10,880 square feet of grocery support space, 111,724 square feet of general merchandise sales, and a 5,795 square foot outdoor garden center. No outparcel development is proposed.

Based on the project information available when the report was prepared in 2013, the analysis assumes that the project would open in 2015, and would replace the existing Walmart store located at 3680 West Shaw Avenue. The urban decay study addresses four key issues:

1. The potential for the proposed project's general merchandise square footage to create a protracted oversupply of GAFO square footage so great that a store would likely close as a result.[1]
2. The potential for the proposed project's addition of grocery sales to the trade area supply to create a level of oversupply of grocery square footage so great that trade area retailers would be likely to close as a result of the project;;
3. The degree to which there will be market demand to support the retenanting or redevelopment of the existing Fresno Walmart store (3680 West Shaw Avenue) once proposed project opens and existing store is vacated; and
4. The potential for the proposed project's contribution of additional GAFO space and grocery sales square footage to combine with other projects similarly increasing trade area supply such that together an oversupply is projected to exist long enough that the loss in sales per square foot existing retailers could experience would be significant enough to lead to a trade area retailer closing.

The economic analysis is used to determine, in accordance with the California Environmental Quality Act (CEQA), the proposed project's potential to create urban decay.

[1] "GAFO" is a retail industry acronym for the General Merchandise, Apparel, Furniture, and Other/Specialty sales categories. These categories correspond to the typical merchandise mix of a general merchandise department store such as the proposed Walmart store. The GAFO retail categories are also referred to as "shopper" or "comparison" goods.

CEQA does not support a presumption that urban decay will occur as a result of other businesses being closed. CEQA instead requires an urban decay evaluation to consider whether a store closing as a result of a business competitor entering the marketplace has the potential to trigger the downward chain of events that can lead to urban decay. According to Guidelines Section 15131:

> *(a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from. . .anticipated economic [or social] changes resulting from the project to physical changes caused in turn by the economic [or social] changes.*

Economic effects include a drop in a retailer's sales per square foot caused by the proposed project. An EIR evaluates the potential for the project to cause a trade area retailer to experience a drop in sales, and if "yes," then the EIR considers whether the loss of revenue is likely to cause a trade area store to close. If "yes," the effects of a store closure are considered to determine the potential for the project's economic effects to result in physical changes referred to as "urban decay."

For the purpose of this analysis and as construed by courts interpreting CEQA, urban decay is defined as physical deterioration due to store closures and long- term vacancies in existing shopping centers that is so prevalent and substantial that it impairs the health, safety, and welfare of the surrounding community. Physical deterioration includes, but is not limited to, abandoned buildings and commercial sites in disrepair, boarded doors and windows, long-term unauthorized use of properties and parking lots, extensive gang or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees or shrubbery, extensive litter, uncontrolled weed growth, and homeless encampments.

Overview of Methodology

For purposes of estimating the project's potential economic effects on trade area retailers in the relevant retail categories, this analysis considers a trade area covering the northwest portion of the City of Fresno along with the immediately surrounding unincorporated areas in Madera (to the north) and Fresno (to the west) counties (see below). The analysis projects total resident purchasing power within this trade area, and uses this projection of total demand as the basis for determining the extent to which the proposed project could be supported in the market area without negatively impacting existing businesses. The study methodology includes the following major steps:

1. Estimate the current potential demand for retail sales in the trade area, based on existing demographics;
2. Estimate the portion of total trade area demand that could realistically be "captured" by retail facilities in the trade area, based on an evaluation of the amounts and locations of competitive retail facilities outside of the evaluated trade area;
3. Forecast future (12-year) growth in the amount of supportable retail sales, based on projected increases in the trade area's resident population;
4. Forecast future growth in retail sales by individual retail category;
5. Estimate supermarket demand by determining the portion of total food store sales captured by supermarkets (versus other types of food stores such as convenience markets);

6. Estimate net supermarket demand after accounting for the capture of available demand by the proposed grocery component of the Walmart store; and
7. Evaluate the impact of the project on average sales per square foot levels at the existing supermarkets in the trade area.

For the non-grocery retail categories, the potential impacts are expressed in terms of the square feet of existing businesses that could potentially be displaced by the proposed project. For the grocery category, in addition to evaluating the potential square footage displacement, the report evaluates direct potential sales impacts (in terms of dollars per square foot) to existing supermarkets in the trade area. This additional level of analysis for supermarkets is possible because the universe of supermarkets in the trade area is a manageable number (there are 11 supermarkets in the trade area). Thus, it is possible to estimate the existing aggregate and average sales of these supermarkets, based on data from the California State Board of Equalization (SBOE) and Trade Dimensions International, Inc., a market research firm of The Nielsen Company (see Section II-D).

At the time the Draft Urban Decay study was prepared, the most recent base-year demographic data was from year 2013, and the proposed project's assumed opening date was 2015, which was the base year in the analysis for purposes of determining potential impacts[2]. Considering that the population (and corresponding incomes) would be higher in a post-2015 opening date, the analysis understates potential market demand to support the proposed project. Given this, the analysis is relatively conservative in that it does not account for the full amount of potential market demand to support the project, as the analysis relies on the base-year 2015 population and income estimates for estimating potential market demand. As presently anticipated, if approved the proposed project would open in 2018.

Description of Trade Area

According to the International Council of Shopping Centers (ICSC) – the premier trade association of the shopping center industry – a community center similar in scale and scope to the proposed project would typically have a trade area of 3 to 6 miles[3]. Starting with the ICSC suggested trade area size as an initial reference point, The Natelson Dale Group, Inc. (TNDG) designed a customized polygon as the trade area. This polygon takes into account natural traffic barriers (such as major highways and roads) and the locations of existing competitive shopping centers. The trade area boundaries are defined as follows:

- *Eastern Boundary* – The eastern boundary is represented by North West Avenue in the City of Fresno, which is approximately 2.0 miles from the proposed project site.
- *Western Boundary* – The majority of the western boundary is represented by Madera Avenue (State Route [SR]-145). At Shaw Avenue, the western boundary cuts to the east to North Dickenson Avenue. The boundary, which is in unincorporated portions of Madera and Fresno counties, is approximately 6.0 to 10.0 miles from the proposed project site.

[2] Hereinafter, the analysis refers to an assumed opening year of 2015, although the proposed project would be expected to open in 2018.

[3] While the proposed project would be a freestanding store, it would essentially function as an extension of the neighboring West Pointe shopping center (in which the existing Walmart store is located). The center and proposed project are adjacent to one another, on the east and west sides of North Brawley Avenue and pedestrians are anticipated to travel between the two centers. Thus the proposed store and the existing center would more or less function as one relatively large community scale retail center.

- *Southern Boundary* – The southern boundary is represented by West Belmont Avenue, extending across portions of unincorporated Fresno County and the City of Fresno. The boundary is approximately 4.0 miles from the proposed project site.
- *Northern Boundary* – The majority of the northern boundary runs along Avenue 9 in unincorporated Madera County. At Road 33 ½, the boundary runs further north along the existing railroad tracks to Avenue 12. The boundary is approximately 5.0 to 7.5 miles from the proposed project site.

It should also be noted there are three other Walmart stores with trade areas that will partially overlap with proposed project's trade area evaluated in this analysis. These stores are located in the cities of Kerman (14061 West Whitesbridge Avenue), Madera (1977 West Cleveland Avenue), and Fresno (7065 North Ingram Avenue). Given these stores' locations, it is inevitable that their trade areas will partially overlap with one another. This reflects the fact that consumers may shop at multiple Walmart stores or prefer one store over the other due to factors such as convenience, commute patterns, selection, adjacency to other retail stores, etc. It does not indicate over-saturation in the market.

In January 2015, a new Walmart store opened in the former Mervyn's Store at the intersection of Ashlan and Blackstone Avenues in Fresno. However, this store does not affect the trade area design, discussed above, as the eastern boundary (North West Avenue) represents the midway point between the Blackstone store and the proposed Walmart store evaluated in this analysis. That is, North West Avenue is approximately two miles east of the proposed project site at North Brawley and West Shaw Avenues, and it is approximately two miles west of the Ashlan Walmart store. Given proximity to both stores and all else being equal, residents west of North West Avenue would tend to shop at the proposed Walmart store evaluated in this study, while residents east of this border would tend to shop at the Ashlan Walmart store.

A map of the trade area boundaries is provided as Figure I-1 on the following page.

Figure I-1: Northwest Fresno Retail Trade Area Boundaries

What this Study Provides

Since this study is being completed as part of the Environmental Impact Report (EIR) process for the proposed project, it focuses strictly on the types of physical changes to the environment t that are defined as significant by the California Environmental Quality Act (CEQA). A project's economic effects on trade area competitors are not an environmental impact under CEQA unless those effects they can be traced to direct physical changes in the market area (i.e., physical deterioration of existing retail centers/facilities).

As Section 15131(b) of the CEQA Guidelines explains:

(a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

In accordance with CEQA, for purposes of this analysis, TNDG has established the following criteria to determine if the project's market impacts would be significant enough to create a lasting physical change in the market area:

- Any diversion of sales from existing retail facilities caused by the project would have to be severe enough to result in business closings; and

- The business closures would have to be significant enough in scale (i.e., in terms of the total square footage affected and/or the loss of key "anchor" tenants) to affect the long-term viability of existing shopping centers or districts, subsequently resulting in urban decay.

- Urban decay may be described as a downward spiral of store closures and long- term vacancies. While the phenomenon of urban decay is not defined under CEQA, according to relevant CEQA case law, it is indicated by significant deterioration of structures and/or their surroundings to a level that inhibits their future marketability and possibly their use for intended purposes.

- Such deterioration occurs when property owners reduce property maintenance activities below that required to keep their properties in good condition. A store closure, in and of itself, does not constitute urban decay. While the closure of a business is clearly a severe impact to the owners and employees of the firm, within the context of CEQA it is an economic effect that is potentially significant only if it results in sustained vacancies and related deterioration of the physical condition of the vacant building(s).

Within the above context, the analysis includes a description of the "baseline" condition of existing retail facilities in the trade area. In particular, TNDG completed a detailed inventory of existing tenants and vacancies in the trade area.

II. EXECUTIVE SUMMARY

II-A. SUMMARY CONCLUSIONS REGARDING POTENTIAL FOR URBAN DECAY

Based on the data and analysis presented in this report, TNDG concludes that the proposed project would not result in urban decay in the evaluated trade area.

It is TNDG's conclusion that the project as proposed would not cause the type of severe economic effects on existing trade area retailers that would result in store closures that could and potentially lead to conditions recognized as "urban decay" under CEQA. The analysis supporting this conclusion is summarized in Sections II-B through II-G, with the study methodology documented in Section III.

II-B. OVERVIEW OF EXISTING RETAIL MARKET IN TRADE AREA

As part of the analysis, TNDG completed a comprehensive inventory of all existing retail tenants and vacancies in the trade area (as of July, 2013). The detailed inventory is provided in Appendix B of the report, while a summary of the findings is provided in Table II-1 on page 7.

The total inventory of competitive retail space in the trade area is estimated at approximately 4.16 million square feet, as shown in Table II-1 on page 7. The overall retail vacancy rate in the trade area is estimated at 17.8%, which is above the range (5% to 10%) generally considered to be reflective of a healthy retail market[4]. Given that the proposed project would reoccupy an existing vacant store, development of the project would lead to a decrease in the trade area retail vacancy rate to approximately 13.2%.[5] The somewhat elevated vacancy rate should be viewed as a temporary phenomenon largely attributable to the recent severe economic downturn, and is in part due to the closures of major chains that have recently closed all of their stores nationwide (e.g., Mervyns). In addition, there do not appear to be long-term indications of existing physical decline or urban decay in the trade area. The vacant stores do not exhibit significant deterioration of the building structures and/or their surroundings[6].

The trade area is largely characterized by grocery-anchored neighborhood shopping centers and smaller strip center retail developments, which primarily serve the daily shopping needs of local residents. For the most part, these shopping centers are located on the east-west commercial corridors along West Shaw, West Ashlan, and West Clinton Avenues, and on the

[4] Real Estate Principles: A Value Approach, 3rd Ed., 2010, Ling and Archer". According to the standard real estate textbook used in real estate courses at both undergraduate and graduate levels, the natural vacancy rate, for purposes of estimating potential gross income, for apartment, office, and retail properties is 5% to 15%. The textbook indicates that this is the typical vacancy rate when the market is in equilibrium.

[5] The existing vacant store is approximately 193,361 square feet. Thus, the proposed project would reduce total vacant square feet in the trade area from 741,748 square feet to 548,387 square feet (741,378 – 193,361 = 548,387). This adjusted vacancy rate calculation assumes that the existing Walmart store would be retenanted with a retail tenant.

[6] It is also likely that the overall vacancy rate in the trade area has improved subsequent to the July, 2013 estimate provided in this analysis, based on two pieces of recent retail market data from REIS and CoStar (two leading providers of commercial real estate data). First, according to data from REIS, the neighborhood and community malls vacancy rate for the U.S. declined from 10.5% (3rd Quarter, 2013) to 10.1% (3rd Quarter, 2015), an improvement of 40 basis points. Second, the Fresno retail market experienced a similar improvement in the retail vacancy rate during this timeframe. According to data from CoStar, the Fresno "total retail market" vacancy rate declined from 8.7% (3rd Quarter, 2013) to 8.3% (3rd Quarter, 2015), a similar improvement of 40 basis points.

north-south corridors along North Brawley and Marks Avenues. In addition to these relatively smaller neighborhood centers, there is a cluster of "big box" retailers in community-scale retail centers near the proposed project. The retailers are concentrated along West Shaw Avenue, between North Marks Avenue and North Golden State Boulevard. These centers and stores include the Arbor Faire (Home Depot, Dick's, and adjacent Target), Shaw Marketplace (Kohl's, Old Navy, Foods Co.), Costco, Toys R Us, and La-Z-Boy Furniture, among others.

The breakdown of the existing retail inventory by category is summarized on Table II-1 below.

Table II-1:
Inventory of Existing Retail Development
Northwest Fresno Retail Trade Area

Retail Category	Square Feet
Clothing and Clothing Accessories	255,846
General Merchandise	668,141
Home Furnishings and Appliances	133,946
Specialty/Other	390,607
Food and Beverage	577,866
Food Service and Drinking	513,192
Bldg. Matrl. & Garden Equip. & Supplies	196,594
Auto Parts	97,959
Gasoline Stations	70,575
Services Space	515,909
Vacant Space	741,748
Grand Total	**4,162,383**

Source: TNDG (see Appendix B).

II-C. IMPACT OF PROPOSED PROJECT'S "GAFO" SALES

It is TNDG's conclusion that the proposed project's GAFO[7] (General Merchandise, Apparel, Furniture/Appliances and Other/Specialty) sales will not have significant impacts on existing retailers in the trade area. The analysis supporting this conclusion is summarized below.

Project Description: The proposed project would result in an increase of 150,045 square feet of retail space devoted to GAFO sales. This total includes all non-grocery related space for the new Walmart store (including the 5,795 square foot outdoor garden center area).

Comparison of Existing Supply and Demand: TNDG's demand analysis indicates existing (year 2013) market support for $484.1 million in GAFO retail sales in the trade area. The $484.1

[7] GAFO" is a retail industry acronym for the General Merchandise, Apparel, Furniture and Other/Specialty retail categories. The GAFO categories generally correspond to the merchandise mix of a discount department store such as Walmart

million in market demand translates into approximately 1.94 million square feet of GAFO retail space that could be currently supported in the trade area. Based on estimates from the field survey completed by TNDG, there is approximately 1.45 million square feet of existing GAFO space in the trade area. Thus, TNDG estimates that the trade area could currently support approximately 487,712 square feet of additional GAFO space over and above the existing inventory.

Projected Growth in Demand: Within the trade area, potential demand for new retail space in the GAFO retail categories is projected to grow to approximately 657,327 by 2015 (the proposed project's assumed opening date for purposes of this report), 700,050 square feet by 2017, 790,488 square feet by 2021, and 884,972 by 2025[8]. See Table II-2, below, for TNDG's projection of supportable square feet within GAFO retail categories from 2013 to 2025.

Table II-2:
Potential Demand for NEW GAFO Retail Space
Northwest Fresno Retail Trade Area
in Square Feet (all numbers are cumulative)

Retail Category	2013	2015	2017	2019	2021	2023	2025
GAFO 1/	487,712	530,544	573,267	617,992	663,705	710,430	758,18
Added Demand from Existing Walmart Closing		126,783	126,783	126,783	126,783	126,783	126,783
Effective GAFO Demand		657,327	700,050	744,775	790,488	837,213	884,97

Source: TNDG.

1/ GAFO = General Merchandise, Apparel, Furniture/Appliances, and Other/Specialty.

Conclusion Regarding Significance of Project's Addition of GAFO square footage to Trade Area: The proposed project will result in an estimated increase of 150,045 square feet of GAFO retail space. Given that this space is well within the level of residual market support for GAFO space in the trade area, TNDG does not believe the GAFO components of the proposed project will have significant competitive impacts on existing stores in the trade area.

II-D. IMPACT OF PROPOSED PROJECT'S GROCERY COMPONENT

It is TNDG's conclusion that the supermarket component of the proposed Walmart is not likely to cause existing supermarkets in the trade area to close. The analysis supporting this conclusion is summarized below.

Project Description: For purposes of this analysis, it is assumed that the grocery component of the proposed Walmart would total 49,111 square feet (38,231 square feet of grocery sales area plus 10,880 square feet of grocery support space). TNDG projects that the Walmart grocery space would generate sales levels equivalent to the national average for grocery sales in Walmart stores of approximately $473 per square foot (gross area), or total grocery sales of approximately $23.2 million[9].

[8] As discussed further in Section II-F, the existing Walmart store is assumed to be retenanted with another retail reuse. However, for purposes of evaluating project-specific impacts in the GAFO category, it is appropriate to account for the "freed up" demand that would result from the closing of the existing store.

[9] Based on data from Progressive Grocer's 2012 *Super 50* publication, the national average sales volumes for Walmart grocery space is approximately $607.33 per square foot of sales area. Based on the floor area configuration for the

Comparison of Existing Supply and Demand: The trade area currently has 11 supermarkets totaling approximately 466,730 square feet[10]. Appendix B, Figure B-1, provides a list of the supermarket centers that includes the stores' square feet and distance to the proposed project. TNDG's demand analysis indicates that there is sufficient base year (2013) demand to support average supermarket sales volumes in the trade area of $464 per square foot at all 11 existing supermarkets. In comparison, the industry median for supermarkets is approximately $473 per square foot nationally and $418 in the Western United States. Thus, TNDG estimates that, on average, supermarkets in the trade area currently have the potential to generate sales volumes which are well above the Western regional median and slightly below the national median.

Projected Growth in Demand: Total demand for supermarket sales in the trade area is projected to increase from approximately $216.5 million in 2013 to approximately $221.3 million in 2015, the assumed opening date of the proposed project. By 2025, total demand for supermarket sales in the trade area is projected to reach approximately $246.7 million (all projections are given in 2013 constant dollars)[11]. Table II-3, below, evaluates the impact of the proposed project's grocery sales in terms of the potential reduction in the sales per square foot volume at the existing supermarkets in the trade area.

grocery component of the proposed Supercenter, the estimated grocery sales area is equal to approximately 77.8% of the grocery component's square footage or "gross building space." Thus, the sales volume for the gross building area of the store's grocery component is estimated at $473 per square foot ($607.33 x 77.8%).

[10] Grocery stores with a minimum of 10,000 square feet of building space are considered supermarkets for purposes of this analysis. Regarding the project's potential to adversely impact non-traditional markets, such as convenience stores, ethnic or specialty markets, and smaller neighborhood grocery stores (which are often below this 10,000 square foot threshold), in the experience of TNDG, these outlets do not tend to compete with traditional supermarkets, and therefore are unlikely to experience lost sales to the project.

[11] See Tables III-1 to III-8 and III-13 in Section III for the derivation of this estimate of market support for supermarket sales, along with the projections of growth in demand for supermarket sales.

Table II-3:
Potential Sales Effects on Existing Supermarkets
Related to Grocery Component of Proposed
Walmart Northwest Fresno Retail Trade Area

Description	2013	2015	2017	2019	2021	2023	2025
Total Food Sales Demand	$288,644	$295,029	$301,398	$308,065	$314,879	$321,845	$328,964
Estimated Supermarket Share	75%	75%	75%	75%	75%	75%	75%
Total Potential Sales	$216,483	$221,271	$226,048	$231,049	$236,160	$241,384	$246,723
--Walmart store 1/	$0	($23,219)	($23,219)	($23,219)	($23,219)	($23,219)	($23,219)
Net Demand Available to Support Existing Supermarkets	$216,483	$198,053	$202,829	$207,830	$212,941	$218,165	$223,504
Existing Supermarket Sq. Ft.	466,730	466,730	466,730	466,730	466,730	466,730	466,730
Potential Sales per Square Foot Existing Supermarkets	***$464***	***$424***	***$435***	***$445***	***$456***	***$467***	***$479***

Source: TNDG; Progressive Grocer, The Super 50, April 2012.

1/ Sales per square foot (gross area) assumptions: $473. Typically, new retail stores operate below average sales volumes in the first few years after opening, and then reach stabilized sales volume levels after being open for a few years. However, in order to remain analytically conservative (i.e., to depict the maximum potential impact), we have assumed that store would reach its full sales potential (based on the chain-wide average) in year 1.

Conclusion Regarding Significance of Impact: The above analysis suggests that the development of the proposed project would initially cause potential average sales volumes at the 11 existing supermarkets to decrease from the current level of $464 per square foot to approximately $424 per square foot. Although this represents a reduction in the potential sales volume per square foot for existing stores, it is TNDG's conclusion that the potential average sales level of $424 per square foot in year 2015 is unlikely to be low enough to cause the closure of any of the trade area's existing supermarkets. At $424 per square foot, potential sales volumes would still be above the previously cited Western regional median ($418) and about 90% of the national median ($473).

II-E. CUMULATIVE IMPACTS OF PROJECTS PLANNED IN THE TRADE AREA

Whereas the above sections examine potential impacts strictly related to the proposed project, this section evaluates the cumulative impacts to the market based on all known planned and pending retail development/reuse projects in the trade area. Table II-4, below, provides a list of these planned and pending projects, including the projects' square feet and current status. As shown on the table, the planned and pending projects in the trade area total approximately 1.06 million square feet, with 1.26 million square feet of non-grocery space and 56,063 square feet of grocery space.

Table II-4:
Planned and Pending Retail Projects
Northwest Fresno Retail Trade Area

Project	Retail Square Feet			Status
	Non-Grocery	Grocery	Total	
FRESNO EL PASEO 1/ W Herndon Ave / N Golden State Blvd Fresno 93722	660,000	0	660,000	Approved (mostly constructed, as of 12/2015)
WESTLAKE West of Grantland Ave, adjacent to Fresno City limits	295,000	0	295,000	Pending
C-10-216 W Ashlan Ave / N Blythe Ave Fresno 93722	32,800	0	32,800	Approved
C-12-226 – mini-mart 5525 W Shaw Ave Fresno 93722	0	3,452	3,452	Pending
PROPOSED PROJECT 4080 W Shaw Ave Fresno 93722	150,045	49,111	199,156	Pending
WALMART REUSE 3680 W Shaw Ave Fresno 93722	126,783	0	126,783	N/A
C-15-025 – mini-mart/gas station 2/ 6985 N. Brawley Ave Fresno 93711		3,500	3,500	Pending
TOTAL	**1,264,628**	**56,063**	**1,320,691**	

Source: FirstCarbon Solutions; Peters Engineering Group.

1/ The Fresno El Paseo project includes a Target store devoting a limited amount of floor area to grocery sales. However, this store is not evaluated in the grocery analysis, as the SBOE classifies Target as a General Merchandise store for purposes of sales tax reporting by retail category. Thus, the demand for grocery sales in these types of general merchandise stores, such as Target, is already accounted for in the projected demand for General Merchandise retail space (see projected distribution of retail demand by category – Table III-6 on page 20). In contrast, the grocery component of a "Super-Target" would be evaluated in a retail demand analysis.

2/ Project was added in the January, 2016 version of this report.

As shown in the table, there are two small convenience markets planned for development in the trade area. Given that this analysis evaluates impacts to the supermarket category of the overall Food category, and only considers demand for the supermarkets (see Section II-D), the small convenience markets are not relevant for purposes of evaluating cumulative impacts.

Demand for new retail space (non-grocery) in the trade area is projected to reach approximately 1.1 million square feet in 2015 and 1.4 million square feet by 2025. As shown above, all of the planned and pending commercial-retail projects would be fully supportable by 2015. See Table II-5, below, for a breakdown of supportable square feet by retail category from 2013 to 2025.

Table II-5:
Demand for NEW Retail Space
by Retail Category (non-grocery)

Retail Category	2015	2017	2019	2021	2023	2025
GAFO	530,544	573,267	617,992	663,705	710,430	758,189
Food Service and Drinking	96,800	109,968	123,753	137,843	152,244	166,964
Bldg. Matrl./Garden Equip./Supplies	218,041	226,992	236,362	245,939	255,729	265,734
Services Space @ 10% of Total Space	100,159	107,733	115,662	123,766	132,050	140,517
TOTAL	*1,001,592*	*1,077,333*	*1,156,622*	*1,237,664*	*1,320,500*	*1,405,167*
Added Demand for Closed Walmart	*126,783*	*126,783*	*126,783*	*126,783*	*126,783*	*126,783*
AJUSTED TOTAL	*1,128,375*	*1,204,116*	*1,283,405*	*1,364,447*	*1,447,283*	*1,531,950*
Square Feet Absorbed by Planned and						
Pending Projects 1/	(969,628)	(969,628)	(1,117,128)	(1,264,628)	(1,264,628)	(1,264,628)
Net Demand	***158,747***	***234,488***	***166,277***	***99,819***	***182,655***	***267,322***

Source: TNDG

Note: Totals may not sum due to rounding.

1/ Phasing for the commercial retail portion of the proposed Westlake project (see Table II-4 above) is projected as follows: 147,500 SF in 2018 and 147,500 SF in 2020. This phasing assumption is provided in the Westlake project's Draft EIR (April, 2013) and is considered worst-case – i.e., a faster than anticipated construction schedule. Remaining projects are assumed to be developed by 2015. Assumes existing Walmart store is reoccupied in 2015.

Based on the potential demand for new non-grocery retail space (as shown on Table II-5 above), the total square feet of planned and pending projects would absorb approximately 83% residual demand through 2025. Even after accounting for all of the planned and pending retail space (including the assumed retail reuse of the existing Walmart store), there would still be residual demand to support more than 260,000 square feet of new retail space in 2025. Thus, TNDG believes that the planned and pending projects will not have significant cumulative economic effects on trade area retailers in the non-grocery categories that could in turn lead to the potential for store closures and adverse physical changes to the retail environment described as urban decay. Moreover, it should be noted that the net demand projections in Table II-5 are likely to be understated, for the following reasons:

- Including the total square feet of the Fresno El Paseo project implicitly assumes that its market area would be identical to the market area for the proposed Northwest

Walmart project (the project's 1st phase broke ground in the first half of 2013). However, as a super-regional retail center, this project would a have a trade area that would only partially overlap with the trade area evaluated in this analysis[12]. In addition, being strategically placed along a major transportation corridor adjacent to the SR-99, the project is also positioned to capture a significant portion of visitor/tourist retail demand, which is also not accounted for in this analysis. As such, this project would not be limited to the same "pool" of demand projected in TNDG's analysis.

- The phasing for the proposed Westlake project's 295,000 square feet of commercial-retail space – 147,500 square feet in 2018 and 147,500 square feet in 2020 – is provided as a "worst-case" assumption, according to that project's Draft EIR. That is, the project phasing is provided at faster than anticipated construction schedule, and thus could be developed beyond the study period evaluated in this analysis. In the case of the retail-commercial square feet of this project being developed at later than projected dates in the Draft EIR, the net demand numbers in this analysis would be higher than those provided above in Table II-5.

II-F. REUSE OF EXISTING FRESNO WALMART SITE

Given that the proposed project will result in the relocation of the existing Walmart store located at 3680 West Shaw Avenue, it is necessary to evaluate the potential for the existing Walmart building to retenant within a reasonable period of time and thus avoid the potential physical, deteriorative changes that can lead to urban decay.

As shown on above on Table II-5, TNDG projects that potential demand would be more than sufficient by 2015 (i.e., the assumed opening date of the proposed project) to support the retail reuse of the existing store, even after accounting for the total planned and pending retail space that would be absorbed in the trade area. TNDG's demand analysis projects net demand for 158,747 square feet of (non-grocery) retail space in 2015, after accounting for the absorption of all planned and pending projects and the retail reuse of the existing Walmart store[13].

Although the market demand analysis indicates theoretically there would be sufficient retail demand to support some type of retail reuse of the existing Walmart store immediately after it closes, TNDG has not identified any specific tenants that would retenant the site. Section II-G highlights some of the factors that TNDG anticipates would lead to a successful retenanting of the existing Walmart Store. This section also provides examples of vacated stores in areas where site-specific circumstances and/or lingering recessionary conditions have delayed their reuse.

[12] The is confirmed by the market study prepared as part of the EIR for this project – "Marketplace at El Paseo – Retail Market Study", March 2010 – which identifies a much larger trade area than the area evaluated in this analysis.
[13] In addition, these net demand projections should be considered conservative, given that some of the cumulative square feet of retail space could potentially be developed at later dates than assumed in this analysis (see discussion above in Section II-E.

Table II-6:
Potential Demand for NEW non-grocery Retail Space (Expressed in Square Feet)
Accounting for Planned/Pending Projects and Reuse of Existing Walmart Store

Retail Category	2015	2017	2019	2021	2023	2025
Total Retail/Services	1,128,375	1,204,116	1,283,405	1,364,447	1,447,283	1,531,950
Square Feet Absorbed						
Proposed Project (net)	150,045	150,045	150,045	150,045	150,045	150,045
Other Planned/Pending*	692,800	692,800	840,300	987,800	987,800	987,800
Reuse of Existing Store	126,783	*126,783*	*126,783*	*126,783*	*126,783*	126,783
TOTAL	*844,167*	*844,167*	*991,667*	*1,139,167*	*1,139,167*	*1,139,167*
Net Demand	***158,747***	***234,488***	***166,277***	***99,819***	***182,655***	***267,322***

Source: TNDG
Note: Totals may not sum due to rounding.
*See Table II-5

II-G. POTENTIAL FOR URBAN DECAY

As discussed in Sections II-C, II-D, and II-E, no store closures are projected under the project-specific analysis or the cumulative analysis.[14] Although the potential reduction in supermarket sales volumes projected in Section II-D would be undesirable from the standpoint of existing supermarkets, it is TNDG's conclusion that urban decay conditions would not result from completion of the project alone or in combination with the other planned projects in the trade area.

Urban decay is a potential consequence of a downward spiral of store closures and long-term vacancies[15]. Urban decay is construed under CEQA to consist of significant deterioration of structures and/or their surroundings due to long-term vacancy and neglect. Such deterioration can occur when property owners reduce property maintenance activities below that required to keep their properties in good condition. Property-owners are likely to make reductions in shopping center or building maintenance under conditions where they see little likelihood of future positive returns due to prolonged vacancy of an anchor tenant.

Given the conclusion by TNDG that no store closures are likely to occur as a result of the project, it is unlikely owners of existing occupied retail space will allow their properties to physically deteriorate as a result of the proposed project.

Retail Reuse of Existing Walmart Store

As discussed above in Section II-F, the retail demand analysis indicates there would be sufficient demand, under project-specific and cumulative conditions, to support a type of retail

[14] Consistent with the Draft EIR' evaluation of the proposed projects environmental impacts, this report uses the same baseline and assumes that impacts associated with the existing Walmart store continue after its closing.
[15] As cited in the Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal. App 4th 1184, p 2.

reuse of the existing Walmart store or an adaptive reuse, as has occurred at other vacated Walmart store locations.

TNDG has prepared urban decay studies, or is aware of other examples, in a number of California cities that involved the simultaneous closing of an existing Walmart store and its relocation to a larger space as a Walmart Supercenter, combining general merchandise and grocery sales. Existing Walmart stores were retenanted by Kohl's (City of La Quintal); Hobby Lobby (Hanford); Burlington Coat Factory and Factory 2U (Palmdale); 99 Cent Store (Cathedral City); Sergins RV Store (Gilroy); Fall as Discount Store (Bakersfield); and a medical plaza (Hemet).[16]

Based on TNDG's knowledge and experience, the relative success in reusing a closed Walmart store for some type of retail or for a non-retail adaptive uses largely depends upon economic conditions. In a time of increasing vacancy rates and few available tenants, the retenanting process can drag on until market conditions improve. In the recent widespread recession lasting from 2007 to 2010 (and beyond), there was little an owner could do to backfill vacated retail space.

When Walmart opened a new Supercenter in the City of Hanford in 2006, its existing store closed and was sold to investors. Until the recession hit at the end of 2007, the 125,000 sf building attracted interest from single-tenant users as well smaller businesses interested in leasing space inside a partitioned. Retenanting efforts stalled and the building changed hands twice before the current owners partitioned the interior space and recently leased it to several smaller retail uses, including Hobby Lobby. The shopping center did not show evidence of urban decay, despite the loss of customers and foot traffic following closure of the existing Walmart store. The owners maintained the building and kept it marketable through the recession.

Further, the fact that the proposed project would retenant a former Super K-Mart store – along with other examples of Walmart retenanting spaces vacated by retailers (e.g., Napa, South San Jose, Morgan Hill, etc.) – provides further evidence of the viability of large-format retail reuse of vacant stores.

The approval of a new Walmart Supercenter generally increases interest in nearby available commercial sites. The existing Northwest Walmart discount store's location across from the proposed project increases its desirability to businesses desiring to take advantage of the ample foot and vehicle traffic the proposed project would generate. It should also be noted that along with potential retail reuse options, the existing Walmart building would also be a candidate for some type of adaptive reuse, including uses ranging from a recreational facility (e.g., bowling alley, ice rink, fitness center)[17] to institutional uses (e.g., government office facility, library, church) to office/service type uses (e.g., call centers). It could also serve several smaller service-oriented uses that would lease space in a partitioned building. There are numerous examples of vacant "big box" stores being converted for these types of uses.

However, even if the property owners of the existing store are unable to immediately attract replacement tenant(s) for the Walmart store, its closure would not be expected to result in a long-term vacancy and lack of maintenance by the West Pointe shopping center owner. The owner would have every incentive to maintain the property in its most marketable condition until it is leased. Pending a retenanting, the West Pointe shopping center would still function as a well tenanted community-scale shopping center, given that new larger Walmart store would

[16] Hemet store closed when the San Jacinto store opened.

[17] For example, 24-Hour Fitness has opened up fitness clubs in vacant big box stores in a number of markets.

be located directly adjacent to the existing store. That is, the proposed project would more or less function as an anchor tenant to the West Pointe shopping center, given its proximity to the center (the proposed project is located directly adjacent, on the west side of North Brawley Avenue, to the center).

The above projections indicating substantial demand for new retail space in the trade area would appear to be inconsistent with the relatively high existing vacancy rate in the trade area, as identified on page 6. However, it should be noted that TNDG's demand projections are based on resident spending potential as reflected in long-term expenditure trends. During a significant recession, when many households curtail retail spending, the levels of potential demand tend not to translate into immediate absorption of retail space. As such, it is not surprising for retail store closures to occur, as happened in many communities across the country during the recent recession.

However, there is a significant distinction between a near-term increase in vacancy levels and the environmental impact of urban decay. What is important from an urban decay perspective is whether or not vacant properties are maintained in leasable condition. TNDG believes that the underlying, long-term strength of the trade area market is such that property owners will have a strong incentive to maintain their properties in order to be well positioned to attract tenants once market conditions improve.

Thus, while it may realistically take several years for on-the-ground conditions to "catch up" to the potential demand levels associated with the trade area's demographics, TNDG's projections indicate sufficient demand to absorb the new proposed space and to retenant the identified vacant buildings. Moreover, the prospects of strong demand over the next several years will create a market environment where property owners will be very unlikely to allow property maintenance to lapse to such a degree that urban decay conditions develop.

III. RETAIL DEMAND ANALYSIS METHODOLOGY

This section examines potential retail demand associated with the population residing in the market area that would be served by the proposed project. The analysis projects future retail demand of residents in the trade area.

III-A. MARKET AREA BOUNDARIES

The trade area is a customized polygon defined with the following boundaries:

- *Eastern Boundary* – The eastern boundary is represented by North West Avenue in the City of Fresno, which is approximately 2.0 miles from the proposed project site.
- *Western Boundary* – The majority of the western boundary is represented by Madera Avenue (State Route [SR]-145). At Shaw Avenue, the western boundary cuts to the east to North Dickenson Avenue. The boundary, which is in unincorporated portions of Madera and Fresno counties, is approximately 6.0 to 10.0 miles from the proposed project site.
- *Southern Boundary* – The southern boundary is represented by West Belmont Avenue, extending across portions of unincorporated Fresno County and the City of Fresno. The boundary is approximately 4.0 miles from the proposed project site.
- *Northern Boundary* – The majority of the northern boundary runs along Avenue 9 in unincorporated Madera County. At Road 33 ½, the boundary runs further north along the existing railroad tracks to Avenue 12. The boundary is approximately 5.0 to 7.5 miles from the proposed project site.

This polygon takes into account natural traffic barriers (such as major highways and roads) and the location of existing competitive shopping centers. As discussed in the report Introduction on page 2, the proposed project would function as a community-scale retail center – given its size and location adjacent to the West Pointe center – and would typically have a trade area defined by a 3- to 6-mile radius (as suggested by ICSC). Thus, the suggested trade area radius was used as a starting point to design the customized trade area polygon.

It should also be noted there are three other Walmart stores with trade areas that will partially overlap with proposed project's trade area evaluated in this analysis. These stores are located in the cities of Kerman (14061 West Whitesbridge Avenue), Madera (1977 West Cleveland Avenue), and Fresno (7065 North Ingram Avenue). Given these stores' locations, it is inevitable that their trade areas will partially overlap with one another. This reflects the fact that consumers may shop at multiple Walmart stores or prefer one store over the other due to factors such as convenience, commute patterns, selection, adjacency to other retail stores, etc. It does not indicate over-saturation in the market.

The Walmart store located in the former Mervyn's building at the intersection of Ashlan and Blackstone Avenues in Fresno, at 1804 East Ashlan Avenue. As noted above does not affect the trade area design, as the eastern boundary (North West Avenue) represents the midway point between that store and the proposed store evaluated in this analysis. That is, North West Avenue is approximately two miles east of the proposed project, and it is approximately two

miles west of the Ashlan Walmart store. Given proximity to both stores, all else equal, residents west of North West Avenue would tend to shop at the proposed Walmart evaluated in this study, while residents east of this border would tend to shop at the Ashlan Walmart store.

The trade area boundaries are shown on Figure III-1 on the following page. The trade area is referred to herein as the Northwest Fresno Retail Trade Area (NFRTA)

Figure III-1: Northwest Fresno Retail Trade Area Boundaries

III-B. POPULATION AND INCOME LEVELS

The population in the trade area is projected as follows:

Table III-1:
Population Projections by Year
Northwest Fresno Retail Trade Area

Market Area	Estimated 2013 Population	Projected 2015 Population	Projected 2017 Population	Projected 2019 Population	Projected 2021 Population	Projected 2023 Population	Projected 2025 Population
NFRTA	139,759	142,850	145,934	149,162	152,462	155,834	159,282

Source: ESRI; TNDG.

The above population estimate (2013) and projections are from ESRI, a nationally-recognized provider of demographic data. The ESRI projections forecast an annual population growth rate of 1.1% between 2012 and 2017. TNDG has applied this growth rate throughout the study period in this analysis (from 2013 to 2025). This growth rate appears to be relatively conservative, as the trade area's population increased at a 2.3% annual rate during the 10-year period between 2000 and 2010, which exceeds the growth rate used in this analysis by more than a factor of two.

Per capita income in the NFRTA is estimated as follows.

Table III-2:
Per Capita Income Level
Northwest Fresno Retail Trade Area

Market Area	2013 Per Capita Income
NFRTA	$34,342

Source: ESRI, TNDG

The indicated estimates of per capita income were obtained from ESRI and increased 53% by TNDG. The reason for this increase factor is that these income estimates are based on "money income" definition of income utilized by the U.S. Census Bureau. This measure of income is narrower than the "personal income" definition used by the U.S. Department of Commerce. The broader definition includes additional income sources such as fringe benefits (health insurance, retirement funding), imputed income (interest, rent), and direct payments to medical providers by governments. Personal income therefore represents a more complete gauge of a household's economic status. According to the Center for the Continuing Study of the California Economy (CCSCE), personal income is the preferred measure for purposes of projecting a household's purchasing power (i.e., retail demand). Thus, this analysis increases the ESRI estimates of money income by 53% to estimate per capita personal income[18].

[18] Per capita "personal income" is a full 53% higher than per capita "money income" in Fresno County, based on 2005-2011 income data (the most recent years available) provided by the Bureau of Economic Analysis and the U.S. Census Bureau.

III-C. RETAIL SALES DEMAND

The portion of total income spent on retail purchases varies by the income level of the individual household and also varies depending on the strength of the overall economy. In general, the percentage of income spent on retail goods decreases as income levels rise (more affluent households spend more on retail goods in absolute dollar terms, but less as a percentage of their total income).

In order to forecast the ratio of total trade area income likely to be spent on retail purchases, TNDG evaluated county level data for the period 2000 through 2011 (the latest 12-year period for which official income data are available from the Bureau of Economic Analysis (BEA). In particular, TNDG calculated the ratio of total retail sales (based on data from the SBOE[19]) to aggregate income (per the BEA). At the countywide level, the ratio of retail sales to total income is estimated as follows for each year of the evaluation period:

Table III-3:
Total Retail Sales
As a Percentage of Aggregate Personal Income
Fresno County

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	11-Year Average
35.6%	34.6%	34.5%	35.6%	36.9%	39.4%	39.0%	35.8%	31.1%	27.5%	27.5%	28.6%	33.8%

Source: TNDG, based on income data from BEA and retail sales data from SBOE.

Whereas the above data are based on countywide income levels, data from the National Consumer Expenditure Survey (CES) allow for evaluation of the variation in retail expenditures by household income level. Since income levels within the NFRTA vary from the countywide average, it is expected that retail expenditures as a percentage of income would vary between the NFRTA and the County as well. Based on the ratio of personal per capita income levels in the NFRTA area relative to the County, TNDG estimates the retail to income ratios as follows in Table III-4 below.

Table III-4:
Total Retail Sales
As a Percentage of Aggregate Personal Income
Northwest Fresno Retail Trade Area

Area	Income Index Factor	2000	2005	2011	12-Year Average
County	1.00	35.6%	39.4%	28.6%	33.8%
NFRTA	0.96	34.2%	37.9%	27.5%	32.5%

Source: TNDG, based on BEA, SBOE and CES data.

The above data in Table III-3 clearly show the effects of a strong economy from 2004 to 2006 and the severe recession beginning in 2008. In order to remain analytically conservative, TNDG's analysis assumes that the retail expenditure ratio for the trade area

[19] The Board of Equalization provides data on taxable retail sales. In order to estimate total retail sales, TNDG multiplied taxable sales in the Food category by a factor of 3.0. As noted previously, this factor has been derived by TNDG based on based on numerous analyses of supermarket supply and demand in comparable communities throughout California, and based on data we have reviewed from the SBOE and selected supermarket chains.

will remain at the 11-year average (as shown in Table III-4 above). It is important to note that TNDG is projecting that the ratio will remain well below the county-indexed 2005 peak of 37.9%.

Table III-5:
Income and Retail Demand
Northwest Fresno Retail Trade Area
in thousands of constant dollars

Demand Variable	2013	2015	2017	2019	2021	2023	2025
Total Income	$4,799,589	$4,905,760	$5,011,664	$5,122,527	$5,235,842	$5,351,664	$5,470,048
Percent of Income Spent							
on Retail Goods	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%
Potential Retail Sales	$1,560,235	$1,594,749	$1,629,176	$1,665,215	$1,702,051	$1,739,702	$1,778,186

Source: TNDG

III-D. DISTRIBUTION OF RETAIL EXPENDITURES

Projected retail demand from market area residents is disaggregated into various retail categories based upon average retail expenditure patterns observed in the state of California from 2009 to 2011, the most recent three years for which data are available. The basic distribution of retail sales by retail category is projected as follows in Table III-6 below.

Table III-6:
Distribution of Sales by Category
Northwest Fresno Retail Trade Area

Retail Category	Distribution
Shopper Goods:	
Clothing and Clothing Accessories	12.5%
General Merchandise	7.5%
Home Furnishings and Appliances	6.0%
Specialty/Other	10.5%
Subtotal	*36.5%*
Convenience Goods:	
Food and Beverage	18.5%
Food Service and Drinking	13.5%
Subtotal	*32.0%*
Heavy Commercial Goods:	
Bldg. Matrl. & Garden Equip. & Supplies	6.5%
Motor Vehicle and Parts Dealers	13.0%
Gasoline Stations	12.0%
Subtotal	*31.5%*
Total	***100.0%***

Source: SBOE; TNDG.

III-E. CAPTURE RATE ANALYSIS

Trade Area Capture Rates

The NFRTA capture rates of resident demand are projected to be relatively high due to the tendency of residents to shop relatively close to their homes, especially for convenience goods. Generally, it is reasonable to expect that residents will make the vast majority of their retail purchases locally, provided that a competitive mix of retail stores reflective of consumer needs is available. This is consistent with one of the findings from standard urban land use theory, which indicates, all else equal, the relative attractiveness of retail outlets decreases as travel time increases for the consumer[20].

Table III-7, below, shows the projected capture rates of NFRTA demand for each retail category.

[20] See, for example, Blair, John. *Urban & Regional Economics*. Irwin, 1991. Hoover, Edgar M. *An Introduction to Regional Economics*. Alfred A. Knopf, 1975. McCann, Phillip. *Urban and Regional Economics*. Oxford University Press, 2001.

Table III-7:
Capture Rates of Trade Area Demand
Northwest Fresno Retail Trade Area

Retail Category	Capture Rate
Shopper Goods:	
Clothing and Clothing Accessories	85%
General Merchandise	85%
Home Furnishings and Appliances	85%
Specialty/Other	85%
Convenience Goods:	
Food and Beverage	100%
Food Service and Drinking	85%
Heavy Commercial Goods:	
Bldg. Matrl. & Garden Equip. & Supplies	100%
Motor Vehicle and Parts Dealers	100%

Source: TNDG

Generally, this type of analysis would treat the area as a “closed system”; in other words, it would assume that given an adequate supply of retail stores, residents of the market area will make all of their retail purchases somewhere in the trade area. However, in this case, the capture rates have been adjusted downward to account for the fact that the NFRTA does not have a super-regional shopping center; therefore, it is assumed that the area will always experience some level of retail “leakage” to other areas of Fresno County with a larger array of retail facilities. According to the ICSC, 11% of retail space is in super-regional centers (defined here as centers with 800,000 square feet or more of gross leasable area) while the remaining 89% of the space is in neighborhood- to regional-scale centers. Based on these data, TNDG believes that the NFRTA, in the absence of such a super-regional center, could be expected to realistically “capture” up to 89% of retail demand in the shopper goods and Food Service and Drinking (restaurants) categories. To be analytically conservative in this analysis, TNDG has adjusted this shopper goods capture rate down to 85%. The NFRTA is projected to potentially capture 100% of its residents’ demand in the Food and Beverage (grocery store), Building Materials/Garden Equipment/Supplies, and Motor Vehicle and Parts Dealers categories, because of the strong propensity of consumers to purchase goods in these categories as close as possible to their residences.

III-F. POTENTIAL RETAIL SALES VOLUMES

Based on the capture rates shown above, Table III-8, below, projects the potential market area demand in the NFRTA for each retail category. As shown on the table, incremental demand through 2025 for retail sales in the NFRTA is projected to grow in proportion to increases in population.

Table III-8:
Potential Capture of Sales
Northwest Fresno Retail Trade Area
in thousands of constant dollars

Market Area	2013	2015	2017	2019	2021	2023	2025
Shopper Goods:							
Clothing and Clothing Accessories	$165,775	$169,442	$173,100	$176,929	$180,843	$184,843	$188,932
General Merchandise	$99,465	$101,665	$103,860	$106,157	$108,506	$110,906	$113,359
Home Furnishings and Appliances	$79,572	$81,332	$83,088	$84,926	$86,805	$88,725	$90,687
Specialty/Other	$139,251	$142,331	$145,404	$148,620	$151,908	$155,268	$158,703
Subtotal	*$484,063*	*$494,771*	*$505,452*	*$516,633*	*$528,061*	*$539,743*	*$551,682*
Convenience Goods:							
Food and Beverage	$288,644	$295,029	$301,398	$308,065	$314,879	$321,845	$328,964
Food Service and Drinking	$179,037	$182,997	$186,948	$191,083	$195,310	$199,631	$204,047
Subtotal	*$467,681*	*$478,026*	*$488,345*	*$499,148*	*$510,190*	*$521,476*	*$533,011*
Heavy Commercial Goods:							
Bldg. Matrl. & Garden Equip. & Supplies	$101,415	$103,659	$105,896	$108,239	$110,633	$113,081	$115,582
Motor Vehicle and Parts Dealers	$202,831	$207,317	$211,793	$216,478	$221,267	$226,161	$231,164
Subtotal	*$304,246*	*$310,976*	*$317,689*	*$324,717*	*$331,900*	*$339,242*	*$346,746*
Total	**$1,255,989**	**$1,283,773**	**$1,311,487**	**$1,340,498**	**$1,370,151**	**$1,400,460**	**$1,431,440**

Source: TNDG

Note: Totals may not sum due to rounding.

III-G. SUPPORTABLE RETAIL SPACE

Sales per Square Foot Standards

Projected sales volume requirements per square foot of retail space by retail category are derived from typical sales standards from the Urban Land Institute's (ULI's) Dollars & Cents Publication and from typical sales per square foot data from representative stores in each retail category (as reported in the July 2009 issue of Retail MAXIM).

Table III-9:
Sales per Foot Standards for Retail Space
Northwest Fresno Retail Trade Area

Retail Category	Sales/ Square Foot
GAFO 1/	$250
Food Service and Drinking	$300
Bldg. Matrl. & Garden Equip. & Supplies	$250
Automotive Parts	$175

Source: TNDG, based on data published by ULI and Retail Maxim.

1/ GAFO = General Merchandise, Apparel, Furniture/Appliances, Other/Specialty.

Demand for New Retail Space

The sales per square foot standards are applied to the net demand numbers for each relevant retail category, as shown in Table III-10 below. This calculation essentially converts potential sales volumes to supportable square feet of new retail space. Supportable development levels will increase in the future by virtue of anticipated population growth in the NFRTA (see Table III-1).

Table III-10:
Demand for Retail Space (Non-Grocery)
Northwest Fresno Retail Trade Area

Retail Category	2013	2015	2017	2019	2021	2023	2025
Shopper Goods:							
GAFO	1,936,252	1,979,084	2,021,807	2,066,532	2,112,245	2,158,970	2,206,729
Convenience Goods:							
Food Service and Drinking	596,790	609,992	623,160	636,945	651,035	665,436	680,156
Heavy Commercial Goods:							
Bldg. Matrl. & Garden Equip. & Supplies	405,661	414,635	423,586	432,956	442,533	452,323	462,328
Auto Parts 1/	150,674	154,007	157,332	160,812	164,370	168,006	171,722
Total	3,089,377	3,157,718	3,225,885	3,297,245	3,370,183	3,444,735	3,520,935

Source: TNDG

Note: Totals may not sum due to rounding.

1/ Assumes that automotive parts stores account for 13% of sales in overall Automotive group category (based on statewide average from 2009 to 2011).

Provided below in Table III-11 is an estimate of the amount of existing square feet of (non-grocery) retail space, broken down by retail category, in the NFRTA. As shown in the table, there is an inventory of approximately 3.6 million square feet of existing retail space (including vacant space) in the NFRTA.

Table III-11:
Estimate of Existing Square Feet of Retail Development (Non-Grocery)
Northwest Fresno Retail Trade Area

Retail Category	Square Feet
Shopper Goods:	
GAFO	1,448,540
Convenience Goods:	
Food Service and Drinking	577,866
Heavy Commercial Goods:	
Bldg. Matrl. & Garden Equip. & Supplies	196,594
Auto Parts 1/	97,959
Services Space	515,909
Vacant Space	741,748
Total	**3,578,616**

Source: TNDG

Demand for New Retail Space

By subtracting the existing amount of retail space (see Table III-11) from the potential supportable amount (see Table III-10), Table III-12, on the following page, provides the amount of new retail space that could be supported in the NFRTA. Currently (as of 2013) the NFRTA could support approximately 833,092 square feet of additional retail space. Due to continued population growth (see Table III-1), the NFRTA would be able to support an additional 1,264,650 square feet of retail space, over and above existing levels, by 2025.

In addition, based on analysis of a proprietary database of shopping centers in a major metropolitan area, TNDG has determined that services space (e.g., dry cleaners, hair salons, banks, etc.) accounts for 10% to 25% of total shopping center space, depending on type of retail development (i.e., regional, community, neighborhood, etc.). To be analytically conservative, this analysis assumes that, on average, services space accounts for 10% of total space in typical shopping center settings. Thus, currently (as of 2013) the NFRTA could support approximately 925,658 square feet of additional retail and services space. Due to continued population growth (see Table III-1), the NFRTA would be able to support an additional 1.4 million square feet of retail and services space, over and above existing levels, by 2025.

Table III-12:
Demand for NEW Retail Space
Northwest Fresno Retail Trade Area

Retail Category	2013	2015	2017	2019	2021	2023	2025
GAFO	487,712	530,544	573,267	617,992	663,705	710,430	758,189
Food Service and Drinking	83,598	96,800	109,968	123,753	137,843	152,244	166,964
Bldg. Matrl./Garden Equip./Supplies	209,067	218,041	226,992	236,362	245,939	255,729	265,734
Auto Parts	52,715	56,048	59,373	62,853	66,411	70,047	73,763
Total Retail Space	833,092	901,433	969,600	1,040,960	1,113,898	1,188,450	1,264,650
Services Space @ 10% of Total Space	92,566	100,159	107,733	115,662	123,766	132,050	140,517
TOTAL	***925,658***	***1,001,592***	***1,077,333***	***1,156,622***	***1,237,664***	***1,320,500***	***1,405,167***

Source: TNDG

Note: Totals may not sum due to rounding.

III-H. DEMAND FOR GROCERY SALES AND SUPPORTABLE GROCERY SPACE

This section evaluates the demand for grocery sales in the NFRTA, along with the proposed project's potential impact on existing supermarkets in the NFRTA. Table III-13, on the following page, provides a forecast of total demand in the Food and Beverage category from 2013 to 2025, in addition to the share of food demand that would be captured by supermarkets in the NFRTA. TNDG estimates that the 11 supermarkets in the NFRTA capture approximately 75% of total Food and Beverage demand[21]. The balance of sales in the overall Food and Beverage category (25% of the total) is captured by smaller convenience and specialty markets.

The table also provides an estimate of the supermarkets' average sales volumes, in terms of sales per square foot, by dividing the estimate of supermarket demand (in dollars) by the square feet of existing supermarket space. Projections of future average sales volumes are net of the demand that would be absorbed by the proposed grocery component of the Walmart store.

[21] In fully developed urban markets, supermarket sales typically account for 80% to 90% of sales in the overall Food category. This factor has been derived by TNDG based on numerous analyses of supermarket supply and demand in urban communities throughout California. In addition, the 11 supermarkets account for approximately 80% of the total square feet in the grocery category in the NFRTA, suggesting that the 75% share factor for supermarket demand is a conservative assumption for this market

Table III-13:
Demand for Supermarket Sales and
Estimate of Sales per Square Foot
Northwest Fresno Retail Trade Area
in thousands of constant dollars

Description	2013	2015	2017	2019	2021	2023	2025
Total Food Sales Demand	$288,644	$295,029	$301,398	$308,065	$314,879	$321,845	$328,964
Estimated Supermarket Share	75%	75%	75%	75%	75%	75%	75%
Total Potential Sales	$216,483	$221,271	$226,048	$231,049	$236,160	$241,384	$246,723
--Walmart store 1/	$0	($23,219)	($23,219)	($23,219)	($23,219)	($23,219)	($23,219)
Net Demand Available to Support Existing Supermarkets	$216,483	$198,053	$202,829	$207,830	$212,941	$218,165	$223,504
Existing Supermarket Sq. Ft.	466,730	466,730	466,730	466,730	466,730	466,730	466,730
Potential Sales per Square Foot Existing Supermarkets	***$464***	***$424***	***$435***	***$445***	***$456***	***$467***	***$479***

Source: TNDG; Progressive Grocer, The Super 50, April 2012.

1/ Sales per square foot (gross area) assumptions: $473. Typically, new retail stores operate below average sales volumes in the first few years after opening, and then reach stabilized sales volume levels after being open for a few years. However, in order to remain analytically conservative (i.e., to depict the maximum potential impact), we have assumed that store would reach its full sales potential (based on the chain-wide average) in year 1.

APPENDIX A:

RETAIL DEMAND ANALYSIS
NORTHWEST FRESNO RETAIL TRADE AREA

Table A-1
Population Projections
NW Fresno Retail Trade Area

Area	2013	2015	2017	2019	2021	2023	2025
NW Fresno Retail Trade Area	139,759	142,850	145,934	149,162	152,462	155,834	159,282
Total	139,759	142,850	145,934	149,162	152,462	155,834	159,282
				9,404			

Source: U.S. Census Bureau

Table A-2
Per Capita Income Projections
NW Fresno Retail Trade Area
In constant dollars

	2013
NW Fresno Retail Trade Area	$34,342
Annual Increase Factor	0.00%

Area	2013	2015	2017	2019	2021	2023	2025
NW Fresno Retail Trade Area	$34,342	$34,342	$34,342	$34,342	$34,342	$34,342	$34,342

Source: U.S. Census Bureau; TNDG.

Table A-3
Total Income and Potential Retail Sales Projections
NW Fresno Retail Trade Area
In thousands of constant dollars

	2013	2015	2017	2019	2021	2023	2025
Percent of Income Spent on Retail Goods	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%

Area	**2013**	**2015**	**2017**	**2019**	**2021**	**2023**	**2025**
Total Income:							
NW Fresno Retail Trade Area	$4,799,589	$4,905,760	$5,011,664	$5,122,527	$5,235,842	$5,351,664	$5,470,048
Total	$4,799,589	$4,905,760	$5,011,664	$5,122,527	$5,235,842	$5,351,664	$5,470,048
Potential Retail Sales:							
NW Fresno Retail Trade Area	$1,560,235	$1,594,749	$1,629,176	$1,665,215	$1,702,051	$1,739,702	$1,778,186
Total	$1,560,235	$1,594,749	$1,629,176	$1,665,215	$1,702,051	$1,739,702	$1,778,186

Source: TNDG

Table A-4
Distribution of Retail Sales by Retail Category
NW Fresno Retail Trade Area

Retail Category	%Distribution 2013	%Distribution 2015	%Distribution 2017	%Distribution 2019	%Distribution 2021	%Distribution 2023	%Distribution 2025
Shopper Goods:							
Clothing and Clothing Accessories	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
General Merchandise	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
Home Furnishings and Appliances	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Specialty/Other	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
Subtotal	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%
Convenience Goods:							
Food and Beverage	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Food Service and Drinking	13.5%	13.5%	13.5%	13.5%	13.5%	13.5%	13.5%
Subtotal	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%
Heavy Commercial Goods:							
Bldg. Matrl. and Garden Equip. and Supplies	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Motor Vehicle and Parts Dealers	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
Gasoline Stations	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Subtotal	31.5%	31.5%	31.5%	31.5%	31.5%	31.5%	31.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: TNDG, based on historic trends (2009-11 taxable sales) reported by the State Board of Equalization (SBOE) for Fresno County.

Table A-5
Projected Demand for Retail Sales by Major Retail Category
NW Fresno Retail Trade Area
In thousands of constant dollars

Retail Category	2013	2015	2017	2019	2021	2023	2025
Shopper Goods:							
Clothing and Clothing Accessories	$195,029	$199,344	$203,647	$208,152	$212,756	$217,463	$222,273
General Merchandise	$117,018	$119,606	$122,188	$124,891	$127,654	$130,478	$133,364
Home Furnishings and Appliances	$93,614	$95,685	$97,751	$99,913	$102,123	$104,382	$106,691
Specialty/Other	$163,825	$167,449	$171,063	$174,848	$178,715	$182,669	$186,710
Subtotal	$569,486	$582,083	$594,649	$607,803	$621,249	$634,991	$649,038
Convenience Goods:							
Food and Beverage	$288,644	$295,029	$301,398	$308,065	$314,879	$321,845	$328,964
Food Service and Drinking	$210,632	$215,291	$219,939	$224,804	$229,777	$234,860	$240,055
Subtotal	$499,275	$510,320	$521,336	$532,869	$544,656	$556,705	$569,020
Heavy Commercial Goods:							
Bldg. Matrl. and Garden Equip. and Supplies	$101,415	$103,659	$105,896	$108,239	$110,633	$113,081	$115,582
Motor Vehicle and Parts Dealers	$202,831	$207,317	$211,793	$216,478	$221,267	$226,161	$231,164
Gasoline Stations	$187,228	$191,370	$195,501	$199,826	$204,246	$208,764	$213,382
Subtotal	$491,474	$502,346	$513,190	$524,543	$536,146	$548,006	$560,129
Total	$1,560,235	$1,594,749	$1,629,176	$1,665,215	$1,702,051	$1,739,702	$1,778,186

Source: TNDG

Table A-6
Potential Capture of Market Area Demand for Retail Sales Expressed in Percentages
NW Fresno Retail Trade Area

Retail Category	2013	2015	2017	2019	2021	2023	2025
Shopper Goods:							
Clothing and Clothing Accessories	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
General Merchandise	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Home Furnishings and Appliances	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Specialty/Other	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Convenience Goods:							
Food and Beverage	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Food Service and Drinking	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Heavy Commercial Goods:							
Bldg. Matrl. and Garden Equip. and Supplies	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Motor Vehicle and Parts Dealers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: TNDG

Table A-7
Potential Capture of Market Area Demand for Retail Sales
NW Fresno Retail Trade Area
In thousands of constant dollars

Retail Category	2013	2015	2017	2019	2021	2023	2025
Shopper Goods:							
Clothing and Clothing Accessories	$165,775	$169,442	$173,100	$176,929	$180,843	$184,843	$188,932
General Merchandise	$99,465	$101,665	$103,860	$106,157	$108,506	$110,906	$113,359
Home Furnishings and Appliances	$79,572	$81,332	$83,088	$84,926	$86,805	$88,725	$90,687
Specialty/Other	$139,251	$142,331	$145,404	$148,620	$151,908	$155,268	$158,703
Subtotal	$484,063	$494,771	$505,452	$516,633	$528,061	$539,743	$551,682
Convenience Goods:							
Food and Beverage	$288,644	$295,029	$301,398	$308,065	$314,879	$321,845	$328,964
Food Service and Drinking	$179,037	$182,997	$186,948	$191,083	$195,310	$199,631	$204,047
Subtotal	$467,681	$478,026	$488,345	$499,148	$510,190	$521,476	$533,011
Heavy Commercial Goods:							
Bldg. Matrl. and Garden Equip. and Supplies	$101,415	$103,659	$105,896	$108,239	$110,633	$113,081	$115,582
Motor Vehicle and Parts Dealers	$202,831	$207,317	$211,793	$216,478	$221,267	$226,161	$231,164
Subtotal	$304,246	$310,976	$317,689	$324,717	$331,900	$339,242	$346,746
Total	$1,255,989	$1,283,773	$1,311,487	$1,340,498	$1,370,151	$1,400,460	$1,431,440

Source: TNDG

Table A-8
Sales Per Square Foot Standards (non-grocery categories)
NW Fresno Retail Trade Area
Expressed in Sales/Square Feet

Retail Category	Sales/Square Feet
Shopper Goods:	
GAFO*	$250
Food Service and Drinking	$300
Bldg. Matrl. and Garden Equip. and Supplies	$250
Automotive Parts	$175

*GAFO: General Merchandise, Apparel, Furniture/Appliances, Other/Specialty

Source: Retail Maxim; Urban Land Institute (ULI); TNDG.

Table A-9
Potential Demand for Retail Space (non-grocery categories)
NW Fresno Retail Trade Area
Expressed in Square Feet

Retail Category	2013	2015	2017	2019	2021	2023	2025
Shopper Goods:							
GAFO Total	1,936,252	1,979,084	2,021,807	2,066,532	2,112,245	2,158,970	2,206,729
Convenience Goods:							
Food Service and Drinking	596,790	609,992	623,160	636,945	651,035	665,436	680,156
Heavy Commercial Goods:							
Bldg. Matrl. and Garden Equip. and Supplies	405,661	414,635	423,586	432,956	442,533	452,323	462,328
Automotive Parts*	150,674	154,007	157,332	160,812	164,370	168,006	171,722
Gasoline Stations	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	556,335	568,642	580,918	593,768	606,903	620,329	634,050
Total Retail Space	3,089,377	3,157,718	3,225,885	3,297,245	3,370,183	3,444,735	3,520,935

*Assumes that automotive parts stores account for 13% of sales in overall Automotive group category (based on statewide average in 2009-2011).

Source: TNDG

Table A-10
Existing Square Feet of Retail Space
NW Fresno Retail Trade Area

Retail Category	Square Feet
Shopper Goods:	
GAFO Total	1,448,540
Convenience Goods:	
Food and Beverage	577,866
Food Service and Drinking	513,192
Subtotal	1,091,058
Heavy Commercial Goods:	
Bldg. Matrl. and Garden Equip. and Supplies	196,594
Automotive Parts	97,959
Gasoline Stations	N/A
Subtotal	294,553
Services Space	515,909
Vacant	741,748
GRAND TOTAL	***4,091,808***

Source: TNDG

Table A-11
Net Demand for Retail Space (non-grocery categories)
NW Fresno Retail Trade Area
Expressed in Square Feet

Retail Category	2013	2015	2017	2019	2021	2023	2025
Shopper Goods:							
GAFO Total	487,712	530,544	573,267	617,992	663,705	710,430	758,189
Convenience Goods:							
Food Service and Drinking	83,598	96,800	109,968	123,753	137,843	152,244	166,964
Heavy Commercial Goods:							
Bldg. Matrl. and Garden Equip. and Supplies	209,067	218,041	226,992	236,362	245,939	255,729	265,734
Automotive Parts	52,715	56,048	59,373	62,853	66,411	70,047	73,763
Gasoline Stations	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	261,782	274,089	286,365	299,215	312,350	325,776	339,497
Total Retail Space	833,092	901,433	969,600	1,040,960	1,113,898	1,188,450	1,264,650
Services Space @ 10% of Total Space	92,566	100,159	107,733	115,662	123,766	132,050	140,517
GRAND TOTAL	***925,658***	***1,001,592***	***1,077,333***	***1,156,622***	***1,237,664***	***1,320,500***	***1,405,167***

Source: TNDG

Table A-12
Potential Sales Impacts to Existing Supermarkets
NW Fresno Retail Trade Area
Expressed in Sales per Square Feet

Demand Variable	2013	2015	2017	2019	2021	2023	2025
Total Food Sales Demand (000's)	$288,644	$295,029	$301,398	$308,065	$314,879	$321,845	$328,964
Estimated Supermarket Share	75%	75%	75%	75%	75%	75%	75%
Total Potential Supermarket Sales	$216,483	$221,271	$226,048	$231,049	$236,160	$241,384	$246,723
Less Demand Absorbed by New Facilities*:							
--Wal-Mart Supercenter		($23,219)	($23,219)	($23,219)	($23,219)	($23,219)	($23,219)
Net Demand Available to Support Existing Supermarkets	$216,483	$198,053	$202,829	$207,830	$212,941	$218,165	$223,504
Existing Supermarket Sq. Ft.	466,730	466,730	466,730	466,730	466,730	466,730	466,730
Potential Sales Per Square Foot Existing Supermarkets	***$464***	***$424***	***$435***	***$445***	***$456***	***$467***	***$479***

*Sales per square foot (gross area) assumptions:
Wal-Mart $473

Source: TNDG; Progressive Grocer, The Super 50, May 2012.

APPENDIX B:

RETAIL INVENTORY
NORTHWEST FRESNO RETAIL TRADE AREA

Table B-1
Retail Inventory - Shopping Centers and Freestanding Space
Northwest Fresno Retail Trade Area

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
MARKS AND BULLARD SHOPPING CENTER	**109,849**	**28,598**	**26.0%**		
3049 W Bullard Ave	15,048	15,048		Vacant	VAC
	9,282			Old Doc's Discount Liquor	F
	8,052			Overthrone Base Camp	SVC
	10,824			Fresno County Public Library	SVC
	17,160			Mayson Ace Hardware	BHG
	1,200			The Door Art Gallery	S
	1,200			Enchanted Nails, Hair	SVC
	1,200	1,200		Vacant	VAC
	1,980			Radiance Salon & Boutique	SVC
	2,880			Optometry	SVC
	1,200			Hye Deli	ED
	1,260			Coast to Coast Electronics	FA
	1,200	1,200		Vacant	VAC
	2,100			The Frame Store	S
	2,100			The Way of Japan	SVC
	4,440			OVIDIO Ristorante Italiano	ED
	5,328			Fresno County Credit Union	SVC
	3,050	3,050		Vacant	VAC
	1,000	1,000		Vacant	VAC
	1,000	1,000		Vacant	VAC
	1,450	1,450		Vacant	VAC
	600	600		Vacant	VAC
	950			A Golden Touch	SVC
	3,650			San Roque Florist	S
	3,350			Fat Boys	ED
	2,250			Classic Cleaners	SVC
	1,000			Gili Alterations	SVC
	1,000			Kenmor Jewelers	A
	1,000	1,000		Vacant	VAC
	1,000	1,000		Vacant	VAC
	2,050	2,050		Vacant	VAC
	45			Retro Espresso	ED
EL PASEO PLAZA	**38,228**	**8,837**	**23.1%**		
3006 W Bullard Ave	2,394			Quick 'N' E-Z Food Liquor	F
	2,044			Bravo Barber Shop	SVC
	2,044	2,044		Vacant	VAC
	2,352			Royal Market & Deli	ED
	914			LR Stone's Firearms	S
	2,874	2,874		Vacant	VAC
	2,090			El Mariachi Mexican Restaurant	ED
	2,090			Coiffures Salon by Aziza	SVC
	1,176			Flowers and More by Gemma	S
	2,874	2,874		Vacant	VAC
	1,176			Smoke Shop Discount Cigaretts & Cigars	S
	914			Allstate	SVC
	1,045	1,045		Vacant	VAC
	1,568			Insight Photography	S
	1,698			e Nails Spa Pedicures	SVC
	1,176			Ding Ho Kitchen	ED
	1,176			Bright Cleaners	SVC
	8,622			West Americabank	SVC
SUNSET SQUARE	**105,547**	**26,815**	**25.4%**		
7075 N Marks Ave	26,815	26,815		Vacant	VAC
	37,736			Save Mart	F
	1,330			Da Vinci's Pizza	ED
	1,330			Subway	ED
	1,330			Sunset Square Management	SVC
	1,330			Pack & Ship Pros of Fresno	SVC
	1,330			Top Nails	SVC
	1,995			VIP Salon	SVC
	1,330			Lela's	ED
	1,330			Diamond Brokers	A
	1,995			Sunsational Tans	SVC
	1,330			Mannequin Boutique	A

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	998			State Farm Insurance	SVC
	998			Sycamore Framing Art Gallery	S
	1,164			Martinizing Dry Cleaning	SVC
	1,496			Asuka Japanese Cuisine	ED
	1,330			The Body in the Bog Pub	ED
	2,660			Elite Liquors	F
	2,052			Taco Bell	ED
	6,420			McDonalds	ED
	2,850			Citibank	SVC
	6,396			Chase	SVC
VILLAGE WALK	**42,473**	**11,962**	**28.2%**		
6360 N Figarden Dr	6,816			Auto Zone	AD
	7,007	7,007		Vacant	VAC
	13,517			Fitness Evolution (Under Construction)	SVC
	1,746			Cosmo Proof	S
	4,955	4,955		Vacant	VAC
	8,432			Family Dollar	GM
FIG LEAF PLAZA	**25,506**	**2,162**	**8.5%**		
6010 N Figarden Dr	14,490			Walgreens	GM
	975			Press Box Sports Grill	ED
	926			MGA Liquor Deli	F
	1,698			Fig Leaf Salon	SVC
	1,081	1,081		Vacant	VAC
	1,081	1,081		Vacant	VAC
	1,235			Deli Delicious	ED
	4,020			The Golden 1	SVC
THE GROVE	**27,946**	**21,899**	**78.4%**		
4045 N Figarden Dr	3,660			Dempsy Orthodontics	SVC
	3,660	3,660		Vacant	VAC
	2,865	2,865		Vacant	VAC
	1,910	1,910		Vacant	VAC
	2,387			Electric Beach Tanning & Salon	SVC
	2,442	2,442		Vacant	VAC
	11,022	11,022		Vacant	VAC
UNNAMED (NEC BULLARD / N FIGARDEN)	**89,710**	**9,578**	**10.7%**		
6055 N Figarden Dr	1,824			Pizza Hut	ED
	1,368	1,368		Vacant	VAC
	1,520			Cleaners	SVC
	1,216			Subway	ED
	1,216	1,216		Vacant	VAC
	1,064			H & R Block	SVC
	1,368			Endless Summer Tan	SVC
	51,000			OSH	BHG
	1,197			Leslie's Nails	SVC
	1,197			Hair Zone	SVC
	1,197			Cigarette Shop	S
	1,197	1,197		Vacant	VAC
	898			T & D Donuts	ED
	1,496			Postal Annex	SVC
	898			China Kitchen	ED
	1,512			Los Gallos Taqueria	ED
	1,380	1,380		Vacant	VAC
	2,967	2,967		Vacant	VAC
	725	725		Vacant	VAC
	725	725		Vacant	VAC
	6,384			O'Riley Auto Parts	AD
	2,457			Advance America Cash Advance	SVC
	1,638			Starbucks Coffee	ED
	3,264			Carls Jr.	ED
HERNDON PLACE	**107,858**	**11,325**	**10.5%**		
6797 N Milburn Ave	1,587			Karate	SVC
	2,622	2,622		Vacant	VAC
	1,147			Edible Arrangements	S
	6,930			Fitness 19	SVC
	2,898	2,898		Vacant	VAC
	1,147			Nutrishop	S
	983	983		Vacant	VAC

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	1,311	1,311		Vacant	VAC
	983			Postalannex	SVC
	3,381			Pho Bac Hon Viet	ED
	3,588			Chase	SVC
	1,311			Little Ceasers	SVC
	1,475			Checks Cashed Loans, Pay Bills	SVC
	1,475			Haircuts Plus	SVC
	1,475			Nails Club	SVC
	52,525			Save Mart Supermarkets	F
	4,960			Jack in the Box	ED
	5,593			Educational Employees Credit Union	SVC
	3,860			Starbucks Coffee Drive Thru	ED
	1,390			Quiznos Subs	ED
	1,390			Apollo Pita	ED
	926			State Farm	SVC
	1,390			Marble Slab Creamery	ED
	1,495	1,495		Vacant	VAC
	2,015	2,015		Vacant	VAC
THE CROSSING	**39,354**	**18,408**	**46.8%**		
6800 N Milburn Ave	15,800			CVS	GM
	5,146			Wells Fargo	SVC
	4,480	4,480		Vacant	VAC
	13,928	13,928		Vacant	VAC
RIVERSIDE CENTER	**29,707**	**12,138**	**40.9%**		
5374 W Spruce Ave	2,250			Me-n-Ed's neighborhood Pizza Parlor	ED
	2,257			Casey's Bar & Grill	ED
	950			Elite Cleaners	ED
	713			Pampered Pet Grooming	SVC
	1,069			Barber Shop	SVC
	831			Bombay Look Beauty Salon	SVC
	1,188	1,188		Vacant	VAC
	2,475			Khalsa Gift and Groceries	S
	1,100			Star Indian Cuisine & Sweet Center	ED
	4,000	4,000		Vacant	VAC
	4,950	4,950		Vacant	VAC
	2,975			No Limit Fitness	SVC
	2,000	2,000		Vacant	VAC
	1,700			Jiffy Lube	AD
	1,250			Chevron	GAS
6833 N Golden State	1,736			Starbucks Coffee Drive Thru	ED
	1,674			Subway	ED
	3,534			Yukon Jack's Log Cabin Dining	ED
6745 N Golden State	2,200			Taco Bell	ED
	5,845			Klein's Country Store/Truck Stop	ED
	1,188			Burder King (Shell Mini-Mart)	ED
UNNAMED CENTER	**17,885**	**2,989**	**16.7%**		
7010 N Marks	1,830			Baskin 31 Robins / Togo's	ED
	1,342	1,342		Vacant	VAC
	1,647	1,647		Vacant	VAC
	13,066			Tri County Bank	SVC
PAVILION WEST	**65,937**	**1,777**	**2.7%**		
2003 W Bullard Ave	6,461			Bentley's	ED
	1,040			Chateau Cleaners	SVC
	1,029			Premier Fine Jewerlers and Gemologists	A
	882			Something Different-Apparel, Accessories	A
	1,500			Merle Norman Cosmetics Studio	SVC
	2,250			Elan - Hair, nails	SVC
	2,250			Bouquet of Fruit	S
	3,600			China Bistro	ED
	980			Amir's Kebob	ED
	1,121			Crème de la Cake	ED
	2,139			Realty World	SVC
	1,725			A Feliche - Italian Ladies, Clothing	A
	1,147			The Travel Address	SVC
	1,406			Pack & Ship Authority	SVC
	1,406			The Patio Place	FA

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	1,406			Nonnie's House Boutique	A
	1,406			Oh So Swanki	S
	1,406			Henry's Salon	SVC
	2,484			PJ Barrett's Clothing and Interiors	A
	1,639			Persian Rugs	FA
	1,147			Natures Nutrients	S
	2,691			Curves for Women	SVC
	1,216			Rosa Linda's Fine Mexican Cuisine	ED
	1,062			Bead Artistry	S
	986			Nails Plus Beau	SVC
	1,260			Cookies By Design	F
	1,224			Eurotan	SVC
	2,261			Kid Dreams	S
	1,777	1,777		Vacant	VAC
	4,148			Japanese and Korean Cuisine	ED
	2,652			Pamela Leeds Photography	S
	3,180			Fresno Breakfast House	ED
	1,995			Rolf's Gallery	S
	1,581			Paninis	ED
	1,479			Yodigity Yogurt	ED
FRESNO COMMONS	**48,529**	**5,195**	**10.7%**		
7015 N West Ave	4,042			Me-n-Ed's Neighborhood Pizzaeria	ED
	2,040	2,040		Vacant	VAC
	1,140	1,140		Vacant	VAC
	1,430			Payless Flooring	BHG
	1,040			Golden Mist Airbrush Tanning	SVC
	2,015	2,015		Vacant	VAC
	1,440			Kimmy's Nails & Beauty	SVC
	1,200			Quest Diagnostics	SVC
	2,867			The Terraces	SVC
	2,074			Indulge Salon & Spa	SVC
	5,307			Dennis E. Shamlian D.D.S.	SVC
	9,000			Premier Bride Wedding Center	SVC
	14,934			Walgreens	GM
UNNAMED CENTER	**31,600**	**0**	**0.0%**		
SEC Brawley & Shields	16,200			Rite Aid	GM
	6,600			Autozone	AD
	8,800			Family Dollar	GM
UNNAMED CENTER	**116,197**	**84,659**	**72.9%**		
NEC Brawley & Shields	31,472	31,472		Vacant	VAC
	9,800			Dollar Tree	GM
	35,724	35,724		Vacant	VAC
	1,050			Check n Go	SVC
	3,544	3,544		Vacant	VAC
	1,050			Sing Tao	ED
	1,181			Salon Bella Vita	SVC
	6,919	6,919		Vacant	VAC
	2,450			Round Table Pizza	ED
	3,117			Buy Rite Liquor	F
	2,203			El Bajio	ED
	7,000	7,000		Vacant	VAC
	1,050			Checks Cashed	SVC
	1,050			Smoke Shop	S
	1,913			Subway	ED
	1,575			Arsenio's	ED
	5,100			McDonalds	ED
UNNAMED CENTER	**90,237**	**4,063**	**4.5%**		
4043 W Clinton Ave	4,063	4,063		Vacant	VAC
	2,188			Radioshack	FA
	50,318			Save Mart	F
	1,006			H&R Block	SVC
	1,150			Smoke Shop	S
	1,294			Nail World	SVC
	1,294			Little Caesars	ED
	1,006			Dragon Restaurant	ED
	1,438			Cash Advance	SVC
	21,356			CVS	GM
	3,400			Burger King	ED

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	1,725			Taco Bell	ED
1839 W Clinton Ave	1,400			Handy Stop Gas	GAS
	1,438			Hair Cuts	SVC
	2,300	2,300		Vacant	VAC
	1,438			Pizza Hut	ED
SWC Clinton & West	2,363			Mom's Burgers	ED
	1,688			Payday Loans	SVC
	1,688			Lela's Pizzeria	ED
	2,813			Laundry Day	SVC
UNNANMED CENTER	**12,750**	**0**	**0.0%**		
1808 W Clinton Ave	7,125			Super Mercado El Provinciano	F
	2,625			El Tapatio	ED
	1,500			Beauty Salon	SVC
	1,500			Inglecsia Christiana	S
UNNAMED CENTER	**21,250**	**0**	**0.0%**		
NEC Clinton & Marks	2,188			Arco	GAS
	1,406			Fresh Donuts	ED
	1,250			Mail Box Center	SVC
	1,250			J&L Check Cashing	SVC
	2,813			Wash Station	SVC
	5,938			Pallca Bazar	S
	1,563			The Panda Room	ED
	1,875			Romeo's Pizza	ED
	1,406			Boost Mobile	S
	1,563			99 Cents Family Saving	GM
NWC Clinton & Marks	2,813			Arco	GAS
	900			Pure Water	S
	2,475			Sher E Punjab	F
	788			Lovely Fabrics	S
	2,250			Jack in the Box	ED
OFFICE MAX CENTER	**56,000**	**9,800**	**17.5%**		
NWC Shaw & West	1,275			Nina's Bakery	ED
	2,450	2,450		Vacant	VAC
	6,000	6,000		Vacant	VAC
	23,200			Office Max	S
	14,488			Tang Dynasty Super Buffet	ED
	1,688			The Broilers	ED
	1,350	1,350		Vacant	VAC
	1,575			Starbucks	ED
	1,800			Taco Bell	ED
	2,175			Gas Station	GAS
TAHOE JOE'S CENTER	**41,256**	**11,419**	**27.7%**		
NEC Shaw & Marks	7,875			Tahoe Joe's	ED
	1,938			Minuteman Press	SVC
	1,938			Check n Go	SVC
	1,938			Fosters Donuts	ED
	1,238			Betty's Sandwiches	ED
	1,444			Uncle Harry's	ED
	4,950			Freebirds	ED
	3,263	3,263		Vacant	VAC
	2,538	2,538		Vacant	VAC
	3,444	3,444		Vacant	VAC
	1,631			Ewell's Place	ED
	1,450			Shear Magic	SVC
	1,631			Pete's Teriyaki	ED
	2,175	2,175		Vacant	VAC
	3,806			Jazzy D	SVC
TARGET CENTER	**301,006**	**82,013**	**27.2%**		
NWC Shaw & Marks	10,000			Big 5	S
	2,231			Jimmy Johns	ED
	3,150			Carl's Jr	ED
	3,713			Country Waffles	ED
	2,025			AAA Relaxation Salon	SVC
	2,700			China Chop Suey	ED

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	2,025			Diana's	ED
	1,688			Salon Lucente	SVC
	1,856			Brahma Bull	ED
	4,388			Edo-Ya	ED
	36,139			Stein Mart	A
	3,938			Family Christian Stores	S
	2,063	2,063		Vacant	VAC
	3,000			Styles For Less	A
	7,688	7,688		Vacant	VAC
	9,750			Anna's Linnens	S
	2,063	2,063		Vacant	VAC
	70,200	70,200		Vacant	VAC
	101,848			Target	GM
	2,700			Backyard Spa	BHG
	1,688			Lucky Nails & Spa	SVC
	2,025			Supercuts	SVC
	1,350			IK Noon Threading	SVC
	1,688			Verizon	S
	1,350			Papa Murphy's	ED
	2,025			La Perla Tapatia Shoe Repair	SVC
	2,700			Springleaf Financial	SVC
	6,581			Texas Roadhouse	ED
	8,438			Mattress Land	FA
ARBOR FAIRE	**273,991**	**1,563**	**0.6%**		
NEC Shaw & Valentine	8,063			Sleeptrain	FA
	3,938			Bright Now Dental	SVC
	25,608			Petsmart	S
	102,160			Home Depot	BHG
	14,710			Western Marine	S
	25,290			Smart & Final	F
	77,360			Dick's	S
	1,406			GNC	S
	1,563	1,563		Vacant	VAC
	1,875			Fedex Office	SVC
	2,500			Sprint	S
	1,875			See's Candy	ED
	1,250			Batteries Plus	BHG
	1,719			L&L Barbeque	ED
	1,875			Bobby Salazar's	ED
	2,800			El Pollo Loco	ED
TOYS R US CENTER	**73,313**	**0**	**0.0%**		
3520 W Shaw Ave	45,900			Toys R Us	S
	23,700			Grocery Outlet	F
	3,713			Panera	ED
WEST POINTE	**235,706**	**26,722**	**11.3%**		
NEC Shaw & Brawley	5,363			Applebees	ED
	5,038			Marie Callenders	ED
	1,688			Broadway Liquor	F
	1,519			Sun Kissed Nails	SVC
	1,688			Astetic Edge	SVC
	1,688			A-One Jewelry	A
	3,881	3,881		Vacant	VAC
	1,688			Body Massage	SVC
	1,856	1,856		Vacant	VAC
	1,519			Cash Advance	SVC
	1,688			Gano Excel	SVC
	1,688			Beauty 4 U	SVC
	2,025	2,025		Vacant	VAC
	1,688			Gobind	A
	1,519			KK Nails	SVC
	1,688			CAI Insurance	SVC
	1,688			Dentist	SVC
	4,219	4,219		Vacant	VAC
	3,713			Payless	A
	126,783			Walmart	GM
	16,232			Goodwill	S
	1,750			Mariscos Colima	ED
	1,750			Jamba Juice	ED
	1,750			Panda Express	ED

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	24,000			Office Depot	S
	14,741	14,741		Vacant	VAC
	2,713			Del Taco	ED
	150			Planet Java	ED
DIRECT BUY CENTER	**98,280**	**0**	**0.0%**		
4150 W Shaw Ave	18,900			Direct Buy	FA
	31,913			99 Cents Only	GM
	39,011			Crazy Bernie's	FA
	8,456			Sleeptrain	FA
SHAW VIEW SHOPPING CENTER	**68,135**	**5,493**	**8.1%**		
NEC Shaw & Blythe	2,400			Wendy's	ED
	4,644			Discount Tires	AD
	32,080			Bally's Blast	SVC
	5,208			Fisherman's Warehouse	S
	4,312			AMB Sanchez Charter High School	SVC
	5,214			Taj of India	ED
	2,001	2,001		Vacant	VAC
	3,492	3,492		Vacant	VAC
	3,498			Sun Angels	SVC
	1,996			Castillo's	ED
	3,290			T Mobile	S
COSTCO CENTER	**300,596**	**0**	**0.0%**		
NWC Shaw & Blythe	3,250			Popeyes	ED
	5,850			Radioshack	FA
	2,925			Hair & Nails	SVC
	2,600			Cravings	ED
	3,250			Postal Station	SVC
	3,250			Fashions & More	A
	6,825			Armed Forces Career Center	SVC
	1,300			Wells Fargo ATM	SVC
	11,050			Dollar Tree	GM
	12,350			Harbor Freight Tools	BHG
	92,279			Winco	F
	133,790			Costco	GM
	21,877			Pep Boys	AD
UNNAMED CENTER	**12,131**	**2,444**	**20.1%**		
4175 W Shaw Ave	2,356			KFC	ED
	3,825			Mattressland	FA
	2,444	2,444		Vacant	VAC
	956			Market	F
	2,550			Me n Ed's Pizza	ED
SHAW & BRAWLEY PLAZA	**14,650**	**0**	**0.0%**		
3759 W Shaw Ave	1,750			Chevron	GAS
	1,250			Payday Now	SVC
	1,750			Port of Subs	ED
	1,250			Pacifica Pizza	ED
	1,250			Slick's Bar	ED
	1,000			Cricket	S
	1,500			Enterprise	SVC
	1,500			Express Graphics	SVC
	3,400			Keothip	ED

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
THE SHAW MARKETPLACE	**252,725**	**14,656**	**5.8%**		
SEC Shaw & Brawley	3,281			Chase	SVC
	2,844			Coast Guard Recruting	SVC
	1,969			Casa de Temales	ED
	2,406			National Guard Recruiting	SVC
	6,781	6,781		Vacant	VAC
	1,969			Verizon	S
	2,406			Game Stop	S
	1,969			Cigarettes	S
	3,500			Catherine's	A
	88,248			Kohls	A
	7,700			Famous Footwear	A
	24,491			Old Navy	A
	59,061			Foods Co	F
	4,725			El Michoacano	ED
	2,363	2,363		Vacant	VAC
	2,888	2,888		Vacant	VAC
	2,625			Revolver Hair Studio	SVC
	2,625			Ybarra Bros Jewelers	A
	2,100			Nails	SVC
	2,625	2,625		Vacant	VAC
	13,400			Party City	S
	12,750			Hometown Buffet	ED
BROADWAY FAIRE	**195,739**	**33,519**	**17.1%**		
3241 W Shaw Ave	6,000			Red Robbin	ED
	3,500			Conroy's Flowers	S
	2,750			Liqour 4 U	F
	2,500	2,500		Vacant	VAC
	39,983			United Artists Theater	SVC
	3,150	3,150		Vacant	VAC
	3,150			California Wok	ED
	20,869	20,869		Vacant	VAC
	7,538			Carpeteria	BHG
	7,000	7,000		Vacant	VAC
	55,224			Food Maxx	F
	1,450			Best Cuts	SVC
	9,425			Dollar Only	GM
	1,994			Gifts & More	S
	1,450			Nail Glamour	SVC
	1,994			Laundry Day	SVC
	1,631			Shoe Repair	SVC
	1,450			Somna Jewelers	A
	1,813			Bases Loaded	S
	2,175			India Sweets & Spices	F
	2,356			Atlas Health Care	SVC
	2,538			U Save Liquor	F
	1,813			Hon's Chinese Food	ED
	2,538			Chili Night	ED
	1,813			Little Caesars	ED
	4,125			McDonalds	ED
	2,756			At&t	S
	2,756			Fresno Cigar	S
TIMES SQUARE	**153,728**	**14,144**	**9.2%**		
SWC Shaw & Marks	2,875			Sushi Culture	ED
	1,375			Starbucks	ED
	7,044	7,044		Vacant	VAC
	29,540			Big Lots	GM
	8,525			Marinello School of Beauty	SVC
	12,000			Chuck E Cheese's	ED
	3,374			Rent A Center	FA
	2,000			Sterling Cleaners	SVC
	1,360			Subway	ED
	1,800			Freeway Insurance	SVC
	1,400			Cash 4 Gold	SVC
	2,640			Sunrise Health Foods	F
	1,800			Thai Massage	SVC
	2,600	2,600		Vacant	VAC
	36,800			Ross	A
	4,500			Sandy's Furniture	FA
	5,063			Dot	A

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	6,500			Union Bank	SVC
	5,900			Western Dental	SVC
	3,088			Check Cashing	SVC
	5,700			Sizzler	ED
	2,400			Plaza Ventana	ED
	945			Border Cantina	ED
	4,500	4,500		Vacant	VAC
UNNAMED CENTER	**39,100**	**2,013**	**5.1%**		
NEC Shaw & Marks	3,450			Smile Care	SVC
	2,300			City Video	S
	2,013			Family Vet	SVC
	2,588			Fast Signs	SVC
	1,150			Sun City Tan	SVC
	1,438			Karate	SVC
	1,150			Japanese Fast Food	ED
	1,294			Reflections	SVC
	1,150			Mike's Pizzeria	ED
	3,163			Elite Fitness	SVC
	2,013			4 K Management	SVC
	1,725			Manny's Mexican Food	ED
	2,013	2,013		Vacant	VAC
	1,438			Valley Tax	SVC
	1,438			Massage	SVC
	2,156			Deli Delicious	ED
	1,006			Cell Pros	S
	1,869			State Bank of India	SVC
	5,750			Outback	ED
PICADILLY SQUARE	**29,406**	**3,506**	**11.9%**		
SEC Shaw & Sequoia	15,913			Pardinis	ED
	3,506			DiCicco's	ED
	2,656	2,656		Vacant	VAC
	1,275			Craftopia	S
	850			Hot Local Deals	SVC
	850	850		Vacant	VAC
	1,488			Mi Casa	ED
	850			Hair Evolution	SVC
	1,381			Picadilly Liquor	F
	638			Nails By Gloria	SVC
FRESH & EASY CENTER	**80,044**	**19,850**	**24.8%**		
SWC Shaw & West	19,800			TJ Maxx	A
	13,500	13,500		Vacant	VAC
	2,450	2,450		Vacant	VAC
	1,750			Cash Advance	SVC
	1,750			H&R Block	SVC
	1,750			Jones Cleaners	SVC
	3,250			Radioshack	FA
	3,900			Sally Beauty Supply	S
	3,900	3,900		Vacant	VAC
	13,969			Fresh & Easy	F
	14,025			Rite Aid	GM
UNNAMED CENTER	**20,250**	**5,400**	**26.7%**		
NWC Ashlan & West	1,800	1,800		Vacant	VAC
	1,500			WIC	SVC
	1,650			San Lorenzo	SVC
	1,200			Liberty Tax	SVC
	1,800			Cricket	S
	2,700			Quickeroo	SVC
	1,500			Subway	ED
	1,200			Smoke Shop	S
	2,100			Liquor Zone	F
	1,200			Hair & Nails	SVC
	3,600	3,600		Vacant	VAC

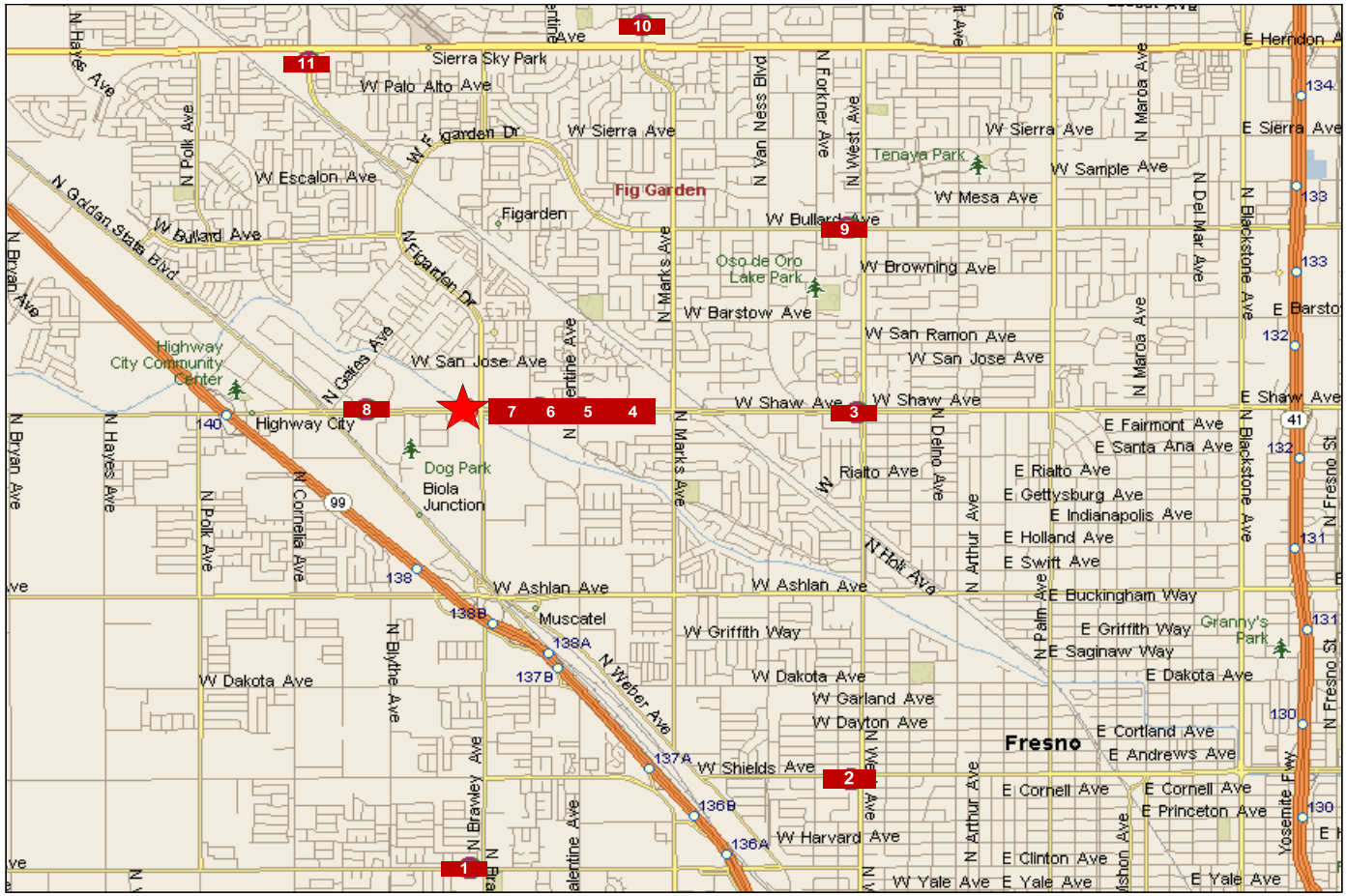
Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
LAN MARK PLAZA	**49,169**	**5,038**	**10.2%**		
NWC Marks & Ashlan	481			Arco	GAS
	300			Al's Rico Tacos	ED
	21,450			Autozone	AD
	11,500			Family Dollar	GM
	1,625			Ann's Donuts	ED
	2,275	2,275		Vacant	VAC
	2,763	2,763		Vacant	VAC
	1,788			The Medicine Shoppe	GM
	1,625			Ashlan Dental Center	SVC
	5,363			Dan's Liquor	F
UNNAMED CENTER	**28,925**	**4,388**	**15.2%**		
NWC Ashlan & Blythe	4,550			Fresno Credit Union	SVC
	4,063			Super Liquor #4	F
	2,113			Curves	SVC
	1,300			Nails	SVC
	1,788			DaVinci's Pizza	ED
	1,625			Legendary Pho Kitchen	ED
	1,300			Starlight Beauty Salon	SVC
	3,088	3,088		Vacant	VAC
	1,625			Oishii	ED
	1,300	1,300		Vacant	VAC
	1,625			Laundry & Cleaners	SVC
	2,925			Asian One Grocery	F
	1,625			Insurance	SVC
UNNAMED CENTER	**15,275**	**1,650**	**10.8%**		
SWC Ashlan & Blythe	1,650	1,650		Vacant	VAC
	1,500			Quiznos	ED
	1,500			Starbucks	ED
	1,563			Supercuts	SVC
	1,563			Cricket	S
	1,250			Ashlan Medical Clinic	SVC
	1,875			Cash Advance	SVC
	4,375			O'Reilly Auto Parts	AD
UNNAMED CENTER	**39,781**	**3,325**	**8.4%**		
SWC Ashlan & Marks	1,544			Ruhana Boutique	A
	1,425			A.S. Jewelers	A
	1,188			T Shirts & More	A
	1,306			Moga Music	S
	1,188			Rakhra Tax Service	SVC
	950			Moge Computer Services	FA
	831			Green Valley	SVC
	950			Photography	SVC
	1,188			Al Rico's Tacos	ED
	1,900	1,900		Vacant	VAC
	1,663			Laundry King	SVC
	3,325			India Chat House	ED
	1,900			India Sweets & Spices	F
	1,425	1,425		Vacant	VAC
	2,613			Chai's Restaurant	ED
	7,838			India's Oven	ED
	2,850			Discount Liquor	F
	1,425			Cash Advance	SVC
	1,425			Jackson Hewit	SVC
	2,850			7 Eleven	GAS
Weber & Cinton	1,925			Dollar Store	GM
	1,375	1,375		Vacant	VAC
	1,650			Income Tax	SVC
	1,375			After Dark	ED
UNNAMED CENTER	**12,613**	**0**	**0.0%**		
NWC Hughes & Weber	2,025			Rudy Jr. Chicken Man	ED
	2,000			Tacos La Piedad	ED
	4,200			Fair Price Laundry	SVC
	4,388			Family Dollar Market	GM
LAS PALMAS CENTER	**40,270**	**938**	**2.3%**		
SWC Shields & West	14,688			CVS	GM

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
	22,770			Las Palmas Super Mercado	F
	938			Jackson Hewitt	SVC
	938			Fresno Check Cashing	SVC
	938	938		Vacant	VAC
SWC Shields & West	1,750			The Office	ED
	1,050			MPX Food Market	F
	1,050			Thrift Wash	SVC
	788			Hair Boutique Barber	SVC
	788			Water	S
	700			Income Tax	SVC
NWC Shields & West	1,444			Krue Kuts Barbershop	SVC
	3,019			G&G Liquor & Deli	F
	1,575			Nick's	ED
	2,888			Flower Shop	S
SAVE MART CENTER	**61,971**	**1,800**	**2.9%**		
2066 W Bullard	33,858			Save Mart	F
	2,300			Verdalee	S
	1,581			Paris Nails & Spa	SVC
	1,006			Prestige Salon	SVC
	1,438			Oka Japanese Cuisine	ED
	863			Subway	ED
	1,006			Allena Interriors	BHG
	4,456			Bullard Pharmacy	S
	1,294			Post Office	SVC
	2,300			The Berrock Shop	ED
	719			Tresses Hair Salon	SVC
	1,150			Green Mile Smoke Shop	S
	1,150			Hye Market	F
	1,800	1,800		Vacant	VAC
	1,350			Village Shoes	A
	1,350			Elan Salon	SVC
	2,700			Discovery Shop	S
	1,650			Fitness for Life Personal Trainer	SVC
FREESTANDING FRESNO					
6765 N West Ave	3,655			Rally's Hamburgers	ED
6945 W Shields Ave	3,000			Grant Market	F
5014 W Shields Ave	4,250			Central Liquor	F
5014 W Shields Ave	1,275			Central Bar	ED
4386 W Shields Ave	1,200			Shop n Gas	GAS
3110 W Shields Ave	2,900			Fresno Gas	GAS
4385 W Clinton Ave	2,400			Chevron	GAS
3071 W Clinton Ave	7,088			O'Reilley Auto Parts	AD
2801 W Clinton Ave	3,931			Arco	GAS
2727 W Clinton Ave	1,800			The New Moon Lite	ED
2727 W Clinton Ave	900			Fashion Cut	SVC
2727 W Clinton Ave	900			TVN Sports Cards	S
1344 W Clinton Ave	13,410			Walgreens	GM
1736 W Clinton Ave	2,713			Me N Ed's Pizzeria	ED
1914 W Clinton Ave	4,375			Di Cicco's	ED
1930 W Clinton Ave	2,025			United Gas	GAS
2734 West Clinton Ave	950			Whiskey Dick's	ED
2424 N Brawley Ave	14,405			Walgreens	GM
2450 N Brawley Ave	12,188			Wells Fargo	SVC
9931 W McKinley Ave	1,875			R&L Market	F
11499 W McKinley Ave	2,550			West McKinley Market	F
NWC McKinley & Brawley	2,400			Liquor Bank	F
1585 N West Ave	2,600			76 Station	GAS
3256 W McKinley Ave	1,400			Discount Market	F
3375 W Olive Ave	4,800			Town & Country Market	F
1823 W Olive Ave	2,800			Al's Café	ED
1805 W Olive Ave	2,356			Liquor Zone	F
1733 W Olive Ave	1,275			Auto Supply	AD
1733 W Olive Ave	1,169			Queen Donuts	ED
1703 W Olive Ave	2,231			Olive Mini Market	GAS
1135 N Parkway Dr	2,625			76 Station	GAS

Shopping Center / Location	GLA	Vacant	Vacancy	Tenants	Category
1121 N Parkway Dr	3,413			Denny's	ED
1459 W Olive Ave	900			Chevron	GAS
SWC Olive & Warren	5,525	5,525		Vacant	VAC
1365 W Olive Ave	1,838			Taco Bell	ED
1718 W Olive Ave	3,300			McDonalds	ED
1904 W Olive Ave	2,275			KFC	ED
2106 W Olive Ave	4,250			Choice Food	F
3016 W Olive Ave	3,294			RS Cheaper Food	GAS
3777 W Belmont Ave	2,363			West Belmont Market	F
1280 W Belmont Ave	1,488			Valero	GAS
1310 W Belmont Ave	3,000			Triangle Burgers	ED
2104 W Belmont Ave	1,800			A&M Market	F
2304 W Shaw Ave	3,938			Oro Financial	SVC
2304 W Shaw Ave	1,275			Domino's	ED
3418 W Shaw Ave	3,938			IHOP	ED
3482 W Shaw Ave	3,000			Burger King	ED
3486 W Shaw Ave	6,888			Takumi	ED
4080 W Shaw Ave	193,361	193,361		Vacant	VAC
4020 W Shaw Ave	4,869			Rally's	ED
4050 W Shaw Ave	2,200			Taco Bell	ED
5030 West Shaw Ave	15,750			Shaw City Auto Parts	AD
5092 W Shaw Ave	2,400			Liquor Junction	F
5106 W Shaw Ave	3,563			In N Out	ED
5222 W Shaw Ave	3,563			McDonalds	ED
5270 W Shaw Ave	788			Chevron	GAS
5316 W Shaw Ave	1,200			Shell	GAS
5472 W Shaw Ave	4,875			Thrift Shop	S
5480 W Shaw Ave	3,000			76 Station	GAS
5510 W Shaw Ave	2,800			Parkway Market	ED
5495 W Shaw Ave	1,750			Highway Liqour	F
5275 W Shaw Ave	3,163			Carl's Jr	ED
5149 W Shaw Ave	3,019			Melody Market	F
4417 W Shaw Ave	12,075			Patioworld	FA
4415 W Shaw Ave	10,763			Ramos Furniture	FA
4249 W Shaw Ave	11,850			JR's Collectibles	S
3489 W Shaw Ave	1,513			Sonic	ED
2195 W Shaw Ave	1,925			Jack in the Box	ED
2840 W Ashlan Ave	14,175			Walgreens	GM
4085 N Golden State Blvd	1,788			Jack in the Box	ED
4095 N Golden State Blvd	4,275			76 Station	GAS
4111 W Swift Ave	1,950			Foster Freeze	ED
4113 W Swift Ave	5,313			Bottoms Up	ED
4113 W Swift Ave	5,313			The Break Room	ED
4246 W Ashlan Ave	2,400			7 Eleven	GAS
4278 W Ashlan Ave	7,875			Yosemite Falls Café	ED
4771 W Ashlan Ave	14,740			Walgreens	GM
4395 W Ashlan Ave	3,444			Chevron	GAS
4245 W Ashlan Ave	1,800			Shell	GAS
3403 W Ashlan Ave	2,100			Valero	GAS
3327 W Ashlan Ave	1,700			Arco	GAS
3315 W Ashlan Ave	7,375			Royal Indian Market	GM
SWC West & Dakota	7,013	7,013		Vacant	VAC
2327 N West Ave	2,100			El Charrito	F
SWC Golden State & Cornelia	13,906	13,906		Vacant (New Construction)	VAC
SWC Golden State & Cornelia	9,750	9,750		Vacant	VAC
SWC Golden State & Cornelia	1,800			Dance Studio	SVC
NEC Weber & Dakota	2,100	2,100		Vacant	VAC
3020 N Weber Ave	800			Guadalajara Market	ED
2250 N Weber Ave	2,063	2,063		Vacant	VAC
1930 W Clinton Ave	2,113			Gas Station	GAS
6749 Herndon Ave	7,256			Shell Station	GAS
FREESTANDING BIOLA					
SEC Shaw & Biola	2,275	2,275		Vacant	VAC
12530 W G Ave	2,000			Zumba	SVC
12532 W G Ave	2,000	2,000		Vacant	VAC
12525 W G Ave	3,038			Best Market	F
12485 W G Ave	3,675			State Club	ED
12483 W G Ave	1,375			Vacant	SVC

Source: TNDG; Fresno County Assessor; shopping center site plans.

Figure B-1
Locations of Supermarkets
Northwest Fresno Retail Trade Area



MAP KEY

★ **PROPOSED PROJECT (distance in miles to supermarket)**

1. Save Mart - 53,318 SF (2.5)
   4043 W Clinton Ave, Fresno
2. Las Palmas Grocery - 22,770 SF (2.8)
   1405 W Shields Ave, Fresno
3. Fresh & Easy - 13,969 SF (2.0)
   2047 W Shaw Ave, Fresno
4. Food Maxx - 55,224 SF(0.8)
   3241 W Shaw Ave, Fresno
5. Smart & Final - 25,290 SF (0.6)
   3330 W Shaw Ave, Fresno
6. Grocery Outlet - 18,420 SF (0.4)
   3566 W Shaw Ave, Fresno
7. Foods Co - 59,061 SF (0.3)
   3657 W Shaw Ave, Fresno
8. Winco - 92,279 SF (0.5)
   4488 W Shaw Ave, Fresno
9. Save Mart - 33,858 SF (2.2)
   2066 W Bullard Ave, Fresno
10. Save Mart - 37,736 SF (2.3)
    7075 N Marks Ave, Fresno
11. Save Mart - 55,525 SF (2.0)
    6797 N Milburn Ave, Fresno

Note: SF = Square Feet; number in parentheses is distance in miles to proposed project.

Source: The Natelson Dale Group, Inc. (TNDG); Fresno County Assessor's Office; shopping center site plans.

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