HEXAGON TRANSPORTATION CONSULTANTS, INC.

557 East Bayshore Road Mixed-Use Development

Draft Transportation Analysis

Prepared for:

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Executive Summary

The proposed mixed-use development at 557 East Bayshore Road in Redwood City, would replace the existing buildings with two five-story, 480-unit multifamily residential buildings on the eastern portion of the site and a 97,101 square foot (s.f.) Villa Sport fitness center on the western portion of the site. The fitness center would consist of a two-level building that includes indoor exercise and activity space on two levels, a pool deck, and an outdoor field. Parking would be provided by a surface parking lot on the northern portion of the site, a small surface parking lot on the southern portion of the site, and above-ground parking garages in each residential building. Access to the project site would be provided via two driveways on East Bayshore Road.

The traffic study was conducted for the purpose of identifying potential traffic impacts related to the project. The potential impacts of the project were evaluated in accordance with the standards set forth by Redwood City and the City/County Association of Governments of San Mateo County (C/CAG). The C/CAG administers the San Mateo County Congestion Management Plan (CMP). This report includes an evaluation of transportation impacts according to CEQA and a Local Transportation Analysis (LTA) per the City's requirements.

TDM Measures

The proposed project would generate greater than 100 peak hour trips. Based on the requirements of Redwood City and the City/County Association of Governments of San Mateo County (C/CAG), this project would be required to implement Transportation Demand Management (TDM) measures to reduce trips by single-occupant vehicles. In addition, a TDM Plan would reduce demand for on-site vehicle parking.

The project applicant has prepared a TDM Plan that includes measures that apply to both residents and Villa Sport patrons. Proposed TDM measures include:

- Pre-tax deduction for employees for qualified transportation expenses
- Unbundled parking for residents
- Bike parking
- Showers and lockers for cyclists
- Well-lit pedestrian pathways, including a connection from the street to the Bayshore and Bay Trail
- On-site amenities (spa, gym, open space, café, childcare)
- Preferential parking for carpools
- Drop-off area
- On-site information

CEQA Analysis – Vehicle Miles Traveled

Senate Bill (SB) 743 changed the way transportation impacts are identified under CEQA from vehicle level of service (LOS) to daily vehicle miles travelled (VMT). The City recently adopted a Transportation Analysis Manual that outlines policies and guidelines for VMT impact evaluation generally consistent with SB 743 and the Governor's Office of Planning and Research (OPR) recommendations.

The project's relatively remote location on the east side of US 101 next to the Bay in an area lacking bicycle and transit connectivity results in project generated VMT that is higher than the City's adopted impact thresholds for both the proposed residential and fitness center uses. Therefore, the project would have a significant impact based on the project generated VMT. The project applicant will implement TDM measures that would lessen the project's VMT thereby reducing the VMT impact for the proposed residential use to a less than significant level. However, the reduction in fitness center VMT estimated as a result of the proposed TDM measures would not be sufficient to fully mitigate the impact on VMT. The VMT impact associated with the fitness center could be fully mitigated by adding additional TDM measures such as financial incentives for employees and/or patrons that use alternative modes.

Local Transportation Analysis – Traffic Operations at Study Intersections

The Local Transportation Analysis included intersection level of service calculations under a total of eight scenarios during both the AM and PM peak hours. Existing conditions were analyzed to determine the baseline level of service at each intersection based on counted traffic volumes and existing roadway geometry. Background conditions were analyzed based on the likely roadway conditions by the time the proposed project is approved. These conditions include volumes added to the existing counts from approved projects and projects currently under construction in the surrounding area. Project conditions were analyzed by adding the trips generated by the proposed project to both the existing and background volumes to generate existing plus project and background plus project conditions. Two separate cumulative scenarios were analyzed, with and without the Blomquist Street extension. Cumulative no project conditions (including the Blomquist Street extension) were determined by reassigning the existing traffic volumes to account for the new roadway connection, applying a growth factor to the existing volumes at each intersection and then adding trips generated by the approved, under construction, and proposed but not yet approved projects. Trips generated by the proposed 557 East Bayshore project were added to these volumes to generate cumulative conditions. Cumulative no project and cumulative conditions without the Blomquist Street extension were generated in a similar manner, without the assumed geometry changes and trip reassignment due to the roadway extension.

Roadway Geometry Assumptions

The existing lane configurations were obtained from field observations. The project is proposing to add a northbound right-turn pocket on East Bayshore Road at the northern project driveway and Class II bike lanes along the project's frontage on East Bayshore Road. There are no project-sponsored improvements and no near-term planned and funded transportation improvements at the study intersections. Thus, the intersection lane configuration would be the same as existing under all near-term scenarios. Cumulative conditions include geometry changes at the Veterans Boulevard and Jefferson Avenue intersection due to the Veterans Boulevard road diet and assume the completion of the planned Blomquist Street extension to connect with East Bayshore Road at Bair Island Road. This includes geometry changes at the East Bayshore Road/Bair Island Road and Blomquist Street/Maple Street intersections. Cumulative conditions also were evaluated without the Blomquist Street extension.

Project Trip Estimates

Daily and peak hour trip generation estimates for the proposed project were based on trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (2017) for "Multifamily Housing Mid-Rise" (Land Use 221) located in a general Urban/Suburban area. The daily and PM peak hour trip generation data collected from existing Villa Sport facilities in Woodlands, Texas and Colorado Springs, Colorado, reported by Kittleson & Associates, Inc. in 2012, were used to estimate trips generated by the proposed Villa Sport use. The existing PM rates from both fitness clubs were averaged and applied to the proposed project size. Kittleson & Associates, Inc. did not collect AM peak hour trip generation data. The AM peak hour rate for this use was developed based on the correlation between the Kittleson & Associates, Inc. rates and the ITE PM rates for Health/Fitness Club (Land Use 492). The observed PM trip rates and the computed AM trip rates are higher than the ITE 10th Edition trip rates. Thus, to be conservative, project trips were estimated based on the observed rates rather than the ITE trip generation rates. The ITE *Trip Generation Manual* does not include daily trip rates for the Health/Fitness Club land use.

A mixed-use trip reduction of 4 percent was applied to the AM and PM peak hour trip generation estimates for the project to account for project residents who walk to and from the Villa Sport on the same site. After applying the trip generation rates and the appropriate trip reductions, the proposed project is estimated to generate 303 net trips during the AM peak hour and 556 net trips during the PM peak hour. Using the inbound/outbound splits obtained from *ITEs Trip Generation Manual* and the Kittleson & Associates, Inc. traffic study, the project would generate 107 inbound and 196 outbound net trips during the AM peak hour, and 309 inbound and 247 outbound net trips during the PM peak hour.

Substantial Adverse Effects

Based on Redwood City and CMP level of service standards and thresholds, the proposed project would result in a substantial adverse effect at two intersections under cumulative conditions, and at one intersection under cumulative without Blomquist Street extension conditions. The substantial adverse effects include:

Cumulative Conditions with Blomquist Street Extension

Blomquist Street and Maple Street. This intersection would operate at an unacceptable LOS F under cumulative no project conditions based on all-way stop control geometry. The addition of project traffic would increase the delay for the worst movement by 22.6 seconds in the AM peak hour and 44.4 seconds in the PM peak hour. Since the intersection meets a signal warrant in the AM and PM peak hour, the intersection would have a substantial adverse effect during both peak hours.

Veterans Boulevard and Woodside Road. The addition of project traffic would cause an increase of 7.3 seconds in the AM peak hour and 5.9 seconds in the PM peak hour to this intersection which is expected to operate at LOS F under cumulative no project conditions.

Cumulative Conditions without Blomquist Street Extension

Veterans Boulevard and Whipple Avenue. This intersection would operate at an unacceptable LOS E during the AM peak hour under cumulative no project conditions. The addition of project traffic would increase the delay for the intersection by 9.6 seconds.

Mitigation Improvements

All project substantial adverse effects would be mitigated though payment of the City's traffic impact fee (TIF). Included in this TIF is the Blomquist Street extension project. The project should also pay a fair share contribution to the US 101/SR 84 (Woodside Road) Interchange Improvement Project that would result in the removal of the Veterans Boulevard and Woodside Road intersection. The Blomquist Street extension project would mitigate the effect at Veterans Boulevard and Whipple Avenue. The proposed roundabout at Blomquist Street and Maple Street would mitigate the effect at this intersection if designed as a two-lane roundabout.

Freeway Segment and Freeway Ramp Levels of Service

The proposed project would not add net trips greater than one percent of the freeway's capacity to any study freeway segments during either the AM or PM peak hours.

All ramps included in this study operate below capacity at LOS D or better. The addition of project traffic would not cause any ramps to deteriorate from their existing level of service.

Site Access and On-Site Circulation

Site access and on-site circulation were evaluated using commonly accepted transportation planning principles. This review is based on the project site plan prepared by BDE Architecture, ELS Architecture & Urban Design, and BKF Engineers, dated July 25, 2019. The project would provide surface parking for Villa Sport users, as well as above-grade parking garages within the residential buildings for Villa Sport users and residents. Two, full-access driveways on East Bayshore Road would provide access to two separate surface parking areas. The parking garage in Building A would be accessed via the northern driveway, while the parking garage in Building B would be accessed via the southern driveway. It is assumed that most of the Villa Sport related trips would use

the north driveway to access the site, and park in the related surface parking lot or in the Building A garage. The south driveway would provide access to the smaller surface parking lot, and the Building B lobby and garage. It is assumed that project trips related to the residential use would use both driveways roughly evenly, as each driveway would provide access to a relatively similar amount of residential garage parking.

On-site circulation would occur in the surface parking lots on the north and south sides of the proposed buildings, and within the above grade parking garages. There are no internal roadways that allow on-site circulation between the northern and southern surface parking areas and between the Building A and Building B parking garages. Thus, vehicles would need to return to East Bayshore Road and proceed to the other site driveway to travel between the northern and southern parking areas. The parking garage ramp slopes are not labeled on the site plan. The ramp design should be reviewed to ensure that the proposed slopes are reasonable and that slope transitions are provided at the top and bottom of each ramp.

All drive aisles within the surface parking areas and within the underground parking garage are shown to be between 24-feet and 26-feet wide. These drive aisle widths would be adequate to meet the City standards for aisles with 90-degree parking. Seven dead-end drive aisles are shown including three in the parking garages and four in the surface parking areas. Hexagon recommends that one parking space be eliminated at the end of each dead-end aisle to provide turn-around space.

Pedestrian on-site circulation would be provided through sidewalks along East Bayshore Road, sidewalks surrounding the Villa Sport and residential buildings, and a pedestrian corridor between the buildings. Designated pedestrian walkways should be provided through the north surface parking lot to the Villa Sport entrance. Aside from this deficiency, good pedestrian connectivity and circulation would be provided on-site.

Emergency vehicles entering the site via the northern driveway would be able to circulate in a counterclockwise manner around Building A and then exit from the same driveway. Emergency vehicles entering the site via the southern driveway would be able to turn around at the southeast corner of the site and then proceed back out the way they entered. Note that garbage trucks would not be able to circulate internally between the two trash staging areas. Instead, trucks would need to exit the site from the southern driveway after collecting the trash for Villa Sport and Residential Building B and travel north along East Bayshore Road to reenter the site at the northern driveway to collect trash for Residential Building A. Staff from Residential Buildings A and B would need to move trash dumpsters from the trash rooms inside each building to the appropriate trash staging areas for collection on designated days.

Pedestrians, Bicycles, and Transit

Based on the project's location, and the distance between the project site and other complementary uses, it is expected that few users would walk to and from the site. The project would improve the pedestrian environment by providing new sidewalks along the project's East Bayshore Road frontage, and through connections between the site and the Bay Trail.

Bicycle and transit connectivity are relatively lacking in the project vicinity. Currently, the only access from the project site to areas west of US 101 is provided via the Whipple Avenue interchange. This interchange has pedestrian walkways on only the south side of the roadway. While there are currently no bicycle facilities at the US 101/ Whipple Avenue interchange, the Citywide Transportation Plan includes several new bicycle connections across US 101 including enhanced Class II bike lanes on Whipple Avenue from Duane Street to East Bayshore Road and new Class I bicycle paths under US 101 connecting Main Street and East Bayshore Road and connecting Chestnut Street and Seaport Boulevard . Furthermore, a Class I bicycle path is proposed adjacent to the entire length of East Bayshore Road and Blomquist Street. The proposed project would add Class II bicycle lanes along the project frontage on East Bayshore Road. However, the new bicycle lanes would not connect to other bicycle facilities. No transit services currently exist in the project vicinity. Due to the lack of bicycle connections to the west side of US 101 and the lack of transit accessibility, the project is expected to generate minimal bicycle and transit trips.

To improve bicycle access, the project should encourage the City to complete the proposed Class I and II bicycle facilities along East Bayshore Road, Whipple Road, Blomquist Street, Main Street and Seaport Boulevard shown on Figure 21: Proposed Bicycle Backbone Network in the Citywide Transportation Plan. Bicycle and pedestrian connectivity would be significantly improved with the Blomquist Street extension project, which would include

bicycle/pedestrian trails along Redwood Creek connecting East Bayshore Road to Main Street. To improve transit access, the project should work with the City and SamTrans to create a bus route that serves the various residential, office, and retail uses on Bair Island.

Parking

Based on the site plan, the project would provide 614 residential parking spaces and 501 spaces for Villa Sport, including 477 vehicular spaces and 24 motorcycle spaces, which meets the State Density Bonus Law requirements for residential uses and the City requirements for commercial uses. The project would also provide seven parking spaces to the San Francisco Bay Conservation & Development Commission (BCDC) for public use by Bay Trail visitors. Based on recommendations in the site plan review, the parking garages might lose a couple of spaces, which could render the on-site parking a little under the City and State requirements.

The site plan indicates that all the surface spaces would be for use by Villa Sport, and the garage in Building A would be shared between Villa Sport and the residential units. Hexagon notes that some of the surface parking spaces are far from the Villa Sport front door. Perhaps those spaces could be used for employee parking. Furthermore, based on a comparison of the number and size of dwelling units to the number of residential parking spaces in each parking garage, it appears that some residents of Building A may need to park in Building B. The project should implement a parking management plan to identify visitor parking spaces and to control the shared parking between Villa Sport and residents.

Recommendations

Based on the findings presented in this report, Hexagon recommends the following:

- The project should expand the proposed TDM measures to reduce the significant VMT impact associated with the proposed fitness center to a less than significant level. One possible measure that could be added is to offer financial incentives for employees and/or patrons that use alternative modes.
- The project should pay a fair-share contribution to the City's TIF to support the development of the Blomquist Street extension project along with the associated roundabout at the Blomquist Street/Maple Street intersection and the US 101/SR 84 (Woodside Road) Interchange Improvement Project
- To improve bicycle access, the project should encourage the City to complete the proposed Class I and II bicycle facilities along East Bayshore Road, Whipple Road, Blomquist Street, Main Street and Seaport Boulevard shown on Figure 21: Proposed Bicycle Backbone Network in the Citywide Transportation Plan. Bicycle and pedestrian connectivity would be significantly improved with the Blomquist Street extension project, which would include bicycle/pedestrian trails along Redwood Creek connecting East Bayshore Road to Main Street.
- Hexagon recommends that one parking space be eliminated at the end of each dead-end aisle to provide turn-around space
- The site plan recommendations could cause the project to have fewer parking spaces than required. The project should work with the City to determine the appropriate measures to ensure provided parking on-site is adequate.
- The project should implement a parking management plan to identify visitor parking spaces and to control the shared parking between Villa Sport and residents
- The project should provide adequate motorcycle parking on-site as required by the City
- The project should work with the City and SamTrans to improve transit accessibility to the site

Table ES 1
Intersection Levels of Service Summary

					Existing		Existing Plus Project		Background		Background Plus Project			With Blomquist St Extension: Cumulative No Project		With Blomquist St Extension: Cumulative			Without Blomquist St Extension: Cumulative No Project		Without Blomquist St Extension: Cumulative		
ID	Intersection	Control [1]	Peak Hour	Count Date	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Incr. in Avg. Del.	Avg. Delay	LOS	Avg. Delay	LOS	Incr. in Avg. Del.	Avg. Delay	LOS	Avg. Delay	LOS	Incr. in Avg. Del.
1	El Camino Real and Whipple Ave*	Signal	AM	09/10/19	21.1	C	21.8	C	22.8	C	23.6	C	0.8	26.2	C	27.0	C	0.8	27.0	C	28.4	C	1.4
			PM	09/10/19	21.4	C	22.6	C	24.0	C	25.4	C	1.4	30.0	C	32.7	C	2.7	30.3	C	33.1	C	2.8
2	Winslow St/Industrial Way and Whipple Ave	Signal	AM	09/10/19	26.1	C	26.3	C	28.0	C	28.1	C	0.1	29.1	C	29.1	C	0.0	29.3	C	29.5	C	0.2
			PM	09/10/19	35.6	D	33.6	C	35.6	D	35.2	D	-0.4	37.3	D	37.1	D	-0.2	36.6	D	36.5	D	-0.1
3	Veterans Blvd and Whipple Ave	Signal	AM	09/10/19	38.7	D	39.6	D	41.8	D	44.4	D	2.6	**55.7**	**E**	**57.6**	**E**	**1.9**	**60.2**	**E**	**69.8**	**E**	**9.6**
			PM	09/10/19	37.2	D	39.3	D	38.5	D	40.3	D	1.8	41.6	D	43.9	D	2.3	42.4	D	45.0	D	2.6
4	US 101 NB Off-Ramp and Whipple Ave	Signal	AM	09/10/19	12.3	B	11.7	B	12.3	B	11.7	B	-0.6	16.3	B	16.4	B	0.1	12.1	B	13.3	B	1.2
			PM	09/10/19	12.8	B	13.7	B	12.8	B	13.7	B	0.9	13.2	B	16.6	B	3.4	13.0	B	17.9	B	4.9
5	East Bayshore Rd and Bair Island Rd	Rbt	AM	09/10/19	5.8	A	5.8	A	5.8	A	5.8	A	0.0	8.4	A	9.2	A	0.8	5.9	A	5.9	A	0.0
			PM	09/10/19	5.6	A	5.7	A	5.6	A	5.7	A	0.1	14.1	B	18.7	C	4.6	5.7	A	5.8	A	0.1
6	Blomquist St and Maple St [2]	OWSC	AM	09/10/19	11.2	B	11.2	B	13.2	B	13.4	B	0.2	--	--	--	--	--	20.4	C	20.8	C	0.4
			PM	09/10/19	12.7	B	12.9	B	16.5	C	16.9	C	0.4	--	--	--	--	--	30.3	D	31.8	D	1.5
		AWSC	AM	N/A	--	--	--	--	--	--	--	--	--	**89.7**	**F**	**112.3**	**F**	**22.6**	--	--	--	--	--
			PM	N/A	--	--	--	--	--	--	--	--	--	**>120**	**F**	**>120**	**F**	**44.4**	--	--	--	--	--
		Rbt	AM	N/A	--	--	--	--	--	--	--	--	--	17.8	C	20.9	C	3.1	--	--	--	--	--
			PM	N/A	--	--	--	--	--	--	--	--	--	29.7	D	**44.8**	**E**	**15.1**	--	--	--	--	--
7	Blomquist St and Seaport Blvd	Signal	AM	11/06/18	33.4	C	33.4	C	34.6	C	35.0	D	0.4	50.6	D	51.9	D	1.3	41.2	D	41.4	D	0.2
			PM	11/06/18	30.6	C	30.7	C	31.7	C	31.8	C	0.1	49.6	D	52.6	D	3.0	**55.4**	**E**	**57.2**	**E**	**1.8**
8	Veterans Blvd and Jefferson Ave	Signal	AM	01/31/18	13.9	B	14.1	B	15.3	B	15.6	B	0.3	17.2	B	17.6	B	0.4	17.2	B	17.4	B	0.2
			PM	01/31/18	12.5	B	13.5	B	12.4	B	13.4	B	1.0	13.8	B	14.7	B	0.9	13.5	B	14.2	B	0.7
9	Veterans Blvd and Maple St	Signal	AM	09/10/19	27.3	C	27.0	C	28.2	C	28.5	C	0.3	33.8	C	34.5	C	0.7	35.3	D	35.5	D	0.2
			PM	09/10/19	29.0	C	29.3	C	29.4	C	29.9	C	0.5	32.2	C	33.6	C	1.4	33.7	C	34.3	C	0.6
10	Veterans Blvd and Woodside Rd**	Signal	AM	09/10/19	31.4	C	31.7	C	**100.0**	**F**	**100.5**	**F**	**0.5**	**>120**	**F**	**>120**	**F**	**7.3**	**>120**	**F**	**>120**	**F**	**0.5**
			PM	09/10/19	80.9	F	82.4	F	**>120**	**F**	**>120**	**F**	0.7	**>120**	**F**	**>120**	**F**	**5.9**	**>120**	**F**	**>120**	**F**	**2.1**

Notes:
* Indicates San Mateo County CMP intersection. LOS standard for El Camino Real and Whipple Ave is LOS E.
** Synchro default parameters were adjusted to ensure intersection delay and LOS reflect field observations. The project's fair share contribution to the US-101 and Woodside Road interchange project would serve as mitigation for the significant cumulative impact at this intersection.
[1] Control Type Definitions: Rbt = Roundabout; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control.
Overall weighted average control delay (seconds per vehicle) is reported for signalized and AWSC intersections.
Worst stop-controlled approach delay (seconds per vehicle) is reported for OWSC intersections.
[2] The intersection of Blomquist St and Maple St will be converted to either an AWSC or Rbt intersection under cumulative conditions. The above results for Rbt reflect a single-lane Rbt. The significant impact at this intersection could be mitigated with a multi-lane Rbt, which would operate at an acceptable level (12.0 seconds average delay, LOS B).
Bold indicates a substandard level of service.
Outline indicates a substantial adverse effect.

1. Introduction

This report presents the results of the traffic impact analysis (TIA) for the proposed mixed-use development at 557 East Bayshore Road in Redwood City, California (see Figure 1). The 14.6-acre project site is occupied by a vacant movie theater complex and is currently used for vehicle storage by the adjacent auto dealerships. The proposed project would replace the existing buildings with two five-story multifamily residential buildings totaling 480 dwelling units on the eastern portion of the site and a 97,101 square foot (s.f.) Villa Sport fitness center on the western portion of the site (see Figure 2). The fitness center would consist of a two-level building that includes indoor exercise and activity space on two levels, a pool deck, and an outdoor field. Parking would be provided by a surface parking lot on the northern portion of the site, a small surface parking lot on the southern portion of the site, and above-grade parking garages incorporated into each residential building. Access to the project site would be provided via two driveways on East Bayshore Road.

Scope of Study

The traffic study was conducted for the purpose of identifying potential traffic impacts related to the project. The potential impacts of the project were evaluated in accordance with the standards set forth by Redwood City and the City/County Association of Governments of San Mateo County (C/CAG). The C/CAG administers the San Mateo County Congestion Management Plan (CMP). This report includes an evaluation of transportation impacts according to CEQA and a Local Transportation Analysis (LTA) per the City's requirements.

CEQA Analysis

Vehicle Miles Travelled

Senate Bill (SB) 743 changed the way transportation impacts are identified under CEQA from vehicle level of service (LOS) to daily vehicle miles travelled (VMT). The City of Redwood City recently adopted a Transportation Analysis Manual that outlines policies and guidelines for VMT impact evaluation generally consistent with SB 743 and the Governor's Office of Planning and Research (OPR) recommendations. A project can be screened from the VMT analysis if it meets the following criteria:

- Transit Priority Areas (TPA): Projects located within ½-mile walkshed around major transit stops or within ¼ mile walkshed around high-quality transit corridors.
- Affordable Housing: 100% restricted affordable residential projects in infill locations and near transit.
- Small Projects: Projects defined as generating 150 or fewer average daily vehicle trips, absent substantial evidence indicating that a project would generate a potentially significant level of VMT.

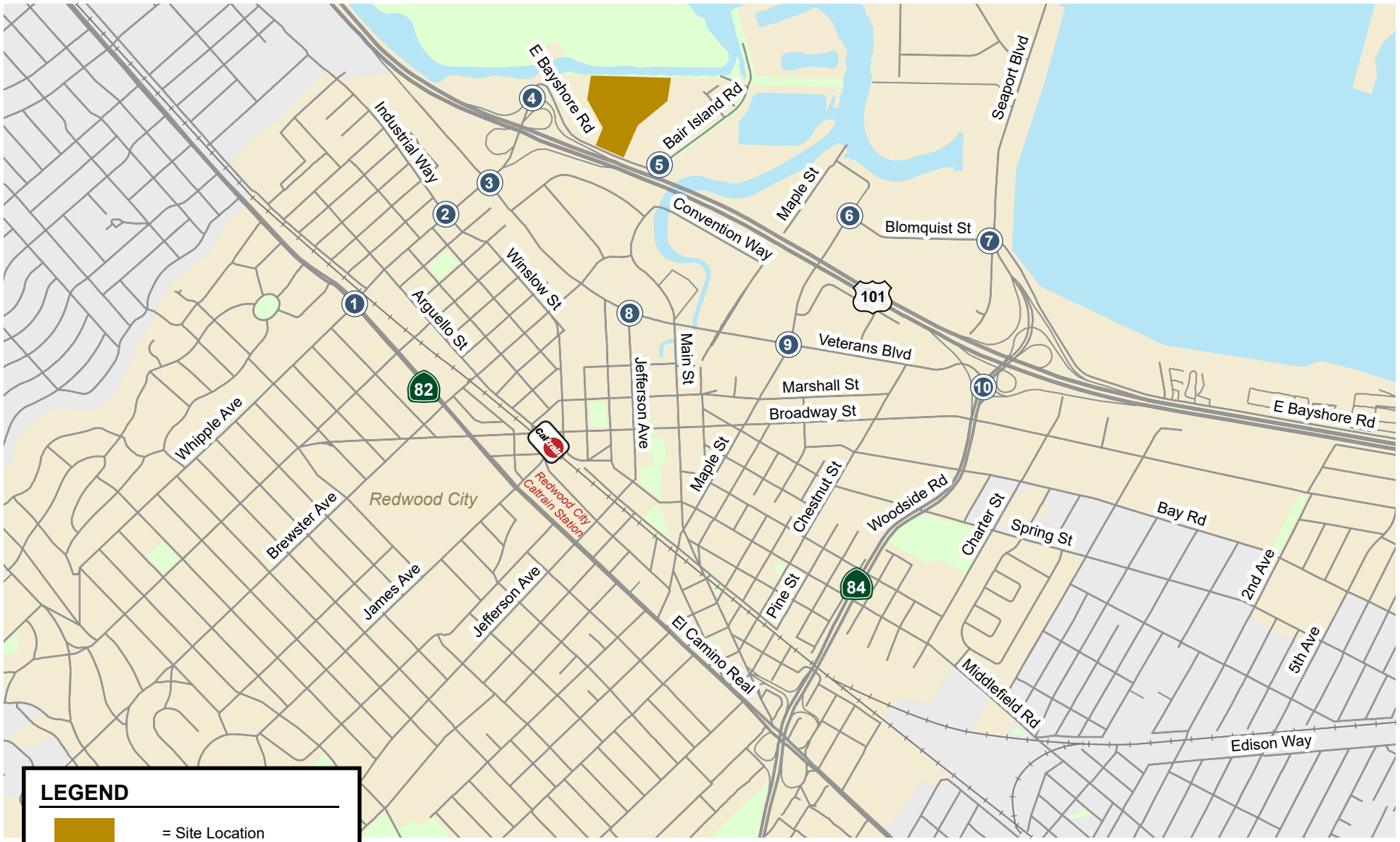


Figure 1
Project Location and Study Intersections

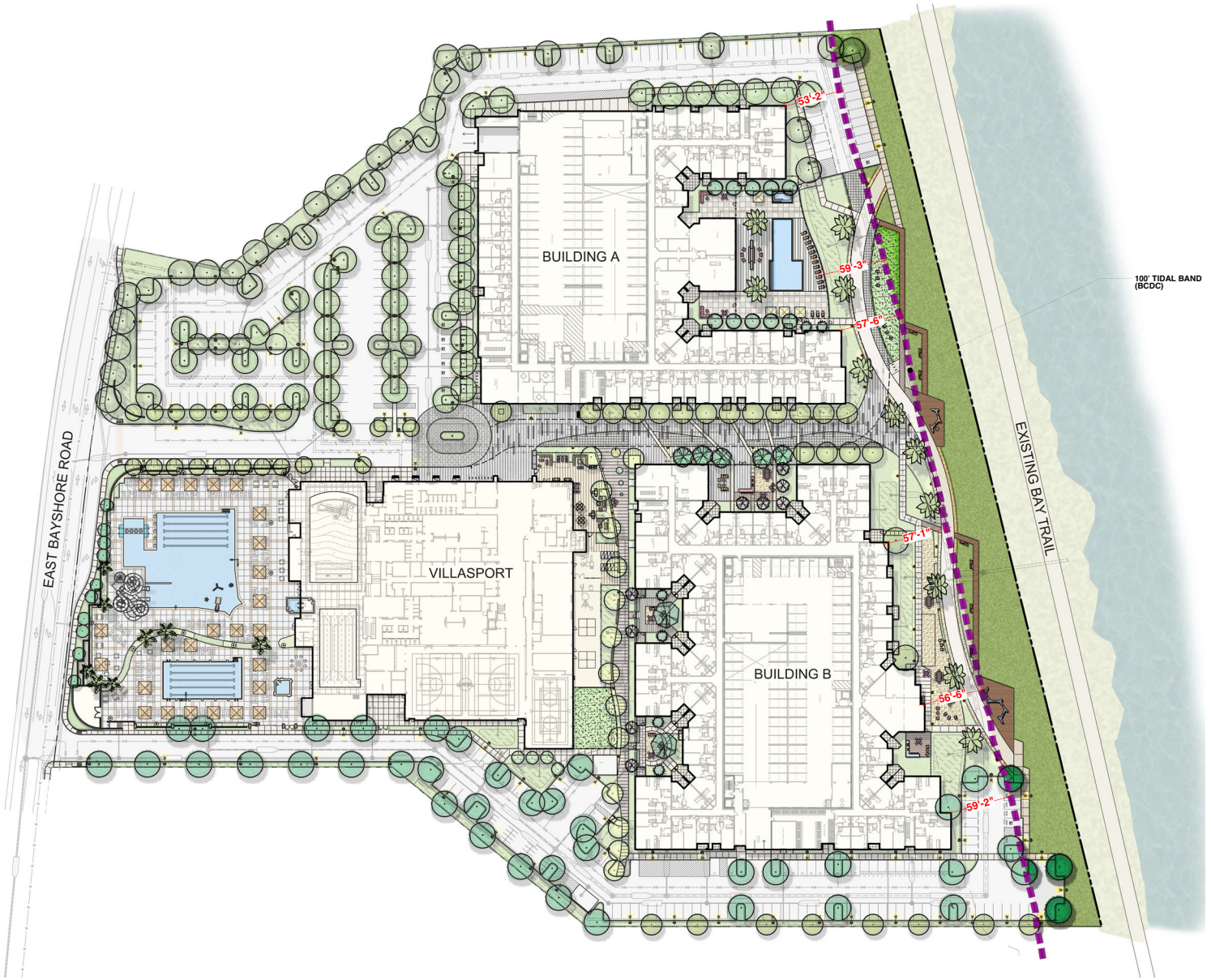


Figure 2
Project Site Plan

NORTH
Not to Scale

- Locally Serving Public Facility: Locally serving public facilities that encompasses government, civic, cultural, health, and infrastructure uses and activity which contribute to and support community needs.
- Neighborhood-Serving Retail Project: Neighborhood-serving retail projects that are less than 30,000 square feet, which serve the immediate neighborhoods and have a similar use within three miles.

The proposed project land uses and location do not meet the above screening criteria. Thus, the San Mateo County and Santa Clara County (C/CAG) travel forecasting model was used to estimate the daily project generated VMT. Travel Analysis Zones (TAZs) and transportation network connectors in the C/CAG model were refined to better represent how the project will connect to the roadway system, and land use inputs were updated for the "with Project" scenarios to match the expected trip generation. To provide a complete picture of the effects of the project on daily VMT, this analysis looks at the project generated VMT for each component of the proposed mixed-use development independently, taking credit for internal capture, and applying the significance criteria for each land use type. The VMT statistics are expressed per service population (e.g. residents, employee, etc. as appropriate) to distinguish the effects of population and/or employment growth from the effects of changes in personal behavior.

Local Transportation Analysis

The LTA analyzed the effect of traffic operations by the project on ten key intersections in the vicinity of the project site. The study intersections were selected in consultation with Redwood City staff and include those intersections that provide primary access to and from the project site and locations that may be affected by the proposed project. The study intersections are listed below and shown on Figure 1. Traffic conditions at the study locations were analyzed for the weekday AM and PM peak hours of traffic.

1. El Camino Real and Whipple Avenue (CMP)
2. Winslow Street/Industrial Way and Whipple Avenue
3. Veterans Boulevard and Whipple Avenue
4. US 101 NB Off Ramp and Whipple Avenue
5. East Bayshore Road/Blomquist Street extension (future) and Bair Island Road
6. Blomquist Street and Maple Street
7. Blomquist Street and Seaport Boulevard
8. Veterans Boulevard and Jefferson Avenue
9. Veterans Boulevard and Maple Street
10. Veterans Boulevard and Woodside Road (SR 84)

Per C/CAG guidelines, projects adding greater than 100 peak hour trips to CMP facilities must include a CMP analysis. CMP roadways in the vicinity of the project include US 101. The following freeway segments and interchange ramps were studied:

Study freeway segments:

1. US 101 between SR 92 and Whipple Avenue
2. US 101 between Whipple Avenue and the Santa Clara County line

Study freeway ramps:

1. US 101 northbound off-ramp to westbound Woodside Road
2. US 101 southbound off-ramp to westbound Woodside Road
3. US 101 southbound on-ramp from Woodside Road
4. US 101 northbound off-ramp to Whipple Avenue
5. US 101 northbound on-ramp from westbound Whipple Avenue
6. US 101 southbound off-ramp to Veterans Boulevard/Whipple Avenue
7. US 101 southbound on-ramp from westbound Whipple Avenue

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes were obtained from traffic counts collected in years 2018 and 2019 prior to covid-19 and shelter-in-place. The reduction in traffic due to covid-19 is

temporary due to closed businesses and remote working. The current report analyzes traffic counts from 2018 and 2019, which reflect typical traffic conditions.

Scenario 2: *Background Conditions*. Background traffic volumes were estimated by adding to existing traffic volumes the projected volumes from approved but not yet constructed developments in the vicinity of the project. A list of approved but not yet completed developments was provided by Redwood City.

Scenario 3: *Existing Plus Project Conditions.* Existing plus project conditions reflect the projected traffic volumes with implementation of the project. Existing plus project traffic volumes were estimated by adding to existing traffic volumes the trips associated with the project. Existing plus project conditions were evaluated relative to existing conditions in order to identify substantial adverse effects due to the project.

Scenario 4: *Background Plus Project Conditions.* Background plus project conditions reflect the future traffic volumes and roadway network with implementation of the project. Background plus project traffic volumes were estimated by adding to background traffic volumes the trips associated with the project. Background plus project conditions were evaluated relative to background conditions in order to identify substantial adverse effects due to the project.

Scenario 5: *Cumulative Conditions.* This scenario assumes the development of the Blomquist Street extension project. The cumulative no project traffic volumes were estimated by reassigning the existing volumes based on the extension, adding the trips generated by approved projects and proposed (not yet approved) projects in the vicinity of the project site, and applying a growth factor based on direction from Redwood City staff. Project trips were assigned based on this road network change and then added to the cumulative no project traffic volumes to yield cumulative traffic volumes.

Scenario 6: *Cumulative Conditions without the Blomquist Street Extension.* The cumulative no project conditions traffic volumes under this scenario were estimated by adding on the trips generated by approved projects and proposed projects in the vicinity of the project site and applying a growth factor based on direction from Redwood City staff. Cumulative volumes without the Blomquist Street extension were estimated by adding to the cumulative no project volumes the trips associated with the project.

Methodology

This section presents the methods used to determine traffic conditions at the study intersections and the effect on traffic operations by the project. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards and mobility deficiency criteria.

Data Requirements

The data required for the analysis were obtained from new traffic counts, previous studies, field observations, and the City of Redwood City. The following data were obtained from these sources:

- Existing intersection peak-hour volumes,
- Lane geometries,
- Signal timing and phasing, and
- Trip generation or trip assignment for approved but not yet constructed projects.

Intersection Level of Service Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

This study uses the 2010 Highway Capacity Manual (HCM) methodology for signalized and unsignalized intersections utilizing Synchro software to determine intersection level of service. This method evaluates intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. Table 1 presents the level of service definitions for signalized intersections. The level of service definitions for unsignalized intersections are presented in Table 2. Note that for unsignalized intersections under two-way or side-street stop control, the level of service is reported for the worst approach.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual,* (Washington, D.C., 2010).

Table 2
Unsignalized Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010).

Level of Service Standards and Mobility Deficiency Criteria

City of Redwood City

The City of Redwood City General Plan contains the following transportation policy with respect to level of service:

> "Program BE-55 / Level of Service Policy Evaluation: Evaluate Redwood City's current Level of Service (LOS) policies for motor vehicle circulation. The evaluation shall consider the following to ensure efficient traffic flow and balance multi-modal mobility goals:
>
> Maintaining LOS D or better for motor vehicles in all areas of the city, except the Downtown area as defined by the Downtown Precise Plan. In Downtown, no minimum vehicular LOS standard will be maintained but vehicular LOS will be calculated and alternate LOS standards for other travel modes will be established."

The study intersections are located outside the Downtown area; thus, the intersections are subject to the City's LOS D standard.

According to the City of Redwood City Transportation Analysis Manual, a substantial adverse effect at a study intersection will be caused by the project if:

Signalized Intersection

1. Operations at a signalized intersection to deteriorate from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F); or
2. Average delay at a signalized intersection operating at an unacceptable level (LOS E or F) to increase by 5 seconds or more.

Unsignalized Intersection

1. Operations at an unsignalized intersection to deteriorate from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F); or
2. Delay at an unsignalized intersection operating at an unacceptable level (LOS E or F) to increase by 5 seconds or more; and traffic volumes at the intersection satisfy the Caltrans peak-hour volume signal warrant for traffic signal installation.

A substantial adverse effect at an intersection by the City of Redwood City standards is said to be satisfactorily mitigated when improvements are implemented that eliminate the project's adverse effect.

CMP Intersection

The intersection of El Camino Real (SR 82) and Whipple Avenue is a CMP intersection. San Mateo County CMP intersections were analyzed at a base level in 1990 and 1991. Intersections performing at LOS F under this base year have a standard of LOS F. The LOS standard at all other CMP intersections was set at one letter designation worse than their projected LOS for the year 2000. The intersection of El Camino Real and Whipple Avenue is subject to a standard of LOS E or better.

Freeway Segments and Ramps

A freeway segment is considered to operate at an acceptable level of service if the segment operates at or better than the level of service standard identified for that segment by the County congestion management agency. C/CAG's level of service standards for the study freeway segments is LOS F for US 101 from Whipple Avenue to the Santa Clara County line. Per CMP technical guidelines, analysis for freeway segment level of service is required for all segments to which the project is expected to add one percent or more to the segment capacity.

C/CAG does not provide thresholds for acceptable freeway ramp operations; however, Redwood City considers ramps operating at less than their capacity (less than a volume capacity ratio of 1.00) to be acceptable. For the purpose of this study, the project is said to create a substantial adverse effect on a freeway ramp if its implementation:

1. Causes the volume-to-capacity (V/C) ratio of the freeway ramp to exceed 1.0; or
2. Increases the amount of traffic on a freeway ramp that is already exceeding its capacity by more than one percent (1%) of the ramp's capacity.

Relevant Plans and Policies

Redwood City Transportation Impact Mitigation Fee Program

The Redwood City Transportation Impact Mitigation Fee (TIF) was adopted by the City to establish a source of funding for future transportation system capital improvements. The list of transportation projects associated with the transportation fee is on file with the Redwood City Community Development Department and is subject to amendment periodically. The notable TIF project in the vicinity of the proposed 557 East Bayshore project is the Blomquist Street extension from Maple Street, over Redwood Creek, to the East Bayshore Road/Bair Island Road intersection. The TIF also includes area-wide improvements to alternative modes such as neighborhood traffic management programs, a City-based shuttle system, a transportation demand management coordinator, and miscellaneous transit, pedestrian, and bicycle projects throughout the City.

US 101/SR 84 (Woodside Road) Interchange Improvement Project

Redwood City, in cooperation with Caltrans and the San Mateo County Transportation Authority (SMCTA), is proposing to reconstruct the US 101 and Woodside Road interchange. The proposal includes modifying the on- and off-ramp configuration at the interchange to improve traffic flow, increase safety, and better accommodate pedestrian and bicycle access across US 101. The City seeks to have a final project planned and approved by 2020 and completed by 2029. Key components of the project include redesign of the existing southbound off-ramp termini from a five-legged intersection to a four-legged intersection, a direct Veterans Boulevard ramp connection to US 101 to reduce vehicular traffic on Woodside Road, perpendicular ramp termini to Woodside Road to allow for improved crossing for both pedestrians and bicyclists, and Class I multi-use paths on the south side of the interchange and along the UPRR corridor to provide safer pedestrian/bicycle access across US 101.

Report Organization

This report has a total of six chapters. Chapter 2 presents the CEQA impact analysis. Chapter 3 presents the local transportation analysis including the description of the existing roadway network, transit service, bicycle and pedestrian facilities as well as traffic conditions in the study area under existing, background, background plus

project, cumulative with and without the Blomquist Street Extension project, cumulative plus project, and recommended mitigation improvements. Chapter 4 includes an analysis of freeway segment and ramp operations under project conditions. Chapter 5 provides an evaluation of other transportation-related issues, such as site access, on-site circulation, vehicle queuing, parking, and potential project impacts on bicycle, pedestrian, and transit facilities. Chapter 6 presents the study conclusions including a summary of recommended improvements.

2. CEQA Impact Analysis

Senate Bill (SB) 743 changed the way transportation impacts are identified under CEQA from vehicle level of service (LOS) to daily vehicle miles travelled (VMT). The City of Redwood City recently adopted a Transportation Analysis Manual that outlines policies and guidelines for VMT impact evaluation generally consistent with SB 743 and the Governor's Office of Planning and Research (OPR) recommendations.

Vehicle Miles Traveled Analysis

The San Mateo County and Santa Clara County (C/CAG) travel forecasting model was used to estimate the daily VMT. Travel Analysis Zones (TAZs) and transportation network connectors were refined to better represent how the project will connect to the roadway system, and land use inputs were updated for the "with Project" scenarios to match the expected trip generation. To provide a complete picture of the effects of the project on daily VMT, this analysis looks at the project generated VMT for each component of the proposed mixed-use development independently, taking credit for internal capture, and applying the significance criteria for each land use type. The VMT statistics are expressed per service population (e.g. residents, employee, etc. as appropriate) to distinguish the effects of population and/or employment growth from the effects of changes in personal behavior.

VMT Impact Criteria

Per the Redwood City Transportation Analysis Manual, a proposed project would have a significant impact on VMT if it meets either of the following criteria:

1. Residential Uses: The project generated home-based VMT per capita exceeds 10.5 miles, which is the existing countywide average home-based VMT per capita (12.3 miles) minus 15 percent.
2. Office Uses: The project generated home-based work VMT per employee exceeds 15.0 miles, which is the existing countywide average home-based work VMT per employee (17.6 miles) minus 15 percent.
3. Retail/Hotel Uses: The total project would cause a net increase in the total countywide average VMT per service population above the existing average (32.0 miles).

The Transportation Analysis Manual does not explicitly set forth the impact criteria for other land use types including fitness centers. For the purpose of this analysis, the fitness center was evaluated based on the same criteria applied to office uses.

VMT Assessment Results

Project Generated VMT

The results of the project generated VMT analysis are presented in Table 3. The project's relatively remote location on the east side of US 101 next to the Bay in an area lacking bicycle and transit connectivity results in a project generated VMT rate that is higher than the average Countywide VMT rate for both the proposed residential and fitness center uses. The project generated home-based VMT per capita of 13.0 is greater than the threshold of 10.5 for residential uses. Likewise, the project generated home-based work VMT per employee of 18.1 is greater than the threshold of 15.0 for the fitness center. Therefore, the project would have a significant impact based on the project generated VMT.

Table 3
557 East Bayshore Project Generated VMT Assessment

Land Use	Significance Criteria	Threshold[1]	Project TAZ VMT[2]
Residential	Project exceeds existing countywide home-based VMT per capita minus 15%	10.5	13.0
Fitness Center	Project exceeds existing countywide home-based work VMT per employee minus 15%	15.0	18.1

Notes:
[1] The threshold for project generated VMT per capita or per employee is 15% below the San Mateo County average.
[2] Average VMT per capita or per employee, as appropriate, within the TAZ where the project is located.

Mitigation

The project generated VMT can be reduced by physical design measures (land use or transportation) and Transportation Demand Management (TDM) measures. The project applicant has prepared a TDM Plan that includes physical facilities, programs, and policies that apply to both residents and Villa Sport patrons. Proposed TDM measures include:

- Pre-tax deduction for employees for qualified transportation expenses
- Unbundled parking for residents
- Bike parking
- Showers and lockers for cyclists
- Well-lit pedestrian pathways, including a connection from the street to the Bayshore and Bay Trail
- On-site amenities (spa, gym, open space, café, childcare)
- Preferential parking for carpools
- Drop-off area
- On-site information

Furthermore, the proposed project would include a reduced supply of on-site parking as permitted under the State Density Bonus Law. Limiting parking has been shown to be an effective measure for reducing VMT.

The Bay Area Air Quality Management District (BAAQMD) TDM Tool was used to estimate the reduction in VMT that could be expected from the proposed TDM measures (see Appendix A). The tool shows that the proposed measures would reduce the residential VMT by 21.3 percent with the greatest reduction coming from unbundled parking. This would reduce the home-based VMT per capita from 13.0 to 10.2, which is below the impact threshold of 10.5.

The proposed TDM measures are estimated to reduce the fitness center VMT by 15.9 percent, which would result in a home-based work VMT per employee of 15.2. Note that the effectiveness of many TDM measures is limited for this use because employee trips comprise only about eight percent of the total fitness center trips. The reduction in fitness center VMT would not be sufficient to fully mitigate the impact on VMT. The VMT impact associated with the fitness center could be fully mitigated by adding additional TDM measures such as financial incentives for employees and/or patrons that use alternative modes.

3. Local Transportation Analysis

This chapter describes the local transportation analysis including existing transportation facilities near the project site and the intersection operations under existing conditions. The chapter also describes intersection operations analysis under background conditions and cumulative conditions with and without the Blomquist Extension project, the method by which project traffic is estimated, and intersection operations analysis for with project conditions under existing, background, and cumulative scenarios. Mitigation improvements for any adverse intersection traffic effects caused by the project are recommended.

Existing Conditions

This section describes the existing conditions for all of the major transportation facilities near the site, including the roadway network, transit service, and bicycle and pedestrian facilities.

Roadway Network

Regional access to the project site is provided via US 101.

US 101 is a north/south freeway that extends from north of San Francisco to south of San Jose. In the project vicinity, US 101 has eight lanes (including two high-occupancy vehicle (HOV) lanes south of Whipple Avenue). US 101 provides site access via the full interchanges at Whipple Avenue and Woodside Road.

Local access to the site is provided by El Camino Real (SR 82), Woodside Road (SR 84), Veterans Boulevard, Winslow Street/Industrial Way, Maple Street, and East Bayshore Road/Blomquist Street. These roadways are described below.

El Camino Real (SR 82) is a four-lane north-south arterial that extends from south of Redwood City north into South San Francisco. El Camino Real provides access to the project site via its intersection with Whipple Avenue.

Woodside Road (SR 84) is a four-lane east-west arterial that extends from US 101 in the east to Portola Road in the west through Woodside. West of Portola Road, Woodside Road becomes La Honda Road and extends all the way to Cabrillo Highway (SR 1). Woodside Road provides access to the project site from the south via its interchange with US 101, and intersections with El Camino Real and Veterans Boulevard.

East Bayshore Road is a two-lane, local road that extends south from the Whipple Avenue and US 101 interchange on the east side of US 101 in the project vicinity, and currently terminates at its roundabout intersection with Bair Island Road. This segment provides direct access to the project site via two driveways. South of the Woodside Road and US 101 interchange, East Bayshore Road continues as a frontage road on the east side of US 101 until its intersection with Sleepy Hollow Lane. East Bayshore Road currently does not have a connection between these two segments.

Veterans Boulevard is a two- to six-lane, divided arterial that provides access from US 101 to Redwood City. Veterans Boulevard runs north-south from the US 101/Woodside Road interchange to the US 101/Whipple Avenue interchange.

Winslow Street is a two-lane collector street that extends north-south between the Redwood City Caltrain Station and Whipple Avenue. Winslow Street becomes Middlefield Road south of the Redwood City Caltrain Station, and Industrial Way north of Whipple Avenue. Winslow Street provides access to the project site via Whipple Avenue.

Industrial Way (Industrial Road) is a two- to four-lane arterial that extends north from Whipple Avenue to Harbor Boulevard in Belmont. Industrial Way provides access to the project site via Whipple Avenue.

Maple Street is an east-west, two-lane collector that extends from its intersection with El Camino Real, through downtown Redwood City to Bair Island. Maple Street serves as the only roadway between Whipple Avenue and Woodside Road that crosses US 101 without an interchange. Access to the project site from Maple Street is currently provided via intersections with Veterans Boulevard and El Camino Real.

Blomquist Street is a two-lane, local road that extends south from Maple Street to its intersection with Woodside Road. South of Woodside Road, Blomquist Street becomes the southern segment of East Bayshore Road.

Bicycle Facilities

Existing Facilities

Bicycle facilities include bike paths, bike lanes, and bike routes. Bike paths (Class I facilities) are pathways separate from roadways that are designated for use by bicycles. Often, these pathways also allow pedestrian access. Bike lanes (Class II facilities) are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes (Class III facilities) are existing rights-of-way that accommodate bicycles but are not separate from existing travel lanes. Class III routes are typically designated with only signs or sharrows (painted, on-road bike markings). The existing bicycle facilities in the project vicinity are shown on Figure 3.

The project site is served relatively well by existing bicycle facilities, which provide access between the project site and downtown Redwood City and nearby office centers (see Figure 3). Existing bicycle facilities include Class III routes on East Bayshore Road south of Seaport Boulevard and Whipple Avenue west of Veterans Boulevard. Class II bicycle lanes in the project vicinity include:

- Veterans Boulevard between Whipple Avenue and Chestnut Street
- Winslow Street between Whipple Avenue and Broadway
- Industrial Way between Harbor Boulevard and Whipple Avenue
- Blomquist Street between Maple Street and Seaport Boulevard
- Marshall Street between Arguello Street and Walnut Street
- Middlefield Road between Veterans Boulevard and Bradford Street
- Main Street between Convention Way and Veterans Boulevard
- Brewster Avenue between Main Street and Fulton Street
- Arguello Street between Whipple Avenue and Brewster Avenue
- Stafford Street between Whipple Avenue and Old County Road
- Old County Road between Stafford Street and Bransten Road
- Edgewood Road west of Alameda De Las Pulgas
- Hopkins Avenue between El Camino Real and Nevada Street

Within the vicinity of the project site, a Class I bicycle path, the Bay Trail, exists along the eastern frontage of the site. The Bay Trail can be accessed via Whipple Avenue at East Bayshore Road and via Bair Island Road. The Bay Trail is a planned, 500-mile bicycle and pedestrian trail that extends around the entire San Francisco Bay. Currently, about 350 miles of the trail have been completed. The Bay Trail does not currently provide access to areas south of the project site as it terminates at Bair Island Road. A separated Class I bicycle facility along the south side of Bair Island Road connects the Bay trail to an existing pedestrian and bicycle bridge, commonly referred to as the Bridge to Nowhere. An unpaved pathway on the south side of the bridge provides access between East Bayshore Drive and Maple Street, and to the continuation of the Bay Trail at its crossing at Seaport Boulevard.

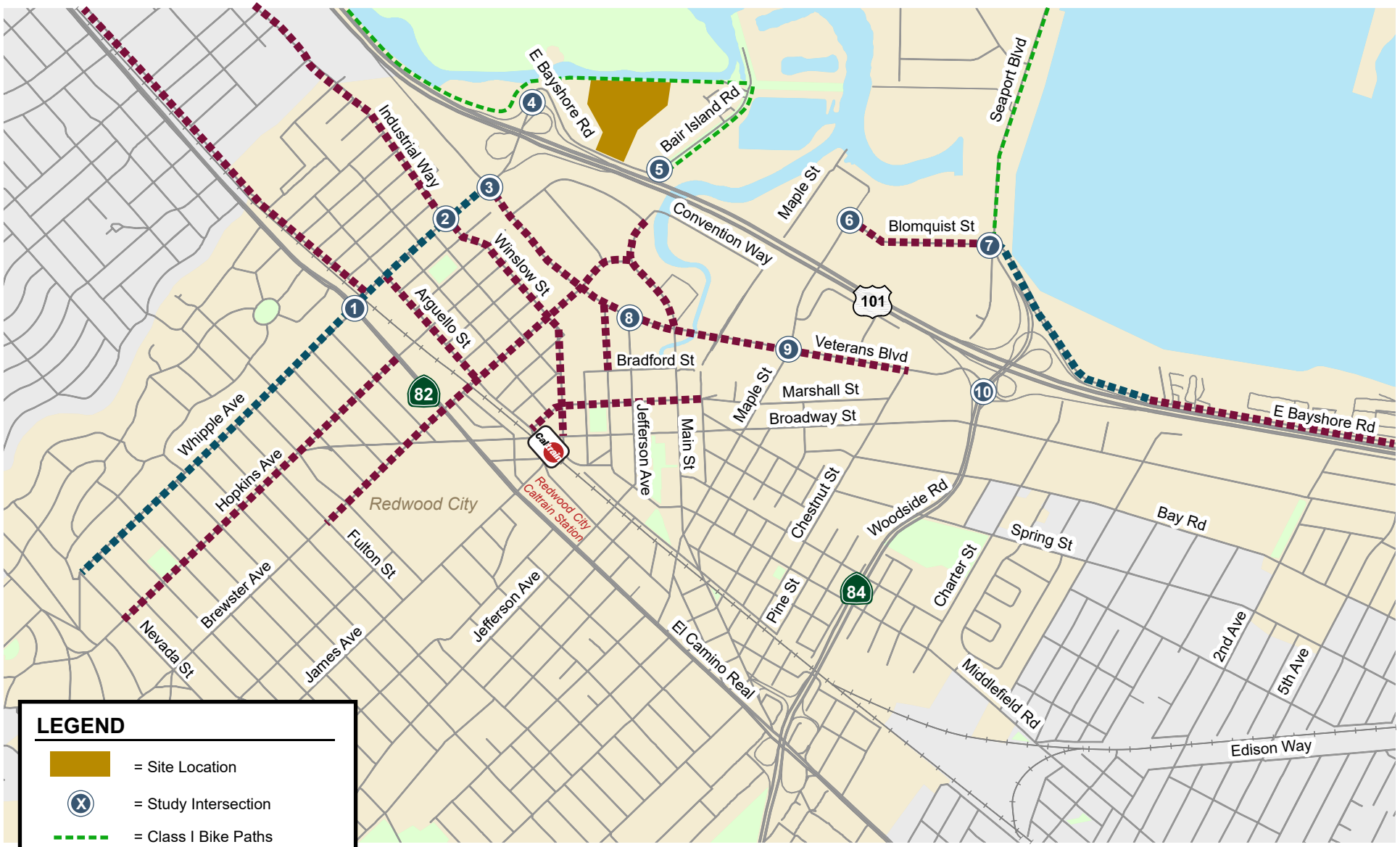
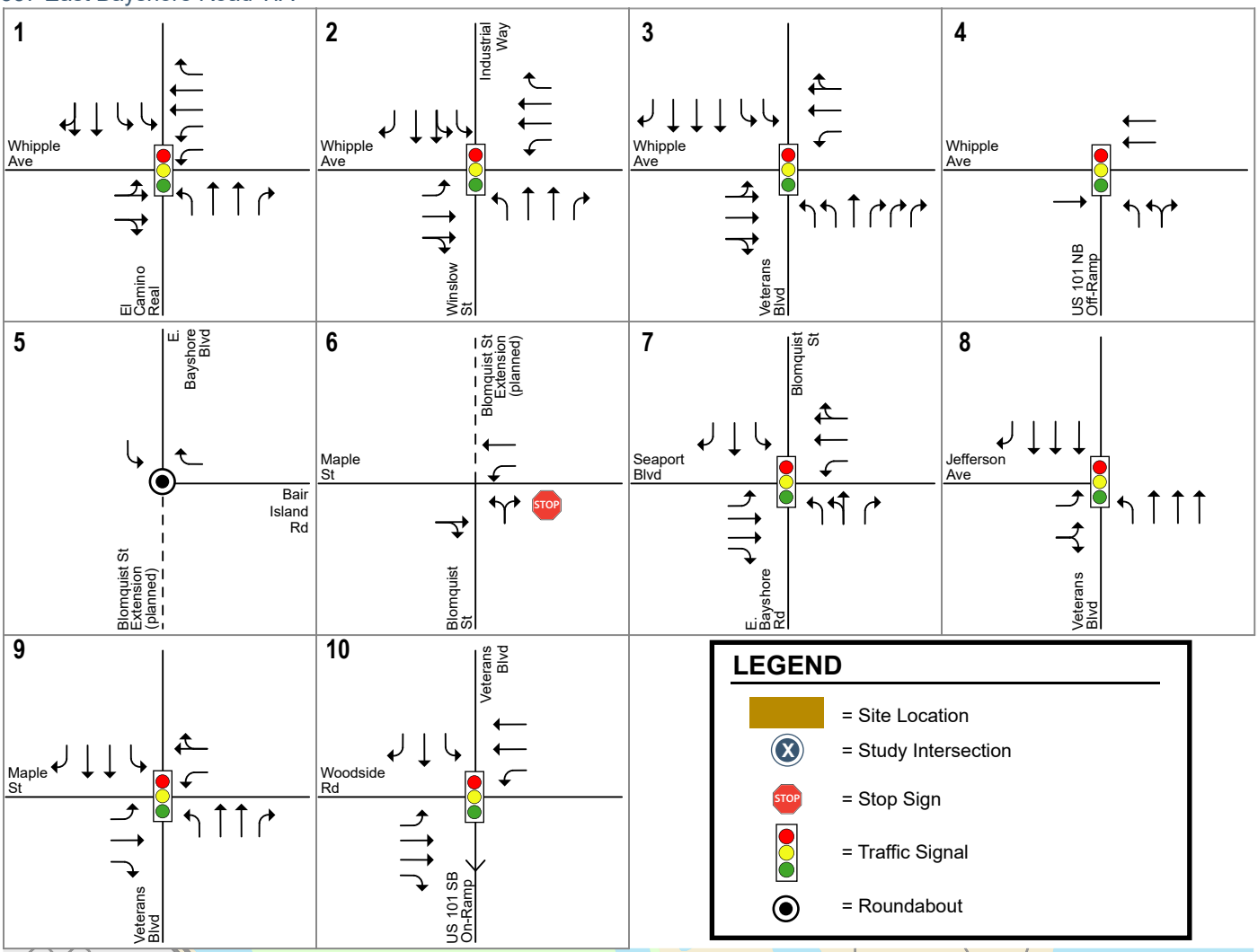


Figure 3
Existing Bicycle Facilities



Figure 4
Existing Transit Services

NORTH
Not to Scale



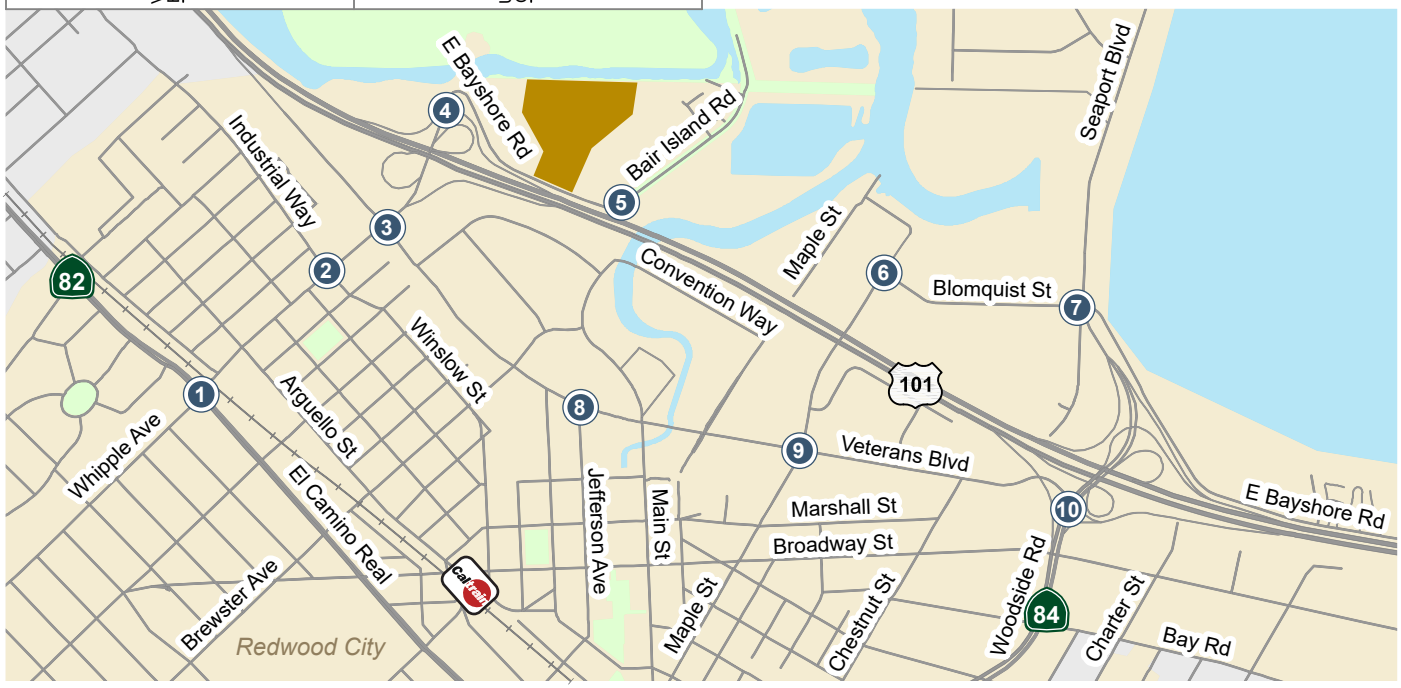


Figure 5
Existing Lane Configurations

NORTH
Not to Scale

Existing bicycle and pedestrian counts were conducted as part of the peak-hour turning movement counts at the study intersections during the AM and PM peak periods. The traffic count data are included in Appendix B.

Planned Facilities

Based on the Citywide Transportation Plan, known as RWC moves, enhance Class II bike lanes are proposed along Whipple Avenue in the vicinity of the site. In addition, a Class I bike path is proposed along East Bayshore Road and the planned Blomquist Street extension between Whipple Avenue and Seaport Boulevard. A second bike path is proposed to connect the Bay Trail/Bair Island Road bike path across US 101 to Main Street. These proposed bicycle lanes/trails would improve connectivity between the project site and areas to the west of US 101, including to downtown Redwood City.

Pedestrian Facilities

Pedestrian facilities in the project vicinity include sidewalks along the project frontage on East Bayshore Road, a sidewalk on the south side of Bair Island Road, and the Bay Trail. Sidewalks are not present along the west side of East Bayshore Road or north of the project site along the frontage of the various industrial and automobile sales buildings. Pedestrian connections to the surrounding area are relatively poor, particularly to areas west of US 101. A sidewalk does exist along the south side of the Whipple Avenue overcrossing, but pedestrian connections between the project site and this sidewalk do not exist.

A crosswalk exists in the project vicinity at the East Bayshore Road and Bair Island Road roundabout. This crosswalk provides access from the project site to the existing Bridge to Nowhere and residential and hotel uses on the south side of Bair Island Road.

Hexagon conducted pedestrian counts at the study intersections adjacent to the project site. The count data are included in Appendix B.

Transit Services

The project site is not served by any existing transit routes. Primary transit service in Redwood City is provided by the San Mateo County Transit District (SamTrans). However, the nearest bus stops are located more than ½ mile from the site at either the Arguello Street and A Street intersection, or the Maple Street and Blomquist Street intersection (see Figure 4). As described previously, pedestrian facilities connecting the project site to these bus stops are inadequate.

Intersection Lane Configurations and Traffic Volumes

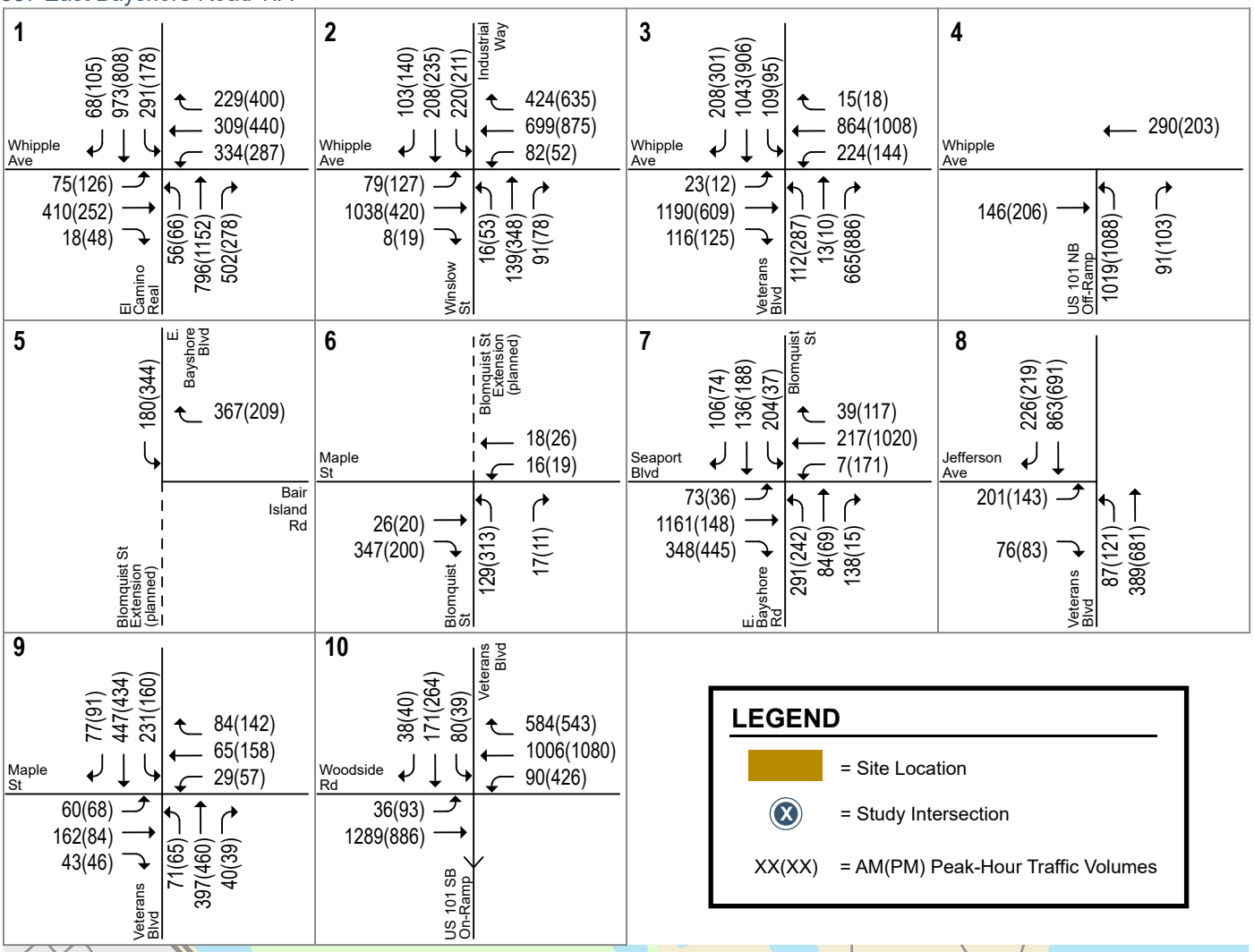
The existing lane configurations at the study intersections were obtained from field observations and are shown on **Error! Reference source not found.**.

Existing weekday AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak hour traffic volumes were obtained from manual turning-movement counts. New traffic counts were conducted at all study intersections on typical weekdays between January 2018 and September 2019 while all local schools were in session.

The existing peak hour traffic volumes used for the study are shown graphically on **Error! Reference source not found.**. New traffic count data are included in Appendix B. Peak-hour intersection volumes for the study intersections are tabulated in Appendix D.

Intersection Levels of Service

The results of the level of service analysis under existing conditions are summarized in Table 4. The results show that nine of the ten study intersections currently operate at an acceptable level of service during the AM and PM peak hours. The intersection of Veterans Boulevard and Woodside Road operates at LOS F in the PM peak hour. The level of service calculation sheets are included in Appendix C.



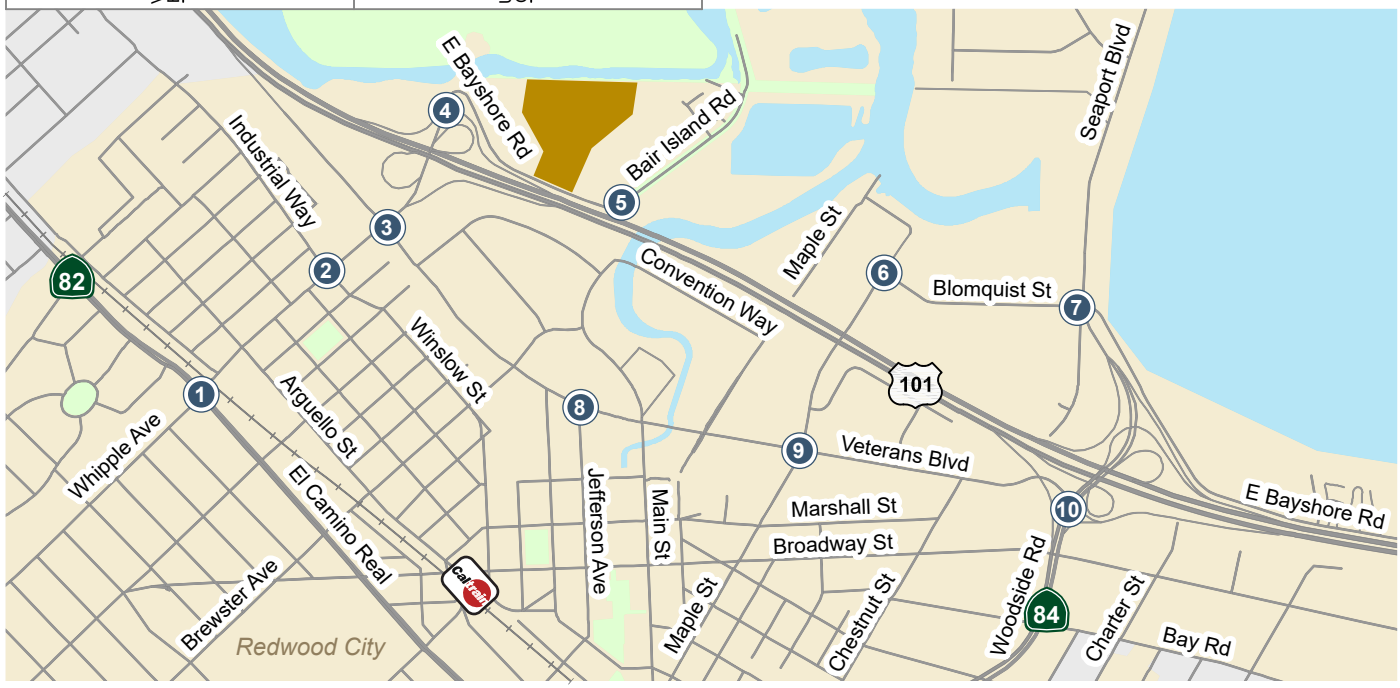


Figure 6
Existing Traffic Volumes

NORTH
Not to Scale

Table 4
Existing Intersection Levels of Service

ID	Intersection	Control [1]	Peak Hour	Count Date	Existing Avg. Delay	Existing LOS
1	El Camino Real and Whipple Ave*	Signal	AM	09/10/19	21.1	C
			PM	09/10/19	21.4	C
2	Winslow St/Industrial Way and Whipple Ave	Signal	AM	09/10/19	26.1	C
			PM	09/10/19	35.6	D
3	Veterans Blvd and Whipple Ave	Signal	AM	09/10/19	38.7	D
			PM	09/10/19	37.2	D
4	US 101 NB Off-Ramp and Whipple Ave	Signal	AM	09/10/19	12.3	B
			PM	09/10/19	12.8	B
5	East Bayshore Rd and Bair Island Rd	Rbt	AM	09/10/19	5.8	A
			PM	09/10/19	5.6	A
6	Blomquist St and Maple St [2]	OWSC	AM	09/10/19	11.2	B
			PM	09/10/19	12.7	B
7	Blomquist St and Seaport Blvd	Signal	AM	11/06/18	33.4	C
			PM	11/06/18	30.6	C
8	Veterans Blvd and Jefferson Ave	Signal	AM	01/31/18	13.9	B
			PM	01/31/18	12.5	B
9	Veterans Blvd and Maple St	Signal	AM	09/10/19	27.3	C
			PM	09/10/19	29.0	C
10	Veterans Blvd and Woodside Rd**	Signal	AM	09/10/19	31.4	C
			PM	09/10/19	**80.9**	**F**

Notes:
* Indicates San Mateo County CMP intersection. LOS standard for El Camino Real and Whipple Ave is LOS E.
** Synchro default parameters were adjusted to ensure intersection delay and LOS reflect field observations.
[1] Control Type Definitions: Rbt = Roundabout; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control. Overall weighted average control delay (seconds per vehicle) is reported for signalized and AWSC intersections. Worst stop-controlled approach delay (seconds per vehicle) is reported for OWSC intersections.
[2] The intersection of Blomquist St and Maple St will be converted to either an AWSC or Rbt intersection under cumulative conditions.
Bold indicates a substandard level of service.

Background Conditions

Roadway Network

There are no near-term planned and funded transportation improvements at the study intersections that would alter the existing intersection lane configurations.

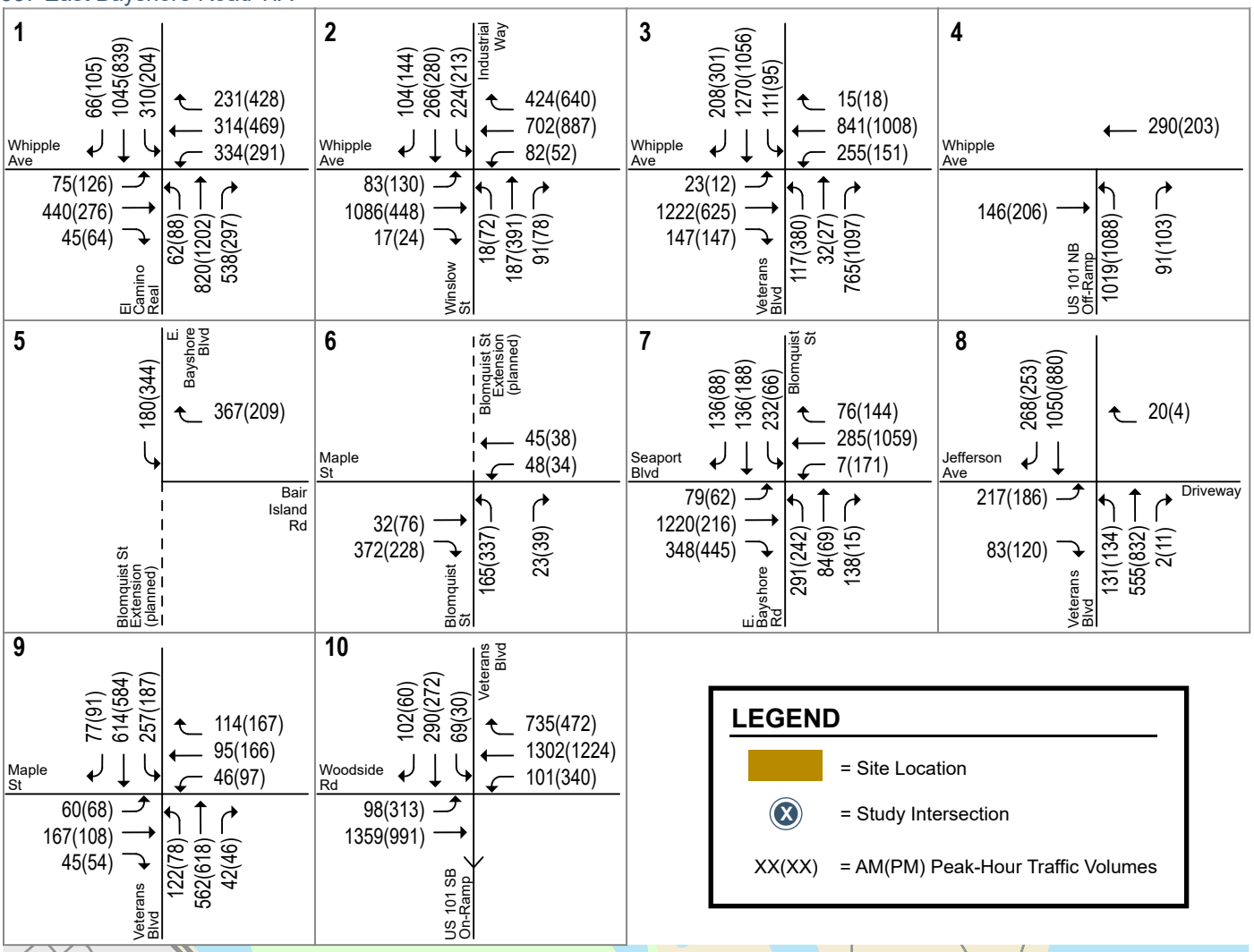
Approved Developments

Background traffic volumes were forecast based on the project trip assignments provided for the relevant approved but not yet completed projects. The list of approved and under construction projects was developed based on information provided by Redwood City in December 2019. The following approved but not constructed projects were considered under background conditions because they would contribute background trips to the study intersections.

- 610 Walnut Street – 65,080 s.f. office
- 1180 Main Street – 109,375 s.f. office
- 353 Main Street – 125-unit affordable housing
- Holiday Inn Express & Suites (1690 Broadway) – 112-room hotel
- Strada (1548 Maple Street) – 131-unit residential
- Broadway Plaza (1401 Broadway and 2201 Bay Road) – Mixed use development including 520-units of residential, 420,000 s.f. of office, 26,000 sf of retail, and 10,000 s.f. of child-care space
- San Mateo County Government Center – 186,000 s.f. office
- Kaiser Medical Office Building 2 (1175 Marshall Street) – 197,800 s.f. of medical office
- 707 Bradford Street – 117-units of affordable housing and 8,000 s.f. of daycare
- Habitat for Humanity (612 Jefferson Avenue) – 20-units of affordable housing
- Greystar IV (1409 El Camino Real) – 350-unit residential and 2,900 s.f. retail
- 851 Main Street – 78,832 s.f. office and 6,900 s.f. retail
- Greystar II (103 Wilson Street) – 175-unit residential
- Broadway Station RWC (2075 Broadway) – 66,786 s.f. office and 26,729 s.f. retail
- Stanford in Redwood City (405, 425, 475, 500-585 Broadway and 1228 Douglas Avenue) – 570,000 s.f. office, 31,159 s.f. of recreation, and 14,000 s.f. of childcare space
- 849 Veterans Boulevard – 90-units residential

Intersection Traffic Volumes

Background peak-hour traffic volumes were calculated by adding to existing volumes the estimated traffic from approved developments. Trip generation and assignment for each project was obtained from each project's traffic impact analysis (TIA) or environmental impact report (EIR). Project trips for developments as part of the Downtown Precise Plan were assigned to the study network based on the trip distribution included within the Downtown Precise Plan DEIR. Background traffic volumes are shown on Figure 7. Peak-hour intersection volumes for the study intersections are tabulated in Appendix D.



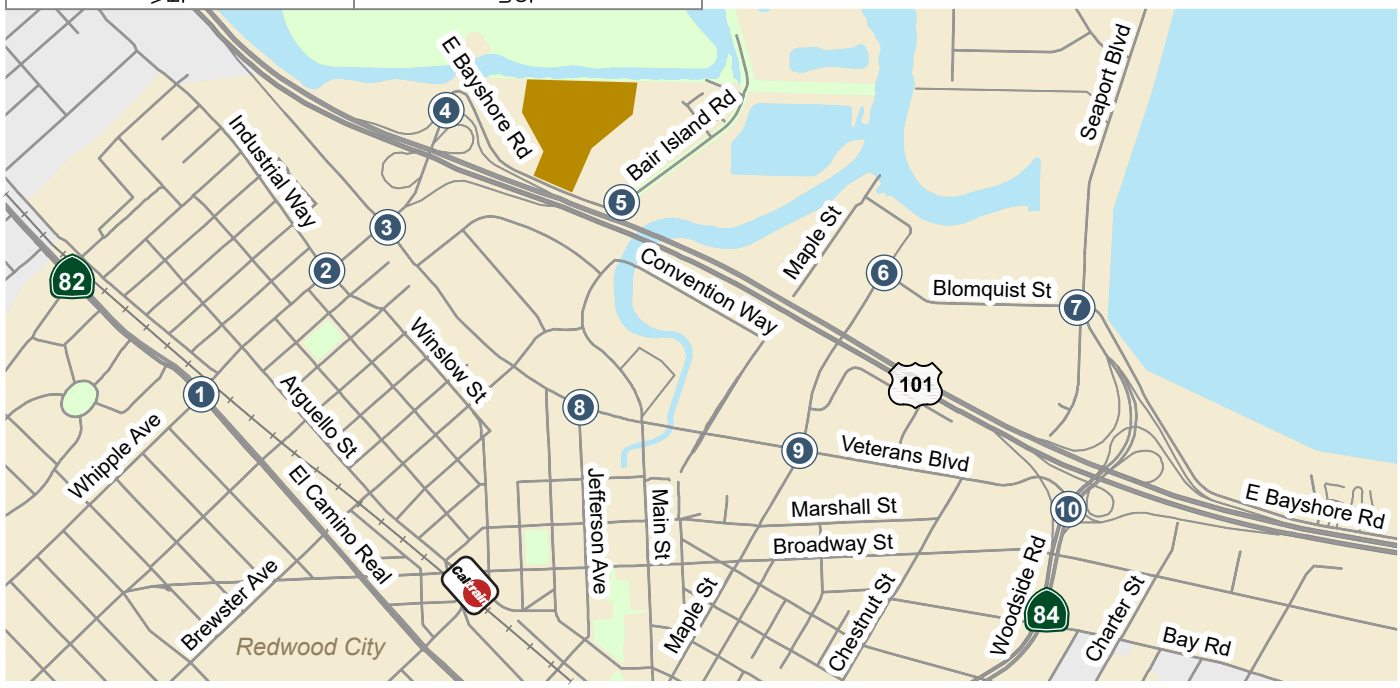


Figure 7
Background Traffic Volumes

NORTH
Not to Scale

Intersection Levels of Service

The results of the level of service analysis under background conditions are summarized in Table 5. The results show that nine of the ten study intersections would continue to operate at an acceptable level of service during the AM and PM peak hours. The intersection of Veterans Boulevard and Woodside Road would operate at LOS F in the AM and PM peak hours. The level of service calculation sheets are included in Appendix C.

Table 5
Background Intersection Levels of Service

				Existing		Background	
ID	Intersection	Control [1]	Peak Hour	Avg. Delay	LOS	Avg. Delay	LOS
1	El Camino Real and Whipple Ave*	Signal	AM	21.1	C	22.8	C
			PM	21.4	C	24.0	C
2	Winslow St/Industrial Way and Whipple Ave	Signal	AM	26.1	C	28.0	C
			PM	35.6	D	35.6	D
3	Veterans Blvd and Whipple Ave	Signal	AM	38.7	D	41.8	D
			PM	37.2	D	38.5	D
4	US 101 NB Off-Ramp and Whipple Ave	Signal	AM	12.3	B	12.3	B
			PM	12.8	B	12.8	B
5	East Bayshore Rd and Bair Island Rd	Rbt	AM	5.8	A	5.8	A
			PM	5.6	A	5.6	A
6	Blomquist St and Maple St [2]	OWSC	AM	11.2	B	13.2	B
			PM	12.7	B	16.5	C
7	Blomquist St and Seaport Blvd	Signal	AM	33.4	C	34.6	C
			PM	30.6	C	31.7	C
8	Veterans Blvd and Jefferson Ave	Signal	AM	13.9	B	15.3	B
			PM	12.5	B	12.4	B
9	Veterans Blvd and Maple St	Signal	AM	27.3	C	28.2	C
			PM	29.0	C	29.4	C
10	Veterans Blvd and Woodside Rd**	Signal	AM	31.4	C	**100.0**	**F**
			PM	**80.9**	**F**	**>120**	**F**

Notes:
* Indicates San Mateo County CMP intersection. LOS standard for El Camino Real and Whipple Ave is LOS E.
** Synchro default parameters were adjusted to ensure intersection delay and LOS reflect field observations.
[1] Control Type Definitions: Rbt = Roundabout; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control. Overall weighted average control delay (seconds per vehicle) is reported for signalized and AWSC intersections. Worst stop-controlled approach delay (seconds per vehicle) is reported for OWSC intersections.
[2] The intersection of Blomquist St and Maple St will be converted to either an AWSC or Rbt intersection under cumulative conditions.
Bold indicates a substandard level of service.

Project Conditions

This section describes the roadway traffic operations under existing plus project and background plus project conditions, the method by which project traffic is estimated, and any substantial adverse effects due to the project. Existing plus project conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. Background plus project conditions represent the likely conditions in which the proposed project is developed after approved projects in the area have been developed.

Roadway Network

The project is proposing to add a northbound right-turn pocket on East Bayshore Road at the northern project driveway and Class II bike lanes along the project's frontage on East Bayshore Road. There are no project-sponsored improvements and no near-term planned and funded transportation improvements at the study intersections. Thus, the intersection lane configuration under existing plus project conditions and under background plus project conditions would be the same as under existing conditions.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: 1) trip generation, 2) trip distribution, and 3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the project site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Daily and peak hour trip generation estimates for the proposed project were based on trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (2017) for "Multifamily Housing Mid-Rise" (Land Use 221) located in a general Urban/Suburban area. As defined by the ITE, "mid-rise" multifamily housing are buildings that have between 3 and 10 floors. The proposed apartments are designed to be five stories tall, therefore the ITE, "mid-rise" multifamily housing category was used for the analysis.

The daily and PM peak hour trip generation data collected from existing Villa Sport facilities in Woodlands, Texas and Colorado Springs, Colorado, reported by Kittleson & Associates, Inc. in 2012, were used to estimate trips generated by the proposed Villa Sport use. The existing daily and PM rates from both fitness clubs were averaged and applied to the proposed project size. Kittleson & Associates, Inc. did not collect AM peak hour trip generation data. The AM peak hour rate for this use was developed based on the correlation between the Kittleson & Associates, Inc. PM rates and the ITE PM rates for Health/Fitness Club (Land Use 492). The observed PM trip rates and the computed AM trip rates are higher than the ITE trip rates. Thus, to be conservative, project trips were estimated based on the observed rates rather than the ITE trip generation rates. The ITE *Trip Generation Manual* does not provide information about daily trips for this land use.

Trip Reductions

A mixed-use trip reduction was applied to the project trip generation estimates. The mixed-use reduction reflects residents of the proposed project who may utilize the Villa Sport facility on the same site. Due to their proximity, these internal trips are expected to be walking trips, which would reduce the vehicle trips generated by both the residential and Villa Sport uses. Based on the number of residential units proposed on the project site in relation to the number of residences nearby on Bair Island Road and in downtown Redwood City, and the location of other health and fitness clubs, it is estimated that approximately four percent of the Villa Sport trips would be by residents of the project site. Thus, a four percent mixed-use reduction was applied to the Villa Sport use, and an equivalent number of trips was subtracted from the apartment use estimates.

Net Trips Generated

After applying the trip generation rates and the appropriate trip reductions, the proposed project is estimated to generate 303 net trips during the AM peak hour and 556 net trips during the PM peak hour (see Table 6). Using the inbound/outbound splits obtained from *ITEs Trip Generation Manual* and the Kittleson & Associates, Inc.

traffic study, the project would generate 5,836 daily trips including 107 inbound and 196 outbound net trips during the AM peak hour, and 309 inbound and 247 outbound net trips during the PM peak hour.

Table 6
Project Trip Generation Estimates

					AM Peak Hour				PM Peak Hour			
Land Use	Size	Units	Daily Rates	Daily Trips	Peak-Hour Rate	In	Out	Total	Peak-Hour Rate	In	Out	Total
Proposed Use												
Apartment [1]	480	d.u.	5.44	2,611	0.36	45	128	173	0.44	129	82	211
Mixed-Use Reduction (4%) [3]				*(140)*		*(3)*	*(3)*	*(6)*		*(7)*	*(8)*	*(15)*
Net Apartment Trips				***2,471***		***42***	***125***	***167***		***122***	***74***	***196***
Villa Sport [2]	97.1	k.s.f.	36.10	3,505	1.47	68	74	142	3.86	195	180	375
Mixed-Use Reduction (4%) [3]				*(140)*		*(3)*	*(3)*	*(6)*		*(8)*	*(7)*	*(15)*
Net Villa Sport Trips				**3,365**		**65**	**71**	**136**		**187**	**173**	**360**
Net Trips Generated				**5,836**		**107**	**196**	**303**		**309**	**247**	**556**

Notes:
d.u. = dwelling units; KSF = 1,000 square feet gross leasable area.
[1] Multifamily Housing (Mid-Rise) (Land Use 221), General Urban/Suburban, ITE *Trip Generation, 10th Edition (2017)* , average rates are used.
[2] Soure: Daily and PM peak hour rate and in/out split was obtained from the *VillaSport at 45 Central TIA* , date May 1, 2012 by Kittelson & Associates, Inc. AM peak hour rate was determined using the ratio between PM peak hour rate in the Kittelson report and the rate in ITEs *Trip Generation Manual, 10th Edition* (2017) for Health/Fitness Club (Land Use 492). This ratio was applied to the AM peak hour rate from ITEs *Trip Generation Manual.* The in/out split was taken from the Kittelson report.
[3] Mixed-Use Reduction (4%) reflects internal trips by residents of the project site who walk to and from the Villa Sport facility thereby reducing the vehicle trips for both uses."

Trip Distribution and Assignment

Hexagon assumed different trip distribution patterns for the apartment and Villa Sport uses. The trip distribution patterns were estimated based on existing travel patterns on the surrounding roadway system, locations of complimentary land uses, and the trip distribution patterns provided as part of the Peninsula Park Project EIR produced by Fehr & Peers (2007). The project trip distribution patterns are shown on Figure 8.

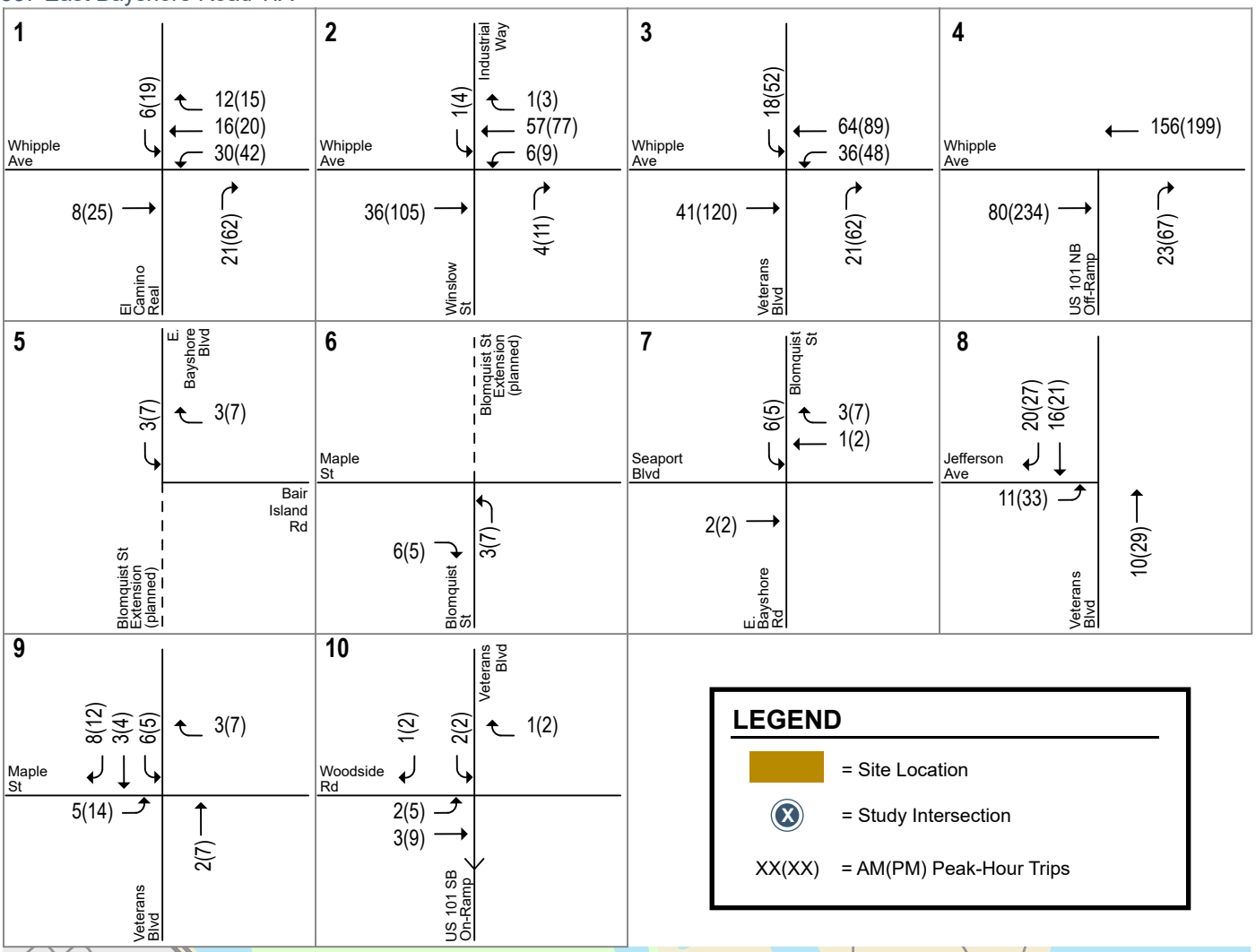
The estimate project generated traffic was added to the surrounding road network based on the distribution percentages described above. The project trip assignment is shown on Figure 9.

Intersection Traffic Volumes

Effects of the project under existing plus project conditions were evaluated relative to existing conditions. Effects of the project under background plus project conditions were evaluated relative to background conditions. For the existing plus project scenario, the new trips generated by the project were added to the existing traffic volumes to derive the existing plus project traffic volumes. Figure 10 shows the intersection turning-movement volumes under existing plus project conditions. For the background plus project scenario, the new trips generated by the project were added to the background traffic volumes to derive the background plus project traffic volumes. Figure 11 shows the intersection turning-movement volumes under background plus project conditions. Peak-hour intersection volumes for the study intersections are tabulated in Appendix D.



Figure 8
Project Trip Distribution



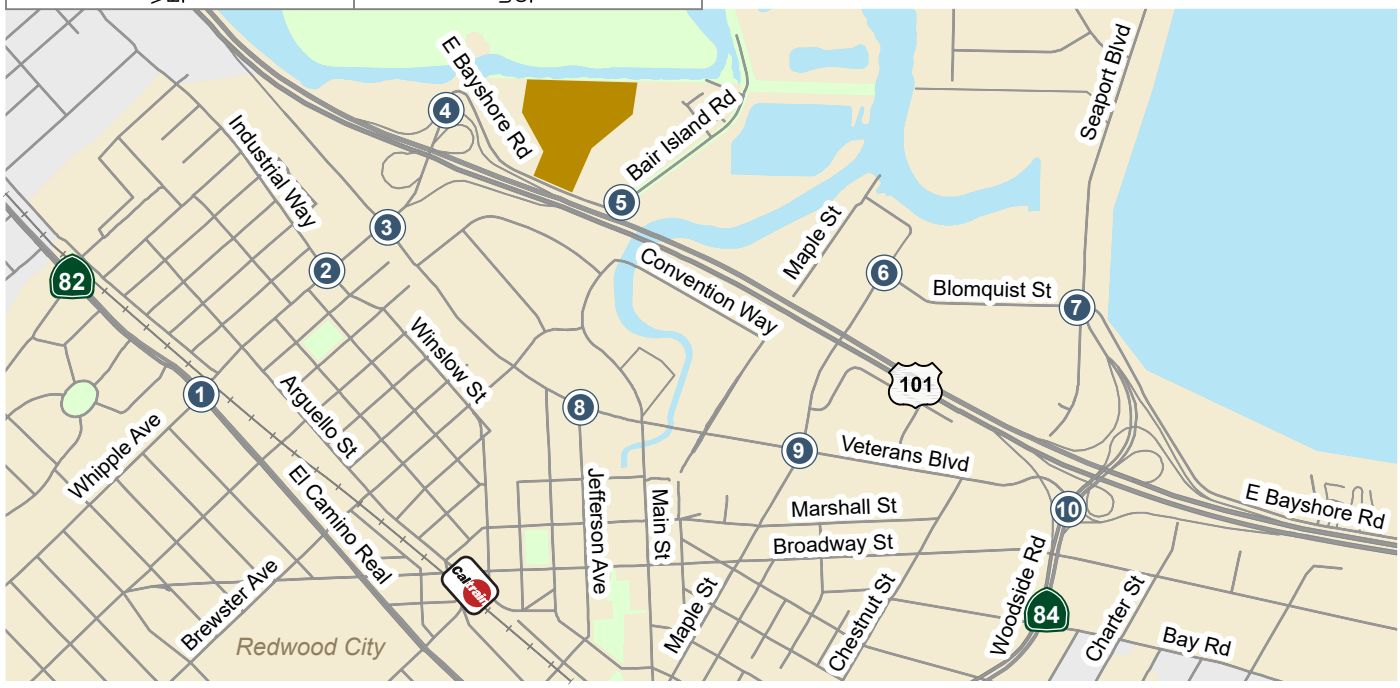
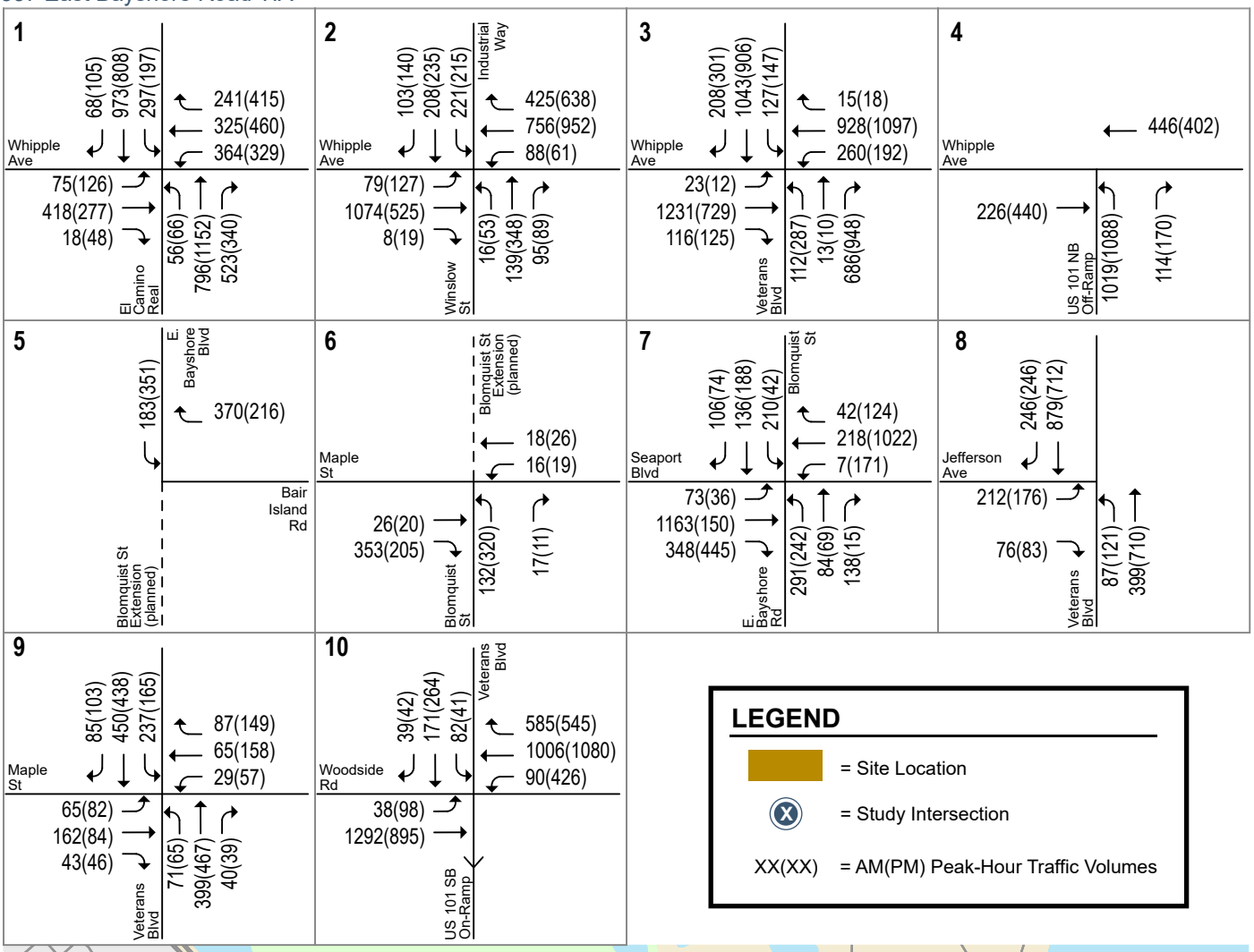


Figure 9
Project Trip Assignment



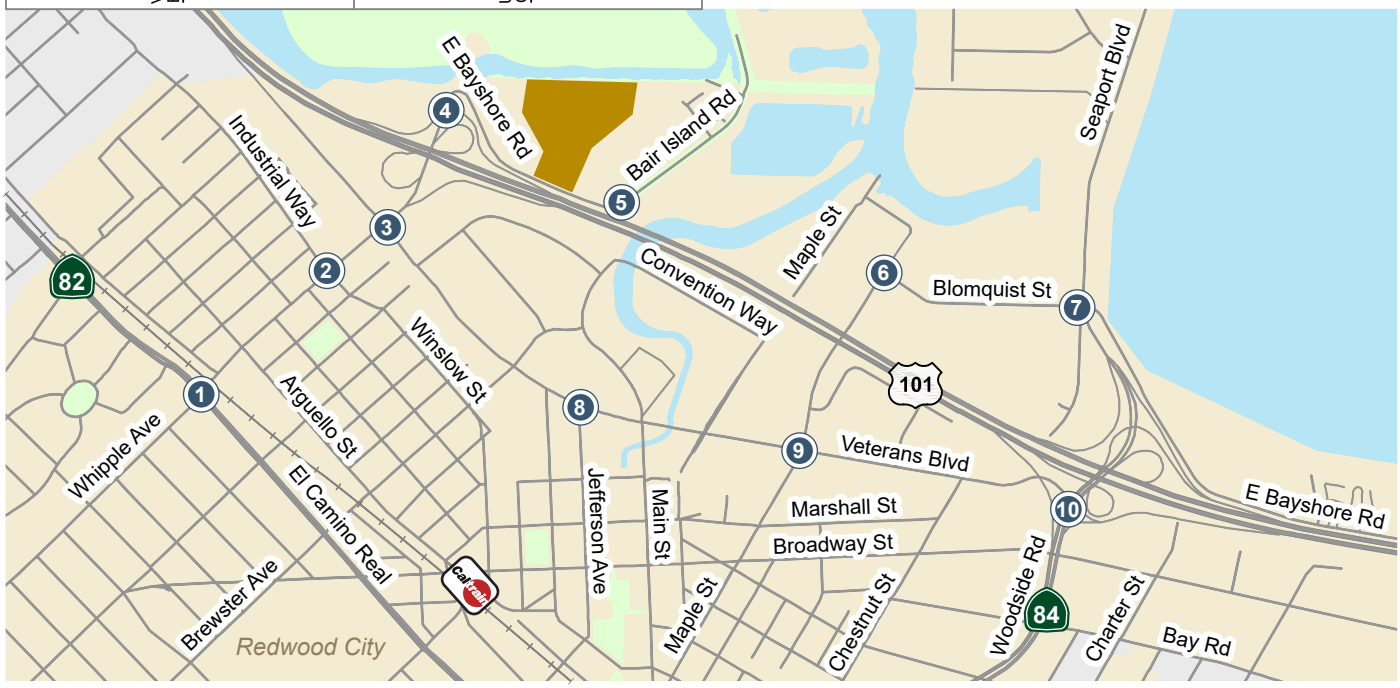
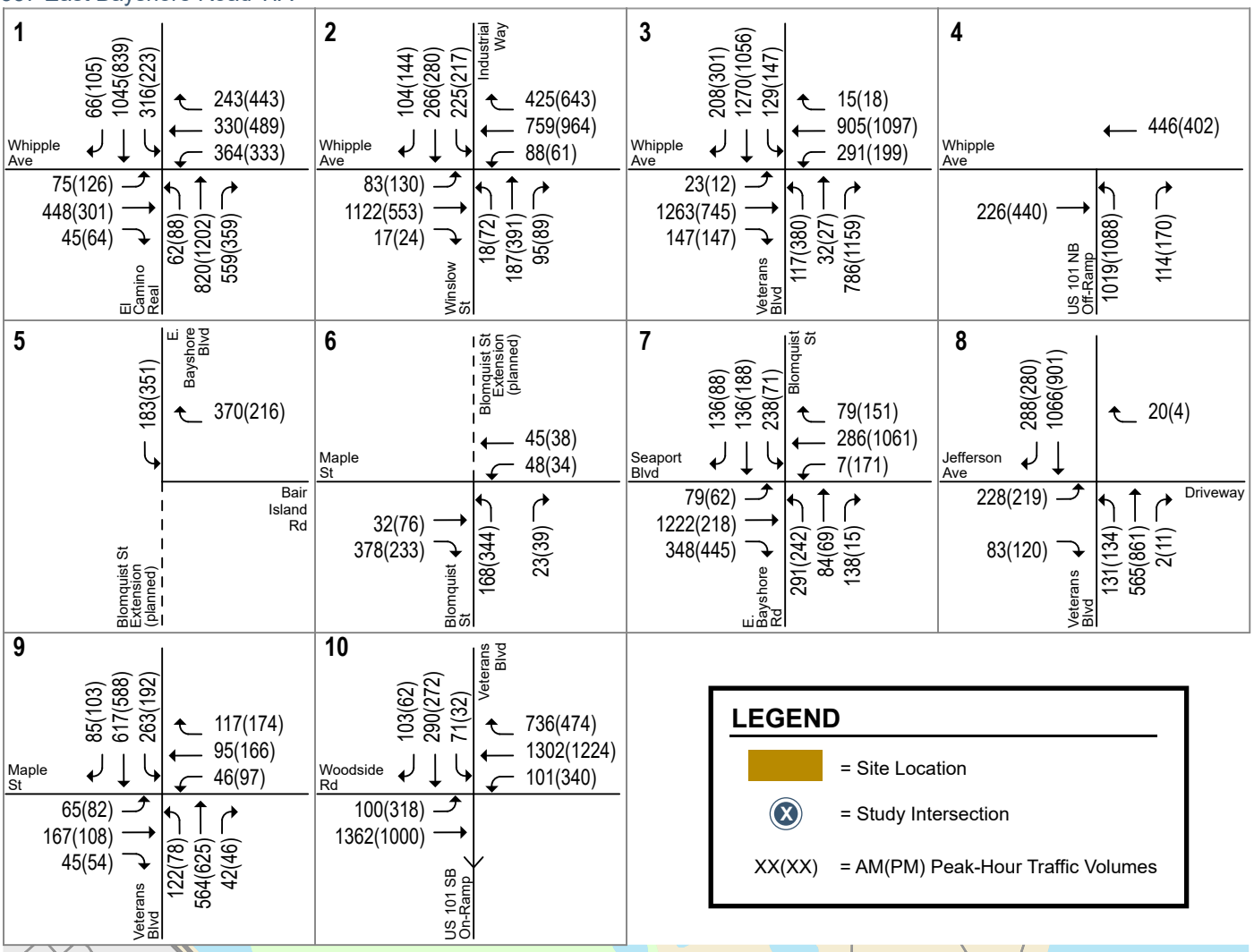


Figure 10
Existing Plus Project Traffic Volumes

NORTH
Not to Scale



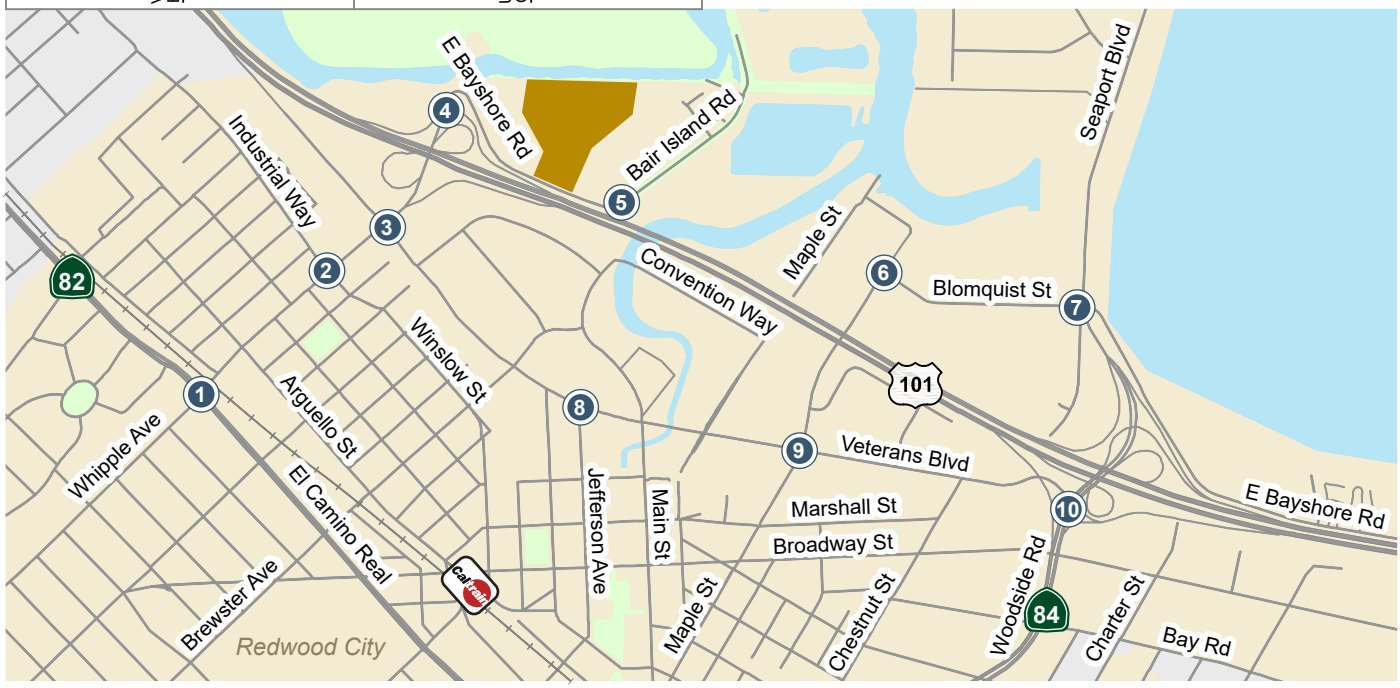


Figure 11
Background Plus Project Traffic Volumes

NORTH
Not to Scale

Intersection Levels of Service

The results of the intersection level of service analysis for existing plus project and background plus project conditions are summarized in Tables 7 and 8, respectively.

Existing Plus Project Conditions

The results show that under existing plus project conditions nine of the ten study intersections would operate at an acceptable level of service during the AM and PM peak hours. The intersection of Veterans Boulevard and Woodside Road would operate at LOS F in the PM peak hour. Since the proposed project would not add five seconds or more of delay at Veterans Boulevard and Woodside Road, the project does not cause a substantial adverse effect at the intersection.

Table 7
Existing Plus Project Intersection Levels of Service

					Existing		Existing Plus Project	
ID	Intersection	Control [1]	Peak Hour	Count Date	Avg. Delay	LOS	Avg. Delay	LOS
1	El Camino Real and Whipple Ave*	Signal	AM	09/10/19	21.1	C	21.8	C
			PM	09/10/19	21.4	C	22.6	C
2	Winslow St/Industrial Way and Whipple Ave	Signal	AM	09/10/19	26.1	C	26.3	C
			PM	09/10/19	35.6	D	33.6	C
3	Veterans Blvd and Whipple Ave	Signal	AM	09/10/19	38.7	D	39.6	D
			PM	09/10/19	37.2	D	39.3	D
4	US 101 NB Off-Ramp and Whipple Ave	Signal	AM	09/10/19	12.3	B	11.7	B
			PM	09/10/19	12.8	B	13.7	B
5	East Bayshore Rd and Bair Island Rd	Rbt	AM	09/10/19	5.8	A	5.8	A
			PM	09/10/19	5.6	A	5.7	A
6	Blomquist St and Maple St [2]	OWSC	AM	09/10/19	11.2	B	11.2	B
			PM	09/10/19	12.7	B	12.9	B
7	Blomquist St and Seaport Blvd	Signal	AM	11/06/18	33.4	C	33.4	C
			PM	11/06/18	30.6	C	30.7	C
8	Veterans Blvd and Jefferson Ave	Signal	AM	01/31/18	13.9	B	14.1	B
			PM	01/31/18	12.5	B	13.5	B
9	Veterans Blvd and Maple St	Signal	AM	09/10/19	27.3	C	27.0	C
			PM	09/10/19	29.0	C	29.3	C
10	Veterans Blvd and Woodside Rd**	Signal	AM	09/10/19	31.4	C	31.7	C
			PM	09/10/19	**80.9**	**F**	**82.4**	**F**

Notes:
* Indicates San Mateo County CMP intersection. LOS standard for El Camino Real and Whipple Ave is LOS E.
** Synchro default parameters were adjusted to ensure intersection delay and LOS reflect field observations.
[1] Control Type Definitions: Rbt = Roundabout; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control.
Overall weighted average control delay (seconds per vehicle) is reported for signalized and AWSC intersections.
Worst stop-controlled approach delay (seconds per vehicle) is reported for OWSC intersections.
[2] The intersection of Blomquist St and Maple St will be converted to either an AWSC or Rbt intersection under cumulative conditions.
Bold indicates a substandard level of service.

Background Plus Project Conditions

The results show that under background plus project conditions, nine of the ten study intersections would operate at an acceptable level of service during the AM and PM peak hours. The intersection of Veterans Boulevard and

Woodside Road would operate at LOS F in the AM and PM peak hour. Since the proposed project would not add five seconds or more of delay during any peak hour at Veterans Boulevard and Woodside Road, the project does not cause a substantial adverse effect at the intersection.

Table 8
Background Plus Project Intersections Levels of Service

				Background		Background Plus Project		
ID	Intersection	Control [1]	Peak Hour	Avg. Delay	LOS	Avg. Delay	LOS	Incr. in Avg. Del.
1	El Camino Real and Whipple Ave*	Signal	AM	22.8	C	23.6	C	0.8
			PM	24.0	C	25.4	C	1.4
2	Winslow St/Industrial Way and Whipple Ave	Signal	AM	28.0	C	28.1	C	0.1
			PM	35.6	D	35.2	D	-0.4
3	Veterans Blvd and Whipple Ave	Signal	AM	41.8	D	44.4	D	2.6
			PM	38.5	D	40.3	D	1.8
4	US 101 NB Off-Ramp and Whipple Ave	Signal	AM	12.3	B	11.7	B	-0.6
			PM	12.8	B	13.7	B	0.9
5	East Bayshore Rd and Bair Island Rd	Rbt	AM	5.8	A	5.8	A	0.0
			PM	5.6	A	5.7	A	0.1
6	Blomquist St and Maple St [2]	OWSC	AM	13.2	B	13.4	B	0.2
			PM	16.5	C	16.9	C	0.4
7	Blomquist St and Seaport Blvd	Signal	AM	34.6	C	35.0	D	0.4
			PM	31.7	C	31.8	C	0.1
8	Veterans Blvd and Jefferson Ave	Signal	AM	15.3	B	15.6	B	0.3
			PM	12.4	B	13.4	B	1.0
9	Veterans Blvd and Maple St	Signal	AM	28.2	C	28.5	C	0.3
			PM	29.4	C	29.9	C	0.5
10	Veterans Blvd and Woodside Rd**	Signal	AM	**100.0**	**F**	**100.5**	**F**	**0.5**
			PM	**>120**	**F**	**>120**	**F**	**0.7**

Notes:
* Indicates San Mateo County CMP intersection. LOS standard for El Camino Real and Whipple Ave is LOS E.
** Synchro default parameters were adjusted to ensure intersection delay and LOS reflect field observations.
[1] Control Type Definitions: Rbt = Roundabout; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control. Overall weighted average control delay (seconds per vehicle) is reported for signalized and AWSC intersections. Worst stop-controlled approach delay (seconds per vehicle) is reported for OWSC intersections.
[2] The intersection of Blomquist St and Maple St will be converted to either an AWSC or Rbt intersection under
Bold indicates a substandard level of service.

At some intersections, the average delay is shown to be decreased slightly with the addition of traffic generated by the proposed project. This occurs because the intersection delay is a weighted average of all intersection movements. When traffic is added to movements with delays lower than the average intersection delay, the average delay for the entire intersection can decrease.

Cumulative Conditions

This section describes traffic operations under cumulative no project conditions and cumulative conditions. For this study, cumulative no project conditions reflect a horizon year of 2022. Cumulative no project traffic volumes reflect regional growth in the study area and traffic generated by nearby approved and proposed development projects. Two cumulative scenarios were analyzed to evaluate cumulative volumes with and without the development of the proposed Blomquist Street extension project (described in detail in Chapter 1).

Roadway Network

Cumulative conditions assume geometry changes at the Veterans Boulevard and Jefferson Avenue intersection due to the Veterans Boulevard road diet per the Redwood City Downtown Precise Plan. The Veterans Boulevard road diet project would reduce the number of through lanes in both the northbound and southbound directions from three to two.

Cumulative Conditions with Blomquist Street Extension

The roadway network under cumulative no project conditions assumes the completion of the planned Blomquist Street extension to connect with East Bayshore Road at Bair Island Road. The Blomquist Street extension would include the following geometry changes to the following two study intersections:

- **East Bayshore Road/Bair Island Road:** Addition of a northbound leg to the existing roundabout intersection. The northbound leg would have one receiving lane and one right-turn lane.

- **Blomquist Street/Maple Street:** Addition of a southbound leg to the existing “T” intersection. The addition of this leg would be accompanied by the installation of all-way stop traffic control at the intersection. This all-way stop control would serve as a short-term control device. The City has stated that the preferred long-term control device for this intersection would be a one-lane roundabout. An analysis of both intersection controls is included as part of this cumulative analysis.

The proposed Blomquist Street extension project and lane configurations at the two intersections described above are shown on Figure 12. No other changes to the roadway network were assumed that would alter existing intersection lane configurations or the existing network.

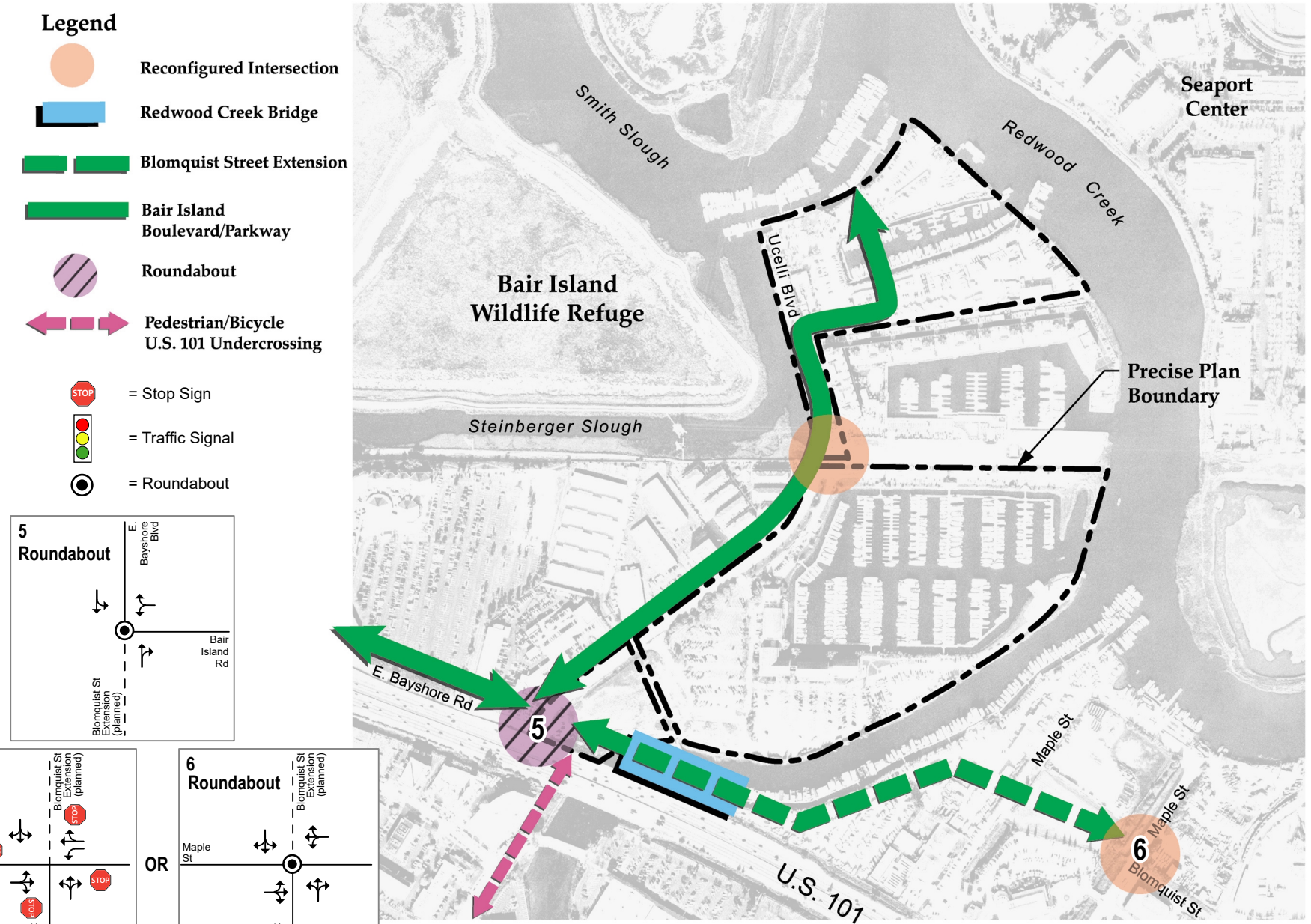


Figure 12
Blomquist Street Extension

Cumulative Conditions without Blomquist Street Extension

For the purposes of this analysis and at the direction of City staff, an analysis of cumulative conditions without the development of the Blomquist Street extension project was conducted. For this alternative analysis, the road diet on Veterans Boulevard and Jefferson Avenue was the only change from existing conditions.

Intersection Traffic Volumes

The cumulative scenarios assume a horizon year of 2022. A growth factor of 1.0 percent per year for both the AM and PM peak periods was assumed based on direction from Redwood City staff.

Cumulative No Project

Cumulative no project volumes were forecast based on the growth factor, the addition of background volumes from approved projects, and the addition of trips from other proposed but not yet approved projects in the study area. Trip generation and trip distribution for proposed projects were obtained from each project's traffic impact analysis (TIA) or environmental impact report (EIR). If there was no traffic study or EIR available for the project, trip generation was developed using ITE *Trip Generation Manual 10th Edition* rates, and trip distribution was developed based on existing travel patterns on the surrounding roadway system, locations of complimentary land uses, and the trip distribution patterns provided as part of nearby traffic studies. Peak-hour intersection volumes for the study intersections are tabulated in Appendix D.

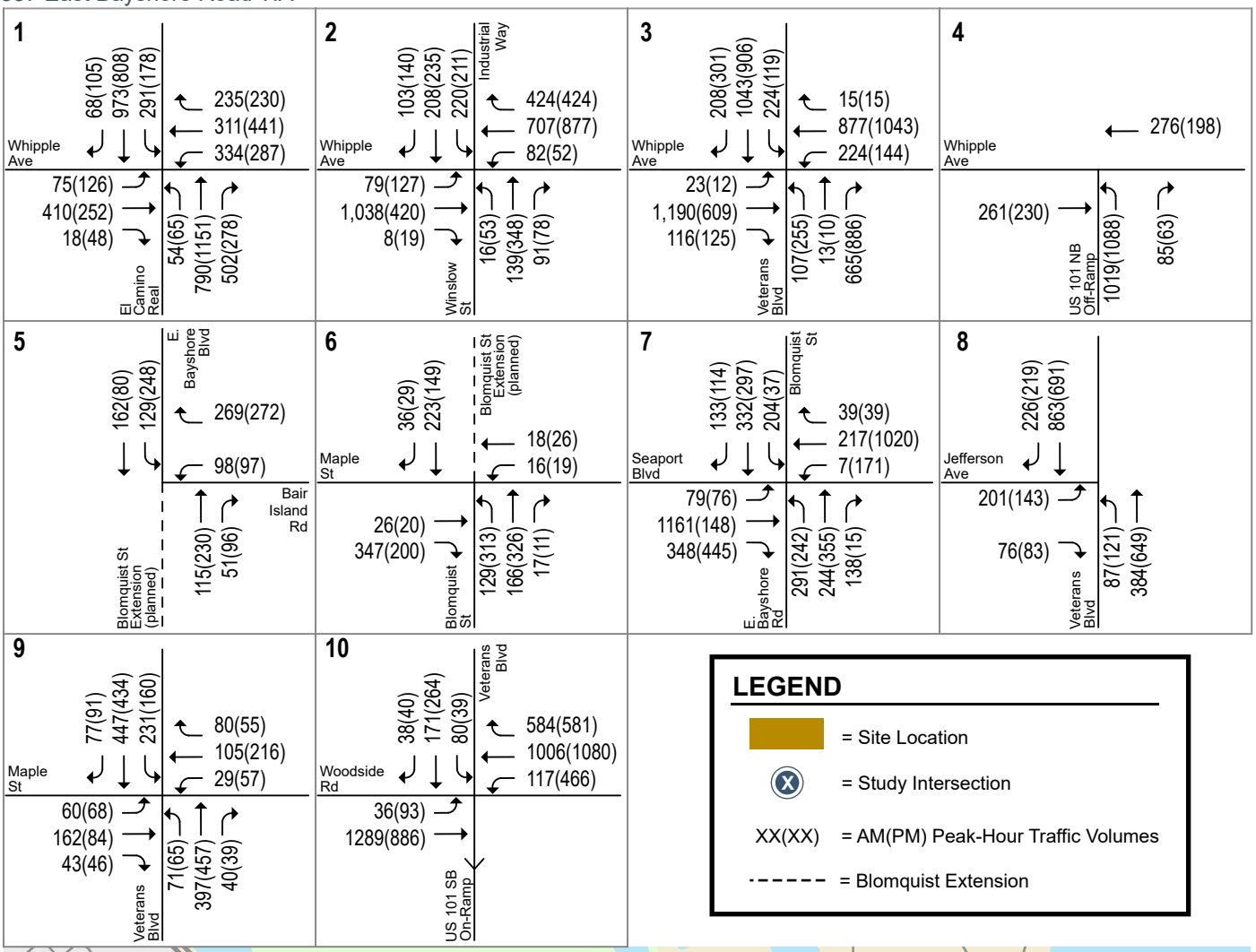
The list of proposed projects was developed based on information provided by Redwood City in December 2019. The following proposed but not yet approved projects were considered under cumulative conditions because they would contribute cumulative trips to the study intersections.

- Sequoia Station Transit Sub-Area Plan (1057 El Camino Real) – 440-unit residential and 1,635,000 s.f. office
- 505 East Bayshore Road – 60 townhomes
- 690 Veterans Boulevard – 92-room hotel
- 1125 Arguello Street – 68 townhomes
- Toyota 101 (525 East Bayshore Road) – 201,670 s.f. automotive dealership
- South Main Mixed-use (1601 El Camino Real) – 540-unit residential, 530,000 s.f. office, 28,841 s.f. retail, 8,367 s.f. childcare space
- Harbor View (320-350 Blomquist Street) – 745,150 s.f. office (including 35,000 s.f. amenities space) and 20,000 s.f. community space

Since the Blomquist Street extension has yet to be built, the existing counts were reassigned to represent travel patterns that would occur if the Blomquist Street extension were in place (See Figure 13). The planned new roadway connection is expected to result in a diversion of trips from US 101 to Blomquist Street/E. Bayshore Road. In addition, existing developments on Bair Island Road and Uccelli Boulevard that are currently only accessible from the north via Whipple Avenue would also be accessible from the south via Maple Street and Seaport Boulevard. Furthermore, trips from the approved Strada development at 1548 Maple Street also were reassigned to reflect the Blomquist Street extension.

As described previously, the City has requested that the analysis include a cumulative scenario without the Blomquist Street extension. The traffic studies for proposed development projects east of the US 101, including 505 East Bayshore Road, Toyota 101, and Harbor View, were completed assuming the Blomquist extension was in place. Therefore, the project traffic needed to be reassigned to reflect no Blomquist Street extension.

Cumulative no project volumes with and without the Blomquist Street extension are presented in Figures 14 and 15, respectively.



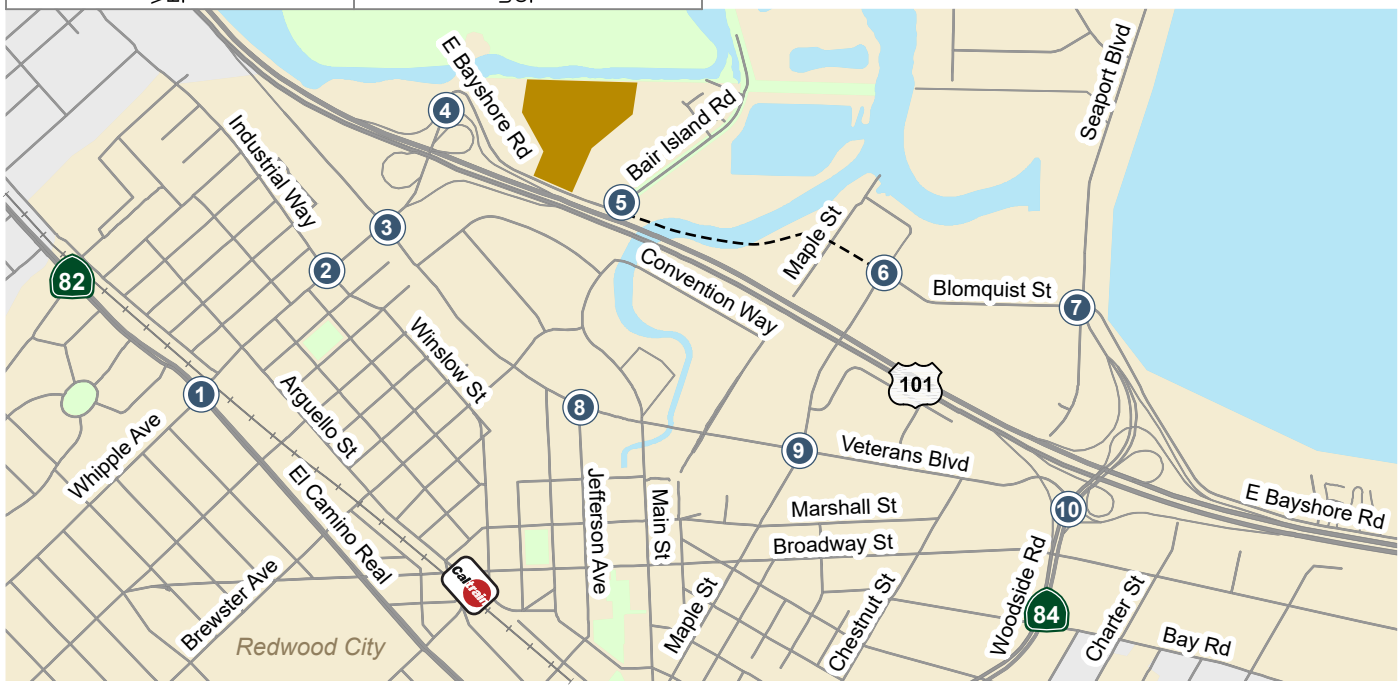
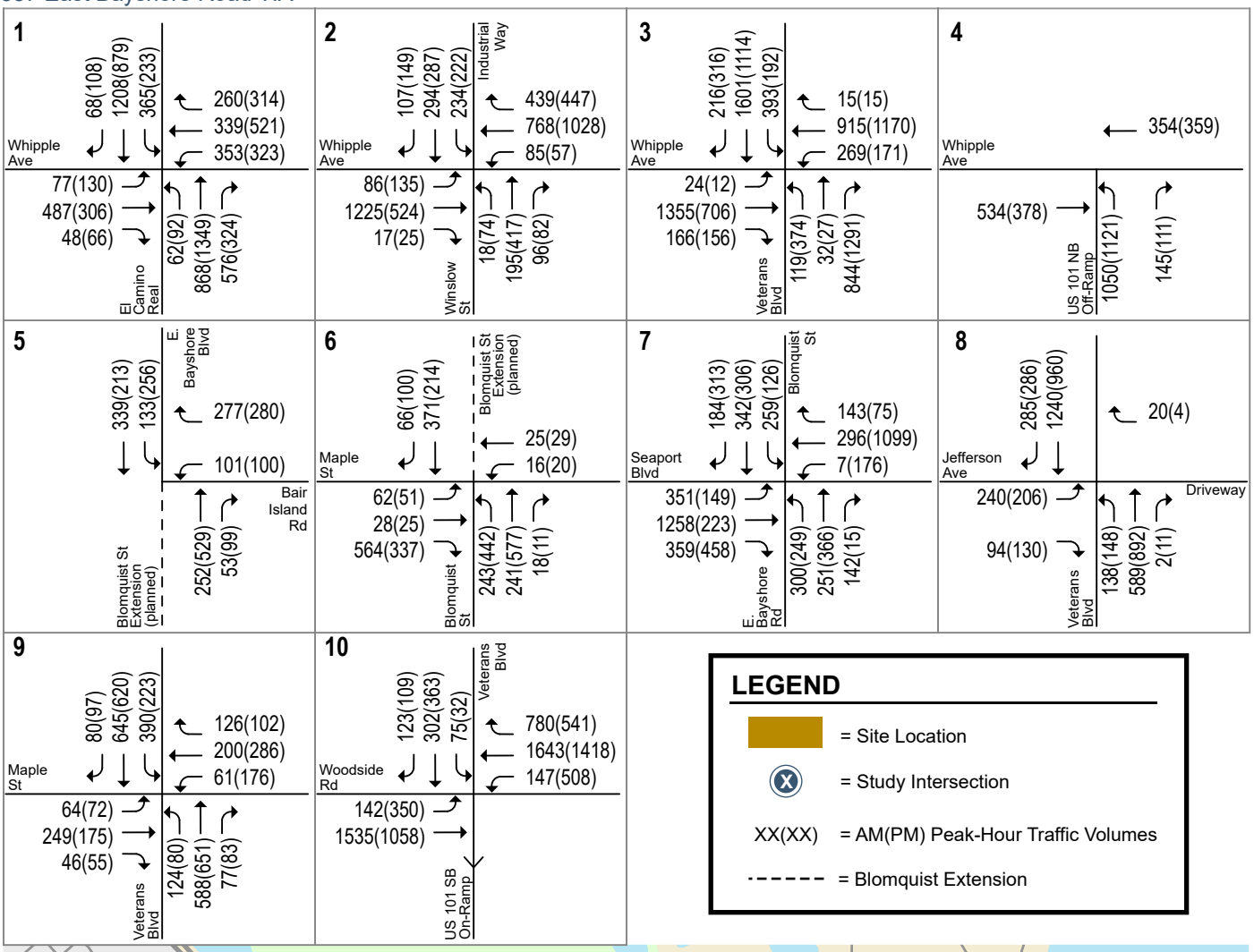


Figure 13
Reassigned Existing Traffic Volumes - Due to Blomquist St. Extension

NORTH
Not to Scale



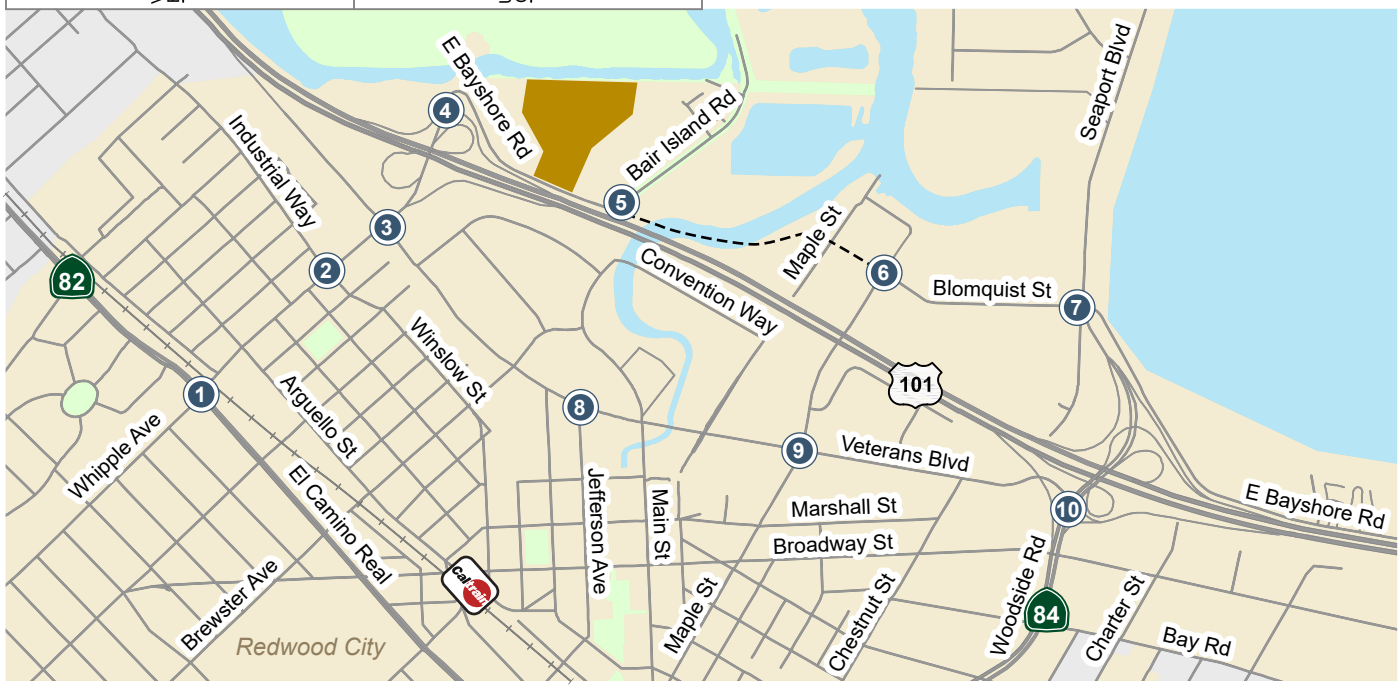
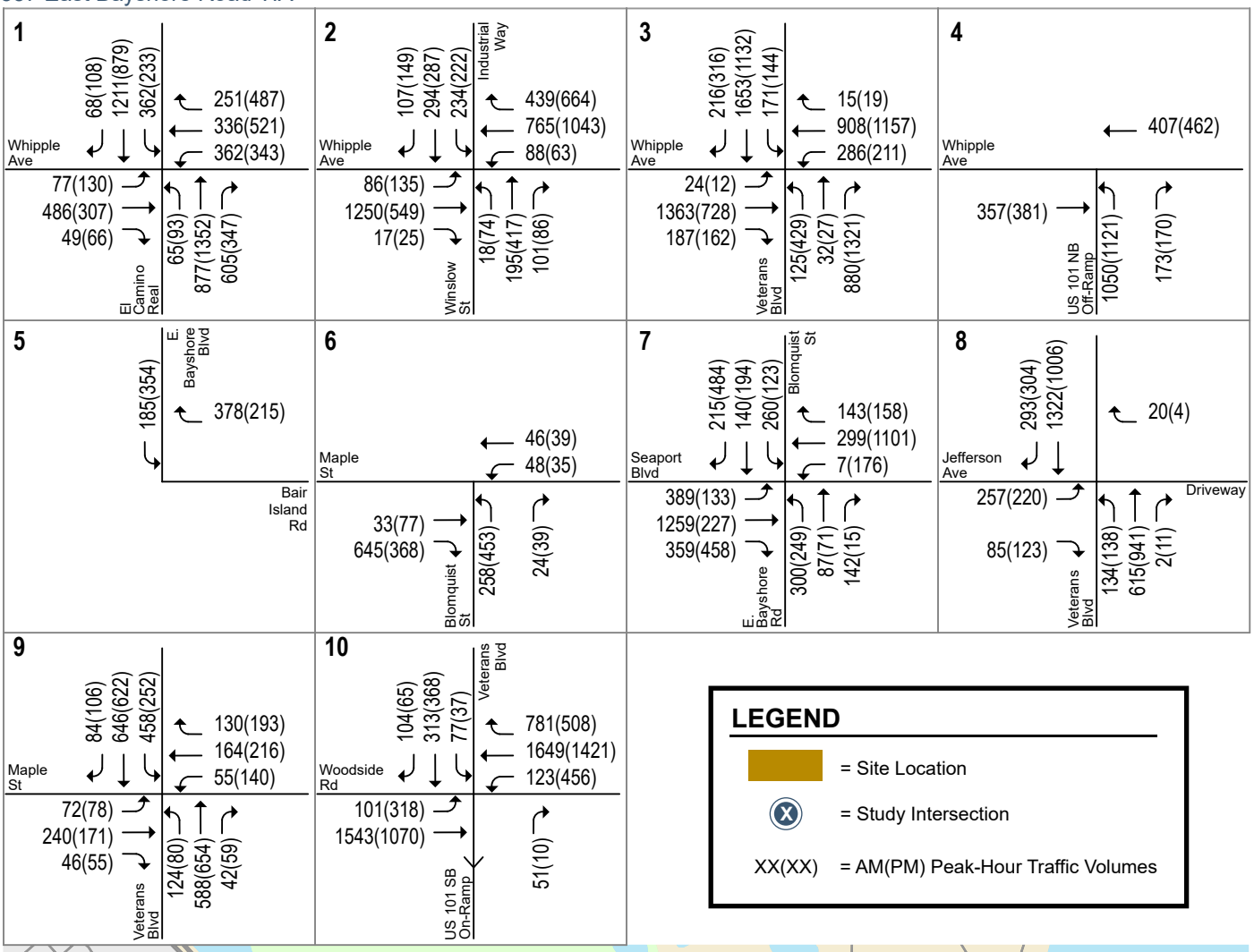


Figure 14
Cumulative No Project Traffic Volumes (with Blomquist St. Extension)



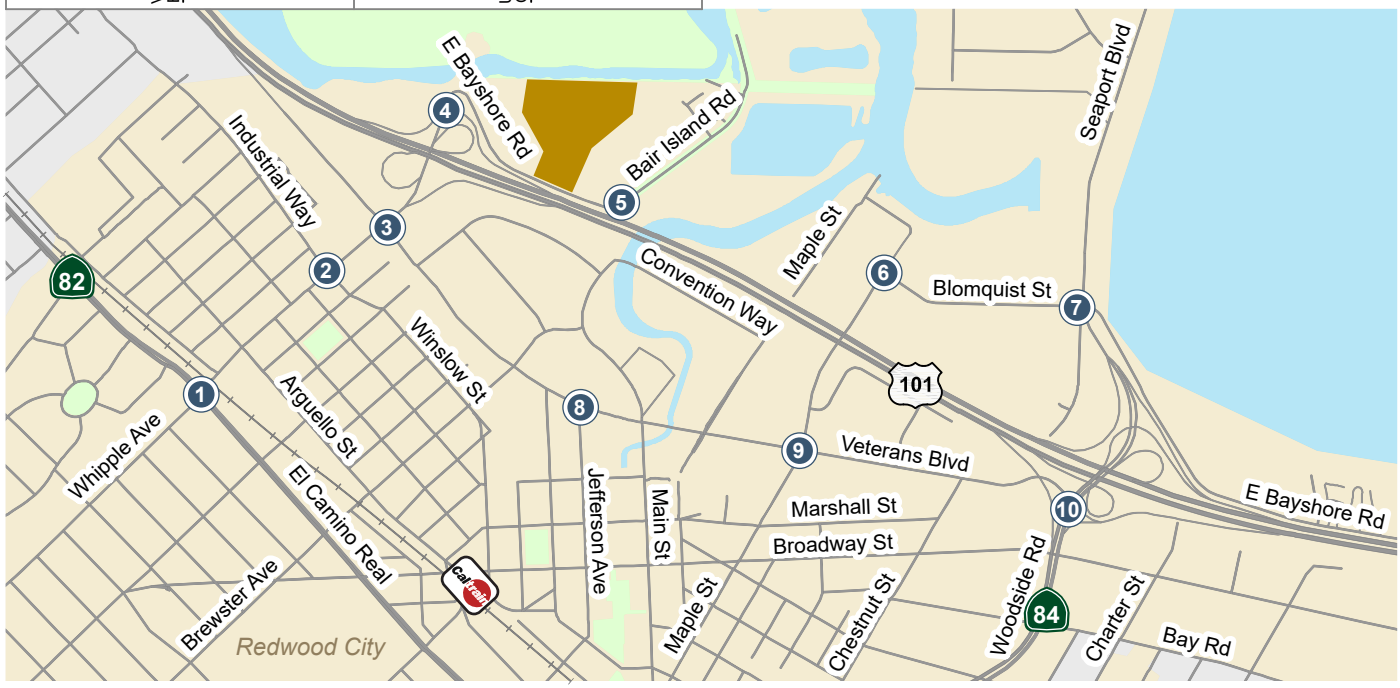


Figure 15
Cumulative No Project (No Blomquist Extension) Traffic Volumes

NORTH
Not to Scale

Cumulative with Project

Project trips were reassigned to the future roadway network assuming the completion of the Blomquist Street extension based on the same trip generation and distribution estimates provided previously (Figure 16). These reassigned project trips were added to the cumulative no project volumes to generate cumulative volumes (Figure 17).

Under cumulative conditions without the Blomquist Street extension, project trip assignment would be the same as described previously. These project trips were added to the cumulative no project (no Blomquist Extension) volumes to generate cumulative (no Blomquist Extension) volumes (Figure 18).

Intersection Levels of Service

Intersection level of service was analyzed with and without the Blomquist Street extension.

With Blomquist Street Extension

The results of the level of service analysis under cumulative no project and cumulative conditions with the Blomquist Street extension are summarized in Table 9. The results show that the project would cause a substantial adverse effect at the intersection of Blomquist Street and Maple Street and at the intersection of Veterans Boulevard and Woodside Road The project would not cause a substantial adverse effect at the remaining study intersections.

Blomquist Street and Maple Street

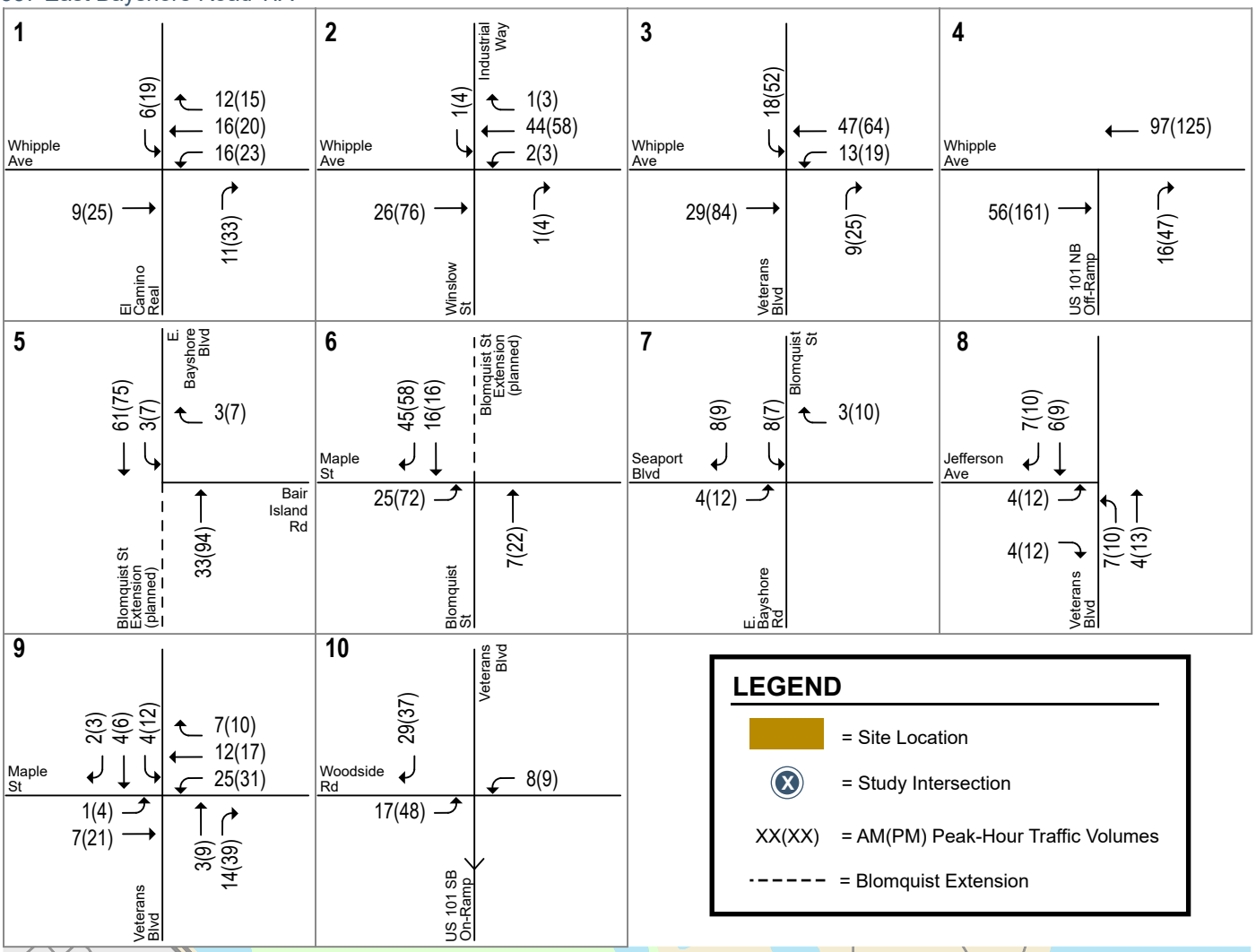
With the installation of the all-way stop control, the Blomquist Street and Maple Street intersection would operate at an unacceptable LOS F during the AM and PM peak hours under both cumulative no project and cumulative conditions. The addition of project trips would increase the average delay at this unsignalized intersection by 22.6 seconds in the AM peak hour and 44.4 seconds in the PM peak hour. As described later in this chapter, this intersection would meet signal warrants under both cumulative no project and cumulative conditions during the AM and the PM peak hours. Because the project would increase the average delay by more than five seconds and the intersection would meet signal warrants under cumulative conditions, the project is considered to have a **substantial adverse effect** at this intersection during both peak hours.

As shown in Table 8, a single-lane roundabout would operate at an acceptable LOS C under both cumulative no project and cumulative conditions during the AM peak hour. However, during the PM peak hour, the intersection would operate at an unacceptable LOS E under cumulative conditions. The roundabout would have to be designed as a two-lane roundabout to operate with an acceptable level of service in both peak hours. This roundabout is included as part of the Blomquist Street extension project, which will be funded in part through the City's Transportation Impact Fee (TIF). Therefore, payment of the City's TIF would mitigate this deficiency.

Veterans Boulevard and Woodside Road

The intersection of Veterans Boulevard and Woodside Road would operate at an unacceptable LOS F during the AM and PM peak hour under both cumulative no project and cumulative conditions. The addition of project related traffic would increase the average delay at this intersection by 7.3 seconds during the AM peak hour and 5.9 seconds during the PM peak hour. Based on Redwood City mobility deficiency criteria, this increase in average delay is considered to be a **substantial adverse effect** at this intersection during both peak hours.

As mentioned in Chapter 1, the US 101/SR 84 (Woodside Road) Interchange Improvement Project would reconstruct this intersection. The final design for the US 101 and Woodside Road interchange project would create a flyover from Veterans Boulevard to provide direct access to US 101 southbound and from US 101 northbound. This flyover would result in the removal of the Veterans Boulevard and Woodside Road intersection. The project's fair-share contribution to this project would serve as mitigation for this deficiency.



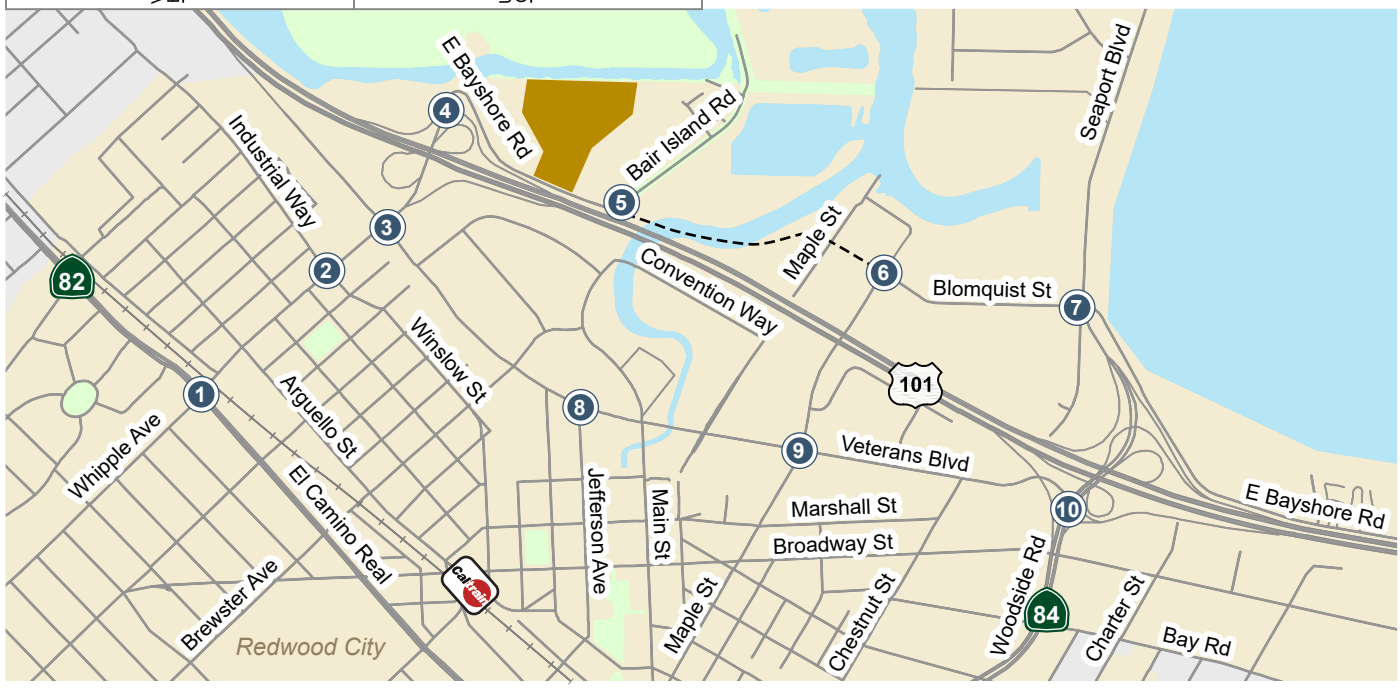
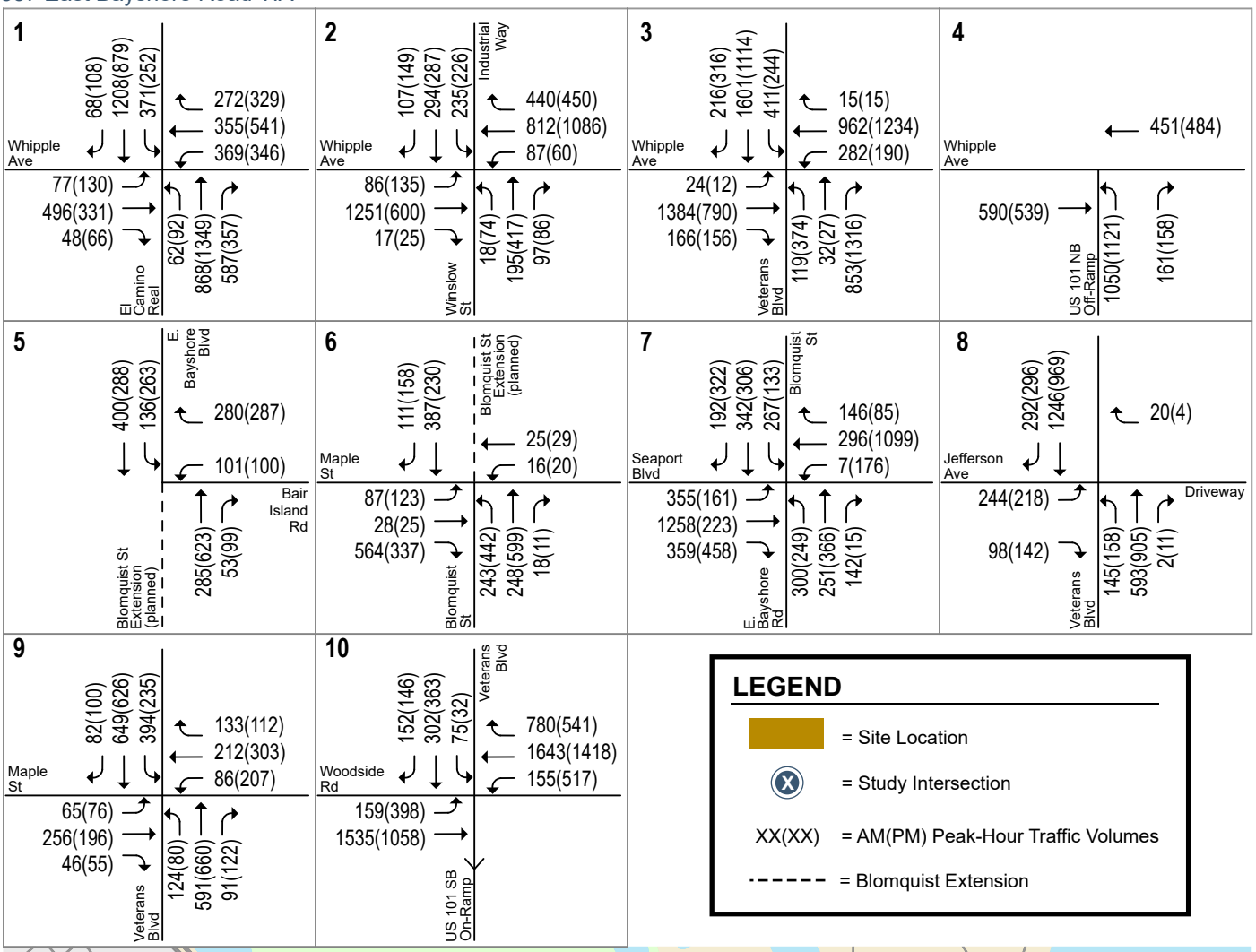


Figure 16
Trip Assignment Under Cumulative Conditions (with Blomquist St. Extension)



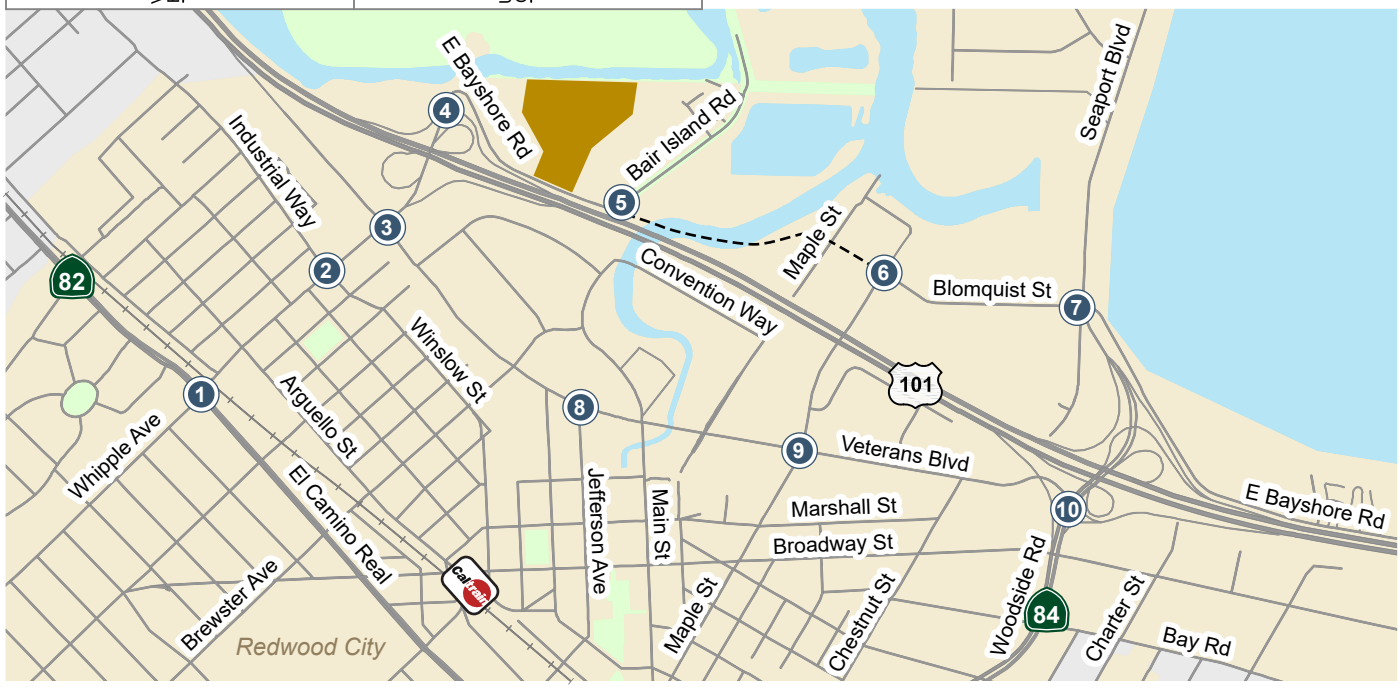
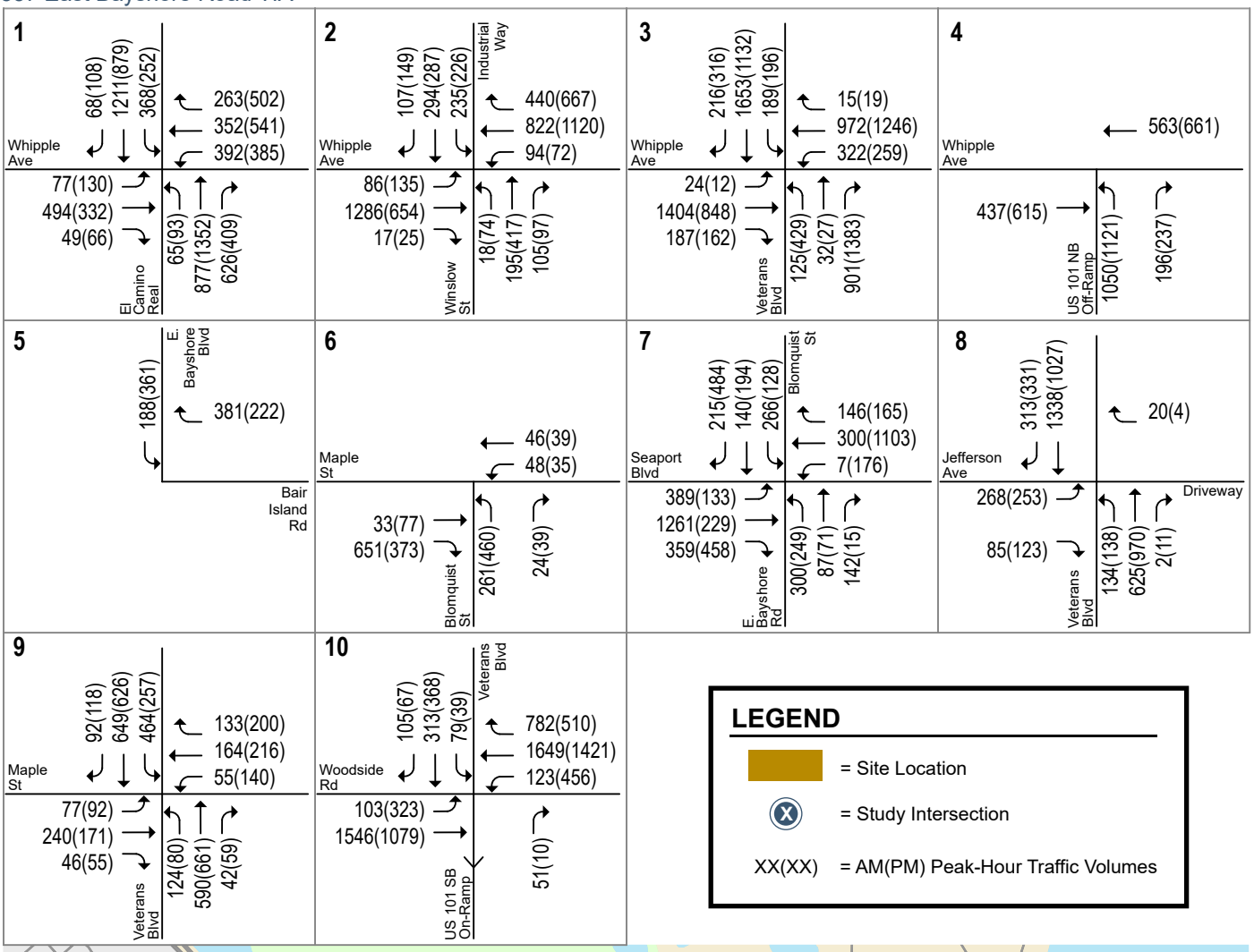


Figure 17
Cumulative Traffic Volumes (with Blomquist St. Extension)

NORTH
Not to Scale



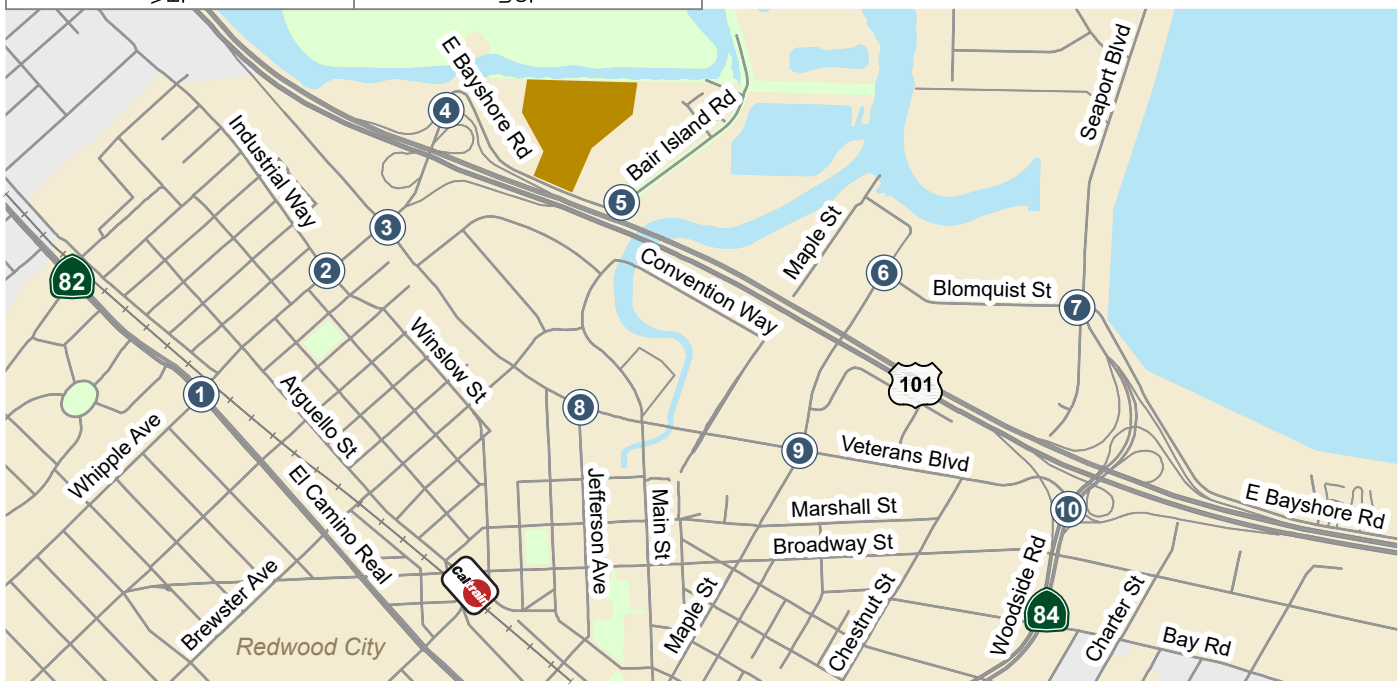


Figure 18
Cumulative (No Blomquist Extension) Traffic Volumes

NORTH
Not to Scale

Table 9
Cumulative With Blomquist Street Extension Intersection Levels of Service

ID	Intersection	Control [1]	Peak Hour	Background Avg. Delay	Background LOS	With Blomquist St Extension: Cumulative No Project Avg. Delay[3]	Cumulative No Project LOS	With Blomquist St Extension: Cumulative Avg. Delay	Cumulative LOS	Incr. in Avg. Del.
1	El Camino Real and Whipple Ave*	Signal	AM	22.8	C	26.2	C	27.0	C	0.8
			PM	24.0	C	30.0	C	32.7	C	2.7
2	Winslow St/Industrial Way and Whipple Ave	Signal	AM	28.0	C	29.1	C	29.1	C	0.0
			PM	35.6	D	37.3	D	37.1	D	-0.2
3	Veterans Blvd and Whipple Ave	Signal	AM	41.8	D	**55.7**	**E**	**57.6**	**E**	**1.9**
			PM	38.5	D	41.6	D	43.9	D	2.3
4	US 101 NB Off-Ramp and Whipple Ave	Signal	AM	12.3	B	16.3	B	16.4	B	0.1
			PM	12.8	B	13.2	B	16.6	B	3.4
5	East Bayshore Rd and Bair Island Rd	Rbt	AM	5.8	A	8.4	A	9.2	A	0.8
			PM	5.6	A	14.1	B	18.7	C	4.6
6	Blomquist St and Maple St [2]	OWSC	AM	13.2	B	--	--	--	--	--
			PM	16.5	C	--	--	--	--	--
		AWSC	AM	--	--	**89.7**	**F**	**112.3**	**F**	**22.6**
			PM	--	--	**>120**	**F**	**>120**	**F**	**44.4**
		Rbt	AM	--	--	17.8	C	20.9	C	3.1
			PM	--	--	29.7	D	**44.8**	**E**	**15.1**
7	Blomquist St and Seaport Blvd	Signal	AM	34.6	C	50.6	D	51.9	D	1.3
			PM	31.7	C	49.6	D	52.6	D	3.0
8	Veterans Blvd and Jefferson Ave	Signal	AM	15.3	B	17.2	B	17.6	B	0.4
			PM	12.4	B	13.8	B	14.7	B	0.9
9	Veterans Blvd and Maple St	Signal	AM	28.2	C	33.8	C	34.5	C	0.7
			PM	29.4	C	32.2	C	33.6	C	1.4
10	Veterans Blvd and Woodside Rd**	Signal	AM	**100.0**	**F**	**>120**	**F**	**>120**	**F**	**7.3**
			PM	**>120**	**F**	**>120**	**F**	**>120**	**F**	**5.9**

Notes:
* Indicates San Mateo County CMP intersection. LOS standard for El Camino Real and Whipple Ave is LOS E.
** Synchro default parameters were adjusted to ensure intersection delay and LOS reflect field observations. The project's fair share contribution to the US-101 and Woodside Road interchange project would serve as mitigation for the significant impact at this intersection.
[1] Control Type Definitions: Rbt = Roundabout; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control.
Overall weighted average control delay (seconds per vehicle) is reported for signalized and AWSC intersections.
Worst stop-controlled approach delay (seconds per vehicle) is reported for OWSC intersections.
[2] The intersection of Blomquist St and Maple St will be converted to either an AWSC or Rbt intersection under cumulative conditions. The above results for Rbt reflect a single-lane Rbt. The significant impact at this intersection could be mitigated with a multi-lane Rbt, which would operate at an acceptable level (12.0 seconds average delay, LOS B).
Bold indicates a substandard level of service.
Outline indicates a substantial adverse effect.

Without Blomquist Street Extension

The results of the level of service analysis under cumulative no project and cumulative conditions without the Blomquist Street extension are summarized in Table 10. The results show that the project would cause a substantial adverse effect at the intersection of Veterans Boulevard and Whipple Avenue during the AM peak hour based on Redwood City standards. The project would not cause a substantial adverse effect on the remaining intersections during both peak hours.

Veterans Boulevard and Whipple Avenue

The Veterans Boulevard and Whipple Avenue intersection would operate at an unacceptable LOS E during the AM peak hour under cumulative no project and cumulative conditions. The addition of project traffic during this peak hour would increase the delay at the intersection by 9.6 seconds. This constitutes a **substantial adverse effect** based on Redwood City mobility deficiency criteria.

There are no physical improvements to the intersection that are feasible. With completion of the Blomquist Street extension, the project would not have a substantial adverse effect at this intersection. Therefore, the Blomquist Street extension can be considered mitigation for this cumulative deficiency. The project should pay the City's Traffic Impact Fee, which funds the Blomquist Street extension.

Table 10
Cumulative Without Blomquist Street Extension Intersection Levels of Service

						Without Blomquist St Extension				
				Background		Cumulative No Project		Cumulative		
ID	Intersection	Existing Control	Peak Hour	Avg. Delay	LOS	Avg. Delay[3]	LOS	Avg. Delay	LOS	Incr. in Avg. Del.
1	El Camino Real and Whipple Ave*	Signal	AM	22.8	C	27.0	C	28.4	C	1.4
			PM	24.0	C	30.3	C	33.1	C	2.8
2	Winslow St/Industrial Way and Whipple Ave	Signal	AM	28.0	C	29.3	C	29.5	C	0.2
			PM	35.6	D	36.6	D	36.5	D	-0.1
3	Veterans Blvd and Whipple Ave[2]	Signal	AM	41.8	D	**60.2**	**E**	**69.8**	**E**	**9.6**
			PM	38.5	D	42.4	D	45.0	D	2.6
4	US 101 NB Off-Ramp and Whipple Ave	Signal	AM	12.3	B	12.1	B	13.3	B	1.2
			PM	12.8	B	13.0	B	17.9	B	4.9
5	East Bayshore Rd and Bair Island Rd	Rbt	AM	5.8	A	5.9	A	5.9	A	0.0
			PM	5.6	A	5.7	A	5.8	A	0.1
6	Blomquist St and Maple St	OWSC	AM	13.2	B	20.4	C	20.8	C	0.4
			PM	16.5	C	30.3	D	31.8	D	1.5
7	Blomquist St and Seaport Blvd	Signal	AM	34.6	C	41.2	D	41.4	D	0.2
			PM	31.7	C	**55.4**	**E**	**57.2**	**E**	**1.8**
8	Veterans Blvd and Jefferson Ave	Signal	AM	15.3	B	17.2	B	17.4	B	0.2
			PM	12.4	B	13.5	B	14.2	B	0.7
9	Veterans Blvd and Maple St	Signal	AM	28.2	C	35.3	D	35.5	D	0.2
			PM	29.4	C	33.7	C	34.3	C	0.6
10	Veterans Blvd and Woodside Rd**	Signal	AM	**100.0**	**F**	**>120**	**F**	**>120**	**F**	**0.5**
			PM	**>120**	**F**	**>120**	**F**	**>120**	**F**	**2.1**

Notes:
* Indicates San Mateo County CMP intersection. LOS standard for El Camino Real and Whipple Ave is LOS E.
** Synchro default parameters were adjusted to ensure intersection delay and LOS reflect field observations. The project's fair share contribution to the US-101 and Woodside Road interchange project would serve as mitigation for the significant impact at this intersection.
[1] Control Type Definitions: Rbt = Roundabout; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control.
Overall weighted average control delay (seconds per vehicle) is reported for signalized and AWSC intersections.
Worst stop-controlled approach delay (seconds per vehicle) is reported for OWSC intersections.
[2] The significant impact at this intersection would be mitigated with the Blomquist Street extension project.
Bold indicates a substandard level of service.
Outline indicates a substantial adverse effect.

Signal Warrants

An assessment was made of the need for signalization at the one unsignalized study intersection at Blomquist Street and Maple Street. This assessment was made on the basis of the Peak-Hour Volume Signal Warrant, Warrant #3, described in the *California Manual on Uniform Traffic Control Devices* (CA MUTCD). This method makes no evaluation of intersection level of service, but simply provides an indication whether peak-hour traffic volumes are or would be sufficient to justify installation of a traffic signal. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary. Additional analysis may include unsignalized level of service analysis and/or operational analyses such as evaluation of vehicle queuing and delay. Other options such as traffic control devices, signage, or geometric changes may be preferable based on existing field conditions.

The peak-hour signal warrant check was completed for the Blomquist Street and Maple Street intersection for the AM and PM peak hours under all scenarios. The analysis showed that the signal *would be satisfied* during the AM and PM peak hour under cumulative no project and cumulative conditions. The signal warrant worksheet can be found in Appendix E.

As described previously, the project would cause a significant increase in delay at this intersection under cumulative conditions with all-way stop control during the AM and PM peak hours. Based on the City's mobility deficiency criteria, a project is said to have a substantial adverse effect at an unsignalized intersection operating at an unacceptable level of service if the addition of project traffic increases the worst movement delay by greater than 5.0 seconds and the peak-hour signal warrants is met at the intersection. Therefore, the project would cause a substantial adverse effect at the intersection during both the AM and PM peak hours. Without Blomquist Street extension, the intersection is expected to operate at an acceptable level under the current one way stop control.

This intersection is planned to have a roundabout with the Blomquist Street extension. The analysis of a one-lane roundabout showed an unacceptable LOS E and delay of 44.8 seconds during the PM peak hour under the cumulative volume forecast in this study. However, if the northbound Blomquist Street leg and the circulating roadway of the proposed roundabout is designed with two lanes, the LOS for the intersection would improve to an acceptable LOS B in the PM peak hour. Based on the projected traffic volumes, a roundabout would be a preferred control method rather than a traffic signal at this intersection.

CMP Compliance

As the Congestion Management Agency (CMA) for San Mateo County, the City/County Association of Governments (C/CAG) is responsible for maintaining the performance and standards of the Congestion Management Program (CMP) roadway network. The CMP requires new development projected to generate 100 or more peak hour trips to implement Travel Demand Management (TDM) measures that would reduce project trips.

The proposed project would generate more than 100 peak hour trips. Based on the requirements of the C/CAG, this project would be required to develop and implement Transportation Demand Management (TDM) measures to reduce these trips. This is discussed in further detail in Chapter 2.

4. Freeway Segment and Ramp Analysis

The magnitude of project trips on the freeway segments near the project site were determined based on the trip assignment. Freeway segments and ramps were analyzed for the AM and PM peak hours as required by the CMP.

The levels of service and existing traffic volumes for the study freeway segments and ramps were obtained from the January 2019 Draft Environmental Impact Report (DEIR) for the Harbor View project. The level of service standards for freeways in San Mateo County vary by segment from LOS D to LOS F according to the CMP. The study segments in the project vicinity are all located along US 101. The LOS standard is E in both directions on the US 101 segments north of Whipple Avenue. The two US 101 study segments south of Whipple Avenue have a LOS standard of F in both directions Vehicle trips that would be generated by the proposed project along US 101 on these freeway segments were added to the existing volumes for this analysis.

Freeway Segment Analysis

All of the study freeway segments currently operate at an acceptable level. Furthermore, the proposed project trips would equate to less than one percent of the freeway's capacity on all study segments during the AM and PM peak hours (see Table 11). The project would add the greatest number of trips to the study segment between Whipple Avenue and Woodside Road in both directions during the PM peak hour. During this period, project trips would account for approximately 0.72 to 0.77 percent of the roadway's capacity. Thus, the project would not cause a substantial adverse effect on the study freeway segments.

Freeway Ramp Analysis

Table 12 shows the project added trips to the study freeway on- and off-ramps near the project site. The ramps included in this analysis are those that would likely experience project related traffic. Ramps for which no project related traffic was assigned were not included in the analysis. All ramps included in this study operate below capacity at LOS D or better. The addition of project traffic would not cause any ramps to deteriorate from their existing levels of service. Thus, the project would not cause a substantial adverse effect on the study freeway ramps.

Table 11
Freeway Segment Levels of Service

Segment	Peak Hour	Direction	Existing				Existing Plus Project				
			Volume	Capacity	V/C	LOS	Added Trips	% of Capacity	Volume	V/C	LOS
US 101 North of Whipple Ave	AM	NB	8198	9200	0.89	E	36	0.39%	8234	0.90	E
		SB	9020	9200	0.98	E	56	0.61%	9076	0.99	E
	PM	NB	7750	9200	0.84	D	41	0.45%	7791	0.85	D
		SB	8061	9200	0.88	D	63	0.68%	8124	0.88	D
US 101 between Whipple Ave and Woodside Rd	AM	NB	8006	8700	0.92	E	23	0.26%	8029	0.92	E
		SB	8080	8700	0.93	E	56	0.64%	8136	0.94	E
	PM	NB	7228	8700	0.83	D	67	0.77%	7295	0.84	D
		SB	7518	8700	0.86	D	63	0.72%	7581	0.87	D
US 101 South of Woodside Rd (SR 84)	AM	NB	8502	8700	0.98	E	20	0.23%	8522	0.98	E
		SB	7797	8700	0.90	E	42	0.48%	7839	0.90	E
	PM	NB	7159	8700	0.82	D	59	0.68%	7218	0.83	D
		SB	7778	8700	0.89	E	44	0.51%	7822	0.90	E

SOURCE: *Harbor View Draft EIR* (January 2019) produced by Fehr & Peers

Table 12
Freeway Ramp Levels of Service

Freeway Interchange and Ramp[1]		Pk. Hr.	Existing Volume	Existing V/C	Existing LOS	Plus Project Without Blomquist Street Extension Added Trips	Plus Project Without Blomquist Street Extension % of Capacity	Plus Project Without Blomquist Street Extension V/C	Plus Project Without Blomquist Street Extension LOS	Plus Project With Blomquist Street Extension Added Trips	Plus Project With Blomquist Street Extension % of Capacity	Plus Project With Blomquist Street Extension V/C	Plus Project With Blomquist Street Extension LOS
US 101 / Woodside Road													
NB	Off-Ramp to WB Woodside Road	AM	1,719	0.86	D	0	0.0%	0.86	D	4	0.2%	0.86	D
		PM	1,230	0.62	C	0	0.0%	0.62	C	12	0.6%	0.62	C
SB	Off-Ramp to WB Woodside Road	AM	884	0.44	B	14	0.7%	0.45	B	3	0.2%	0.44	B
		PM	1,008	0.50	C	18	0.9%	0.51	C	6	0.3%	0.51	C
	On-Ramp from Woodside Road	AM	936	0.47	B	0	0.0%	0.47	B	8	0.4%	0.47	B
		PM	1,239	0.62	C	0	0.0%	0.62	C	9	0.5%	0.62	C
US 101/Whipple Ave													
NB	Off-Ramp to Whipple Ave	AM	1,014	0.51	C	23	1.2%	0.52	C	16	0.8%	0.52	C
		PM	1,282	0.64	C	67	3.4%	0.67	C	47	2.4%	0.66	C
	On-Ramp from WB Whipple Ave	AM	75	0.04	A	36	1.8%	0.06	A	36	1.8%	0.06	A
		PM	69	0.03	A	41	2.1%	0.06	A	41	2.1%	0.06	A
SB	Off-Ramp to Veterans Ave/Whipple Ave	AM	1,727	0.45	B	18	0.5%	0.46	B	18	0.5%	0.46	B
		PM	1,355	0.36	B	52	1.4%	0.37	B	52	1.4%	0.37	B
	On-Ramp from WB Whipple Ave	AM	54	0.03	A	56	3.1%	0.06	A	37	2.1%	0.05	A
		PM	165	0.09	A	63	3.5%	0.13	A	41	2.3%	0.11	A

Notes

SOURCE: Harbor View Draft EIR (January 2019) produced by Fehr & Peers

[1] Theoretical capacities of ramps per Exhibit 25-3 of HCM 2000: 2,000 vph for single-lane diagonal ramps, 1,800 vph for loop ramps, and 3,800 vph for dual-lane diagonal ramps

5. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project, including:

- Site access and on-site circulation
- Potential impacts to pedestrian, bicycle, and transit facilities
- Parking Demand and Supply
- Vehicle Queuing

Unlike the CEQA VMT impact analysis and the level of service mobility deficiency methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Site Access and On-Site Circulation

Site access and on-site circulation were evaluated using commonly accepted transportation planning principles. This review is based on the project site plan prepared by BDE Architecture, ELS Architecture & Urban Design, and BKF Engineers, dated July 25, 2019 (see Figure 2). The site access and circulation were evaluated to determine the adequacy of the site's driveways with regard to traffic volumes, delays, vehicle queues, geometric design, sight distance, and truck access. In general, the site plan shows adequate site access and internal circulation.

For the purposes of this discussion, the orientation of the project site is defined as being bound to the west by East Bayshore Road, and to the east by the Bay Trail and Smith Slough. The project would provide surface parking for Villa Sport users, as well as above-grade parking garages within the residential buildings for Villa Sport users and residents. Two, full-access driveways on East Bayshore Road would provide access to two separate surface parking areas. The parking garage in Building A would be accessed via the northern driveway, while the parking garage in Building B would be accessed via the southern driveway.

A majority of the on-site parking would be accessible via the northern project driveway. Approximately 80 percent of the surface parking would be accessible via this driveway. In addition, this driveway would also provide access to the Residential - Building A and Villa Sport lobbies and the Building A parking garage. It is assumed that most of the Villa Sport related trips would use the north driveway to access the site, and park in the related surface parking lot or in the Building A garage. The south driveway would provide access to the smaller surface parking lot, and the Building B lobby and garage. It is assumed that project trips related to the residential use would use both driveways roughly evenly, as each driveway would provide access to a relatively similar amount of residential garage parking. The project trip assignment at the two driveways is shown on Figure 19.

Sight Distance at Project Driveways

The project driveways should be free and clear of any obstructions to optimize sight distance, thereby ensuring the exiting vehicles can see pedestrians on the sidewalk and other vehicles travelling along East Bayshore Road. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers entering and exiting the site. On-street parking is not permitted along either side of East Bayshore Road, so sight obstructions due to parked cars should not be an issue for this project.

Providing the appropriate sight distance reduces the likelihood of a collision at a driveway and provides drivers with the ability to exit a driveway or locate sufficient gaps in traffic. Sight distance generally should be provided in accordance with Caltrans design standards. The minimum acceptable sight distance is often considered the Caltrans stopping sight distance. Sight distance requirements vary depending on the roadway speeds. The speed limit on East Bayshore Road is 25 mph, for which the Caltrans recommended stopping sight distance is 150 feet. This means that a driver must be able to see 150 feet down East Bayshore Road to avoid a collision while exiting the driveway. There are no roadway curves within 150 feet or landscaping features shown on the site plan that would obstruct the vision of exiting drivers. Therefore, adequate sight distance would be provided at the project driveways.

On-Site Circulation

Vehicular on-site circulation was reviewed for the project in accordance with generally accepted traffic engineering standards and Redwood City guidelines. On-site circulation would occur in the surface parking lots on the north and south sides of the proposed buildings, and within the above grade parking garages. There are no internal roadways that allow on-site circulation between the northern and southern surface parking areas and between the Building A and Building B parking garages. Thus, vehicles would need to return to East Bayshore Road and proceed to the other site driveway to travel between the northern and southern parking areas. The parking garage ramp slope are not labeled on the site plan. The ramp design should be reviewed to ensure that the proposed slopes are reasonable and that slope transitions are provided at the top and bottom of each ramp.

All drive aisles within the surface parking areas and within the underground parking garage are shown to be between 24-feet and 26-feet wide. These drive aisle widths would be adequate to meet the City standards for aisles with 90-degree parking. Seven dead-end drive aisles are shown including three in the parking garages and four in the surface parking areas. Dead-end aisles generally should be avoided because if spaces are full, motorists must back out of the aisles. Adequate turn-around spaces are not shown in some locations. Hexagon recommends that one parking space be eliminated at the end of each dead-end aisle to provide turn-around space.

Pedestrian on-site circulation would be provided through sidewalks along East Bayshore Road, sidewalks surrounding the Villa Sport and residential buildings, and a pedestrian corridor between the buildings. Additionally, the project includes the development of pedestrian walkways connecting East Bayshore Road, the on-site parking facilities and buildings to the San Francisco Bay with a new Bay Trail segment and a large publicly accessible shoreline open space along the existing Bay Trail. A majority of the pedestrian activity is likely to occur within the surface parking lots as pedestrians walk between their vehicles and the Villa Sport building. The site plan includes textured pavement in front of the main Villa Sport entrance, which would serve as a traffic calming method to encourage slow speeds while travelling through this area. Designated pedestrian walkways should be provided through the north surface parking lot to the Villa Sport entrance. Aside from this deficiency, good pedestrian connectivity and circulation would be provided on-site.

Access and Circulation for Emergency Vehicles and Trucks

Based on the site plan provided, emergency response vehicles would access the project site from East Bayshore Road via either of the two driveways. Emergency vehicles entering the site via the northern driveway would be able to circulate in a counterclockwise manner around Building A and then exit from the same driveway. Emergency vehicles entering the site via the southern driveway would be able to turn around at the southeast corner of the site and then proceed back out the way they entered.

Trash collection for Villa Sport and the Residential Building B would occur from the surface parking area on the south side of the site. Villa Sport would utilize a trash enclosure and Residential Building B would have a trash staging area adjacent to the southern drive aisle. Garbage trucks servicing these buildings would enter and exit

via the southern driveway and make a 3-point turn near the southwest corner of Residential Building B. Trash collection for Residential Building A would occur from the trash staging area in the north surface parking lot immediately west of Residential Building A. Garbage trucks servicing Residential Building A would enter via the northern site driveway and circulate through the northern surface parking area before exiting from the same driveway. Note that garbage trucks would not be able to circulate internally between the two trash staging areas. Instead, trucks would need to exit the site from the southern driveway after collecting the trash for Villa Sport and Residential Building B and travel north along East Bayshore Road to reenter the site at the northern driveway to collect trash for Residential Building A. Staff from Residential Buildings A and B would need to move trash dumpsters from the trash rooms inside each building to the appropriate trash staging areas for collection on designated days.

Site access and circulation for garbage collection trucks and emergency vehicles were evaluated with vehicle turning movement templates. As shown on the site plan on Sheets TM-9.0 through TM 11.0 (see Appendix F).

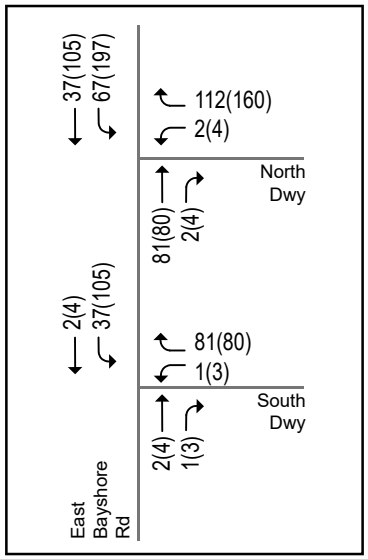
Potential Impacts to Pedestrians, Bicycles, and Transit

Based on the project's location, and the distance between the project site and other complementary uses, it is expected that few users would walk to and from the site. The project would improve the pedestrian environment by providing new sidewalks along the project's East Bayshore Road frontage, and through connections between the site and the Bay Trail.

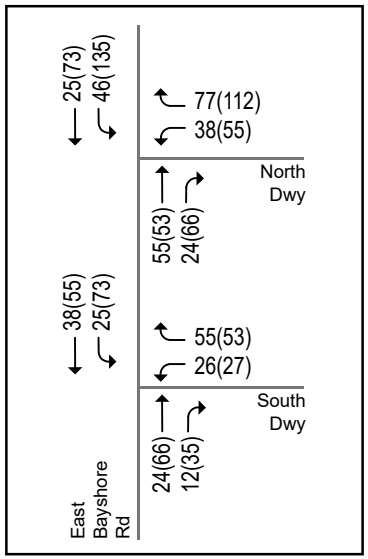
Bicycle and transit connectivity are relatively lacking in the project vicinity. Currently, the only access from the project site to areas west of US 101 is provided via the Whipple Avenue interchange. This interchange has pedestrian walkways on only the south side of the roadway. While there are currently no bicycle facilities at the US 101/ Whipple Avenue interchange, the Citywide Transportation Plan includes several new bicycle connections across US 101 including enhanced Class II bike lanes on Whipple Avenue from Duane Street to East Bayshore Road and new Class I bicycle paths under US 101 connecting Main Street and East Bayshore Road and connecting Chestnut Street and Seaport Boulevard . Furthermore, a Class I bicycle path is proposed adjacent to the entire length of East Bayshore Road and Blomquist Street. No transit services currently exist in the project vicinity. The proposed project would add Class II bicycle lanes along the project frontage on East Bayshore Road. However, the new bicycle lanes would not connect to other bicycle facilities. Due to the lack of bicycle connections to the west side of US 101 and the lack of transit accessibility, the project is expected to generate minimal bicycle and transit trips.

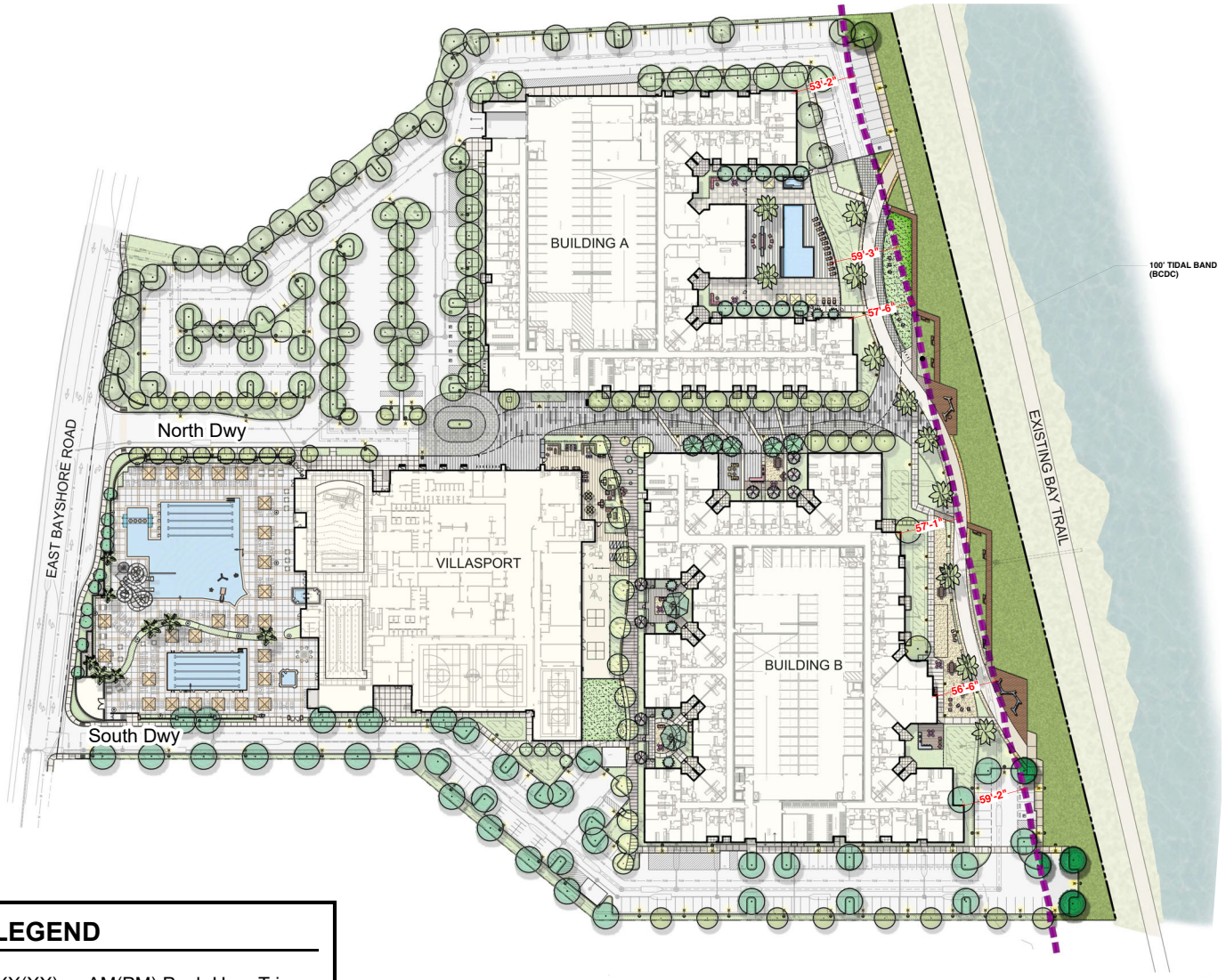
To improve bicycle access, the project should encourage the City to complete the proposed Class I and II bicycle facilities along East Bayshore Road, Whipple Road, Blomquist Street, Main Street and Seaport Boulevard shown on Figure 21: Proposed Bicycle Backbone Network in the Citywide Transportation Plan. Bicycle and pedestrian connectivity would be significantly improved with the Blomquist Street extension project, which would include bicycle/pedestrian trails along Redwood Creek connecting East Bayshore Road to Main Street. To improve transit access, the project should work with the City and SamTrans to create a bus route that serves the various residential, office, and retail uses on Bair Island.

Project Trip Assignment under Existing Conditions (without Blomquist St. Extension)



Project Trip Assignment under Cumulative Conditions (with Blomquist St. Extension)





LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 19
Project Trip Assignment at Driveways

Parking

The proposed project includes two surface parking areas and above-grade parking garages within each residential building. Based on the site plan, Villa Sport users would park in the surface parking areas or in the Residential – Building A garage, while residents and residential guests would park in one of the above-grade garages.

Parking Requirements

The project is located within a mixed-use zone. Based on the Redwood City Zoning Ordinance (Section 30.5), the project would be required to provide parking at the following rates for each use:

- Residential Use: 2 spaces per each unit with two or more bedrooms, and 1.5 spaces for each studio and one-bedroom unit.
- Residential Guest: 1 space for every 4 residential units
- Villa Sport: 1 space per 200 s.f. of gross floor area.

Based on the project site plan and description, the project would provide parking to a total of 480 residential units (including 134 2-bedroom units, and 346 1-bedroom/studio units) and 97,101 s.f. of fitness center space. Based on the requirements listed above, the project would be required to provide a total of 1,393 parking spaces, including 787 spaces for residents, 120 spaces for residential guests, and 486 spaces for Villa Sport patrons.

The project is eligible for a parking reduction under the State Density Bonus Law. The mandatory maximum residential parking standards under the State Density Bonus Law require no more than one vehicle parking space for studio and 1-bedroom units and two vehicle parking spaces for two-bedroom units. Per the State Density Bonus Law, the project would be required to provide 614 residential vehicle parking spaces, which includes visitor spaces.

Provided Parking

Based on the site plan, the project would provide 614 residential parking spaces and 501 spaces for Villa Sport, including 477 vehicular spaces and 24 motorcycle spaces, which meets the State Density Bonus Law requirements for residential uses and the City requirements for commercial uses. The project would also provide seven parking spaces to the San Francisco Bay Conservation & Development Commission (BCDC) for public use by Bay Trail visitors. Based on recommendations in the site plan review, the parking garages might lose a couple of spaces, which could render the on-site parking a little under the City and State requirements. The implementation of shared parking and the proposed Transportation Demand Management (TDM) measures could reduce demand for on-site vehicle parking.

The site plan indicates that all the surface spaces would be for use by Villa Sport, and the garage in Building A would be shared between Villa Sport and the residential units. Hexagon notes that some of the surface parking spaces are far from the Villa Sport front door. Perhaps those spaces could be used for employee parking. Furthermore, based on a comparison of the number and size of dwelling units to the number of residential parking spaces in each parking garage, it appears that some residents of Building A may need to park in Building B. The project should implement a parking management plan to identify visitor parking spaces and to control the shared parking between Villa Sport and residents.

Bicycle Parking

The bicycle parking requirements per Redwood City Zoning Ordinance (Section 57.6) are:

- Residential Use: One bicycle parking space shall be provided per every three dwelling units.
- Villa Sport Use: Five (5) percent of the number of vehicular parking spaces

Per the above zoning code, the project is required to provide 160 bicycle parking spaces for residential use and 24 bicycle parking spaces for Villa Sport use. The site plan dated July 25, 2019 is proposing 180 bicycle parking spaces for residential use (160 long-term and 20 short-term) and 48 bicycle parking spaces for Villa Sport use (24 long-term and 24 short-term). Based on the provided site plan, the project is providing 44 additional bicycle parking spaces beyond the minimum required by the City.

Motorcycle Parking

Based on the Redwood City Zoning Ordinance (Section 30.6), every parking area with parking for one hundred cars or more shall have five percent of its required parking spaces designated for motorcycle parking. Therefore, the project should designate 31 motorcycle parking spaces for the residential use, and 24 spaces for the Villa Sport use. Based on the provided site plan, the project would not provide any on-site designated motorcycle parking for residential use but would provide 24 motorcycle parking spaces for Villa Sport use.

Vehicle Queuing Analysis

A vehicle queuing analysis was performed at select study intersections. The intersections analyzed would experience an increase in left-turn volumes following the development of the proposed project. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x = n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P(x=n) = probability of "n" vehicles in queue per lane

n = number of vehicles in the queue per lane

λ = average number of vehicles in the queue per lane (veh per hr per lane/signal cycles per hr)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned storage requirements at signalized intersections. The 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Thus, left-turn storage pocket designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the "design queue length." The vehicle queue estimates, and a tabulated summary of the findings are provided in Table 13 for existing and background conditions (with and without project). Table 14 shows the queueing analysis for cumulative and cumulative no Blomquist extension conditions (with and without project). The following paragraphs describe locations where excessive vehicle queues might occur.

El Camino Real and Whipple Avenue

The southbound and westbound left-turns at the El Camino Real and Whipple Avenue intersection were analyzed under each scenario. The 95th percentile queues are not expected to exceed the existing storage capacity for southbound left-turns under any scenario and would continue to provide adequate queue space with project trips added.

The westbound left-turn lane at this intersection is relatively constrained by the existing Caltrain railroad tracks. The railroad tracks cross Whipple Avenue approximately 100 feet from this intersection, reducing the queue space available for westbound vehicles. Under all no project conditions, the 95th percentile left-turn queues would exceed the existing storage capacity by 150 feet (6 vehicles) during the AM peak hour. During the PM peak hour, the 95th percentile left-turn queues exceed the storage by 100 feet (4 vehicles) under existing and background conditions, 125 feet (5 vehicles) under cumulative no project conditions, and 150 feet (6 vehicles) under cumulative no project without the Blomquist Street extension.

Under existing plus project and background plus project conditions, the addition of project traffic would increase the 95th percentile queue during the PM peak hour by one vehicle and two vehicles respectively. Under cumulative and cumulative without Blomquist Street extension conditions, the addition of project traffic would increase the 95th percentile queue by one vehicle during both the AM and PM peak hours.

As previously stated, the westbound leg of this intersection is constrained by the close proximity of the railroad tracks to the intersection. Due to this, geometry changes or left-turn lane extension for this leg is not feasible. The presence of two westbound through lanes at this intersection reduces the effect of vehicles spilling out of this left-turn pocket as vehicles would be able to get around these queued vehicles by moving into the adjacent through lane. The number of vehicles added by the project to this movement would not cause any adverse effects to the intersection.

Veterans Boulevard and Whipple Avenue

The southbound and westbound left-turn movements at Veterans Boulevard and Whipple Avenue were analyzed under each scenario. The existing storage capacity would be adequate to serve southbound left-turns under existing, background, and cumulative without Blomquist Street extension conditions both with and without project added trips for both peak hours. However, under cumulative no project conditions (without the Blomquist Street extension), the 95th percentile queues were estimated to exceed this storage by 50 feet (2 vehicles) during the AM peak hour. The addition of project traffic would cause the 95th percentile queue to exceed the available storage by 100 feet (4 vehicles). In the PM peak hour, the 95th percentile queues were estimated to exceed this storage under cumulative conditions by 25 feet (1 vehicle). The southbound left-turn pocket could be extended to accommodate the projected queue lengths by modifying the median.

The westbound left-turn movement at this intersection exceeds the storage capacity of the left-turn pocket during the AM peak hour by 100 feet (4 vehicles) under existing conditions and 125 feet (5 vehicles) under background conditions. The project would add 36 vehicle trips to this movement during the AM peak hour. This addition of project trips would increase the 95th percentile queue between existing and existing plus project conditions by 25 feet (1 vehicle) and between background and background plus project conditions by 50 feet (2 vehicles). The project would result in a similar increase in 95th percentile queues between cumulative no project and cumulative conditions both with and without the Blomquist Street extension.

The westbound left-turn movement at this intersection exceeds the storage capacity of the left-turn pocket during the PM peak hour by 25 feet (1 vehicle) under existing and background conditions. The project would add 48 vehicle trips to this movement during the PM peak hour. This addition of project trips would increase the 95th percentile queue between existing and existing plus project conditions and between background and background plus project conditions by 50 feet (2 vehicles). The project would result in a similar increase in 95th percentile queues between cumulative no project and cumulative conditions both with and without the Blomquist Street extension.

There is ample room to restripe Whipple Avenue to extend the length of the westbound turn pocket to accommodate the forecast queue lengths.

Table 13
Vehicle Queueing and Left-Turn Pocket Storage Analysis – Existing and Background Scenarios

Intersection	El Camino Real & Whipple Ave				Veterans Blvd & Whipple Ave				Veterans Blvd & Jefferson Ave		Veterans Blvd & Maple St	
Movement	SB LT		WB LT		SB LT		WB LT		EB LT/RT		EB LT	
Peak Hour Period	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing												
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	116	125	116	125
Lanes	2	2	2	2	2	2	1	1	2	2	1	1
Volume (vph)	291	178	334	287	109	95	224	144	277	226	60	68
Volume (vphpl)	146	89	167	144	55	48	224	144	139	113	60	68
95th% Queue (veh/ln)	10	7	12	10	4	4	12	9	8	7	4	5
95th% Queue (ft/ln)	250	175	300	250	100	100	300	225	200	175	100	125
Storage (ft/ ln)	375	375	150	150	175	175	200	200	525	525	250	250
Adequate (Y/N)[3]	Y	Y	***N***	***N***	Y	Y	***N***	***N***	Y	Y	Y	Y
Existing Plus Project												
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	116	125	116	125
Lanes	2	2	2	2	2	2	1	1	2	2	1	1
Volume (vph)	297	197	364	329	127	147	260	192	288	259	65	82
Volume (vphpl)	149	99	182	165	64	74	260	192	144	130	65	82
95th% Queue (veh/ln)	11	8	12	11	5	5	13	11	8	8	5	6
95th% Queue (ft/ln)	275	200	300	275	125	125	325	275	200	200	125	150
Storage (ft/ ln)	375	375	150	150	175	175	200	200	525	525	250	250
Adequate (Y/N)[3]	Y	Y	***N***	***N***	Y	Y	***N***	***N***	Y	Y	Y	Y
Background												
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	116	125	116.0	125
Lanes	2	2	2	2	2	2	1	1	2	2	1	1
Volume (vph)	310	204	334	291	111	95	255	151	300	306	60	68
Volume (vphpl)	155	102	167	146	56	48	255	151	150	153	60	68
95th% Queue (veh/ln)	11	8	12	10	4	4	13	9	9	9	4	5
95th% Queue (ft/ln)	275	200	300	250	100	100	325	225	225	225	100	125
Storage (ft/ ln)	375	375	150	150	175	175	200	200	525	525	250	250
Adequate (Y/N)[3]	Y	Y	***N***	***N***	Y	Y	***N***	***N***	Y	Y	Y	Y
Background Plus Project												
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	116	125	116.0	125
Lanes	2	2	2	2	2	2	1	1	2	2	1	1
Volume (vph)	316	223	364	333	129	147	291	199	311	336	65	82
Volume (vphpl)	158	112	182	167	65	74	291	199	156	168	65	82
95th% Queue (veh/ln)	11	8	12	12	5	5	15	11	9	10	5	6
95th% Queue (ft/ln)	275	200	300	300	125	125	375	275	225	250	125	150
Storage (ft/ ln)	375	375	150	150	175	175	200	200	525	525	250	250
Adequate (Y/N)[3]	Y	Y	***N***	***N***	Y	Y	***N***	***N***	Y	Y	Y	Y

Notes:
WB = westbound; EB = eastbound; SB = southbound; NB = northbound.
RT = right turn movement; LT = left turn movement; TH = through movement.
[1] Vehicle queue calculations based on cycle length for signalized intersections and average delay for unsignalized intersections.
[2] Assumes 25 feet per vehicle queued.
[3] A 95th percentile queue length exceeding the available storage by one vehicle (25 feet) is not expected to cause any significant operational issues.

Table 14
Vehicle Queueing and Left-Turn Pocket Storage Analysis – Cumulative Scenarios

Intersection	El Camino Real & Whipple Ave				Veterans Blvd & Whipple Ave				Blomquist St & Seaport Blvd		Veterans Blvd & Jefferson		Veterans Blvd & Maple St								Veterans Blvd & Woodside Rd	
Movement	SB LT		WB LT		SB LT		WB LT		EB LT		EB LT		SB LT		WB LT		EBLT		EBRT		EB LT	
Peak Hour Period	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Cumulative No Project																						
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	120	116	116	125	116	125	116	125	116	125	116	125	160	160
Lanes	2	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1
Volume (vph)	365	233	353	323	293	192	269	171	351	149	334	336	390	223	61	176	64	72	46	55	142	350
Volume (vphpl)	183	117	177	162	147	96	269	171	351	149	167	168	390	223	61	176	64	72	46	55	142	350
95th% Queue (veh/ln)	12	9	12	11	9	7	14	10	18	9	9	10	19	13	4	10	5	5	4	4	11	22
95th% Queue (ft/ln)	300	225	300	275	225	175	350	250	450	225	225	250	475	325	100	250	125	125	100	100	275	550
Storage (ft/ ln)	375	375	150	150	175	175	200	200	225	225	525	525	175	175	150	150	250	250	250	250	100	100
Adequate (Y/N)[3]	Y	Y	***N***	***N***	***N***	Y	***N***	***N***	***N***	Y	Y	Y	***N***	***N***	Y	***N***	Y	Y	Y	Y	***N***	***N***
Cumulative																						
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	120	116	116	125	116	125	116	125	116	125	116	125	160	160
Lanes	2	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1
Volume (vph)	371	252	369	346	411	244	282	190	355	161	342	360	394	235	86	207	65	76	46	55	159	398
Volume (vphpl)	186	126	185	173	206	122	282	190	355	161	171	180	394	235	86	207	65	76	46	55	159	398
95th% Queue (veh/ln)	13	9	13	12	11	8	14	11	18	9	10	11	19	13	6	12	5	6	4	4	12	25
95th% Queue (ft/ln)	325	225	325	300	275	200	350	275	450	225	250	275	475	325	150	300	125	150	100	100	300	625
Storage (ft/ ln)	375	375	150	150	175	175	200	200	225	225	525	525	175	175	150	150	250	250	250	250	100	100
Adequate (Y/N)[3]	Y	Y	***N***	***N***	***N***	***N***	***N***	***N***	***N***	Y	Y	Y	***N***	***N***	Y	***N***	Y	Y	Y	Y	***N***	***N***
Cumulative No Project (No Blomquist Extension)																						
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	120	116	116.0	125	116	125	116	125	116	125	116	125	160.0	160
Lanes	2	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1
Volume (vph)	362	233	362	343	171	144	286	211	389	133	342	343	458	252	55	140	72	78	46	55	101	318
Volume (vphpl)	181	117	181	172	86	72	286	211	389	133	171	172	458	252	55	140	72	78	46	55	101	318
95th% Queue (veh/ln)	12	9	12	12	6	5	14	12	19	8	10	10	21	14	4	9	5	6	4	4	8	21
95th% Queue (ft/ln)	300	225	300	300	150	125	350	300	475	200	250	250	525	350	100	225	125	150	100	100	200	525
Storage (ft/ ln)	375	375	150	150	175	175	200	200	225	225	525	525	175	175	150	150	250	250	250	250	100	100
Adequate (Y/N)[3]	Y	Y	***N***	***N***	Y	Y	***N***	***N***	***N***	Y	Y	Y	***N***	***N***	Y	***N***	Y	Y	Y	Y	***N***	***N***
Cumulative (No Blomquist Extension)																						
Cycle/Delay[1] (sec)	150	150	150	150	116	125	116	125	120	116	116.0	125	116	125	116	125	116	125	116	125	160.0	160
Lanes	2	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1
Volume (vph)	368	252	392	385	189	196	322	259	389	133	353	376	464	257	55	140	77	92	46	55	103	323
Volume (vphpl)	184	126	196	193	95	98	322	259	389	133	177	188	464	257	55	140	77	92	46	55	103	323
95th% Queue (veh/ln)	12	9	13	13	6	7	16	14	19	8	10	11	22	14	4	9	8	6	4	4	8	21
95th% Queue (ft/ln)	300	225	325	325	150	175	400	350	475	200	250	275	550	350	100	225	200	150	100	100	200	525
Storage (ft/ ln)	375	375	150	150	175	175	200	200	225	225	525	525	175	175	150	150	250	250	250	250	100	100
Adequate (Y/N)[3]	Y	Y	***N***	***N***	Y	Y	***N***	***N***	***N***	Y	Y	Y	***N***	***N***	Y	***N***	Y	Y	Y	Y	***N***	***N***

Notes:
WB = westbound; EB = eastbound; SB = southbound; NB = northbound.
RT = right turn movement; LT = left turn movement; TH = through movement.
[1] Vehicle queue calculations based on cycle length for signalized intersections and average delay for unsignalized intersections.
[2] Assumes 25 feet per vehicle queued.
[3] A 95th percentile queue length exceeding the available storage by one vehicle (25 feet) is not expected to cause any significant operational issues.

Blomquist Street and Seaport Boulevard

The eastbound left-turn at this intersection was analyzed under cumulative no project and cumulative conditions. The project would not add any vehicles to this left-turn movement under existing plus project or background plus project conditions, and therefore was not included in the analysis summarized in Table 13. It should be noted that the Harbor View project is estimated to add a significant number of trips to this movement under cumulative no project conditions, including 255 vehicles during the AM peak hour, and 59 vehicles during the PM peak hour. Under cumulative conditions, the proposed project would add only 4 vehicles to this movement during the AM peak hour and 12 vehicles during the PM peak hour. Based on field observations, this intersection does not currently experience any queuing issues for this eastbound left-turn. Because the proposed project would add an insignificant number of vehicles to this movement when compared to the Harbor View project, it would not cause any noticeable increase to the 95th percentile queues.

Veterans Boulevard and Maple Street

The eastbound left-turn movement at this intersection was analyzed under existing and background conditions with and without the project, and the westbound and southbound left-turn movements were analyzed under only cumulative conditions due to the project adding no trips to these movements under existing plus project and background plus project conditions.

Under existing and background conditions both with and without the project, the existing eastbound left-turn lane would be adequate to serve the projected 95th percentile queues during both peak hours.

Under cumulative conditions with and without the project, the existing westbound left-turn storage of 150 feet would be adequate to serve the 95th percentile queues during the AM peak hour. The 95th percentile queues would exceed the pocket length during the PM peak hour under cumulative conditions. The addition of 31 left-turning project trips to cumulative no project volumes would increase this 95th percentile queue by 100 feet (4 vehicles). There is adequate space on this leg to increase the length of the left-turn pocket by restriping the two-way-left-turn lane that exists immediately east of the turn pocket. This turn pocket could be extended up to 125 feet (for a total turn pocket length of 275 feet) without interfering with the driveway operations of the strip-mall uses on either side of the roadway.

Under cumulative no project conditions, the 95th percentile southbound left-turn queue would exceed the existing storage by 300 feet (12 vehicles) during the AM peak hour, and by 150 feet (6 vehicles) during the PM peak hour. The addition of project trips would not increase this 95th percentile queue. Under cumulative no project conditions without the Blomquist Street extension, the 95th percentile southbound left-turn queue would exceed the existing storage by 350 feet (14 vehicles) during the AM peak hour, and by 175 feet (7 vehicles) during the PM peak hour. The addition of project trips would increase this 95th percentile queue during the AM peak hour by 25 feet (1 vehicle). There is adequate space for this storage pocket to be extended up to 350 feet by cutting into the existing median. An increase in one vehicle to the 95th percentile would not cause any significant increase in operational issues at the intersection.

Veterans Boulevard and Woodside Road

The eastbound left-turn movement on Woodside Road at Veterans Boulevard was analyzed under all cumulative conditions. The turn pocket for this movement is relatively short (approximately 100 feet) and was observed in the field regularly exceeding capacity during both the AM and PM peak hours.

The 95th percentile queue under cumulative no project conditions would exceed the existing storage by 175 feet (7 vehicles) during the AM peak hour and by 450 feet (18 vehicles) during the PM peak hour. The addition of project traffic under cumulative conditions would increase this 95th percentile queue by 25 feet (1 vehicle) during the AM peak hour, and by 75 feet (3 vehicles) during the PM peak hour. There are no feasible improvements that could be made to increase the length of this left-turn pocket within the existing roadway geometry. The construction of the US 101/Woodside Road Interchange project would create a flyover from Veterans Boulevard to provide direct access to US 101 southbound and from US 101 northbound. This flyover would result in the removal of the Veterans Boulevard and Woodside Road intersection thereby eliminating the current left-turn queue storage deficiency.

6. Conclusions

The proposed mixed-use development at 557 East Bayshore Road in Redwood City, would replace the existing buildings with two five-story, 480-unit multifamily residential buildings on the eastern portion of the site and a 97,101 square foot (s.f.) Villa Sport fitness center on the western portion of the site. The fitness center would consist of a two-level building that includes indoor exercise and activity space on two levels, a pool deck, and an outdoor field. Parking would be provided by a surface parking lot on the northern portion of the site, a small surface parking lot on the southern portion of the site, and above-ground parking garages in each residential building. Access to the project site would be provided via two driveways on East Bayshore Road.

The traffic study was conducted for the purpose of identifying potential traffic impacts related to the project. The potential impacts of the project were evaluated in accordance with the standards set forth by Redwood City and the City/County Association of Governments of San Mateo County (C/CAG). The C/CAG administers the San Mateo County Congestion Management Plan (CMP). This report includes an evaluation of transportation impacts according to CEQA and a Local Transportation Analysis (LTA) per the City's requirements.

TDM Measures

The proposed project would generate greater than 100 peak hour trips. Based on the requirements of Redwood City and the City/County Association of Governments of San Mateo County (C/CAG), this project would be required to implement Transportation Demand Management (TDM) measures to reduce trips by single-occupant vehicles. In addition, a TDM Plan would reduce demand for on-site vehicle parking.

The project applicant has prepared a TDM Plan that includes measures that apply to both residents and Villa Sport patrons. Proposed TDM measures include:

- Pre-tax deduction for employees
- Unbundled parking
- Bike parking
- Showers and lockers for cyclists
- Well-lit pedestrian pathways, including a connection from the street to the Bayshore and Bay Trail
- On-site amenities (spa, gym, open space, café, childcare)
- Preferential parking for carpools
- Drop-off area
- On-site information

CEQA Analysis – Vehicle Miles Traveled

Senate Bill (SB) 743 changed the way transportation impacts are identified under CEQA from vehicle level of service (LOS) to daily vehicle miles travelled (VMT). The City recently adopted a Transportation Analysis Manual that outlines policies and guidelines for VMT impact evaluation generally consistent with SB 743 and the Governor's Office of Planning and Research (OPR) recommendations.

The project's relatively remote location on the east side of US 101 next to the Bay in an area lacking bicycle and transit connectivity results in project generated VMT that is higher than the City's adopted impact thresholds for both the proposed residential and fitness center uses. Therefore, the project would have a significant impact based on the project generated VMT. The project applicant will implement TDM measures that would lessen the project's VMT thereby reducing the VMT impact for the proposed residential use to a less than significant level. However, the reduction in fitness center VMT estimated as a result of the proposed TDM measures would not be sufficient to fully mitigate the impact on VMT. The VMT impact associated with the fitness center could be fully mitigated by adding additional TDM measures such as financial incentives for employees and/or patrons that use alternative modes.

Local Transportation Analysis – Traffic Operations at Study Intersections

The Local Transportation Analysis included intersection level of service calculations under a total of eight scenarios during both the AM and PM peak hours. Existing conditions were analyzed to determine the baseline level of service at each intersection based on counted traffic volumes and existing roadway geometry. Background conditions were analyzed based on the likely roadway conditions by the time the proposed project is approved. These conditions include volumes added to the existing counts from approved projects and projects currently under construction in the surrounding area. Project conditions were analyzed by adding the trips generated by the proposed project to both the existing and background volumes to generate existing plus project and background plus project conditions. Two separate cumulative scenarios were analyzed, with and without the Blomquist Street extension. Cumulative no project conditions (including the Blomquist Street extension) were determined by reassigning the existing traffic volumes to account for the new roadway connection, applying a growth factor to the existing volumes at each intersection and then adding trips generated by the approved, under construction, and proposed but not yet approved projects. Trips generated by the proposed 557 East Bayshore project were added to these volumes to generate cumulative conditions. Cumulative no project and cumulative conditions without the Blomquist Street extension were generated in a similar manner, without the assumed geometry changes and trip reassignment due to the roadway extension.

Roadway Geometry Assumptions

The existing lane configurations were obtained from field observations. The project is proposing to add a northbound right-turn pocket on East Bayshore Road at the northern project driveway and Class II bike lanes along the project's frontage on East Bayshore Road. There are no project-sponsored improvements and no near-term planned and funded transportation improvements at the study intersections. Thus, the intersection lane configuration would be the same as existing under all near-term scenarios. Cumulative conditions include geometry changes at the Veterans Boulevard and Jefferson Avenue intersection due to the Veterans Boulevard road diet and assume the completion of the planned Blomquist Street extension to connect with East Bayshore Road at Bair Island Road. This includes geometry changes at the East Bayshore Road/Bair Island Road and Blomquist Street/Maple Street intersections. Cumulative conditions also were evaluated without the Blomquist Street extension.

Project Trip Estimates

Daily and peak hour trip generation estimates for the proposed project were based on trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (2017) for "Multifamily Housing Mid-Rise" (Land Use 221) located in a general Urban/Suburban area. The daily and PM peak hour trip generation data collected from existing Villa Sport facilities in Woodlands, Texas and Colorado Springs, Colorado, reported by Kittleson & Associates, Inc. in 2012, were used to estimate trips generated by the proposed Villa Sport use. The existing PM rates from both fitness clubs were averaged and applied to the proposed project size. Kittleson & Associates, Inc. did not collect AM peak hour trip generation data. The AM peak hour rate for this use was

developed based on the correlation between the Kittleson & Associates, Inc. rates and the ITE PM rates for Health/Fitness Club (Land Use 492). The observed PM trip rates and the computed AM trip rates are higher than the ITE 10th Edition trip rates. Thus, to be conservative, project trips were estimated based on the observed rates rather than the ITE trip generation rates. The ITE *Trip Generation Manual* does not include daily trip rates for the Health/Fitness Club land use.

A mixed-use trip reduction of 4 percent was applied to the AM and PM peak hour trip generation estimates for the project to account for project residents who walk to and from the Villa Sport on the same site. After applying the trip generation rates and the appropriate trip reductions, the proposed project is estimated to generate 303 net trips during the AM peak hour and 556 net trips during the PM peak hour. Using the inbound/outbound splits obtained from *ITEs Trip Generation Manual* and the Kittleson & Associates, Inc. traffic study, the project would generate 107 inbound and 196 outbound net trips during the AM peak hour, and 309 inbound and 247 outbound net trips during the PM peak hour.

Substantial Adverse Effects

Based on Redwood City and CMP level of service standards and thresholds, the proposed project would result in a substantial adverse effect at two intersections under cumulative conditions, and at one intersection under cumulative without Blomquist Street extension conditions. Substantial adverse effects include:

Cumulative Conditions with Blomquist Street Extension

Blomquist Street and Maple Street. This intersection would operate at an unacceptable LOS F under cumulative no project conditions based on all-way stop control geometry. The addition of project traffic would increase the delay for the worst movement by 22.6 seconds in the AM peak hour and 44.4 seconds in the PM peak hour. Since the intersection meets a signal warrant in the AM and PM peak hour, the intersection would have a substantial adverse effect during both peak hours.

Veterans Boulevard and Woodside Road. The addition of project traffic would cause an increase of 7.3 seconds in the AM peak hour and 5.9 seconds in the PM peak hour to this intersection which is expected to operate at LOS F under cumulative no project conditions.

Cumulative Conditions without Blomquist Street Extension

Veterans Boulevard and Whipple Avenue. This intersection would operate at an unacceptable LOS E during the AM peak hour under cumulative no project conditions. The addition of project traffic would increase the delay for the intersection by 9.6 seconds.

Mitigation Improvements

All project substantial adverse effects would be mitigated though payment of the City's traffic impact fee (TIF). Included in this TIF is the Blomquist Street extension project. The project should also pay a fair share contribution to the US 101/SR 84 (Woodside Road) Interchange Improvement Project that would result in the removal of the Veterans Boulevard and Woodside Road intersection. The Blomquist Street extension project would mitigate the effect at Veterans Boulevard and Whipple Avenue. The proposed roundabout at Blomquist Street and Maple Street would mitigate the effect at this intersection if designed as a two-lane roundabout.

Freeway Segment and Freeway Ramp Levels of Service

The proposed project would not add net trips greater than one percent of the freeway's capacity to any study freeway segments during either the AM or PM peak hours.

All ramps included in this study operate below capacity at LOS D or better. The addition of project traffic would not cause any ramps to deteriorate from their existing level of service.

Site Access and On-Site Circulation

Site access and on-site circulation were evaluated using commonly accepted transportation planning principles. This review is based on the project site plan prepared by BDE Architecture, ELS Architecture & Urban Design,

and BKF Engineers, dated July 25, 2019. The project would provide surface parking for Villa Sport users, as well as above-grade parking garages within the residential buildings for Villa Sport users and residents. Two, full-access driveways on East Bayshore Road would provide access to two separate surface parking areas. The parking garage in Building A would be accessed via the northern driveway, while the parking garage in Building B would be accessed via the southern driveway. It is assumed that most of the Villa Sport related trips would use the north driveway to access the site, and park in the related surface parking lot or in the Building A garage. The south driveway would provide access to the smaller surface parking lot, and the Building B lobby and garage. It is assumed that project trips related to the residential use would use both driveways roughly evenly, as each driveway would provide access to a relatively similar amount of residential garage parking.

On-site circulation would occur in the surface parking lots on the north and south sides of the proposed buildings, and within the above grade parking garages. There are no internal roadways that allow on-site circulation between the northern and southern surface parking areas and between the Building A and Building B parking garages. Thus, vehicles would need to return to East Bayshore Road and proceed to the other site driveway to travel between the northern and southern parking areas. The parking garage ramp slopes are not labeled on the site plan. The ramp design should be reviewed to ensure that the proposed slopes are reasonable and that slope transitions are provided at the top and bottom of each ramp.

All drive aisles within the surface parking areas and within the underground parking garage are shown to be between 24-feet and 26-feet wide. These drive aisle widths would be adequate to meet the City standards for aisles with 90-degree parking. Seven dead-end drive aisles are shown including three in the parking garages and four in the surface parking areas. Hexagon recommends that one parking space be eliminated at the end of each dead-end aisle to provide turn-around space.

Pedestrian on-site circulation would be provided through sidewalks along East Bayshore Road, sidewalks surrounding the Villa Sport and residential buildings, and a pedestrian corridor between the buildings. Designated pedestrian walkways should be provided through the north surface parking lot to the Villa Sport entrance. Aside from this deficiency, good pedestrian connectivity and circulation would be provided on-site.

Emergency vehicles entering the site via the northern driveway would be able to circulate in a counterclockwise manner around Building A and then exit from the same driveway. Emergency vehicles entering the site via the southern driveway would be able to turn around at the southeast corner of the site and then proceed back out the way they entered. Note that garbage trucks would not be able to circulate internally between the two trash staging areas. Instead, trucks would need to exit the site from the southern driveway after collecting the trash for Villa Sport and Residential Building B and travel north along East Bayshore Road to reenter the site at the northern driveway to collect trash for Residential Building A. Staff from Residential Buildings A and B would need to move trash dumpsters from the trash rooms inside each building to the appropriate trash staging areas for collection on designated days.

Pedestrians, Bicycles, and Transit

Based on the project's location, and the distance between the project site and other complementary uses, it is expected that few users would walk to and from the site. The project would improve the pedestrian environment by providing new sidewalks along the project's East Bayshore Road frontage, and through connections between the site and the Bay Trail.

Bicycle and transit connectivity are relatively lacking in the project vicinity. Currently, the only access from the project site to areas west of US 101 is provided via the Whipple Avenue interchange. This interchange has pedestrian walkways on only the south side of the roadway. While there are currently no bicycle facilities at the US 101/ Whipple Avenue interchange, the Citywide Transportation Plan includes several new bicycle connections across US 101 including enhanced Class II bike lanes on Whipple Avenue from Duane Street to East Bayshore Road and new Class I bicycle paths under US 101 connecting Main Street and East Bayshore Road and connecting Chestnut Street and Seaport Boulevard . Furthermore, a Class I bicycle path is proposed adjacent to the entire length of East Bayshore Road and Blomquist Street. The proposed project would add Class II bicycle lanes along the project frontage on East Bayshore Road. However, the new bicycle lanes would not connect to other bicycle facilities. No transit services currently exist in the project vicinity. Due to the lack of bicycle connections to the west side of US 101 and the lack of transit accessibility, the project is expected to generate minimal bicycle and transit trips.

To improve bicycle access, the project should encourage the City to complete the proposed Class I and II bicycle facilities along East Bayshore Road, Whipple Road, Blomquist Street, Main Street and Seaport Boulevard shown on Figure 21: Proposed Bicycle Backbone Network in the Citywide Transportation Plan. Bicycle and pedestrian connectivity would be significantly improved with the Blomquist Street extension project, which would include bicycle/pedestrian trails along Redwood Creek connecting East Bayshore Road to Main Street. To improve transit access, the project should work with the City and SamTrans to create a bus route that serves the various residential, office, and retail uses on Bair Island.

Parking

Based on the site plan, the project would provide 614 residential parking spaces and 501 spaces for Villa Sport, including 477 vehicular spaces and 24 motorcycle spaces, which meets the State Density Bonus Law requirements for residential uses and the City requirements for commercial uses. The project would also provide seven parking spaces to the San Francisco Bay Conservation & Development Commission (BCDC) for public use by Bay Trail visitors. Based on recommendations in the site plan review, the parking garages might lose a couple of spaces, which could render the on-site parking a little under the City and State requirements.

The site plan indicates that all the surface spaces would be for use by Villa Sport, and the garage in Building A would be shared between Villa Sport and the residential units. Hexagon notes that some of the surface parking spaces are far from the Villa Sport front door. Perhaps those spaces could be used for employee parking. Furthermore, based on a comparison of the number and size of dwelling units to the number of residential parking spaces in each parking garage, it appears that some residents of Building A may need to park in Building B. The project should implement a parking management plan to identify visitor parking spaces and to control the shared parking between Villa Sport and residents.

Recommendations

Based on the findings presented in this report, Hexagon recommends the following:

- The project should expand the proposed TDM measures to reduce the significant VMT impact associated with the proposed fitness center to a less than significant level. One possible measure that could be added is to offer financial incentives for employees and/or patrons that use alternative modes.
- The project should pay a fair-share contribution to the City's TIF to support the development of the Blomquist Street extension project along with the associated roundabout at the Blomquist Street/Maple Street intersection and the US 101/SR 84 (Woodside Road) Interchange Improvement Project
- To improve bicycle access, the project should encourage the City to complete the proposed Class I and II bicycle facilities along East Bayshore Road, Whipple Road, Blomquist Street, Main Street and Seaport Boulevard shown on Figure 21: Proposed Bicycle Backbone Network in the Citywide Transportation Plan. Bicycle and pedestrian connectivity would be significantly improved with the Blomquist Street extension project, which would include bicycle/pedestrian trails along Redwood Creek connecting East Bayshore Road to Main Street.
- Hexagon recommends that one parking space be eliminated at the end of each dead-end aisle to provide turn-around space
- The site plan recommendations could cause the project to have fewer parking spaces than required. The project should work with the City to determine the appropriate measures to ensure provided parking on-site is adequate.
- The project should implement a parking management plan to identify visitor parking spaces and to control the shared parking between Villa Sport and residents
- The project should provide adequate motorcycle parking on-site as required by the City
- The project should work with the City and SamTrans to improve transit accessibility to the site

557 East Bayshore Road TIA
Traffic Impact Analysis

Technical Appendices

Appendix A

BAAQMD TDM Tool Calculations

Analysis of Residential Use

= input
= calculation

Input Page

General Inputs

compact infill	Project Location
-	Total Project Unmitigated VMT
23%	Percentage of work related VMT[1]

no	Implementing strategy?
42	# of … housing units per acre

Density

no	Implementing strategy?
60	# of intersections per square mile

Design

no	Implementing strategy?
	% of each land use type in the project
0%	single family residential
50%	multifamily residential
20%	commercial
0%	industrial
0%	institutional
30%	park
100%	Total

Diversity

no	Implementing strategy?
2	distance (in miles) to downtown or major job center

Destination Accessibility

no	Implementing strategy?
0.1	distance (in miles) to transit station

Transit Accessibility

no	Implementing strategy?
18%	percentage of units that are deed-restricted BMR housing

Below Market Rate (BMR) Housing

Land Use / Location Strategies

yes	Implementing strategy?
within project and connecting off-site	extent of pedestrian accommodations

Pedestrian Network

no	Implementing strategy?
50%	percentage of streets within project with traffic calming improvements
75%	percentage of intersections within project with traffic calming improvements

Traffic Calming

no	Implementing strategy?
1 NEV per 10	# of households

*25 = low penetration, 10 = medium, 1 = high

NEV Network

no	Implementing strategy?
urban + comprehensive transit	project setting

Carshare Program

Neighborhood / Site Enhancements Strategies

yes	Implementing strategy?
706	ITE parking provision for the project site
614	Actual parking provision for the project site

Parking Supply Limits

yes	Implementing strategy?
$ 75	monthly parking cost for the project site

Unbundle Parking Costs

no	Implementing strategy?
30%	increase in on-street parking prices (min 25%, max 50%)

On-Street Market Pricing

Parking Policy / Pricing Strategies

no	Implementing strategy?
50%	percentage increase of transit network coverage
5%	existing transit mode share (as a % of total daily trips)

Network Expansion

no	Implementing strategy?
85%	percentage reduction in headways (increase in frequency)
5%	existing transit mode share (as a % of total daily trips)
>=50% of lines (within project) improved	level of implementation

Service Frequency/Speed

no	Implementing strategy?
17%	existing transit mode share (as a % of total daily trips)
25%	percentage of lines serving project converted to BRT

Bus Rapid Transit

Transit System Improvements Strategies

yes	Implementing strategy?
100%	percentage of employees eligible

CTR Program - Required

no	Implementing strategy?
50%	percentage of employees eligible

CTR Program - Voluntary

no	Implementing strategy?
100%	percentage of employees eligible
$ 5.96	amount of transit subsidy per passenger (daily equivalent)

Transit Fare Subsidy

no	Implementing strategy?
50%	percentage of employees eligible

Employee Parking Cash-Out

no	Implementing strategy?
$ 2.00	daily parking charge
100%	percentage of employees subject to priced parking

Workplace Parking Pricing

no	Implementing strategy?
5%	percentage of employees participating
9-day/80-hour work week	strategy implemented

Alternative Work Schedules and Telecommute Program

yes	Implementing strategy?
100%	percentage of employees eligible

CTR Marketing

no	Implementing strategy?
medium	degree of implementation
	*low (< 10 vans), medium (<30 vans), large (>30 vans)
medium	employer size
	*small (< 100 employees), medium (< 500), large (>500)
50%	percentage of employees eligible

Employer Sponsored Vanpool/Shuttle

no	Implementing strategy?
100%	percentage of employees eligible

Ride-Share Program

no	Implementing strategy?
low	degree of implementation
	low = contact list covering <50% of all students
	medium = contact list covering 75% of all students
	high = contact list covering majority of students and active coordinator

School Pool	
no	Implementing strategy?
50%	percent of families expected to use school bus program
School Bus	

Commute Trip Reduction (CTR) Programs Strategies

1. 22% work trips represents a mixed-used site (SF Bay Area Travel Survey). See Assumptions Tab for more detail.

Pulldown menu data hidden here:

Analysis of Residential Use

Global Max Reduction (all VMT):
21.3%
or
0

Cross-Category Max Reduction (all VMT):
16.6%
or
0

Max Reduction (all VMT):
5.6%
or
0

Land Use/ Location	Neighborhood/ Site Enhancements	Parking Policy/ Pricing	Transit System Improvements	Commute Trip Reduction (CTR) Progams (assuming mixed-use development)
Category Reduction (all VMT): 0.0%	Category Reduction (all VMT): 2.0%	Category Reduction (all VMT): 14.9%	Category Reduction (all VMT): 0.0%	Category Reduction (work VMT): 24%
Density 0.0%	**Pedestrian Network** 2.0%	**Parking Supply Limits** 6.5%	**Network Expansion** 0.0%	**CTR Program - Required** (work VMT) 21.0%
Design 0.0%	**Traffic Calming** 0.0%	**Unbundled Parking Costs** 9.0%	**Service Frequency/Speed** 0.0%	**CTR Program - Voluntary** (work VMT) 0.0%
Diversity 0.0%	**NEV Network** 0.0%	**On-Street Market Pricing** 0.0%	**Bus Rapid Transit** 0.0%	**Transit Fare Subsidy** (work VMT) 0.0%
Destination Accessibility 0.0%	**Car Share Program** 0.0%			**Employee Parking Cash-Out** (work VMT) 0.0%
Transit Accessibility 0.0%				**Workplace Parking Pricing** (work VMT) 0.0%
BMR Housing 0.0%				**Alternative Work Schedules and Telecommute Program** (work VMT) 0.0%
				CTR Marketing (work VMT) 4.0%
				Employer-Sponsored Vanpool/Shuttle (work VMT) 0.0%
				Ride Share Program (work VMT) 0.0%
				School Pool (school VMT) 0.0%
				School Bus (school VMT) 0.0%

= input
= calculation

Input Page

General Inputs

compact infill	Project Location
-	Total Project Unmitigated VMT
8%	Percentage of work related VMT[1]

no	Implementing strategy?
42	# of … housing units per acre

Density

no	Implementing strategy?
60	# of intersections per square mile

Design

no	Implementing strategy?
	% of each land use type in the project
0%	single family residential
50%	multifamily residential
20%	commercial
0%	industrial
0%	institutional
30%	park
100%	Total

Diversity

no	Implementing strategy?
2	distance (in miles) to downtown or major job center

Destination Accessibility

no	Implementing strategy?
0.1	distance (in miles) to transit station

Transit Accessibility

no	Implementing strategy?
18%	percentage of units that are deed-restricted BMR housing

Below Market Rate (BMR) Housing

Land Use / Location Strategies

yes	Implementing strategy?
within project and connecting off-site	extent of pedestrian accommodations

Pedestrian Network

no	Implementing strategy?
50%	percentage of streets within project with traffic calming improvements
75%	percentage of intersections within project with traffic calming improvements

Traffic Calming

no	Implementing strategy?
1 NEV per 10	# of households

*25 = low penetration, 10 = medium, 1 = high

NEV Network

no	Implementing strategy?
urban + comprehensive transit	project setting

Carshare Program

Neighborhood / Site Enhancements Strategies

yes	Implementing strategy?
668	ITE parking provision for the project site
501	Actual parking provision for the project site

Parking Supply Limits

no	Implementing strategy?
$ 75	monthly parking cost for the project site

Unbundle Parking Costs

no	Implementing strategy?
30%	increase in on-street parking prices (min 25%, max 50%)

On-Street Market Pricing

Parking Policy / Pricing Strategies

no	Implementing strategy?
50%	percentage increase of transit network coverage
5%	existing transit mode share (as a % of total daily trips)

Network Expansion

no	Implementing strategy?
85%	percentage reduction in headways (increase in frequency)
5%	existing transit mode share (as a % of total daily trips)
>=50% of lines (within project) improved	level of implementation

Service Frequency/Speed

no	Implementing strategy?
17%	existing transit mode share (as a % of total daily trips)
25%	percentage of lines serving project converted to BRT

Bus Rapid Transit

Transit System Improvements Strategies

yes	Implementing strategy?
100%	percentage of employees eligible

CTR Program - Required

no	Implementing strategy?
50%	percentage of employees eligible

CTR Program - Voluntary

no	Implementing strategy?
10%	percentage of employees eligible
$ 5.96	amount of transit subsidy per passenger (daily equivalent)

Transit Fare Subsidy

no	Implementing strategy?
10%	percentage of employees eligible

Employee Parking Cash-Out

no	Implementing strategy?
$ 2.00	daily parking charge
100%	percentage of employees subject to priced parking

Workplace Parking Pricing

no	Implementing strategy?
5%	percentage of employees participating
9-day/80-hour work week	strategy implemented

Alternative Work Schedules and Telecommute Program

yes	Implementing strategy?
100%	percentage of employees eligible

CTR Marketing

no	Implementing strategy?
medium	degree of implementation
	*low (< 10 vans), medium (<30 vans), large (>30 vans)
medium	employer size
	*small (< 100 employees), medium (< 500), large (>500)
50%	percentage of employees eligible

Employer Sponsored Vanpool/Shuttle

no	Implementing strategy?
100%	percentage of employees eligible

Ride-Share Program

no	Implementing strategy?
low	degree of implementation
	low = contact list covering <50% of all students
	medium = contact list covering 75% of all students
	high = contact list covering majority of students and active coordinator

School Pool	
no	Implementing strategy?
50%	percent of families expected to use school bus program
School Bus	

Commute Trip Reduction (CTR) Programs Strategies

1. 22% work trips represents a mixed-used site (SF Bay Area Travel Survey). See Assumptions Tab for more detail.

Pulldown menu data hidden here:

Analysis of Fitness Center Use

Global Max Reduction (all VMT):
15.9%
or
0

Cross-Category Max Reduction (all VMT):
14.3%
or
0

Max Reduction (all VMT):
2.0%
or
0

Land Use/ Location	Neighborhood/ Site Enhancements	Parking Policy/ Pricing	Transit System Improvements	Commute Trip Reduction (CTR) Progams (assuming mixed-use development)
Category Reduction (all VMT): 0.0%	Category Reduction (all VMT): 2.0%	Category Reduction (all VMT): 12.5%	Category Reduction (all VMT): 0.0%	Category Reduction (work VMT): 24%
Density 0.0%	**Pedestrian Network** 2.0%	**Parking Supply Limits** 12.5%	**Network Expansion** 0.0%	**CTR Program - Required** (work VMT) 21.0%
Design 0.0%	**Traffic Calming** 0.0%	**Unbundled Parking Costs** 0.0%	**Service Frequency/Speed** 0.0%	**CTR Program - Voluntary** (work VMT) 0.0%
Diversity 0.0%	**NEV Network** 0.0%	**On-Street Market Pricing** 0.0%	**Bus Rapid Transit** 0.0%	**Transit Fare Subsidy** (work VMT) 0.0%
Destination Accessibility 0.0%	**Car Share Program** 0.0%			**Employee Parking Cash-Out** (work VMT) 0.0%
Transit Accessibility 0.0%				**Workplace Parking Pricing** (work VMT) 0.0%
BMR Housing 0.0%				**Alternative Work Schedules and Telecommute Program** (work VMT) 0.0%
				CTR Marketing (work VMT) 4.0%
				Employer-Sponsored Vanpool/Shuttle (work VMT) 0.0%
				Ride Share Program (work VMT) 0.0%
				School Pool (school VMT) 0.0%
				School Bus (school VMT) 0.0%

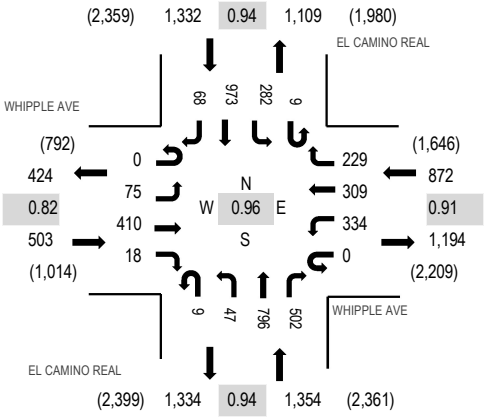
Appendix B

Traffic Counts

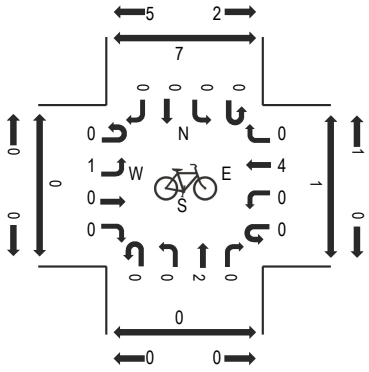
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 1 EL CAMINO REAL & WHIPPLE AVE AM
Date: Tuesday, September 10, 2019
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

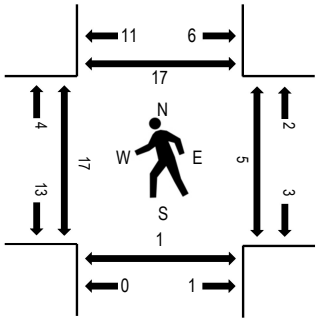
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	15	80	4	0	76	58	36	1	2	106	58	3	49	125	17	630	3,379	0	1	1	5
7:15 AM	0	26	110	6	0	74	58	43	0	6	142	78	3	42	198	10	796	3,690	4	5	0	4
7:30 AM	0	12	118	5	0	99	97	56	3	9	175	100	3	56	160	22	915	3,921	4	1	0	9
7:45 AM	0	19	141	4	0	77	86	87	0	13	200	106	3	52	234	16	1,038	4,061	3	2	1	6
8:00 AM	0	16	78	6	0	80	72	47	0	17	200	119	3	65	222	16	941	4,001	3	2	0	5
8:15 AM	0	20	97	4	0	97	68	49	2	10	192	132	2	84	251	19	1,027		6	1	0	4
8:30 AM	0	20	94	4	0	80	83	46	7	7	204	145	1	81	266	17	1,055		5	0	0	2
8:45 AM	0	21	101	13	0	73	66	38	1	8	191	127	1	96	227	15	978		3	0	0	10

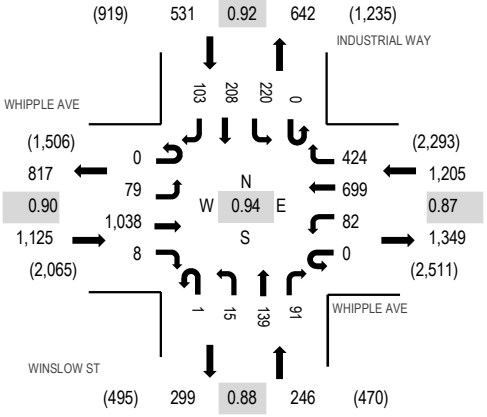
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	2	0	2	0	0	4	0	0	1	2	0	12
Lights	0	74	406	17	0	314	302	217	9	44	764	492	9	274	937	63	3,922
Mediums	0	1	3	1	0	18	7	10	0	3	28	10	0	7	34	5	127
Total	0	75	410	18	0	334	309	229	9	47	796	502	9	282	973	68	4,061

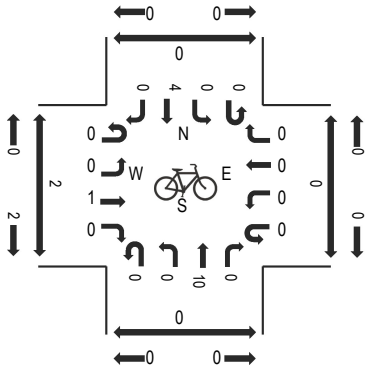
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 2 WINSLOW ST & WHIPPLE AVE AM
Date: Tuesday, September 10, 2019
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

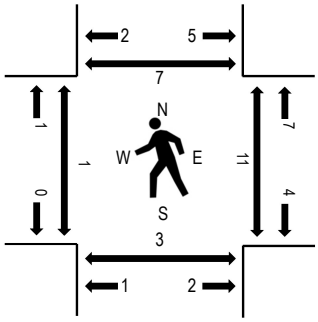
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				WINSLOW ST Northbound				INDUSTRIAL WAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	10	167	1	0	16	136	108	0	3	21	24	0	37	18	13	554	2,730	1	0	1	1
7:15 AM	0	17	202	4	0	9	167	115	0	5	24	26	0	40	27	13	649	2,902	0	0	1	0
7:30 AM	0	24	219	3	0	15	172	106	0	6	20	24	0	52	36	22	699	3,026	1	0	0	1
7:45 AM	0	24	288	1	0	23	209	118	0	3	41	20	0	44	35	22	828	3,107	0	3	1	2
8:00 AM	0	16	230	4	0	16	155	106	1	3	31	22	0	58	62	22	726	3,017	1	4	1	4
8:15 AM	0	23	243	3	0	21	163	96	0	6	33	33	0	63	55	34	773		0	4	1	1
8:30 AM	0	16	277	0	0	22	172	104	0	3	34	16	0	55	56	25	780		0	0	0	0
8:45 AM	0	21	271	1	0	21	128	95	0	2	32	37	0	63	45	22	738		0	1	1	3

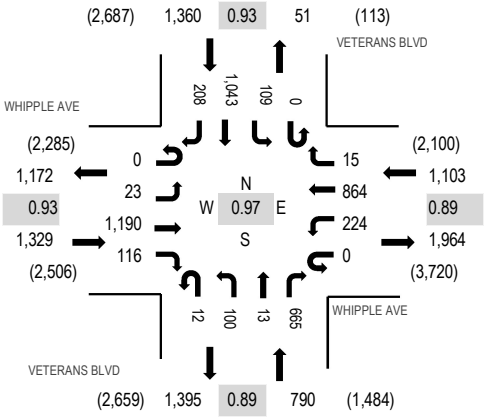
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	4	3	0	0	0	0	0	3	1	5	18
Lights	0	78	1,024	7	0	81	671	402	1	15	136	85	0	203	196	91	2,990
Mediums	0	1	12	1	0	1	24	19	0	0	3	6	0	14	11	7	99
Total	0	79	1,038	8	0	82	699	424	1	15	139	91	0	220	208	103	3,107

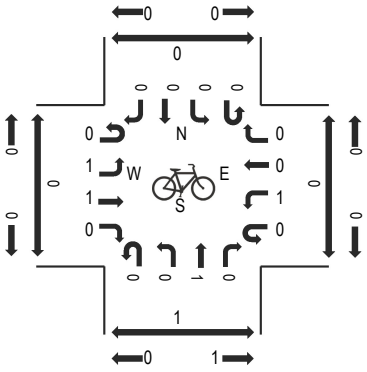
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 3 VETERANS BLVD & WHIPPLE AVE AM
Date: Tuesday, September 10, 2019
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

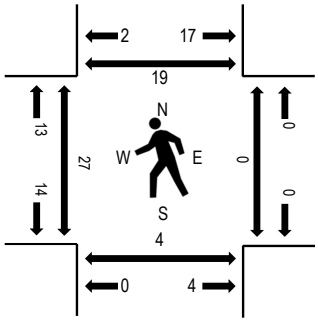
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				VETERANS BLVD Northbound				VETERANS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	218	19	0	51	194	3	0	17	6	119	0	38	210	64	943	4,265	2	0	0	3
7:15 AM	0	6	235	14	0	46	199	5	1	20	2	134	0	24	254	67	1,007	4,451	2	0	0	2
7:30 AM	0	8	279	28	0	43	214	7	1	21	4	175	0	27	252	71	1,130	4,551	3	0	0	5
7:45 AM	0	4	304	31	0	65	250	4	2	28	2	181	0	25	237	52	1,185	4,582	0	0	1	1
8:00 AM	0	11	285	23	0	59	246	4	0	20	3	142	0	26	271	39	1,129	4,512	11	0	2	10
8:15 AM	0	5	281	22	0	56	181	4	2	26	5	158	0	33	273	61	1,107		15	0	0	7
8:30 AM	0	3	320	40	0	44	187	3	8	26	3	184	0	25	262	56	1,161		1	0	1	1
8:45 AM	0	8	312	46	0	55	175	5	1	24	4	165	0	30	243	47	1,115		7	0	1	8

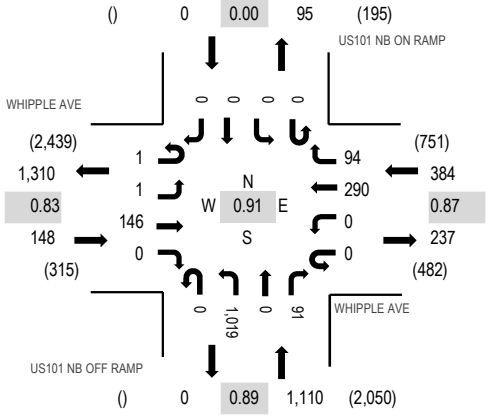
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	6	0	0	1	4	0	0	0	0	2	0	0	3	1	17
Lights	0	21	1,163	109	0	217	822	15	11	96	13	648	0	103	1,023	202	4,443
Mediums	0	2	21	7	0	6	38	0	1	4	0	15	0	6	17	5	122
Total	0	23	1,190	116	0	224	864	15	12	100	13	665	0	109	1,043	208	4,582

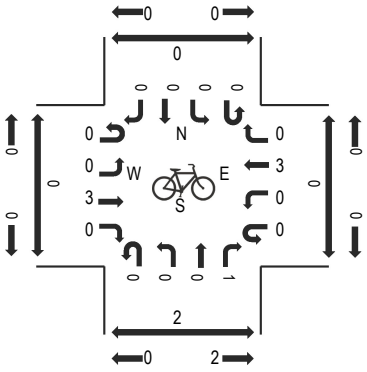
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 4 US101 NB OFF RAMP & WHIPPLE AVE AM
Date: Tuesday, September 10, 2019
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

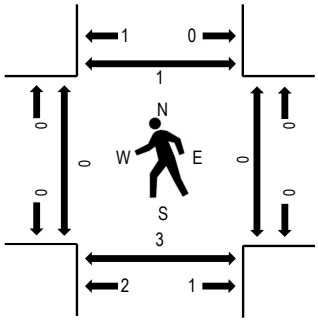
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				US101 NB OFF RAMP Northbound				US101 NB ON RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	44	0	0	0	48	16	0	221	0	15	0	0	0	0	344	1,562	0	0	1	0
7:15 AM	0	0	37	0	0	0	55	19	0	225	0	21	0	0	0	0	357	1,642	0	0	0	0
7:30 AM	0	0	36	0	0	0	78	21	0	255	0	19	0	0	0	0	409	1,632	0	0	1	0
7:45 AM	0	0	35	0	0	0	80	26	0	287	0	24	0	0	0	0	452	1,599	0	0	1	0
8:00 AM	1	1	38	0	0	0	77	28	0	252	0	27	0	0	0	0	424	1,554	0	0	1	1
8:15 AM	0	0	32	0	0	0	65	24	0	214	0	12	0	0	0	0	347		0	0	3	0
8:30 AM	0	0	42	0	0	0	78	19	0	211	0	26	0	0	0	0	376		0	0	2	0
8:45 AM	0	0	49	0	0	0	77	40	0	215	1	25	0	0	0	0	407		0	0	3	0

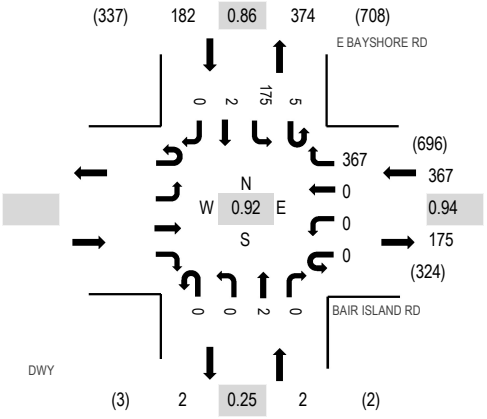
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	6	0	0	0	0	0	0	7
Lights	1	1	145	0	0	0	283	94	0	980	0	89	0	0	0	0	1,593
Mediums	0	0	1	0	0	0	6	0	0	33	0	2	0	0	0	0	42
Total	1	1	146	0	0	0	290	94	0	1,019	0	91	0	0	0	0	1,642

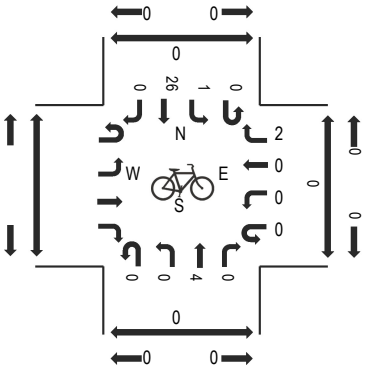
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 5 DWY & BAIR ISLAND RD AM
Date: Tuesday, September 10, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

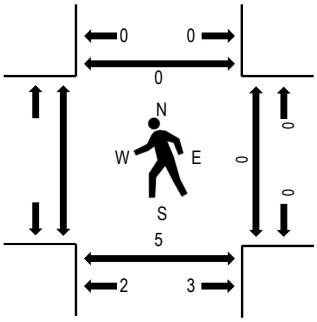
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BAIR ISLAND RD Eastbound				BAIR ISLAND RD Westbound				DWY Northbound				E BAYSHORE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM					0	0	0	57	0	0	0	0	0	39	1	0	97	484		0	1	0
7:15 AM					0	0	0	76	0	0	0	0	3	35	0	0	114	517		0	1	0
7:30 AM					1	0	0	94	0	0	0	0	1	32	0	0	128	540		0	0	0
7:45 AM					0	0	0	101	0	0	0	0	2	42	0	0	145	546		0	0	0
8:00 AM					0	0	0	89	0	0	0	0	1	40	0	0	130	551		0	0	0
8:15 AM					0	0	0	96	0	0	0	0	0	40	1	0	137			0	0	0
8:30 AM					0	0	0	87	0	0	0	0	1	46	0	0	134			0	1	0
8:45 AM					0	0	0	95	0	0	2	0	3	49	1	0	150			0	4	0

Peak Rolling Hour Flow Rates

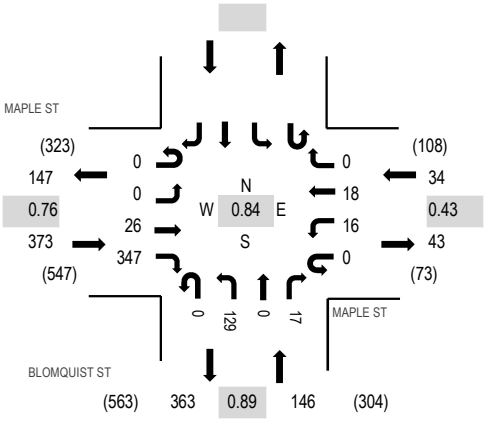
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	1	0	1
Lights					0	0	0	361	0	0	1	0	4	169	1	0	536
Mediums					0	0	0	6	0	0	1	0	1	6	0	0	14
Total					0	0	0	367	0	0	2	0	5	175	2	0	551

All Traffic Data Services Inc.

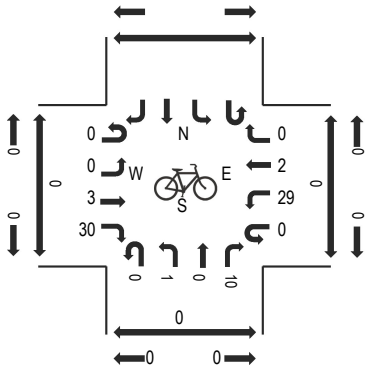
(303) 216-2439
www.alltrafficdata.net

Location: 6 BLOMQUIST ST & MAPLE ST AM
Date: Tuesday, September 10, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

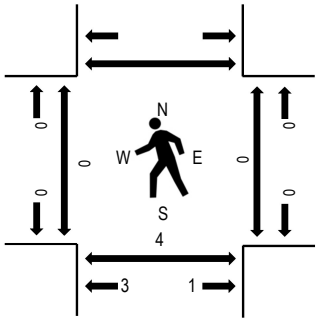
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MAPLE ST Eastbound				MAPLE ST Westbound				BLOMQUIST ST Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	2	25	0	26	17	0	0	20	0	5					95	406	0	0	0	
7:15 AM	0	0	4	29	0	9	6	0	0	38	0	2					88	444	0	0	0	
7:30 AM	0	0	4	39	0	2	6	0	0	43	0	6					100	478	0	0	1	
7:45 AM	0	0	5	66	0	3	5	0	1	41	0	2					123	511	0	0	2	
8:00 AM	0	0	7	74	0	6	4	0	0	37	0	5					133	553	0	0	1	
8:15 AM	0	0	6	72	0	4	2	0	0	33	0	5					122		0	0	0	
8:30 AM	0	0	5	86	0	4	6	0	0	30	0	2					133		0	0	2	
8:45 AM	0	0	8	115	0	2	6	0	0	29	0	5					165		0	0	1	

Peak Rolling Hour Flow Rates

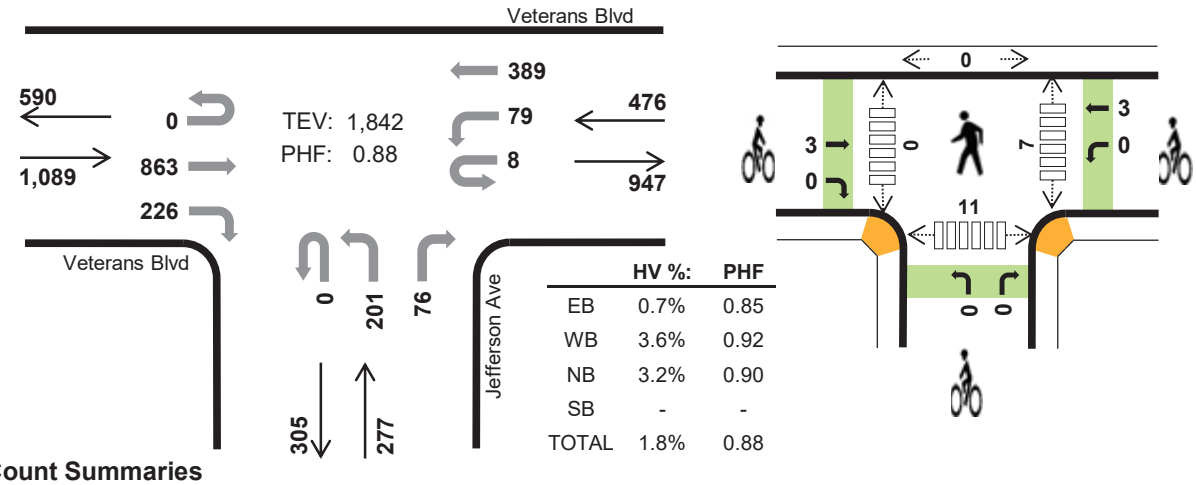
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	0	0	0					1
Lights	0	0	25	332	0	16	16	0	0	123	0	15					527
Mediums	0	0	1	14	0	0	2	0	0	6	0	2					25
Total	0	0	26	347	0	16	18	0	0	129	0	17					553

Jefferson Ave
Veterans Blvd

N

Peak Hour

Date: 01-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



Two-Hour Count Summaries

Interval Start	Veterans Blvd Eastbound				Veterans Blvd Westbound				Jefferson Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	102	24	0	12	56	0	0	23	0	16	0	0	0	0	233	0
7:15 AM	0	0	124	36	1	21	74	0	0	25	0	10	0	0	0	0	291	0
7:30 AM	1	0	143	46	1	25	98	0	0	34	0	7	0	0	0	0	355	0
7:45 AM	0	0	183	43	3	18	86	0	0	33	0	17	0	0	0	0	383	1,262
8:00 AM	**0**	**0**	**186**	**59**	**2**	**19**	**96**	**0**	**0**	**40**	**0**	**16**	**0**	**0**	**0**	**0**	**418**	1,447
8:15 AM	**0**	**0**	**197**	**44**	**3**	**22**	**91**	**0**	**0**	**62**	**0**	**15**	**0**	**0**	**0**	**0**	**434**	1,590
8:30 AM	**0**	**0**	**222**	**60**	**1**	**14**	**98**	**0**	**0**	**49**	**0**	**24**	**0**	**0**	**0**	**0**	**468**	1,703
8:45 AM	**0**	**0**	**258**	**63**	**2**	**24**	**104**	**0**	**0**	**50**	**0**	**21**	**0**	**0**	**0**	**0**	**522**	**1,842**
Count Total	1	0	1,415	375	13	155	703	0	0	316	0	126	0	0	0	0	3,104	0
Peak Hour All	**0**	**0**	**863**	**226**	**8**	**79**	**389**	**0**	**0**	**201**	**0**	**76**	**0**	**0**	**0**	**0**	**1,842**	**0**
Peak Hour HV	**0**	**0**	**6**	**2**	**0**	**3**	**14**	**0**	**0**	**6**	**0**	**3**	**0**	**0**	**0**	**0**	**34**	**0**
Peak Hour HV%	**-**	**-**	**1%**	**1%**	**0%**	**4%**	**4%**	**-**	**-**	**3%**	**-**	**4%**	**-**	**-**	**-**	**-**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	1	2	0	*6*	1	0	0	0	*1*	0	0	0	0	*0*
7:15 AM	7	1	1	0	*9*	0	1	0	0	*1*	2	0	0	4	*6*
7:30 AM	3	5	2	0	*10*	0	0	0	0	*0*	1	0	0	1	*2*
7:45 AM	7	6	2	0	*15*	2	0	0	0	*2*	0	0	0	1	*1*
8:00 AM	**1**	**5**	**4**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
8:15 AM	**3**	**3**	**2**	**0**	***8***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**0**	**2**	*3*
8:30 AM	**3**	**1**	**2**	**0**	***6***	**1**	**1**	**0**	**0**	***2***	**1**	**0**	**0**	**3**	*4*
8:45 AM	**1**	**8**	**1**	**0**	***10***	**2**	**1**	**0**	**0**	***3***	**4**	**0**	**0**	**6**	***10***
Count Total	28	30	16	0	*74*	6	4	0	0	*10*	10	0	0	17	*27*
Peak Hr	**8**	**17**	**9**	**0**	***34***	**3**	**3**	**0**	**0**	***6***	**7**	**0**	**0**	**11**	***18***

Two-Hour Count Summaries - Heavy Vehicles

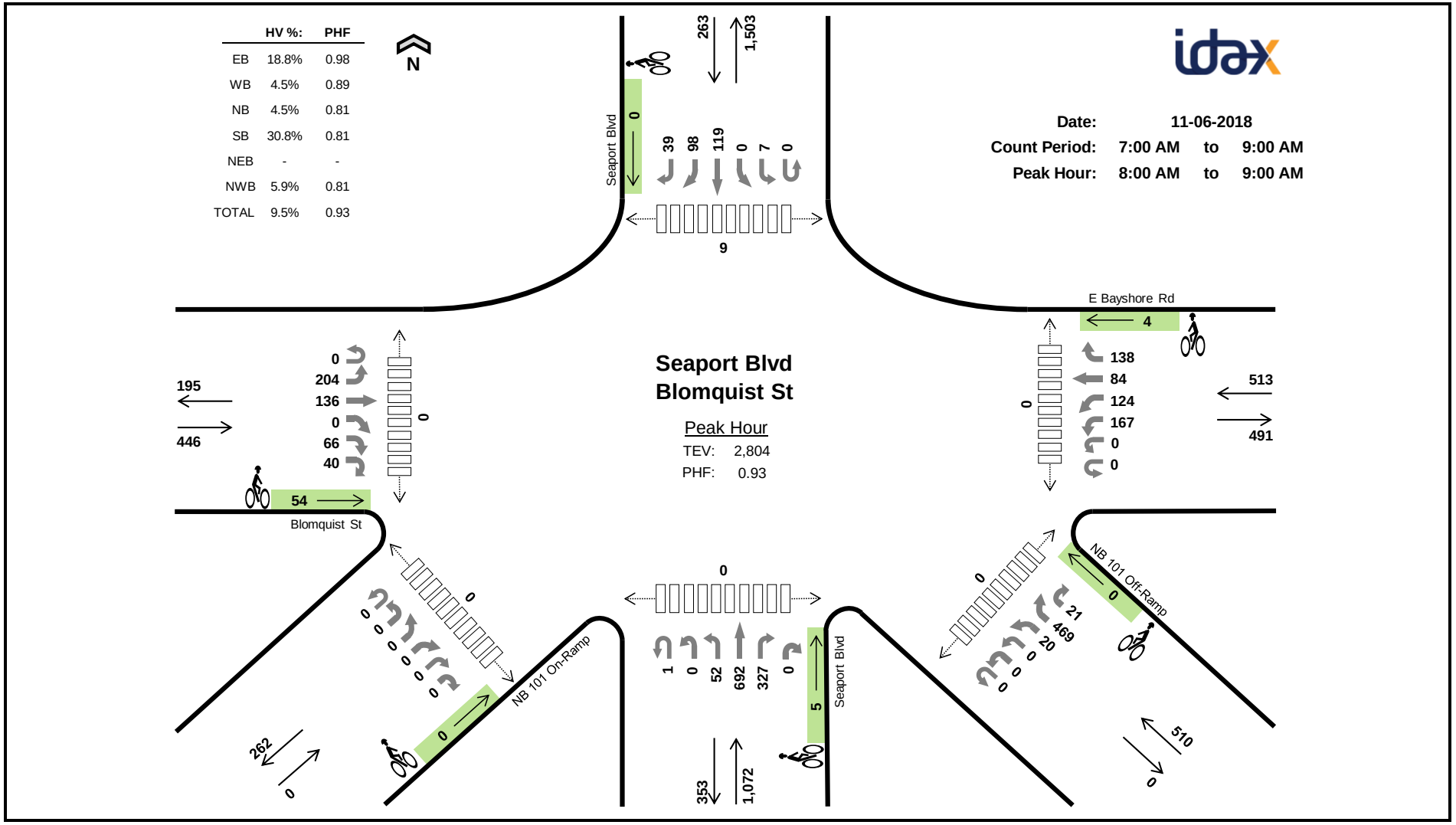
Interval Start	Veterans Blvd				Veterans Blvd				Jefferson Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	1	0	0	1	0	0	0	0	2	0	0	0	0	6	0
7:15 AM	0	0	4	3	0	0	1	0	0	1	0	0	0	0	0	0	9	0
7:30 AM	0	0	1	2	0	0	5	0	0	1	0	1	0	0	0	0	10	0
7:45 AM	0	0	6	1	0	0	6	0	0	2	0	0	0	0	0	0	15	40
8:00 AM	**0**	**0**	**0**	**1**	**0**	**1**	**4**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**10**	44
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**8**	43
8:30 AM	**0**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	39
8:45 AM	**0**	**0**	**1**	**0**	**0**	**2**	**6**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**34**
Count Total	0	0	19	9	0	3	27	0	0	10	0	6	0	0	0	0	74	0
Peak Hour	**0**	**0**	**6**	**2**	**0**	**3**	**14**	**0**	**0**	**6**	**0**	**3**	**0**	**0**	**0**	**0**	**34**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Veterans Blvd			Veterans Blvd			Jefferson Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	4
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:15 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
8:30 AM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	5
8:45 AM	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**6**
Count Total	0	6	0	0	4	0	0	0	0	0	0	0	10	0
Peak Hour	**0**	**3**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

	HV %:	PHF
EB	18.8%	0.98
WB	4.5%	0.89
NB	4.5%	0.81
SB	30.8%	0.81
NEB	-	-
NWB	5.9%	0.81
TOTAL	9.5%	0.93


N
Seaport Blvd
Blomquist St
E Bayshore Rd
NB 101 On-Ramp
NB 101 Off-Ramp
Seaport Blvd
Seaport Blvd
Blomquist St
Peak Hour
TEV: 2,804
PHF: 0.93
Date: 11-06-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM
263
1,503
39
98
119
0
7
0
9
0
195
446
0
204
136
0
66
40
0
54
4
138
84
124
167
0
0
513
491
0
0
0

Two-Hour Count Summaries

Interval Start	Blomquist St Eastbound						E Bayshore Rd Westbound						Seaport Blvd Northbound						Seaport Blvd Southbound						NB 101 On-Ramp Northeastbound						NB 101 Off-Ramp Northwestbound						15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	HR	UT	HL	LT	BL	TH	RT	UT	HL	LT	TH	RT	HR	UT	LT	BL	TH	BR	RT	UT	HL	BL	BR	RT	HR	UT	HL	LT	BL	BR	HR		
7:00 AM	0	22	12	0	25	25	0	0	40	28	16	20	0	0	15	109	31	0	0	3	0	37	29	7	0	0	0	0	0	0	0	0	0	20	90	5	534	0
7:15 AM	0	15	8	0	27	18	0	0	40	32	13	22	0	0	22	122	43	0	0	2	0	30	16	9	0	0	0	0	0	0	0	0	0	6	76	9	510	0
7:30 AM	0	29	11	0	15	16	0	0	69	39	28	17	0	0	10	98	53	0	0	2	0	24	13	10	0	0	0	0	0	0	0	0	0	10	101	3	548	0
7:45 AM	0	44	19	0	16	24	0	0	47	36	41	16	0	0	18	142	33	0	0	4	0	32	18	9	0	0	0	0	0	0	0	0	0	5	111	3	618	2,210
8:00 AM	**0**	**48**	**33**	**0**	**18**	**14**	**0**	**0**	**53**	**32**	**24**	**31**	**1**	**0**	**16**	**165**	**53**	**0**	**0**	**1**	**0**	**23**	**23**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**79**	**8**	**636**	2,312
8:15 AM	**0**	**43**	**38**	**0**	**13**	**12**	**0**	**0**	**47**	**40**	**20**	**37**	**0**	**0**	**9**	**145**	**69**	**0**	**0**	**3**	**0**	**33**	**32**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**148**	**3**	**711**	2,513
8:30 AM	**0**	**56**	**33**	**0**	**16**	**8**	**0**	**0**	**41**	**25**	**21**	**41**	**0**	**0**	**15**	**178**	**92**	**0**	**0**	**1**	**0**	**26**	**22**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**110**	**6**	**702**	2,667
8:45 AM	**0**	**57**	**32**	**0**	**19**	**6**	**0**	**0**	**26**	**27**	**19**	**29**	**0**	**0**	**12**	**204**	**113**	**0**	**0**	**2**	**0**	**37**	**21**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**132**	**4**	**755**	**2,804**
Count Total	0	314	186	0	149	123	0	0	363	259	182	213	1	0	117	1,163	487	0	0	18	0	242	174	74	0	0	0	0	0	0	0	0	0	61	847	41	5,014	0
Peak Hour All	**0**	**204**	**136**	**0**	**66**	**40**	**0**	**0**	**167**	**124**	**84**	**138**	**1**	**0**	**52**	**692**	**327**	**0**	**0**	**7**	**0**	**119**	**98**	**39**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**469**	**21**	**2,804**	**0**
Peak Hour HV	**0**	**18**	**6**	**0**	**36**	**24**	**0**	**0**	**11**	**5**	**5**	**2**	**0**	**0**	**13**	**22**	**13**	**0**	**0**	**2**	**0**	**32**	**33**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**25**	**1**	**266**	**0**
Peak Hour HV%	**-**	**9%**	**4%**	**-**	**55%**	**60%**	**-**	**-**	**7%**	**4%**	**6%**	**1%**	**0%**	**-**	**25%**	**3%**	**4%**	**-**	**-**	**29%**	**-**	**27%**	**34%**	**36%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**20%**	**5%**	**5%**	**9%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals							Bicycles							Pedestrians (Crossing Leg)						
	EB	WB	NB	SB	NEB	NWB	Total	EB	WB	NB	SB	NEB	NWB	Total	East	West	North	South	SE	SW	Total
7:00 AM	15	8	14	21	0	11	*69*	8	3	0	1	0	0	*12*	0	0	3	0	0	0	*3*
7:15 AM	19	3	17	22	0	2	*63*	10	0	0	0	0	0	*10*	0	1	4	0	0	0	*5*
7:30 AM	24	2	9	15	0	10	*60*	5	0	0	0	0	0	*5*	0	0	4	0	0	0	*4*
7:45 AM	25	2	15	21	0	10	*73*	8	0	0	1	0	0	*9*	0	0	4	0	0	0	*4*
8:00 AM	**25**	**10**	**14**	**14**	**0**	**3**	***66***	**14**	**0**	**1**	**0**	**0**	**0**	***15***	**0**	**0**	**1**	**0**	**0**	**0**	***1***
8:15 AM	**21**	**9**	**8**	**27**	**0**	**7**	***72***	**16**	**0**	**2**	**0**	**0**	**0**	***18***	**0**	**0**	**3**	**0**	**0**	**0**	***3***
8:30 AM	**22**	**2**	**13**	**17**	**0**	**9**	***63***	**17**	**2**	**2**	**0**	**0**	**0**	***21***	**0**	**0**	**5**	**0**	**0**	**0**	***5***
8:45 AM	**16**	**2**	**13**	**23**	**0**	**11**	***65***	**7**	**2**	**0**	**0**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	**0**	**0**	***0***
Count Total	167	38	103	160	0	63	*531*	85	7	5	2	0	0	*99*	0	1	24	0	0	0	*25*
Peak Hr	**84**	**23**	**48**	**81**	**0**	**30**	***266***	**54**	**4**	**5**	**0**	**0**	**0**	***63***	**0**	**0**	**9**	**0**	**0**	**0**	***9***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Blomquist St Eastbound						E Bayshore Rd Westbound						Seaport Blvd Northbound						Seaport Blvd Southbound						NB 101 On-Ramp Northeastbound						NB 101 Off-Ramp Northwestbound						15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	HR	UT	HL	LT	BL	TH	RT	UT	HL	LT	TH	RT	HR	UT	LT	BL	TH	BR	RT	UT	HL	BL	BR	RT	HR	UT	HL	LT	BL	BR	HR		
7:00 AM	0	3	0	0	2	10	0	0	4	3	1	0	0	0	4	10	0	0	0	0	0	11	7	3	0	0	0	0	0	0	0	0	0	3	8	0	69	0
7:15 AM	0	3	0	0	10	6	0	0	2	0	1	0	0	0	9	6	2	0	0	1	0	13	6	2	0	0	0	0	0	0	0	0	0	0	2	0	63	0
7:30 AM	0	5	1	0	7	11	0	0	1	0	1	0	0	0	3	5	1	0	0	0	0	7	5	3	0	0	0	0	0	0	0	0	0	2	7	1	60	0
7:45 AM	0	6	0	0	4	15	0	0	2	0	0	0	0	0	8	6	1	0	0	1	0	11	5	4	0	0	0	0	0	0	0	0	0	1	9	0	73	265
8:00 AM	**0**	**4**	**3**	**0**	**8**	**10**	**0**	**0**	**2**	**4**	**3**	**1**	**0**	**0**	**6**	**4**	**4**	**0**	**0**	**0**	**0**	**8**	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**66**	262
8:15 AM	**0**	**4**	**2**	**0**	**7**	**8**	**0**	**0**	**5**	**1**	**2**	**1**	**0**	**0**	**1**	**6**	**1**	**0**	**0**	**1**	**0**	**7**	**14**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	**0**	**72**	271
8:30 AM	**0**	**5**	**0**	**0**	**11**	**6**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**2**	**0**	**0**	**1**	**0**	**7**	**7**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**0**	**63**	274
8:45 AM	**0**	**5**	**1**	**0**	**10**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**4**	**6**	**0**	**0**	**0**	**0**	**10**	**9**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**1**	**65**	**266**
Count Total	0	35	7	0	59	66	0	0	20	8	8	2	0	0	37	49	17	0	0	4	0	74	56	26	0	0	0	0	0	0	0	0	0	10	51	2	531	0
Peak Hour	**0**	**18**	**6**	**0**	**36**	**24**	**0**	**0**	**11**	**5**	**5**	**2**	**0**	**0**	**13**	**22**	**13**	**0**	**0**	**2**	**0**	**32**	**33**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**25**	**1**	266	**0**

Two-Hour Count Summaries - Bikes

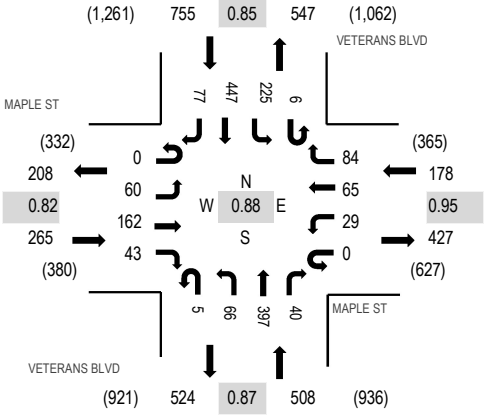
Interval Start	Blomquist St Eastbound						E Bayshore Rd Westbound						Seaport Blvd Northbound						Seaport Blvd Southbound						NB 101 On-Ramp Northeastbound						NB 101 Off-Ramp Northwestbound						15-min Total	Rolling One Hour
	UT	LT	TH	BR	RT	HR	UT	HL	LT	BL	TH	RT	UT	HL	LT	TH	RT	HR	UT	LT	BL	TH	BR	RT	UT	HL	BL	BR	RT	HR	UT	HL	LT	BL	BR	HR		
7:00 AM	0	3	5	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	12	0
7:15 AM	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
7:30 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
7:45 AM	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9	36
8:00 AM	**0**	**4**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	39
8:15 AM	**0**	**7**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	47
8:30 AM	**0**	**8**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	63
8:45 AM	**0**	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**63**
Count Total	0	28	57	0	0	0	0	0	0	0	3	4	0	0	1	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	99	0
Peak Hour	**0**	**20**	**34**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	63	**0**

All Traffic Data Services Inc.

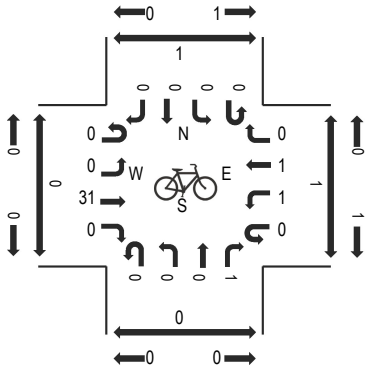
(303) 216-2439
www.alltrafficdata.net

Location: 7 VETERANS BLVD & MAPLE ST AM
Date: Tuesday, September 10, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

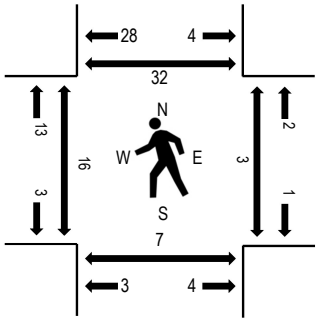
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MAPLE ST Eastbound				MAPLE ST Westbound				VETERANS BLVD Northbound				VETERANS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	5	7	6	0	8	12	27	1	5	67	9	1	11	62	9	230	1,236	2	0	1	6
7:15 AM	0	7	10	3	0	4	13	30	0	8	84	4	1	26	85	16	291	1,371	12	1	2	4
7:30 AM	0	10	17	10	0	4	18	28	1	9	106	7	3	32	79	4	328	1,484	5	0	2	8
7:45 AM	0	8	22	10	0	5	15	23	1	6	113	7	2	48	118	9	387	1,610	5	2	0	10
8:00 AM	0	14	42	8	0	6	23	21	0	9	88	10	2	50	80	12	365	1,706	4	0	3	11
8:15 AM	0	18	35	12	0	7	14	17	1	19	92	11	1	51	105	21	404		7	0	2	6
8:30 AM	0	17	34	4	0	2	10	33	1	21	101	9	1	61	139	21	454		3	0	1	7
8:45 AM	0	11	51	19	0	14	18	13	3	17	116	10	2	63	123	23	483		2	3	1	8

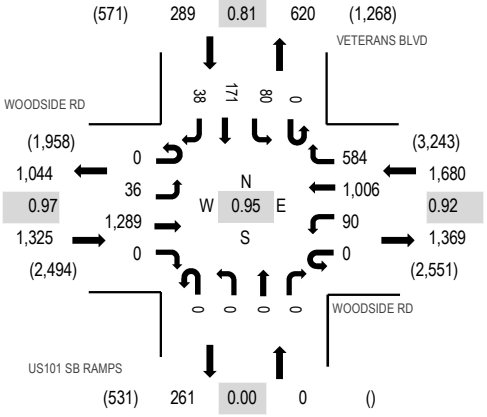
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	1	0	0	0	0	0	1	0	0	4	0	7
Lights	0	60	151	42	0	26	59	80	5	63	383	35	6	222	425	74	1,631
Mediums	0	0	10	1	0	2	6	4	0	3	14	4	0	3	18	3	68
Total	0	60	162	43	0	29	65	84	5	66	397	40	6	225	447	77	1,706

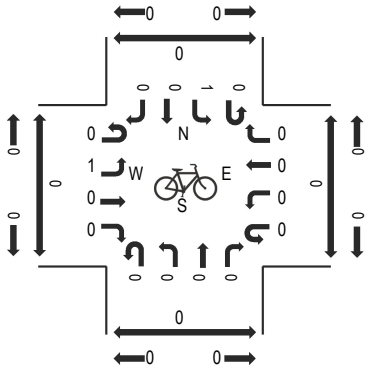
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 8 US101 SB RAMPS & WOODSIDE RD AM
Date: Tuesday, September 10, 2019
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

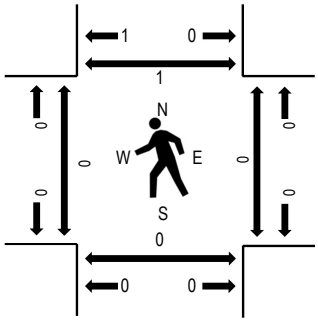
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WOODSIDE RD Eastbound				WOODSIDE RD Westbound				US101 SB RAMPS Northbound				VETERANS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	12	259	0	0	35	255	112	0	0	0	0	0	9	31	4	717	3,215	0	0	0	0
7:15 AM	0	14	327	0	0	20	259	124	0	0	0	0	0	11	18	12	785	3,294	0	0	0	0
7:30 AM	0	7	315	0	0	26	252	150	0	0	0	0	0	31	60	9	850	3,260	0	0	0	0
7:45 AM	0	6	336	0	0	22	262	173	0	0	0	0	0	15	38	11	863	3,181	0	0	0	0
8:00 AM	0	9	311	0	0	22	233	137	0	0	0	0	0	23	55	6	796	3,093	0	0	0	1
8:15 AM	0	12	280	0	0	12	212	158	0	0	0	0	0	21	48	8	751		0	0	0	1
8:30 AM	0	20	281	0	0	27	226	142	0	0	0	0	0	20	48	7	771		0	0	0	0
8:45 AM	0	19	286	0	0	18	193	173	0	0	0	0	0	26	51	9	775		0	0	0	0

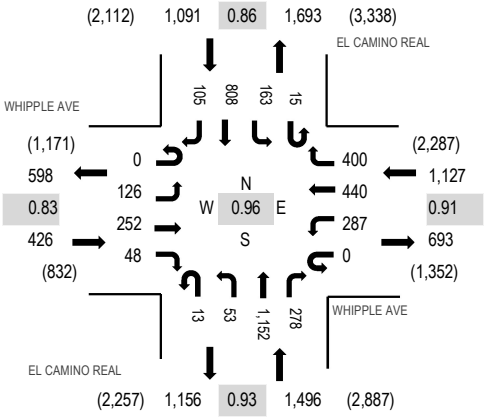
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	11	0	0	22	20	0	0	0	0	0	0	5	0	1	59
Lights	0	34	1,225	0	0	51	931	572	0	0	0	0	0	68	164	35	3,080
Mediums	0	2	53	0	0	17	55	12	0	0	0	0	0	7	7	2	155
Total	0	36	1,289	0	0	90	1,006	584	0	0	0	0	0	80	171	38	3,294

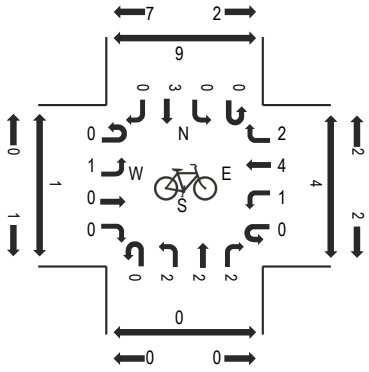
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 1 EL CAMINO REAL & WHIPPLE AVE PM
Date: Tuesday, September 10, 2019
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

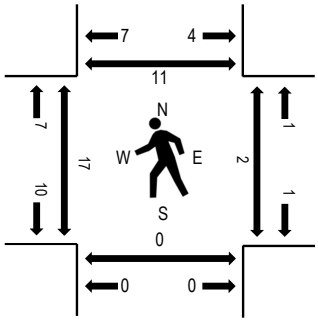
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	28	58	12	0	79	105	101	1	10	242	73	7	57	162	25	960	4,038	9	0	0	7
4:15 PM	0	35	61	17	0	81	105	112	2	15	262	78	5	39	174	24	1,010	4,032	1	1	0	4
4:30 PM	0	26	53	11	0	63	100	104	4	16	287	56	15	34	196	27	992	4,067	5	0	0	2
4:45 PM	0	37	78	15	0	85	120	118	3	10	283	75	3	37	194	18	1,076	4,140	5	0	0	5
5:00 PM	0	27	53	12	0	68	99	89	4	11	257	70	7	47	191	19	954	4,080	3	1	0	4
5:15 PM	0	34	57	9	0	76	117	93	3	15	310	74	1	33	192	31	1,045		3	1	0	1
5:30 PM	0	28	64	12	0	58	104	100	3	17	302	59	4	46	231	37	1,065		6	0	0	1
5:45 PM	0	35	49	21	0	72	120	118	3	13	260	69	8	32	203	13	1,016		4	2	0	8

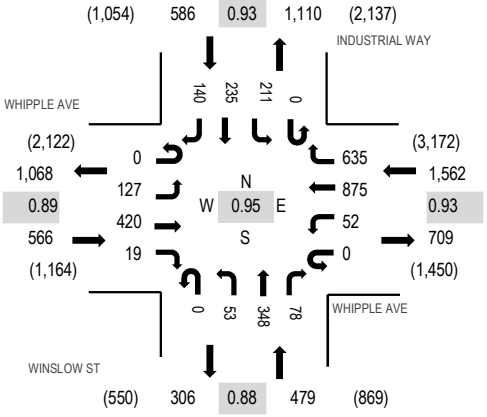
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Lights	0	125	247	46	0	283	439	397	13	52	1,133	273	15	162	794	104	4,083
Mediums	0	1	5	2	0	4	1	3	0	1	17	5	0	1	14	1	55
Total	0	126	252	48	0	287	440	400	13	53	1,152	278	15	163	808	105	4,140

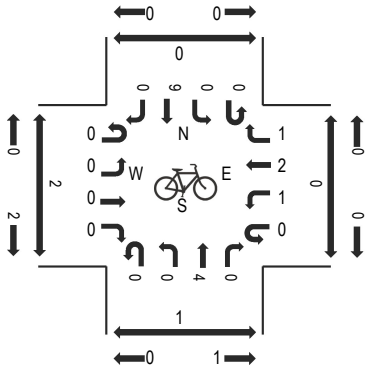
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 2 WINSLOW ST & WHIPPLE AVE PM
Date: Tuesday, September 10, 2019
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

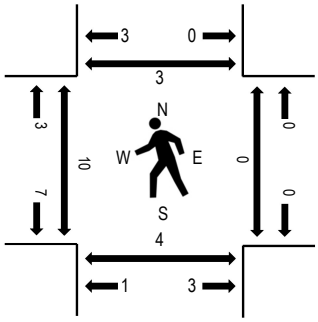
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				WINSLOW ST Northbound				INDUSTRIAL WAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	14	135	5	0	14	215	134	0	12	62	29	0	65	44	26	755	3,085	2	0	0	4
4:15 PM	0	37	124	4	1	18	249	161	0	12	53	12	0	41	48	26	786	3,167	2	0	1	2
4:30 PM	0	30	99	2	0	14	229	172	0	13	69	19	0	59	60	32	798	3,193	4	0	0	2
4:45 PM	0	33	95	9	0	8	223	138	0	13	75	16	0	47	52	37	746	3,182	3	0	1	1
5:00 PM	0	37	115	5	0	14	216	156	0	12	105	20	0	59	61	37	837	3,174	2	0	2	0
5:15 PM	0	27	111	3	0	16	207	169	0	15	99	23	0	46	62	34	812		1	0	1	0
5:30 PM	0	29	112	5	0	18	219	178	0	6	82	14	0	58	36	30	787		2	0	0	0
5:45 PM	0	29	102	2	0	12	223	168	0	9	80	19	0	29	38	27	738		0	0	0	1

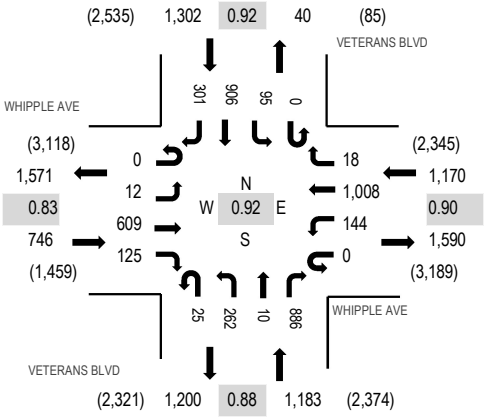
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	124	409	19	0	49	869	627	0	53	346	78	0	208	231	139	3,152
Mediums	0	3	10	0	0	3	6	8	0	0	2	0	0	3	4	1	40
Total	0	127	420	19	0	52	875	635	0	53	348	78	0	211	235	140	3,193

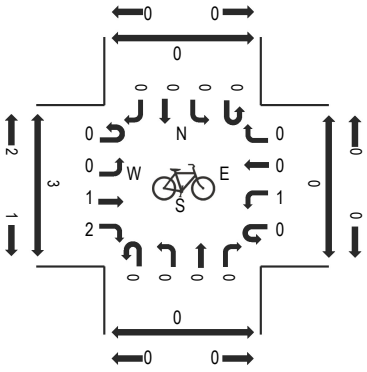
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 3 VETERANS BLVD & WHIPPLE AVE PM
Date: Tuesday, September 10, 2019
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

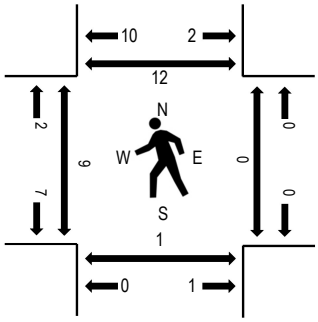
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				VETERANS BLVD Northbound				VETERANS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	3	185	38	0	38	234	2	6	59	1	312	0	24	210	78	1,190	4,401	5	0	1	4
4:15 PM	0	5	142	32	0	33	249	4	8	76	3	197	0	26	244	82	1,101	4,333	0	0	0	1
4:30 PM	0	2	132	27	0	44	276	5	7	67	4	192	0	24	234	75	1,089	4,351	4	0	0	5
4:45 PM	0	2	150	28	0	29	249	7	4	60	2	185	0	21	218	66	1,021	4,339	0	0	0	2
5:00 PM	0	4	176	28	0	37	237	6	8	76	6	252	0	33	200	59	1,122	4,312	6	0	2	6
5:15 PM	0	5	158	18	0	46	235	4	4	72	5	211	0	36	241	84	1,119		0	1	0	2
5:30 PM	0	4	151	22	0	36	254	1	5	75	5	232	0	29	201	62	1,077		0	0	0	1
5:45 PM	1	1	123	22	0	44	273	2	9	63	2	166	0	32	200	56	994		1	0	0	1

Peak Rolling Hour Flow Rates

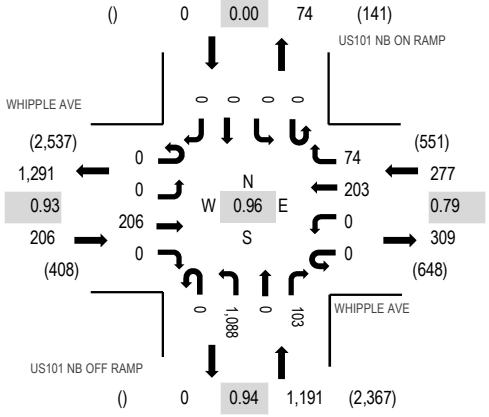
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	3
Lights	0	12	600	123	0	140	992	17	25	261	10	881	0	94	897	296	4,348
Mediums	0	0	9	2	0	4	16	1	0	1	0	4	0	1	9	3	50
Total	0	12	609	125	0	144	1,008	18	25	262	10	886	0	95	906	301	4,401

All Traffic Data Services Inc.

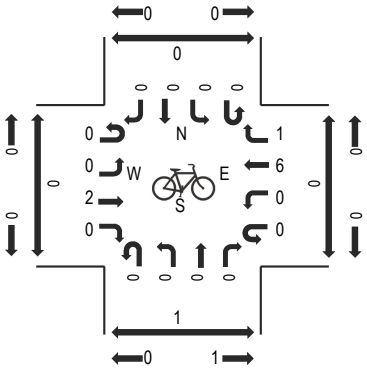
(303) 216-2439
www.alltrafficdata.net

Location: 4 US101 NB OFF RAMP & WHIPPLE AVE PM
Date: Tuesday, September 10, 2019
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

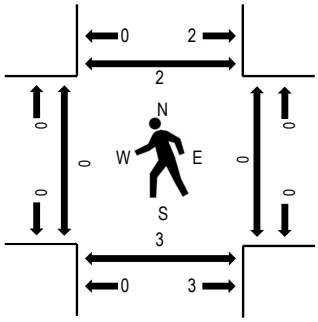
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WHIPPLE AVE Eastbound				WHIPPLE AVE Westbound				US101 NB OFF RAMP Northbound				US101 NB ON RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	47	0	0	0	66	23	0	255	0	27	0	0	0	0	418	1,660	0	0	0	1
4:15 PM	0	0	40	0	0	0	47	13	0	271	0	23	0	0	0	0	394	1,661	0	0	0	0
4:30 PM	0	0	38	0	0	0	64	23	0	286	0	26	0	0	0	0	437	1,674	0	0	0	2
4:45 PM	0	0	44	0	0	0	34	13	0	290	0	30	0	0	0	0	411	1,659	0	0	0	0
5:00 PM	0	0	64	0	0	0	59	16	0	256	0	24	0	0	0	0	419	1,666	0	0	0	0
5:15 PM	0	0	60	0	0	0	46	22	0	256	0	23	0	0	0	0	407		0	0	3	0
5:30 PM	0	0	56	0	0	0	44	10	0	274	0	38	0	0	0	0	422		0	0	0	0
5:45 PM	0	0	59	0	1	0	49	21	0	240	0	48	0	0	0	0	418		0	0	0	0

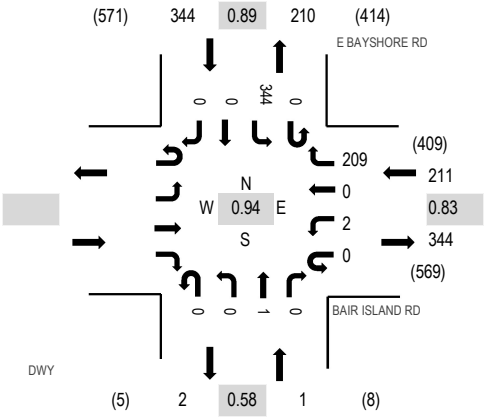
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Lights	0	0	203	0	0	0	201	74	0	1,073	0	100	0	0	0	0	1,651
Mediums	0	0	3	0	0	0	2	0	0	14	0	3	0	0	0	0	22
Total	0	0	206	0	0	0	203	74	0	1,088	0	103	0	0	0	0	1,674

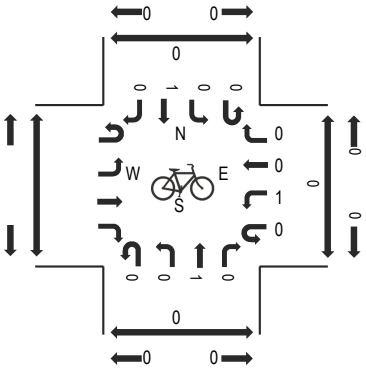
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 5 DWY & BAIR ISLAND RD PM
Date: Tuesday, September 10, 2019
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

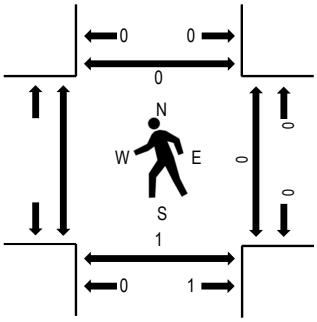
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BAIR ISLAND RD Eastbound				BAIR ISLAND RD Westbound				DWY Northbound				E BAYSHORE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM					0	0	0	63	0	0	3	0	1	63	0	0	130	432		0	1	0
4:15 PM					0	1	0	38	0	0	1	0	0	52	0	0	92	450		0	0	0
4:30 PM					0	1	0	53	1	0	2	0	1	46	0	0	104	493		0	1	0
4:45 PM					1	0	0	41	0	0	0	0	1	63	0	0	106	514		0	0	0
5:00 PM					0	1	0	64	0	0	0	0	0	83	0	0	148	556		0	0	0
5:15 PM					0	0	0	55	0	0	0	0	0	80	0	0	135			0	0	0
5:30 PM					0	0	0	41	0	0	0	0	0	84	0	0	125			0	0	0
5:45 PM					0	1	0	49	0	0	1	0	0	97	0	0	148			0	1	0

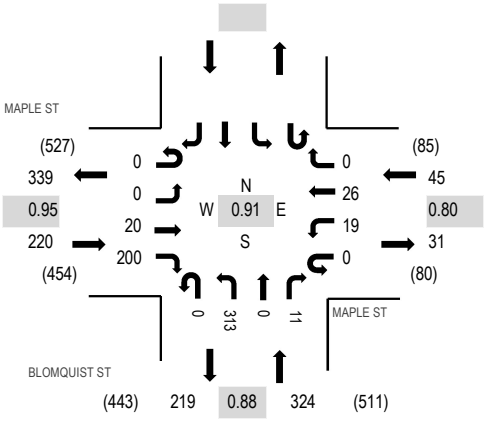
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	2	0	207	0	0	1	0	0	339	0	0	549
Mediums					0	0	0	2	0	0	0	0	0	5	0	0	7
Total					0	2	0	209	0	0	1	0	0	344	0	0	556

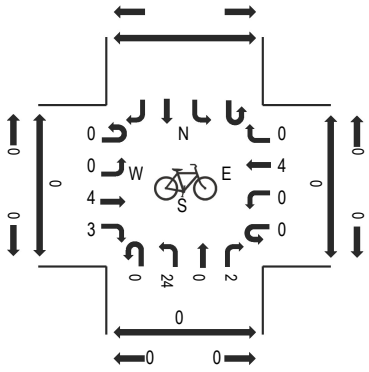
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 6 BLOMQUIST ST & MAPLE ST PM
Date: Tuesday, September 10, 2019
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

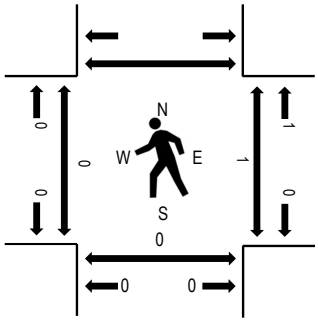
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

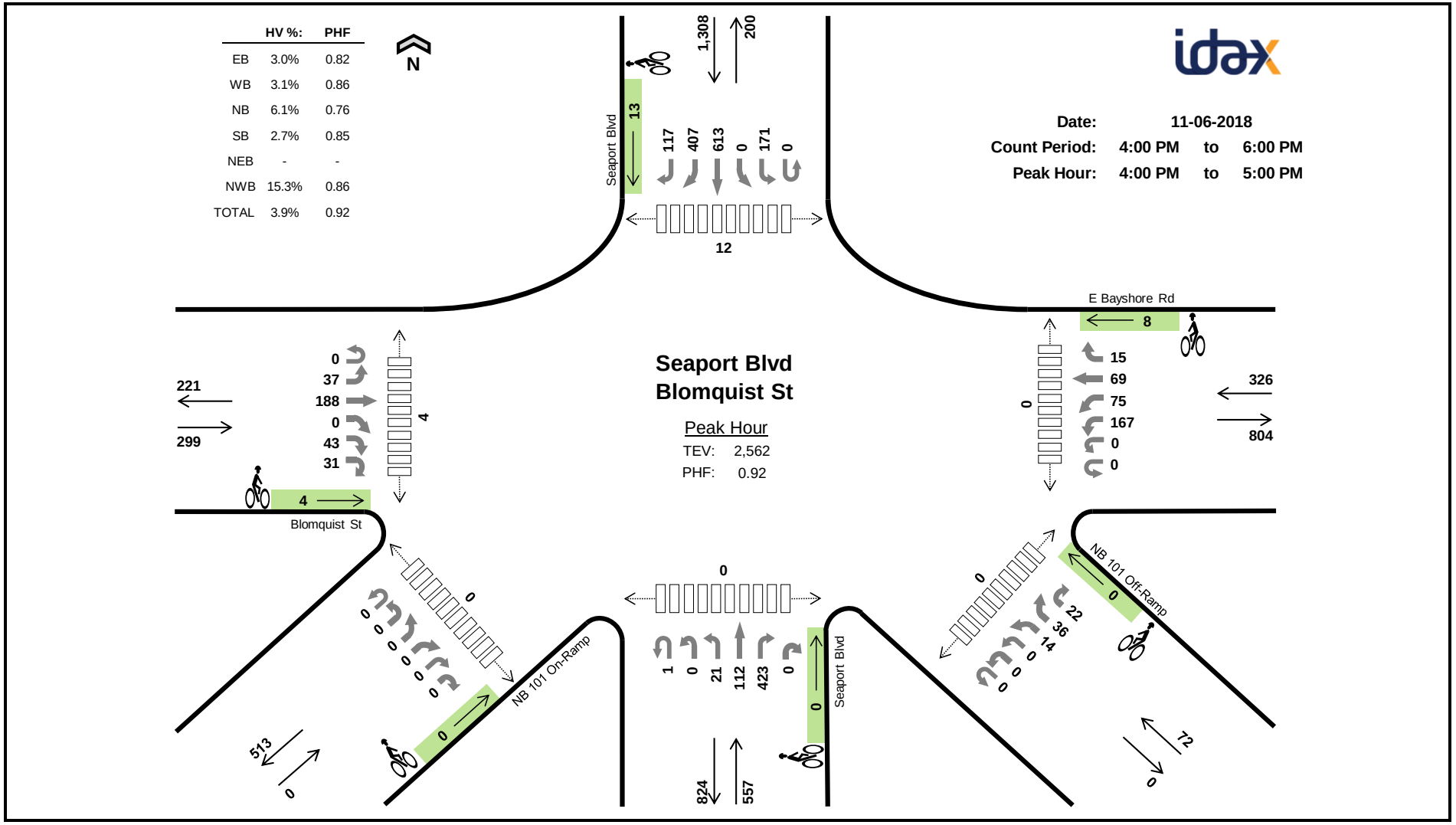
Traffic Counts - Motorized Vehicles

Interval Start Time	MAPLE ST Eastbound				MAPLE ST Westbound				BLOMQUIST ST Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	1	0	11	54	0	10	10	0	0	34	0	13					133	503	0	0	0	
4:15 PM	0	0	5	57	0	3	4	0	0	48	0	3					120	508	0	0	0	
4:30 PM	0	0	2	62	0	5	3	0	0	38	0	2					112	549	0	0	0	
4:45 PM	0	0	6	54	0	2	6	0	0	68	0	2					138	589	0	0	0	
5:00 PM	0	0	4	46	0	6	7	0	0	71	0	4					138	547	0	1	0	
5:15 PM	0	0	7	57	0	3	7	0	0	84	0	3					161		0	0	0	
5:30 PM	0	0	3	43	0	8	6	0	0	90	0	2					152		0	0	0	
5:45 PM	0	0	11	31	0	2	3	0	0	47	0	2					96		0	0	1	

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1					1
Lights	0	0	20	193	0	19	26	0	0	309	0	10					577
Mediums	0	0	0	7	0	0	0	0	0	4	0	0					11
Total	0	0	20	200	0	19	26	0	0	313	0	11					589

	HV %:	PHF
EB	3.0%	0.82
WB	3.1%	0.86
NB	6.1%	0.76
SB	2.7%	0.85
NEB	-	-
NWB	15.3%	0.86
TOTAL	3.9%	0.92



Date: 11-06-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Two-Hour Count Summaries

Interval Start		Blomquist St Eastbound						E Bayshore Rd Westbound						Seaport Blvd Northbound						Seaport Blvd Southbound						NB 101 On-Ramp Northeastbound						NB 101 Off-Ramp Northwestbound						15-min Total	Rolling One Hour
		UT	LT	TH	BR	RT	HR	UT	HL	LT	BL	TH	RT	UT	HL	LT	TH	RT	HR	UT	LT	BL	TH	BR	RT	UT	HL	BL	BR	RT	HR	UT	HL	LT	BL	BR	HR		
4:00 PM		**0**	**12**	**54**	**0**	**16**	**9**	**0**	**0**	**30**	**22**	**15**	**3**	**0**	**0**	**2**	**29**	**95**	**0**	**0**	**48**	**0**	**184**	**135**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**10**	**5**	**693**	0
4:15 PM		**0**	**7**	**52**	**0**	**13**	**11**	**0**	**0**	**44**	**14**	**20**	**4**	**0**	**0**	**11**	**26**	**146**	**0**	**0**	**34**	**0**	**132**	**87**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**8**	**4**	**634**	0
4:30 PM		**0**	**12**	**41**	**0**	**8**	**5**	**0**	**0**	**53**	**18**	**17**	**7**	**1**	**0**	**2**	**23**	**76**	**0**	**0**	**50**	**0**	**160**	**103**	**43**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**10**	**7**	**639**	0
4:45 PM		**0**	**6**	**41**	**0**	**6**	**6**	**0**	**0**	**40**	**21**	**17**	**1**	**0**	**0**	**6**	**34**	**106**	**0**	**0**	**39**	**0**	**137**	**82**	**39**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**6**	**596**	**2,562**
5:00 PM		0	7	37	0	13	7	0	0	47	20	24	4	0	0	7	20	89	0	0	43	0	136	99	51	0	0	0	0	0	0	0	0	0	4	9	2	619	2,488
5:15 PM		0	10	42	0	5	5	0	0	56	18	43	1	0	0	3	22	106	0	0	36	0	140	97	60	0	0	0	0	0	0	0	0	0	4	3	4	655	2,509
5:30 PM		0	10	36	0	3	1	0	0	55	15	37	0	1	0	19	29	79	0	0	33	0	141	60	35	0	0	0	0	0	0	0	0	0	11	16	8	589	2,459
5:45 PM		0	6	28	0	1	7	0	0	51	8	30	4	0	0	22	30	65	0	0	21	0	142	76	41	0	0	0	0	0	0	0	0	0	6	15	13	566	2,429
Count Total		0	70	331	0	65	51	0	0	376	136	203	24	2	0	72	213	762	0	0	304	0	1,172	739	304	0	0	0	0	0	0	0	0	0	39	79	49	4,991	0
Peak Hour	**All**	**0**	**37**	**188**	**0**	**43**	**31**	**0**	**0**	**167**	**75**	**69**	**15**	**1**	**0**	**21**	**112**	**423**	**0**	**0**	**171**	**0**	**613**	**407**	**117**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**36**	**22**	**2,562**	**0**
	HV	**0**	**5**	**2**	**0**	**1**	**1**	**0**	**0**	**3**	**2**	**1**	**4**	**0**	**0**	**0**	**13**	**21**	**0**	**0**	**2**	**0**	**13**	**16**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**1**	**99**	**0**
	HV%	**-**	**14%**	**1%**	**-**	**2%**	**3%**	**-**	**-**	**2%**	**3%**	**1%**	**27%**	**0%**	**-**	**0%**	**12%**	**5%**	**-**	**-**	**1%**	**-**	**2%**	**4%**	**3%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0%**	**28%**	**5%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals							Bicycles							Pedestrians (Crossing Leg)						
	EB	WB	NB	SB	NEB	NWB	Total	EB	WB	NB	SB	NEB	NWB	Total	East	West	North	South	SE	SW	Total
4:00 PM	**3**	**4**	**7**	**5**	**0**	**5**	***24***	**1**	**3**	**0**	**1**	**0**	**0**	***5***	**0**	**1**	**2**	**0**	**0**	**0**	***3***
4:15 PM	**2**	**2**	**10**	**12**	**0**	**1**	***27***	**2**	**1**	**0**	**6**	**0**	**0**	***9***	**0**	**2**	**3**	**0**	**0**	**0**	***5***
4:30 PM	**2**	**2**	**7**	**9**	**0**	**3**	***23***	**0**	**3**	**0**	**3**	**0**	**0**	***6***	**0**	**1**	**6**	**0**	**0**	**0**	***7***
4:45 PM	**2**	**2**	**10**	**9**	**0**	**2**	***25***	**1**	**1**	**0**	**3**	**0**	**0**	***5***	**0**	**0**	**1**	**0**	**0**	**0**	***1***
5:00 PM	5	1	9	5	0	2	*22*	1	8	1	4	0	0	*14*	0	0	2	0	0	0	*2*
5:15 PM	2	1	4	4	0	2	*13*	1	9	0	1	0	0	*11*	0	0	4	0	0	0	*4*
5:30 PM	1	1	3	1	0	1	*7*	4	6	0	0	0	0	*10*	0	0	4	0	0	0	*4*
5:45 PM	1	0	3	3	0	0	*7*	1	7	0	0	0	0	*8*	0	0	0	0	0	0	*0*
Count Total	18	13	53	48	0	16	*148*	11	38	1	18	0	0	*68*	0	4	*22*	0	0	0	*26*
Peak Hr	**9**	**10**	**34**	**35**	**0**	**11**	***99***	**4**	**8**	**0**	**13**	**0**	**0**	***25***	**0**	**4**	**12**	**0**	**0**	**0**	***16***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start		Blomquist St Eastbound						E Bayshore Rd Westbound						Seaport Blvd Northbound						Seaport Blvd Southbound						NB 101 On-Ramp Northeastbound						NB 101 Off-Ramp Northwestbound						15-min Total	Rolling One Hour
		UT	LT	TH	BR	RT	HR	UT	HL	LT	BL	TH	RT	UT	HL	LT	TH	RT	HR	UT	LT	BL	TH	BR	RT	UT	HL	BL	BR	RT	HR	UT	HL	LT	BL	BR	HR		
4:00 PM		**0**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**4**	**3**	**0**	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**24**	0
4:15 PM		**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**3**	**7**	**0**	**0**	**1**	**0**	**6**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**27**	0
4:30 PM		**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**0**	**2**	**4**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**23**	0
4:45 PM		**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**6**	**0**	**0**	**1**	**0**	**4**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**25**	**99**
5:00 PM		0	0	4	0	0	1	0	0	0	1	0	0	0	0	0	4	5	0	0	1	0	1	1	2	0	0	0	0	0	0	0	0	0	0	2	0	22	97
5:15 PM		0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	3	1	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	1	1	13	83
5:30 PM		0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	7	67
5:45 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	49
Count Total		0	9	6	0	1	2	0	0	4	3	2	4	0	0	0	25	28	0	0	3	0	17	20	8	0	0	0	0	0	0	0	0	0	0	14	2	148	0
Peak Hour		**0**	**5**	**2**	**0**	**1**	**1**	**0**	**0**	**3**	**2**	**1**	**4**	**0**	**0**	**0**	**13**	**21**	**0**	**0**	**2**	**0**	**13**	**16**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**1**	99	**0**

Two-Hour Count Summaries - Bikes

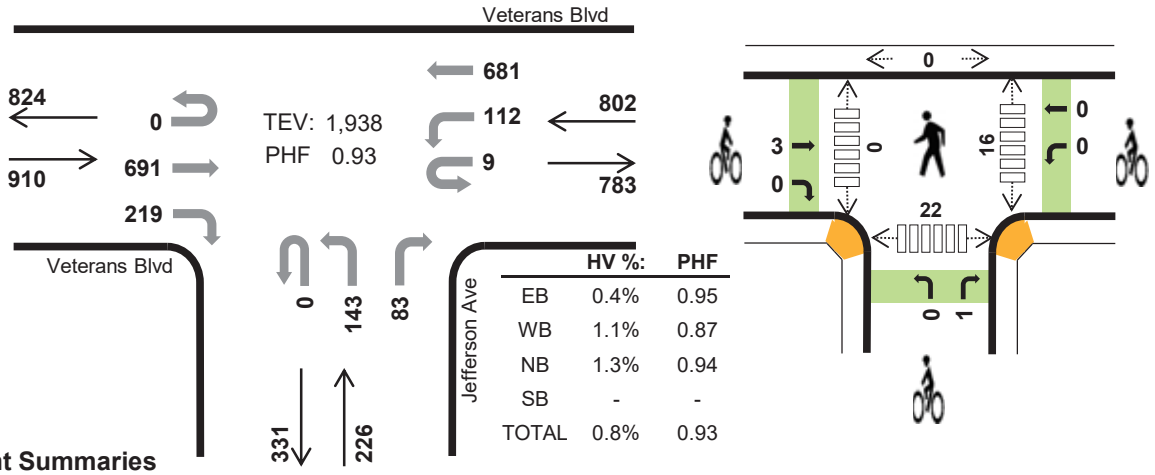
Interval Start		Blomquist St Eastbound						E Bayshore Rd Westbound						Seaport Blvd Northbound						Seaport Blvd Southbound						NB 101 On-Ramp Northeastbound						NB 101 Off-Ramp Northwestbound						15-min Total	Rolling One Hour
		UT	LT	TH	BR	RT	HR	UT	HL	LT	BL	TH	RT	UT	HL	LT	TH	RT	HR	UT	LT	BL	TH	BR	RT	UT	HL	BL	BR	RT	HR	UT	HL	LT	BL	BR	HR		
4:00 PM		**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	0
4:15 PM		**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	0
4:45 PM		**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**25**
5:00 PM		0	0	1	0	0	0	0	0	0	0	7	1	0	0	0	0	1	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	14	34
5:15 PM		0	0	1	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	11	36
5:30 PM		0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	40
5:45 PM		0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	43
Count Total		0	1	9	0	1	0	0	0	0	0	37	1	0	0	0	0	1	0	0	6	0	2	0	10	0	0	0	0	0	0	0	0	0	0	0	0	68	0
Peak Hour		**0**	**1**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	25	**0**

Jefferson Ave
Veterans Blvd

N

Peak Hour

Date: 01-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



Two-Hour Count Summaries

Interval Start	Veterans Blvd Eastbound				Veterans Blvd Westbound				Jefferson Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	189	43	3	18	164	0	0	36	0	25	0	0	0	0	478	0
4:15 PM	0	0	176	57	7	21	157	0	0	40	0	22	0	0	0	0	480	0
4:30 PM	**0**	**0**	**176**	**63**	**2**	**26**	**134**	**0**	**0**	**33**	**0**	**27**	**0**	**0**	**0**	**0**	**461**	0
4:45 PM	**0**	**0**	**147**	**51**	**3**	**25**	**156**	**0**	**0**	**37**	**0**	**21**	**0**	**0**	**0**	**0**	**440**	1,859
5:00 PM	**0**	**0**	**182**	**51**	**1**	**27**	**202**	**0**	**0**	**39**	**0**	**15**	**0**	**0**	**0**	**0**	**517**	1,898
5:15 PM	**0**	**0**	**186**	**54**	**3**	**34**	**189**	**0**	**0**	**34**	**0**	**20**	**0**	**0**	**0**	**0**	**520**	**1,938**
5:30 PM	0	0	172	33	2	27	165	0	0	27	0	28	0	0	0	0	454	1,931
5:45 PM	0	0	156	55	1	24	146	0	0	34	0	19	0	0	0	0	435	1,926
Count Total	0	0	1,384	407	22	202	1,313	0	0	280	0	177	0	0	0	0	3,785	0
Peak Hour All	**0**	**0**	**691**	**219**	**9**	**112**	**681**	**0**	**0**	**143**	**0**	**83**	**0**	**0**	**0**	**0**	**1,938**	**0**
Peak Hour HV	**0**	**0**	**4**	**0**	**0**	**2**	**7**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**16**	**0**
Peak Hour HV%	**-**	**-**	**1%**	**0%**	**0%**	**2%**	**1%**	**-**	**-**	**1%**	**-**	**2%**	**-**	**-**	**-**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	6	1	0	*10*	1	2	0	0	*3*	7	0	0	11	*18*
4:15 PM	2	1	0	0	*3*	0	0	0	0	*0*	2	0	0	4	*6*
4:30 PM	**1**	**2**	**2**	**0**	*5*	**1**	**0**	**1**	**0**	*2*	**3**	**0**	**0**	**3**	*6*
4:45 PM	**1**	**3**	**0**	**0**	*4*	**0**	**0**	**0**	**0**	*0*	**8**	**0**	**0**	**8**	*16*
5:00 PM	**1**	**0**	**1**	**0**	*2*	**2**	**0**	**0**	**0**	*2*	**4**	**0**	**0**	**8**	*12*
5:15 PM	**1**	**4**	**0**	**0**	*5*	**0**	**0**	**0**	**0**	*0*	**1**	**0**	**0**	**3**	*4*
5:30 PM	1	0	1	0	*2*	0	1	1	0	*2*	8	0	0	7	*15*
5:45 PM	0	1	0	0	*1*	1	2	0	0	*3*	3	0	0	5	*8*
Count Total	10	17	5	0	*32*	5	5	2	0	*12*	36	0	0	49	*85*
Peak Hr	**4**	**9**	**3**	**0**	***16***	**3**	**0**	**1**	**0**	***4***	**16**	**0**	**0**	**22**	***38***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Veterans Blvd Eastbound				Veterans Blvd Westbound				Jefferson Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	1	0	0	6	0	0	0	0	1	0	0	0	0	10	0
4:15 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0
4:30 PM	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**5**	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	22
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	14
5:15 PM	**0**	**0**	**1**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**16**
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	13
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	10
Count Total	0	0	9	1	0	3	14	0	0	1	0	4	0	0	0	0	32	0
Peak Hour	**0**	**0**	**4**	**0**	**0**	**2**	**7**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**16**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Veterans Blvd Eastbound			Veterans Blvd Westbound			Jefferson Ave Northbound			0 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	2	0	0	0	0	0	0	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:00 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	4
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
5:30 PM	0	0	0	0	1	0	0	0	1	0	0	0	2	4
5:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3	7
Count Total	0	5	0	0	5	0	0	0	2	0	0	0	12	0
Peak Hour	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**0**

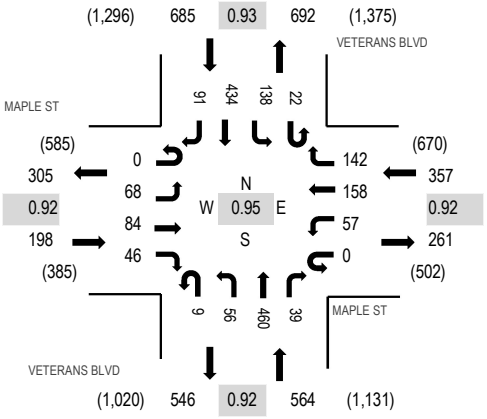
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

All Traffic Data Services Inc.

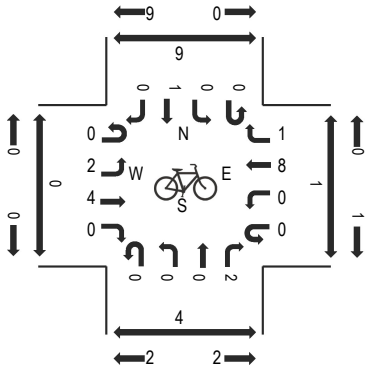
(303) 216-2439
www.alltrafficdata.net

Location: 7 VETERANS BLVD & MAPLE ST PM
Date: Tuesday, September 10, 2019
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

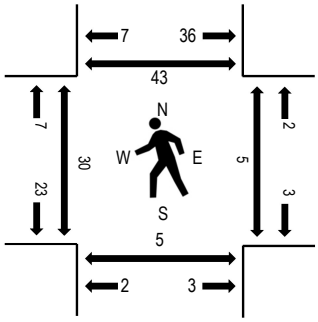
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MAPLE ST Eastbound				MAPLE ST Westbound				VETERANS BLVD Northbound				VETERANS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	15	19	17	0	12	27	32	1	15	111	13	4	40	90	29	425	1,745	9	5	4	11
4:15 PM	0	18	18	19	0	10	28	31	2	11	124	10	1	42	113	31	458	1,797	6	1	1	6
4:30 PM	0	21	18	8	0	17	33	27	3	16	114	6	4	35	111	21	434	1,804	13	4	2	22
4:45 PM	0	11	27	12	0	11	34	43	2	16	115	9	2	33	88	25	428	1,779	7	0	1	7
5:00 PM	0	15	13	13	0	21	37	31	4	15	130	11	8	31	129	19	477	1,737	6	1	1	6
5:15 PM	0	21	26	13	0	8	54	41	0	9	101	13	8	39	106	26	465		4	0	1	8
5:30 PM	0	20	21	5	0	10	46	45	2	15	117	9	0	26	81	12	409		4	1	0	10
5:45 PM	0	11	12	12	0	9	31	32	0	12	119	6	3	25	91	23	386		3	0	1	4

Peak Rolling Hour Flow Rates

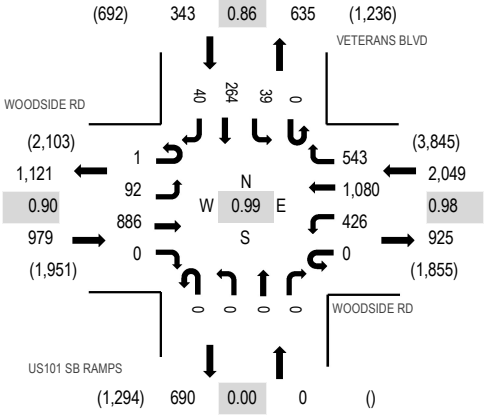
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	67	80	46	0	57	153	139	9	55	453	38	22	134	430	90	1,773
Mediums	0	0	4	0	0	0	5	3	0	1	7	1	0	4	4	1	30
Total	0	68	84	46	0	57	158	142	9	56	460	39	22	138	434	91	1,804

All Traffic Data Services Inc.

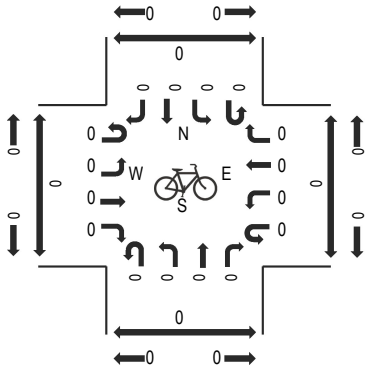
(303) 216-2439
www.alltrafficdata.net

Location: 8 US101 SB RAMPS & WOODSIDE RD PM
Date: Tuesday, September 10, 2019
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

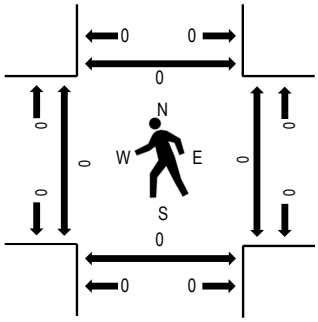
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WOODSIDE RD Eastbound				WOODSIDE RD Westbound				US101 SB RAMPS Northbound				VETERANS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	15	274	2	0	95	240	108	0	0	0	0	0	11	56	10	811	3,246	0	0	0	0
4:15 PM	0	33	220	0	0	89	199	99	0	0	0	0	0	16	74	15	745	3,282	0	0	0	0
4:30 PM	1	26	231	0	0	110	248	143	0	0	0	0	0	10	58	19	846	3,371	0	0	0	0
4:45 PM	0	26	219	0	0	110	269	127	0	0	0	0	0	16	69	8	844	3,304	0	0	0	0
5:00 PM	0	17	235	0	0	94	294	131	0	0	0	0	0	8	63	5	847	3,242	0	0	0	0
5:15 PM	0	23	201	0	0	112	269	142	0	0	0	0	0	5	74	8	834		0	0	0	0
5:30 PM	0	18	182	0	0	92	253	150	0	0	0	0	0	8	63	13	779		0	0	0	0
5:45 PM	0	19	209	0	0	71	241	159	0	0	0	0	0	10	62	11	782		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	0	0	3	2	1	0	0	0	0	0	0	0	0	11
Lights	1	91	862	0	0	416	1,066	536	0	0	0	0	0	38	264	40	3,314
Mediums	0	1	19	0	0	7	12	6	0	0	0	0	0	1	0	0	46
Total	1	92	886	0	0	426	1,080	543	0	0	0	0	0	39	264	40	3,371

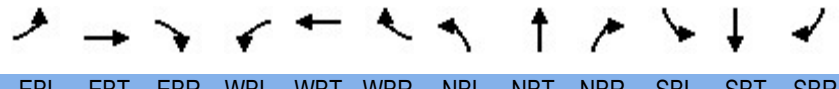
Appendix C

Level of Service Calculations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	410	18	334	309	229	56	796	502	291	973	68
Future Volume (veh/h)	75	410	18	334	309	229	56	796	502	291	973	68
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	410	16	334	309	36	56	796	317	291	973	65
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	94	541	22	653	672	285	73	1064	467	396	1287	86
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.04	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	536	3089	126	3510	3610	1532	1810	3610	1586	3510	3427	229
Grp Volume(v), veh/h	262	0	239	334	309	36	56	796	317	291	512	526
Grp Sat Flow(s),veh/h/ln	1873	0	1878	1755	1805	1532	1810	1805	1586	1755	1805	1851
Q Serve(g_s), s	8.2	0.0	7.3	5.2	4.6	1.2	1.9	12.2	10.7	4.9	15.1	15.1
Cycle Q Clear(g_c), s	8.2	0.0	7.3	5.2	4.6	1.2	1.9	12.2	10.7	4.9	15.1	15.1
Prop In Lane	0.29		0.07	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	328	0	329	653	672	285	73	1064	467	396	678	695
V/C Ratio(X)	0.80	0.00	0.73	0.51	0.46	0.13	0.77	0.75	0.68	0.73	0.76	0.76
Avail Cap(c_a), veh/h	860	0	862	2038	2096	889	297	3138	1379	1123	1865	1912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	23.8	22.3	22.1	20.7	29.0	19.5	19.0	26.2	16.6	16.6
Incr Delay (d2), s/veh	1.7	0.0	1.2	0.2	0.2	0.1	6.2	0.4	0.6	1.0	0.7	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	4.4	0.0	3.9	2.5	2.3	0.5	1.1	6.1	4.8	2.4	7.5	7.7
LnGrp Delay(d),s/veh	25.8	0.0	24.9	22.5	22.3	20.8	35.2	19.9	19.6	27.2	17.3	17.2
LnGrp LOS	C		C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		501			679			1169			1329	
Approach Delay, s/veh		25.4			22.3			20.5			19.4	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	26.9		13.7	10.4	22.0		14.9
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	10.0	63.0		28.0	19.5	53.0		35.4
Max Q Clear Time (g_c+I1), s	3.9	17.1		10.2	6.9	14.2		7.2
Green Ext Time (p_c), s	0.0	1.2		0.5	0.0	1.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

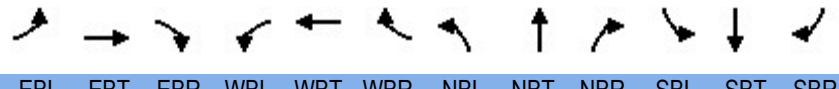


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	1038	8	82	699	424	16	139	91	220	208	103
Future Volume (veh/h)	79	1038	8	82	699	424	16	139	91	220	208	103
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	1038	7	82	699	200	16	139	13	239	181	16
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	129	2062	14	130	2027	889	150	300	127	447	235	196
Arrive On Green	0.07	0.56	0.56	0.07	0.56	0.56	0.08	0.08	0.08	0.12	0.12	0.12
Sat Flow, veh/h	1810	3675	25	1810	3610	1583	1810	3610	1529	3619	1900	1586
Grp Volume(v), veh/h	79	510	535	82	699	200	16	139	13	239	181	16
Grp Sat Flow(s),veh/h/ln	1810	1805	1895	1810	1805	1583	1810	1805	1529	1810	1900	1586
Q Serve(g_s), s	4.9	20.0	20.0	5.1	12.2	7.4	0.9	4.3	0.9	7.2	10.7	1.0
Cycle Q Clear(g_c), s	4.9	20.0	20.0	5.1	12.2	7.4	0.9	4.3	0.9	7.2	10.7	1.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	1013	1063	130	2027	889	150	300	127	447	235	196
V/C Ratio(X)	0.61	0.50	0.50	0.63	0.34	0.22	0.11	0.46	0.10	0.53	0.77	0.08
Avail Cap(c_a), veh/h	178	1013	1063	178	2027	889	395	787	333	789	414	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	52.3	15.6	15.6	52.3	13.8	12.8	49.2	50.7	49.2	47.7	49.2	45.0
Incr Delay (d2), s/veh	3.4	1.8	1.7	3.7	0.5	0.6	0.3	1.1	0.3	1.0	5.3	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	2.6	10.4	10.9	2.7	6.2	3.4	0.5	2.2	0.4	3.6	6.0	0.5
LnGrp Delay(d),s/veh	55.7	17.4	17.3	56.0	14.3	13.3	49.5	51.8	49.5	48.7	54.5	45.2
LnGrp LOS	E	B	B	E	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1124			981			168			436	
Approach Delay, s/veh		20.0			17.6			51.4			51.0	
Approach LOS		C			B			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	12.9	69.7		14.3	13.0	69.7		19.0
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	11.4	35.4		* 25	11.4	35.4		25.3
Max Q Clear Time (g_c+I1), s	6.9	14.2		6.3	7.1	22.0		12.7
Green Ext Time (p_c), s	0.0	4.6		0.8	0.0	4.8		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1190	116	224	864	15	112	13	665	109	1043	208
Future Volume (veh/h)	23	1190	116	224	864	15	112	13	665	109	1043	208
Number	3	8	18	7	4	14	5	2	12	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		0.95	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	1190	106	224	864	14	112	13	206	109	1043	121
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	1384	122	248	1697	27	295	630	1195	295	1720	522
Arrive On Green	0.30	0.30	0.30	0.14	0.47	0.47	0.08	0.33	0.33	0.08	0.33	0.33
Sat Flow, veh/h	47	4564	403	1810	3634	59	3510	1900	3600	3510	5187	1576
Grp Volume(v), veh/h	476	413	430	224	429	449	112	13	206	109	1043	121
Grp Sat Flow(s),veh/h/ln	1806	1573	1635	1810	1805	1888	1755	1900	1200	1755	1729	1576
Q Serve(g_s), s	13.3	28.8	28.8	14.1	19.3	19.3	3.5	0.5	4.7	3.4	19.5	6.4
Cycle Q Clear(g_c), s	28.6	28.8	28.8	14.1	19.3	19.3	3.5	0.5	4.7	3.4	19.5	6.4
Prop In Lane	0.05		0.25	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	580	477	496	248	843	882	295	630	1195	295	1720	522
V/C Ratio(X)	0.82	0.87	0.87	0.90	0.51	0.51	0.38	0.02	0.17	0.37	0.61	0.23
Avail Cap(c_a), veh/h	667	556	578	248	934	976	318	630	1195	318	1720	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	37.8	38.2	38.2	49.3	21.6	21.6	50.3	26.1	27.5	50.2	32.4	28.1
Incr Delay (d2), s/veh	6.2	10.9	10.6	32.0	0.2	0.2	0.3	0.1	0.3	0.3	1.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	14.0	14.5	9.3	9.6	10.0	1.7	0.3	1.6	1.7	9.5	3.0
LnGrp Delay(d),s/veh	44.0	49.1	48.8	81.3	21.8	21.8	50.6	26.1	27.8	50.5	34.0	29.1
LnGrp LOS	D	D	D	F	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1319			1102			331			1273	
Approach Delay, s/veh		47.2			33.9			35.4			35.0	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	43.6		59.2	13.3	43.6	19.0	40.2
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.5	31.9		60.0	9.5	* 32	14.9	41.0
Max Q Clear Time (g_c+I1), s	15.4	6.7		21.3	5.5	21.5	16.1	30.8
Green Ext Time (p_c), s	0.1	0.5		4.0	0.1	4.1	0.0	4.4

Intersection Summary		
HCM 2010 Ctrl Delay	38.7	
HCM 2010 LOS	D	

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	146	0	0	290	1019	91
Future Volume (veh/h)	146	0	0	290	1019	91
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	146	0	0	290	1104	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	969	0	0	1841	1230	549
Arrive On Green	0.51	0.00	0.00	0.51	0.34	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	146	0	0	290	1104	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	1.8	0.0	0.0	1.9	12.7	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	1.9	12.7	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	969	0	0	1841	1230	549
V/C Ratio(X)	0.15	0.00	0.00	0.16	0.90	0.00
Avail Cap(c_a), veh/h	969	0	0	1841	2554	1140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.7	0.0	0.0	5.7	13.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	1.0	6.5	0.0
LnGrp Delay(d),s/veh	6.0	0.0	0.0	5.9	14.8	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	146			290	1104	
Approach Delay, s/veh	6.0			5.9	14.8	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		17.9
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		3.8				3.9		14.7
Green Ext Time (p_c), s		0.1				0.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.8
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	367	0	180
Demand Flow Rate, veh/h	367	0	180
Vehicles Circulating, veh/h	0	180	0
Vehicles Exiting, veh/h	180	0	367
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.3	0.0	4.6
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	367	180
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	367	180
Cap Entry, veh/h	1130	1130
V/C Ratio	0.325	0.159
Control Delay, s/veh	6.3	4.6
LOS	A	A
95th %tile Queue, veh	1	1

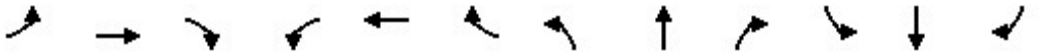
Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	26	347	16	18	129	17
Future Vol, veh/h	26	347	16	18	129	17
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	347	16	18	129	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	377	0	258	208
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1193	-	735	837
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1188	-	720	831
Mov Cap-2 Maneuver	-	-	-	-	720	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	957	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.8	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	731	-	-	1188	-
HCM Lane V/C Ratio	0.2	-	-	0.013	-
HCM Control Delay (s)	11.2	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1161	348	7	217	39	291	84	138	204	136	106
Future Volume (veh/h)	73	1161	348	7	217	39	291	84	138	204	136	106
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	73	1161	224	7	217	27	188	229	22	204	136	16
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	148	1694	722	131	1484	182	222	270	214	238	287	244
Arrive On Green	0.08	0.47	0.47	0.07	0.46	0.46	0.12	0.14	0.14	0.13	0.15	0.15
Sat Flow, veh/h	1810	3610	1538	1810	3225	396	1810	1900	1502	1810	1900	1615
Grp Volume(v), veh/h	73	1161	224	7	120	124	188	229	22	204	136	16
Grp Sat Flow(s),veh/h/ln	1810	1805	1538	1810	1805	1815	1810	1900	1502	1810	1900	1615
Q Serve(g_s), s	4.3	27.7	5.8	0.4	4.2	4.4	11.2	12.9	1.1	12.2	7.2	0.9
Cycle Q Clear(g_c), s	4.3	27.7	5.8	0.4	4.2	4.4	11.2	12.9	1.1	12.2	7.2	0.9
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1694	722	131	831	835	222	270	214	238	287	244
V/C Ratio(X)	0.49	0.69	0.31	0.05	0.14	0.15	0.85	0.85	0.10	0.86	0.47	0.07
Avail Cap(c_a), veh/h	169	1694	722	131	831	835	363	310	245	361	309	262
HCM Platoon Ratio	1.00	1.00	1.00	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	48.4	22.9	6.1	47.6	17.2	17.2	47.3	46.1	26.1	46.8	42.8	40.1
Incr Delay (d2), s/veh	2.5	2.3	1.1	0.2	0.4	0.4	9.5	17.4	0.2	12.1	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	14.2	3.8	0.2	2.2	2.3	6.2	8.1	0.6	6.9	3.9	0.4
LnGrp Delay(d),s/veh	50.9	25.1	7.2	47.7	17.6	17.6	56.8	63.4	26.3	58.9	44.0	40.2
LnGrp LOS	D	C	A	D	B	B	E	E	C	E	D	D
Approach Vol, veh/h		1458			251			439			356	
Approach Delay, s/veh		23.7			18.4			58.8			52.4	
Approach LOS		C			B			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	13.1	56.8	19.5	20.8	14.1	55.8	18.6	21.6
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	8.0	51.7	22.0	18.0	10.3	49.4	22.1	17.9
Max Q Clear Time (g_c+I1), s	2.4	29.7	14.2	14.9	6.3	6.4	13.2	9.2
Green Ext Time (p_c), s	0.0	10.1	0.3	0.4	0.0	1.5	0.3	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

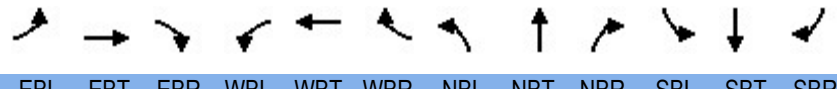


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	201	76	87	389	863	226
Future Volume (veh/h)	201	76	87	389	863	226
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	234	0	87	389	863	135
Adj No. of Lanes	2	1	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	316	141	117	4332	3817	1180
Arrive On Green	0.09	0.00	0.06	0.84	0.74	0.74
Sat Flow, veh/h	3619	1615	1810	5358	5358	1603
Grp Volume(v), veh/h	234	0	87	389	863	135
Grp Sat Flow(s),veh/h/ln	1810	1615	1810	1729	1729	1603
Q Serve(g_s), s	7.3	0.0	5.5	1.5	6.1	2.8
Cycle Q Clear(g_c), s	7.3	0.0	5.5	1.5	6.1	2.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	316	141	117	4332	3817	1180
V/C Ratio(X)	0.74	0.00	0.74	0.09	0.23	0.11
Avail Cap(c_a), veh/h	1179	526	203	4332	3817	1180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	0.0	53.3	1.7	4.9	4.4
Incr Delay (d2), s/veh	3.4	0.0	6.7	0.0	0.1	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	3.8	0.0	2.9	0.7	2.9	1.3
LnGrp Delay(d),s/veh	55.1	0.0	60.0	1.7	5.0	4.6
LnGrp LOS	E		E	A	A	A
Approach Vol, veh/h	234			476	998	
Approach Delay, s/veh	55.1			12.4	4.9	
Approach LOS	E			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.5	90.2		14.3		101.7		
Change Period (Y+Rc), s	4.0	* 4.8		* 4.2		* 4.8		
Max Green Setting (Gmax), s	13.0	* 52		* 38		* 69		
Max Q Clear Time (g_c+I1), s	7.5	8.1		9.3		3.5		
Green Ext Time (p_c), s	0.1	8.0		0.8		3.0		

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	162	43	29	65	84	71	397	40	231	447	77
Future Volume (veh/h)	60	162	43	29	65	84	71	397	40	231	447	77
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.98	0.99		0.94	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	60	162	11	29	65	38	71	397	18	231	447	67
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	241	366	303	205	211	123	98	1917	819	262	1949	290
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.05	0.53	0.53	0.14	0.62	0.62
Sat Flow, veh/h	1263	1900	1577	1223	1096	641	1810	3610	1541	1810	3136	467
Grp Volume(v), veh/h	60	162	11	29	0	103	71	397	18	231	256	258
Grp Sat Flow(s),veh/h/ln	1263	1900	1577	1223	0	1736	1810	1805	1541	1810	1805	1798
Q Serve(g_s), s	5.0	8.7	0.7	2.5	0.0	5.9	4.5	6.7	0.6	14.5	7.3	7.4
Cycle Q Clear(g_c), s	10.9	8.7	0.7	11.2	0.0	5.9	4.5	6.7	0.6	14.5	7.3	7.4
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	241	366	303	205	0	334	98	1917	819	262	1122	1118
V/C Ratio(X)	0.25	0.44	0.04	0.14	0.00	0.31	0.72	0.21	0.02	0.88	0.23	0.23
Avail Cap(c_a), veh/h	454	686	569	416	0	633	139	1917	819	435	1122	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	41.3	38.1	46.3	0.0	40.2	54.0	14.3	12.9	48.7	9.7	9.7
Incr Delay (d2), s/veh	0.4	0.6	0.0	0.2	0.0	0.4	4.7	0.2	0.0	6.4	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	1.8	4.7	0.3	0.9	0.0	2.9	2.4	3.4	0.3	7.7	3.8	3.8
LnGrp Delay(d),s/veh	45.3	42.0	38.1	46.5	0.0	40.6	58.7	14.6	13.0	55.0	10.2	10.2
LnGrp LOS	D	D	D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		233			132			486			745	
Approach Delay, s/veh		42.6			41.9			21.0			24.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.9	66.7		27.4	11.4	77.2		27.4
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	27.3	30.9		* 42	8.9	49.9		41.9
Max Q Clear Time (g_c+I1), s	16.5	8.7		13.2	6.5	9.4		12.9
Green Ext Time (p_c), s	0.3	1.8		0.5	0.0	2.1		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1289	0	90	1006	584	0	0	0	80	171	38
Future Volume (veh/h)	36	1289	0	90	1006	584	0	0	0	80	171	38
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	36	1289	0	90	1006	369				80	171	8
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	42	1469	0	100	1190	521				209	225	188
Arrive On Green	0.03	0.56	0.00	0.11	0.64	0.64				0.20	0.20	0.20
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	36	1289	0	90	1006	369				80	171	8
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	2.7	41.2	0.0	9.4	41.0	29.0				7.4	16.7	0.8
Cycle Q Clear(g_c), s	2.7	41.2	0.0	9.4	41.0	29.0				7.4	16.7	0.8
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	42	1469	0	100	1190	521				209	225	188
V/C Ratio(X)	0.86	0.88	0.00	0.90	0.85	0.71				0.38	0.76	0.04
Avail Cap(c_a), veh/h	113	2313	0	213	1916	839				345	363	308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	22.6	0.0	50.8	17.3	14.6				40.9	44.2	39.5
Incr Delay (d2), s/veh	36.5	2.6	0.0	22.8	2.1	1.8				1.1	5.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				59.7	58.8	85.2
%ile BackOfQ(50%),veh/ln	1.6	18.3	0.0	3.5	13.0	8.1				8.2	10.9	10.2
LnGrp Delay(d),s/veh	92.0	25.2	0.0	73.6	19.4	16.4				101.7	108.1	124.8
LnGrp LOS	F	C		E	B	B				F	F	F
Approach Vol, veh/h		1325			1465						259	
Approach Delay, s/veh		27.0			22.0						106.7	
Approach LOS		C			C						F	

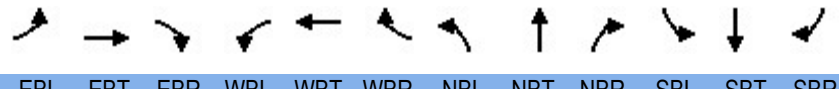
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	15.1	61.3		24.2	7.7	68.7		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	22.5	87.5		36.5	8.5	101.5		
Max Q Clear Time (g_c+I1), s	11.4	43.2		18.7	4.7	43.0		
Green Ext Time (p_c), s	0.1	13.6		1.1	0.0	12.0		

Intersection Summary		
HCM 2010 Ctrl Delay	31.4	
HCM 2010 LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	252	48	287	440	400	66	1152	278	178	808	105
Future Volume (veh/h)	126	252	48	287	440	400	66	1152	278	178	808	105
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	252	40	287	440	68	66	1152	219	178	808	99
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	339	56	661	680	291	84	1339	591	270	1318	161
Arrive On Green	0.15	0.15	0.15	0.19	0.19	0.19	0.05	0.37	0.37	0.08	0.41	0.41
Sat Flow, veh/h	1061	2251	369	3510	3610	1548	1810	3610	1592	3510	3226	395
Grp Volume(v), veh/h	219	0	199	287	440	68	66	1152	219	178	452	455
Grp Sat Flow(s),veh/h/ln	1847	0	1835	1755	1805	1548	1810	1805	1592	1755	1805	1816
Q Serve(g_s), s	7.6	0.0	6.8	4.8	7.4	2.5	2.4	19.5	6.6	3.3	13.1	13.1
Cycle Q Clear(g_c), s	7.6	0.0	6.8	4.8	7.4	2.5	2.4	19.5	6.6	3.3	13.1	13.1
Prop In Lane	0.57		0.20	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	278	0	276	661	680	291	84	1339	591	270	738	742
V/C Ratio(X)	0.79	0.00	0.72	0.43	0.65	0.23	0.78	0.86	0.37	0.66	0.61	0.61
Avail Cap(c_a), veh/h	642	0	638	2092	2151	922	328	3385	1493	610	1692	1702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	26.7	23.7	24.8	22.8	31.2	19.2	15.2	29.7	15.4	15.4
Incr Delay (d2), s/veh	1.9	0.0	1.3	0.2	0.4	0.2	5.8	0.7	0.1	1.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	3.5	2.3	3.8	1.1	1.3	9.7	2.9	1.6	6.5	6.5
LnGrp Delay(d),s/veh	29.0	0.0	28.1	23.9	25.2	22.9	36.9	19.9	15.3	30.7	15.7	15.7
LnGrp LOS	C		C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		418			795			1437			1085	
Approach Delay, s/veh		28.5			24.5			20.0			18.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	31.0		13.0	8.6	28.5		16.1
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	12.0	62.0		23.0	11.5	62.0		39.4
Max Q Clear Time (g_c+I1), s	4.4	15.1		9.6	5.3	21.5		9.4
Green Ext Time (p_c), s	0.0	1.0		0.4	0.0	1.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

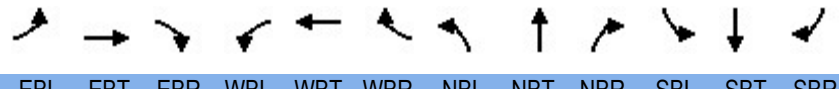


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	420	19	52	875	635	53	348	78	211	235	140
Future Volume (veh/h)	127	420	19	52	875	635	53	348	78	211	235	140
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	127	420	17	52	875	303	53	348	12	149	322	25
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	136	1924	78	109	1911	840	226	451	199	220	462	189
Arrive On Green	0.08	0.54	0.54	0.06	0.53	0.53	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1810	3534	143	1810	3610	1586	1810	3610	1593	1810	3800	1551
Grp Volume(v), veh/h	127	214	223	52	875	303	53	348	12	149	322	25
Grp Sat Flow(s),veh/h/ln	1810	1805	1872	1810	1805	1586	1810	1805	1593	1810	1900	1551
Q Serve(g_s), s	8.7	7.7	7.7	3.5	18.8	13.9	3.3	11.7	0.8	9.9	10.2	1.8
Cycle Q Clear(g_c), s	8.7	7.7	7.7	3.5	18.8	13.9	3.3	11.7	0.8	9.9	10.2	1.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	136	983	1019	109	1911	840	226	451	199	220	462	189
V/C Ratio(X)	0.93	0.22	0.22	0.48	0.46	0.36	0.23	0.77	0.06	0.68	0.70	0.13
Avail Cap(c_a), veh/h	136	983	1019	295	1911	840	381	760	335	468	982	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	14.7	14.7	56.8	18.3	17.1	49.3	53.0	48.2	52.5	52.7	49.0
Incr Delay (d2), s/veh	56.8	0.5	0.5	2.4	0.8	1.2	0.5	2.8	0.1	3.6	1.9	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	6.5	3.9	4.1	1.8	9.6	6.3	1.7	6.0	0.4	5.1	5.4	0.8
LnGrp Delay(d),s/veh	114.3	15.2	15.2	59.2	19.1	18.3	49.8	55.8	48.4	56.1	54.6	49.3
LnGrp LOS	F	B	B	E	B	B	D	E	D	E	D	D
Approach Vol, veh/h		564			1230			413			496	
Approach Delay, s/veh		37.5			20.6			54.8			54.8	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	70.8		20.3	12.1	72.7		19.9
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	9.4	38.4		* 26	20.4	27.4		32.3
Max Q Clear Time (g_c+I1), s	10.7	20.8		13.7	5.5	9.7		12.2
Green Ext Time (p_c), s	0.0	5.8		1.9	0.1	1.9		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	609	125	144	1008	18	287	10	886	95	906	301
Future Volume (veh/h)	12	609	125	144	1008	18	287	10	886	95	906	301
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	609	97	144	1008	17	287	10	437	95	906	222
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	808	126	184	1177	20	372	931	1765	272	2393	741
Arrive On Green	0.20	0.20	0.20	0.10	0.32	0.32	0.11	0.49	0.49	0.08	0.46	0.46
Sat Flow, veh/h	28	4090	637	1810	3631	61	3510	1900	3603	3510	5187	1606
Grp Volume(v), veh/h	240	235	243	144	501	524	287	10	437	95	906	222
Grp Sat Flow(s),veh/h/ln	1584	1573	1596	1810	1805	1887	1755	1900	1201	1755	1729	1606
Q Serve(g_s), s	1.8	17.6	18.0	9.7	32.5	32.5	10.0	0.3	8.8	3.2	14.3	10.8
Cycle Q Clear(g_c), s	18.4	17.6	18.0	9.7	32.5	32.5	10.0	0.3	8.8	3.2	14.3	10.8
Prop In Lane	0.05		0.40	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	311	316	184	585	612	372	931	1765	272	2393	741
V/C Ratio(X)	0.70	0.76	0.77	0.78	0.86	0.86	0.77	0.01	0.25	0.35	0.38	0.30
Avail Cap(c_a), veh/h	564	516	524	245	881	921	520	931	1765	295	2393	741
HCM Platoon Ratio	1.00	1.00	1.00	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	46.3	47.3	47.5	54.8	39.5	39.5	54.4	16.4	18.5	54.7	22.0	21.0
Incr Delay (d2), s/veh	1.0	1.4	1.5	8.0	3.6	3.5	2.8	0.0	0.3	0.3	0.5	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	8.0	7.8	8.1	5.3	16.7	17.5	5.0	0.2	3.0	1.6	6.9	5.0
LnGrp Delay(d),s/veh	47.3	48.7	49.0	62.8	43.1	43.0	57.2	16.4	18.8	55.0	22.4	22.1
LnGrp LOS	D	D	D	E	D	D	E	B	B	D	C	C
Approach Vol, veh/h		718			1169			734			1223	
Approach Delay, s/veh		48.3			45.5			33.8			24.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	66.3		45.5	16.7	62.8	15.8	29.7
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.5	39.9		61.0	17.5	* 32	15.9	41.0
Max Q Clear Time (g_c+I1), s	5.2	10.8		34.5	12.0	16.3	11.7	20.4
Green Ext Time (p_c), s	0.0	1.1		4.7	0.3	4.5	0.1	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.2
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	206	0	0	203	1088	103
Future Volume (veh/h)	206	0	0	203	1088	103
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	206	0	0	203	1184	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	939	0	0	1785	1303	581
Arrive On Green	0.49	0.00	0.00	0.49	0.36	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	206	0	0	203	1184	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	2.8	0.0	0.0	1.4	14.1	0.0
Cycle Q Clear(g_c), s	2.8	0.0	0.0	1.4	14.1	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	939	0	0	1785	1303	581
V/C Ratio(X)	0.22	0.00	0.00	0.11	0.91	0.00
Avail Cap(c_a), veh/h	939	0	0	1785	2476	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.5	0.0	0.0	6.1	13.8	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	0.7	7.1	0.0
LnGrp Delay(d),s/veh	7.0	0.0	0.0	6.3	14.9	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	206			203	1184	
Approach Delay, s/veh	7.0			6.3	14.9	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		19.3
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		4.8				3.4		16.1
Green Ext Time (p_c), s		0.2				0.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.6
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	209	0	344
Demand Flow Rate, veh/h	209	0	344
Vehicles Circulating, veh/h	0	344	0
Vehicles Exiting, veh/h	344	0	209
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	0.0	6.1
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	209	344
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	209	344
Cap Entry, veh/h	1130	1130
V/C Ratio	0.185	0.304
Control Delay, s/veh	4.8	6.1
LOS	A	A
95th %tile Queue, veh	1	1

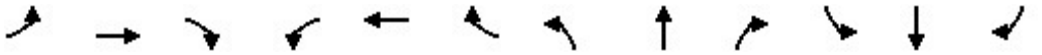
Intersection	
Int Delay, s/veh	7.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	200	19	26	313	11
Future Vol, veh/h	20	200	19	26	313	11
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	200	19	26	313	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	224	0	192	128
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1357	-	801	927
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	960	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1352	-	783	920
Mov Cap-2 Maneuver	-	-	-	-	783	-
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	787	-	-	1352	-
HCM Lane V/C Ratio	0.412	-	-	0.014	-
HCM Control Delay (s)	12.7	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	2	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	148	445	171	1020	117	242	69	15	37	188	74
Future Volume (veh/h)	36	148	445	171	1020	117	242	69	15	37	188	74
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	36	148	200	171	1020	111	156	190	3	37	188	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	1645	700	208	1576	171	193	250	197	175	231	197
Arrive On Green	0.09	0.46	0.46	0.11	0.48	0.48	0.11	0.13	0.13	0.10	0.12	0.12
Sat Flow, veh/h	1810	3610	1537	1810	3273	356	1810	1900	1495	1810	1900	1615
Grp Volume(v), veh/h	36	148	200	171	562	569	156	190	3	37	188	11
Grp Sat Flow(s),veh/h/ln	1810	1805	1537	1810	1805	1824	1810	1900	1495	1810	1900	1615
Q Serve(g_s), s	1.9	2.3	5.3	9.3	23.7	23.7	8.5	9.7	0.1	1.9	9.7	0.6
Cycle Q Clear(g_c), s	1.9	2.3	5.3	9.3	23.7	23.7	8.5	9.7	0.1	1.9	9.7	0.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	1645	700	208	869	878	193	250	197	175	231	197
V/C Ratio(X)	0.22	0.09	0.29	0.82	0.65	0.65	0.81	0.76	0.02	0.21	0.81	0.06
Avail Cap(c_a), veh/h	163	1645	700	353	869	878	341	546	429	175	358	304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	15.6	7.0	43.7	19.7	19.7	44.1	42.3	23.2	42.1	43.2	39.2
Incr Delay (d2), s/veh	0.7	0.1	1.0	7.9	3.7	3.7	7.8	4.7	0.0	0.6	7.9	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	1.0	1.2	3.1	5.1	12.6	12.7	4.7	5.4	0.1	1.0	5.6	0.3
LnGrp Delay(d),s/veh	43.4	15.7	8.0	51.5	23.4	23.4	51.9	47.0	23.3	42.7	51.1	39.3
LnGrp LOS	D	B	A	D	C	C	D	D	C	D	D	D
Approach Vol, veh/h		384			1302			349			236	
Approach Delay, s/veh		14.3			27.1			49.0			49.3	
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	16.7	51.1	14.7	18.4	14.1	53.7	15.9	17.3
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	19.7	38.0	9.0	29.0	9.1	48.6	19.0	19.0
Max Q Clear Time (g_c+I1), s	11.3	7.3	3.9	11.7	3.9	25.7	10.5	11.7
Green Ext Time (p_c), s	0.3	1.7	0.0	0.9	0.0	8.3	0.2	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Notes

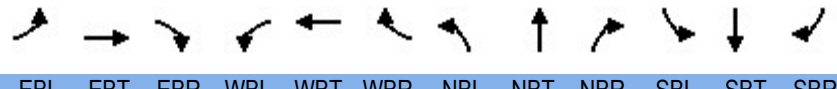


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	143	83	121	681	691	219
Future Volume (veh/h)	143	83	121	681	691	219
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	158	0	121	681	691	130
Adj No. of Lanes	2	1	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	288	129	147	4400	3812	1169
Arrive On Green	0.08	0.00	0.08	0.85	0.73	0.73
Sat Flow, veh/h	3619	1615	1810	5358	5358	1591
Grp Volume(v), veh/h	158	0	121	681	691	130
Grp Sat Flow(s),veh/h/ln	1810	1615	1810	1729	1729	1591
Q Serve(g_s), s	5.3	0.0	8.2	2.9	5.1	2.9
Cycle Q Clear(g_c), s	5.3	0.0	8.2	2.9	5.1	2.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	288	129	147	4400	3812	1169
V/C Ratio(X)	0.55	0.00	0.82	0.15	0.18	0.11
Avail Cap(c_a), veh/h	1094	488	246	4400	3812	1169
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	0.0	56.5	1.7	5.1	4.8
Incr Delay (d2), s/veh	1.6	0.0	8.2	0.1	0.1	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	2.7	0.0	4.5	1.4	2.5	1.4
LnGrp Delay(d),s/veh	57.0	0.0	64.7	1.7	5.2	5.0
LnGrp LOS	E		E	A	A	A
Approach Vol, veh/h	158			802	821	
Approach Delay, s/veh	57.0			11.2	5.1	
Approach LOS	E			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.2	96.7		14.2		110.8		
Change Period (Y+Rc), s	4.0	* 4.8		* 4.2		* 4.8		
Max Green Setting (Gmax), s	17.8	* 57		* 38		* 78		
Max Q Clear Time (g_c+I1), s	10.2	7.1		7.3		4.9		
Green Ext Time (p_c), s	0.1	6.2		0.5		5.6		

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	84	46	57	158	142	65	460	39	160	434	91
Future Volume (veh/h)	68	84	46	57	158	142	65	460	39	160	434	91
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.98	0.99		0.93	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	68	84	11	57	158	113	65	460	20	160	434	80
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	151	437	364	313	229	164	91	1963	837	188	1807	330
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.05	0.54	0.54	0.10	0.60	0.60
Sat Flow, veh/h	1096	1900	1584	1314	998	714	1810	3610	1539	1810	3024	552
Grp Volume(v), veh/h	68	84	11	57	0	271	65	460	20	160	257	257
Grp Sat Flow(s),veh/h/ln	1096	1900	1584	1314	0	1712	1810	1805	1539	1810	1805	1771
Q Serve(g_s), s	7.6	4.5	0.7	4.6	0.0	18.1	4.4	8.3	0.8	10.9	8.4	8.5
Cycle Q Clear(g_c), s	25.7	4.5	0.7	9.0	0.0	18.1	4.4	8.3	0.8	10.9	8.4	8.5
Prop In Lane	1.00		1.00	1.00		0.42	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	151	437	364	313	0	394	91	1963	837	188	1079	1058
V/C Ratio(X)	0.45	0.19	0.03	0.18	0.00	0.69	0.72	0.23	0.02	0.85	0.24	0.24
Avail Cap(c_a), veh/h	266	637	531	456	0	579	187	1963	837	389	1079	1058
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	38.8	37.3	42.4	0.0	44.0	58.5	14.9	13.2	55.1	11.8	11.8
Incr Delay (d2), s/veh	1.6	0.2	0.0	0.2	0.0	1.6	3.9	0.3	0.1	4.1	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	2.4	2.4	0.3	1.7	0.0	8.8	2.3	4.2	0.3	5.6	4.3	4.3
LnGrp Delay(d),s/veh	57.3	38.9	37.3	42.6	0.0	45.6	62.4	15.2	13.2	59.2	12.3	12.4
LnGrp LOS	E	D	D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		163			328			545			674	
Approach Delay, s/veh		46.5			45.1			20.7			23.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.1	73.1		33.8	11.4	79.8		33.8
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	26.9	40.9		* 42	12.9	54.9		41.9
Max Q Clear Time (g_c+I1), s	12.9	10.3		20.1	6.4	10.5		27.7
Green Ext Time (p_c), s	0.2	2.2		1.5	0.0	2.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	886	0	426	1080	543	0	0	0	39	264	40
Future Volume (veh/h)	93	886	0	426	1080	543	0	0	0	39	264	40
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	93	886	0	426	1080	340				39	264	13
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	115	988	0	499	1481	651				343	317	306
Arrive On Green	0.07	0.30	0.00	0.36	0.59	0.59				0.23	0.23	0.23
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	93	886	0	426	1080	340				39	264	13
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	5.9	26.7	0.0	38.9	36.9	21.8				2.5	23.0	0.9
Cycle Q Clear(g_c), s	5.9	26.7	0.0	38.9	36.9	21.8				2.5	23.0	0.9
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	115	988	0	499	1481	651				343	317	306
V/C Ratio(X)	0.81	0.90	0.00	0.85	0.73	0.52				0.11	0.83	0.04
Avail Cap(c_a), veh/h	242	1379	0	675	1959	858				472	430	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	52.0	0.0	47.1	23.7	24.7				43.9	59.1	43.1
Incr Delay (d2), s/veh	12.6	6.2	0.0	7.9	1.0	0.7				0.1	9.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	78.7	30.3	89.0				0.0	72.6	0.0
%ile BackOfQ(50%),veh/ln	4.2	18.3	0.0	33.6	28.4	36.5				1.3	20.9	0.9
LnGrp Delay(d),s/veh	81.1	58.2	0.0	133.7	55.0	114.4				44.0	141.7	43.2
LnGrp LOS	F	E		F	E	F				D	F	D
Approach Vol, veh/h		979			1846						316	
Approach Delay, s/veh		60.3			84.1						125.6	
Approach LOS		E			F						F	

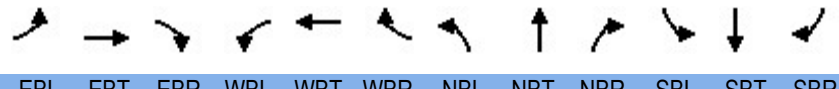
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	16.8	38.9		30.8	12.1	73.5		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	63.5	44.5		38.5	15.6	92.4		
Max Q Clear Time (g_c+I1), s	10.9	28.7		25.0	7.9	38.9		
Green Ext Time (p_c), s	1.3	5.7		1.4	0.1	12.9		

Intersection Summary	
HCM 2010 Ctrl Delay	80.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	418	18	364	325	241	56	796	523	297	973	68
Future Volume (veh/h)	75	418	18	364	325	241	56	796	523	297	973	68
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	418	16	364	325	40	56	796	329	297	973	65
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	93	547	22	673	692	294	72	1057	464	400	1285	86
Arrive On Green	0.18	0.18	0.18	0.19	0.19	0.19	0.04	0.29	0.29	0.11	0.37	0.37
Sat Flow, veh/h	528	3100	124	3510	3610	1534	1810	3610	1586	3510	3427	229
Grp Volume(v), veh/h	266	0	243	364	325	40	56	796	329	297	512	526
Grp Sat Flow(s),veh/h/ln	1874	0	1878	1755	1805	1534	1810	1805	1586	1755	1805	1851
Q Serve(g_s), s	8.5	0.0	7.7	5.9	5.0	1.4	1.9	12.5	11.6	5.1	15.5	15.5
Cycle Q Clear(g_c), s	8.5	0.0	7.7	5.9	5.0	1.4	1.9	12.5	11.6	5.1	15.5	15.5
Prop In Lane	0.28		0.07	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	331	0	331	673	692	294	72	1057	464	400	677	694
V/C Ratio(X)	0.81	0.00	0.73	0.54	0.47	0.14	0.78	0.75	0.71	0.74	0.76	0.76
Avail Cap(c_a), veh/h	868	0	870	1973	2029	862	289	2998	1317	1104	1793	1838
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	24.4	22.8	22.5	21.0	29.8	20.1	19.8	26.9	17.1	17.1
Incr Delay (d2), s/veh	1.8	0.0	1.2	0.3	0.2	0.1	6.6	0.4	0.7	1.0	0.7	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	4.5	0.0	4.1	2.9	2.5	0.6	1.1	6.3	5.1	2.5	7.8	8.0
LnGrp Delay(d),s/veh	26.5	0.0	25.6	23.1	22.7	21.1	36.4	20.5	20.5	27.9	17.7	17.7
LnGrp LOS	C		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		509			729			1181			1335	
Approach Delay, s/veh		26.1			22.8			21.3			20.0	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	27.5		14.0	10.6	22.3		15.6
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	10.0	62.2		29.0	19.7	52.0		35.2
Max Q Clear Time (g_c+I1), s	3.9	17.5		10.5	7.1	14.5		7.9
Green Ext Time (p_c), s	0.0	1.2		0.5	0.0	1.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

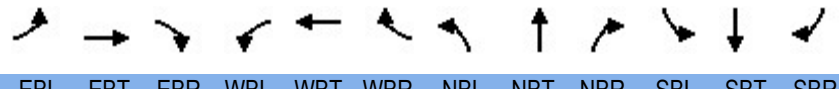


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	1074	8	88	756	425	16	139	95	221	208	103
Future Volume (veh/h)	79	1074	8	88	756	425	16	139	95	221	208	103
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	1074	7	88	756	200	16	139	13	240	182	16
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	129	2074	14	132	2042	896	150	300	127	432	227	189
Arrive On Green	0.07	0.56	0.56	0.07	0.57	0.57	0.08	0.08	0.08	0.12	0.12	0.12
Sat Flow, veh/h	1810	3676	24	1810	3610	1583	1810	3610	1529	3619	1900	1586
Grp Volume(v), veh/h	79	527	554	88	756	200	16	139	13	240	182	16
Grp Sat Flow(s),veh/h/ln	1810	1805	1895	1810	1805	1583	1810	1805	1529	1810	1900	1586
Q Serve(g_s), s	4.9	20.9	20.9	5.5	13.3	7.3	0.9	4.3	0.9	7.3	10.8	1.0
Cycle Q Clear(g_c), s	4.9	20.9	20.9	5.5	13.3	7.3	0.9	4.3	0.9	7.3	10.8	1.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	1018	1069	132	2042	896	150	300	127	432	227	189
V/C Ratio(X)	0.61	0.52	0.52	0.67	0.37	0.22	0.11	0.46	0.10	0.56	0.80	0.08
Avail Cap(c_a), veh/h	184	1018	1069	193	2042	896	285	570	241	571	300	250
HCM Platoon Ratio	1.00	1.00	1.00	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	52.3	15.6	15.6	52.4	13.8	12.5	49.2	50.7	49.2	48.2	49.7	45.4
Incr Delay (d2), s/veh	3.4	1.9	1.8	4.2	0.5	0.6	0.3	1.1	0.3	1.1	11.0	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	2.6	10.9	11.5	2.9	6.8	3.3	0.5	2.2	0.4	3.7	6.4	0.5
LnGrp Delay(d),s/veh	55.7	17.4	17.4	56.6	14.3	13.1	49.5	51.8	49.5	49.3	60.7	45.6
LnGrp LOS	E	B	B	E	B	B	D	D	D	D	E	D
Approach Vol, veh/h		1160			1044			168			438	
Approach Delay, s/veh		20.0			17.7			51.4			53.9	
Approach LOS		C			B			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	12.9	70.2		14.3	13.1	70.1		18.6
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	8.3	49.0		* 18	12.4	48.4		18.3
Max Q Clear Time (g_c+I1), s	6.9	15.3		6.3	7.5	22.9		12.8
Green Ext Time (p_c), s	0.0	5.5		0.6	0.1	6.5		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1231	116	260	928	15	112	13	686	127	1043	208
Future Volume (veh/h)	23	1231	116	260	928	15	112	13	686	127	1043	208
Number	3	8	18	7	4	14	5	2	12	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		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	1231	107	260	928	14	112	13	237	127	1043	131
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	1400	121	302	1818	27	295	567	1074	298	1552	470
Arrive On Green	0.31	0.31	0.31	0.17	0.50	0.50	0.08	0.30	0.30	0.08	0.30	0.30
Sat Flow, veh/h	46	4572	394	1810	3639	55	3510	1900	3599	3510	5187	1571
Grp Volume(v), veh/h	490	427	444	260	460	482	112	13	237	127	1043	131
Grp Sat Flow(s),veh/h/ln	1801	1573	1638	1810	1805	1889	1755	1900	1200	1755	1729	1571
Q Serve(g_s), s	14.3	30.0	30.0	16.2	19.9	19.9	3.5	0.6	5.7	4.0	20.5	7.4
Cycle Q Clear(g_c), s	29.7	30.0	30.0	16.2	19.9	19.9	3.5	0.6	5.7	4.0	20.5	7.4
Prop In Lane	0.05		0.24	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	584	482	501	302	902	943	295	567	1074	298	1552	470
V/C Ratio(X)	0.84	0.89	0.89	0.86	0.51	0.51	0.38	0.02	0.22	0.43	0.67	0.28
Avail Cap(c_a), veh/h	636	529	551	342	996	1042	303	567	1074	303	1552	470
HCM Platoon Ratio	1.00	1.00	1.00	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	37.9	38.3	38.3	47.0	19.5	19.5	50.3	28.8	30.6	50.4	35.7	31.1
Incr Delay (d2), s/veh	8.3	14.6	14.1	16.5	0.2	0.2	0.3	0.1	0.5	0.4	2.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.2	15.0	15.5	9.5	9.9	10.3	1.7	0.3	2.0	2.0	10.1	3.4
LnGrp Delay(d),s/veh	46.2	52.9	52.5	63.6	19.7	19.7	50.6	28.8	31.0	50.8	38.0	32.6
LnGrp LOS	D	D	D	E	B	B	D	C	C	D	D	C
Approach Vol, veh/h		1361			1202			362			1301	
Approach Delay, s/veh		50.4			29.2			37.0			38.7	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	39.7		62.9	13.3	39.8	22.4	40.5
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.0	28.4		64.0	9.0	* 29	20.9	39.0
Max Q Clear Time (g_c+I1), s	16.0	7.7		21.9	5.5	22.5	18.2	32.0
Green Ext Time (p_c), s	0.1	0.6		4.4	0.1	2.9	0.1	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	226	0	0	446	1019	114
Future Volume (veh/h)	226	0	0	446	1019	114
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	226	0	0	446	1125	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	961	0	0	1826	1249	557
Arrive On Green	0.51	0.00	0.00	0.51	0.35	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	226	0	0	446	1125	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	3.0	0.0	0.0	3.1	13.1	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	3.1	13.1	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	961	0	0	1826	1249	557
V/C Ratio(X)	0.24	0.00	0.00	0.24	0.90	0.00
Avail Cap(c_a), veh/h	961	0	0	1826	2534	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.1	0.0	0.0	6.2	13.8	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.3	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.6	6.6	0.0
LnGrp Delay(d),s/veh	6.7	0.0	0.0	6.5	14.8	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	226			446	1125	
Approach Delay, s/veh	6.7			6.5	14.8	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		18.3
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		5.0				5.1		15.1
Green Ext Time (p_c), s		0.2				0.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.8
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	370	0	183
Demand Flow Rate, veh/h	370	0	183
Vehicles Circulating, veh/h	0	183	0
Vehicles Exiting, veh/h	183	0	370
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.4	0.0	4.6
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	370	183
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	370	183
Cap Entry, veh/h	1130	1130
V/C Ratio	0.327	0.162
Control Delay, s/veh	6.4	4.6
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	26	353	16	18	132	17
Future Vol, veh/h	26	353	16	18	132	17
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	353	16	18	132	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	383	0	261	211
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1187	-	732	834
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1182	-	716	828
Mov Cap-2 Maneuver	-	-	-	-	716	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.8	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	727	-	-	1182	-
HCM Lane V/C Ratio	0.205	-	-	0.014	-
HCM Control Delay (s)	11.2	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.8	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1163	348	7	218	42	291	84	138	210	136	106
Future Volume (veh/h)	73	1163	348	7	218	42	291	84	138	210	136	106
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	73	1163	224	7	218	29	188	229	22	210	136	17
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	1673	713	132	1452	190	222	271	214	245	294	250
Arrive On Green	0.08	0.46	0.46	0.07	0.45	0.45	0.12	0.14	0.14	0.14	0.15	0.15
Sat Flow, veh/h	1810	3610	1538	1810	3196	419	1810	1900	1502	1810	1900	1615
Grp Volume(v), veh/h	73	1163	224	7	122	125	188	229	22	210	136	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1538	1810	1805	1810	1810	1900	1502	1810	1900	1615
Q Serve(g_s), s	4.2	27.9	5.8	0.4	4.3	4.4	11.1	12.9	1.1	12.4	7.1	1.0
Cycle Q Clear(g_c), s	4.2	27.9	5.8	0.4	4.3	4.4	11.1	12.9	1.1	12.4	7.1	1.0
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	1673	713	132	820	822	222	271	214	245	294	250
V/C Ratio(X)	0.49	0.70	0.31	0.05	0.15	0.15	0.84	0.85	0.10	0.86	0.46	0.07
Avail Cap(c_a), veh/h	170	1673	713	132	820	822	366	313	247	381	328	279
HCM Platoon Ratio	1.00	1.00	1.00	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	48.0	23.2	6.1	47.2	17.5	17.5	46.9	45.7	25.8	46.3	42.1	39.5
Incr Delay (d2), s/veh	2.5	2.4	1.2	0.2	0.4	0.4	9.3	17.0	0.2	11.3	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	14.5	3.8	0.2	2.2	2.3	6.2	8.0	0.6	6.9	3.8	0.4
LnGrp Delay(d),s/veh	50.5	25.6	7.3	47.3	17.8	17.9	56.2	62.7	26.0	57.5	43.2	39.6
LnGrp LOS	D	C	A	D	B	B	E	E	C	E	D	D
Approach Vol, veh/h		1460			254			439			363	
Approach Delay, s/veh		24.1			18.7			58.1			51.3	
Approach LOS		C			B			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	13.1	55.8	19.8	20.7	14.1	54.8	18.5	21.9
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	8.0	50.7	23.0	18.0	10.3	48.4	22.1	18.9
Max Q Clear Time (g_c+I1), s	2.4	29.9	14.4	14.9	6.2	6.4	13.1	9.1
Green Ext Time (p_c), s	0.0	9.8	0.4	0.4	0.0	1.5	0.3	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

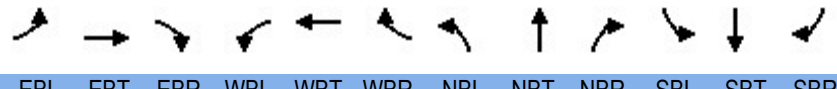


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	212	76	87	399	879	246
Future Volume (veh/h)	212	76	87	399	879	246
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	247	0	87	399	879	147
Adj No. of Lanes	2	1	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	329	147	117	4312	3798	1173
Arrive On Green	0.09	0.00	0.06	0.83	0.73	0.73
Sat Flow, veh/h	3619	1615	1810	5358	5358	1603
Grp Volume(v), veh/h	247	0	87	399	879	147
Grp Sat Flow(s),veh/h/ln	1810	1615	1810	1729	1729	1603
Q Serve(g_s), s	7.7	0.0	5.5	1.6	6.3	3.1
Cycle Q Clear(g_c), s	7.7	0.0	5.5	1.6	6.3	3.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	329	147	117	4312	3798	1173
V/C Ratio(X)	0.75	0.00	0.74	0.09	0.23	0.13
Avail Cap(c_a), veh/h	1117	498	312	4312	3798	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	0.0	53.3	1.8	5.0	4.6
Incr Delay (d2), s/veh	3.4	0.0	6.7	0.0	0.1	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	4.0	0.0	2.9	0.8	3.1	1.5
LnGrp Delay(d),s/veh	54.9	0.0	60.0	1.8	5.2	4.8
LnGrp LOS	D		E	A	A	A
Approach Vol, veh/h	247			486	1026	
Approach Delay, s/veh	54.9			12.2	5.1	
Approach LOS	D			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.5	89.7		14.8		101.2		
Change Period (Y+Rc), s	4.0	* 4.8		* 4.2		* 4.8		
Max Green Setting (Gmax), s	20.0	* 47		* 36		* 71		
Max Q Clear Time (g_c+I1), s	7.7	8.3		9.7		3.6		
Green Ext Time (p_c), s	0.1	8.1		0.8		3.1		

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	162	43	29	65	87	71	399	40	237	450	85
Future Volume (veh/h)	65	162	43	29	65	87	71	399	40	237	450	85
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.98	0.99		0.94	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	65	162	11	29	65	39	71	399	18	237	450	74
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	240	366	303	205	209	125	98	1904	813	268	1921	314
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.05	0.53	0.53	0.15	0.62	0.62
Sat Flow, veh/h	1262	1900	1577	1223	1084	650	1810	3610	1541	1810	3091	505
Grp Volume(v), veh/h	65	162	11	29	0	104	71	399	18	237	261	263
Grp Sat Flow(s),veh/h/ln	1262	1900	1577	1223	0	1734	1810	1805	1541	1810	1805	1790
Q Serve(g_s), s	5.4	8.7	0.7	2.5	0.0	6.0	4.5	6.8	0.6	14.9	7.4	7.5
Cycle Q Clear(g_c), s	11.4	8.7	0.7	11.2	0.0	6.0	4.5	6.8	0.6	14.9	7.4	7.5
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	240	366	303	205	0	334	98	1904	813	268	1122	1112
V/C Ratio(X)	0.27	0.44	0.04	0.14	0.00	0.31	0.72	0.21	0.02	0.88	0.23	0.24
Avail Cap(c_a), veh/h	420	637	529	384	0	587	217	1904	813	513	1122	1112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	41.3	38.1	46.3	0.0	40.2	54.0	14.6	13.1	48.4	9.7	9.7
Incr Delay (d2), s/veh	0.4	0.6	0.0	0.2	0.0	0.4	3.7	0.3	0.1	3.8	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	1.9	4.7	0.3	0.9	0.0	2.9	2.4	3.4	0.3	7.7	3.9	3.9
LnGrp Delay(d),s/veh	45.6	42.0	38.1	46.5	0.0	40.6	57.7	14.8	13.2	52.3	10.2	10.2
LnGrp LOS	D	D	D	D		D	E	B	B	D	B	B
Approach Vol, veh/h		238			133			488			761	
Approach Delay, s/veh		42.8			41.9			21.0			23.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.3	66.3		27.4	11.4	77.2		27.4
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	7.2	28.9		* 39	13.9	47.9		38.9
Max Q Clear Time (g_c+I1), s	6.9	8.8		13.2	6.5	9.5		13.4
Green Ext Time (p_c), s	0.3	1.7		0.5	0.0	2.2		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	1292	0	90	1006	585	0	0	0	82	171	39
Future Volume (veh/h)	38	1292	0	90	1006	585	0	0	0	82	171	39
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	38	1292	0	90	1006	370				82	171	9
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	44	1472	0	100	1189	521				209	225	188
Arrive On Green	0.03	0.57	0.00	0.11	0.64	0.64				0.20	0.20	0.20
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	38	1292	0	90	1006	370				82	171	9
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	2.9	41.6	0.0	9.5	41.2	29.4				7.7	16.8	0.9
Cycle Q Clear(g_c), s	2.9	41.6	0.0	9.5	41.2	29.4				7.7	16.8	0.9
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	44	1472	0	100	1189	521				209	225	188
V/C Ratio(X)	0.87	0.88	0.00	0.90	0.85	0.71				0.39	0.76	0.05
Avail Cap(c_a), veh/h	112	2325	0	202	1905	834				343	360	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	22.7	0.0	51.2	17.5	14.8				41.3	44.5	39.8
Incr Delay (d2), s/veh	37.3	2.5	0.0	22.9	2.1	1.8				1.2	5.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				60.7	59.0	85.9
%ile BackOfQ(50%),veh/ln	1.7	18.4	0.0	3.5	13.0	8.2				8.3	11.0	10.3
LnGrp Delay(d),s/veh	93.1	25.3	0.0	74.1	19.6	16.6				103.1	108.7	125.8
LnGrp LOS	F	C		E	B	B				F	F	F
Approach Vol, veh/h		1330			1466						262	
Approach Delay, s/veh		27.2			22.2						107.5	
Approach LOS		C			C						F	

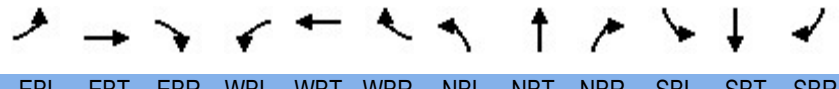
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	15.2	61.7		24.4	7.8	69.1		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	21.5	88.5		36.5	8.5	101.5		
Max Q Clear Time (g_c+I1), s	11.5	43.6		18.8	4.9	43.2		
Green Ext Time (p_c), s	0.1	13.7		1.1	0.0	12.0		

Intersection Summary	
HCM 2010 Ctrl Delay	31.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	277	48	329	460	415	66	1152	340	197	808	105
Future Volume (veh/h)	126	277	48	329	460	415	66	1152	340	197	808	105
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	277	41	329	460	74	66	1152	266	197	808	99
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	365	56	671	690	296	85	1325	584	287	1321	162
Arrive On Green	0.16	0.16	0.16	0.19	0.19	0.19	0.05	0.37	0.37	0.08	0.41	0.41
Sat Flow, veh/h	1000	2330	357	3510	3610	1548	1810	3610	1592	3510	3226	395
Grp Volume(v), veh/h	233	0	211	329	460	74	66	1152	266	197	452	455
Grp Sat Flow(s),veh/h/ln	1850	0	1837	1755	1805	1548	1810	1805	1592	1755	1805	1816
Q Serve(g_s), s	8.4	0.0	7.6	5.8	8.2	2.8	2.5	20.6	8.8	3.8	13.7	13.7
Cycle Q Clear(g_c), s	8.4	0.0	7.6	5.8	8.2	2.8	2.5	20.6	8.8	3.8	13.7	13.7
Prop In Lane	0.54		0.19	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	290	0	288	671	690	296	85	1325	584	287	739	743
V/C Ratio(X)	0.80	0.00	0.73	0.49	0.67	0.25	0.78	0.87	0.46	0.69	0.61	0.61
Avail Cap(c_a), veh/h	640	0	636	1944	1999	857	313	3175	1400	633	1614	1623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	27.9	25.0	26.0	23.8	32.7	20.4	16.7	31.0	16.1	16.1
Incr Delay (d2), s/veh	2.0	0.0	1.4	0.2	0.4	0.2	5.7	0.7	0.2	1.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	3.9	2.8	4.1	1.2	1.4	10.4	3.9	1.9	6.8	6.9
LnGrp Delay(d),s/veh	30.2	0.0	29.2	25.2	26.4	24.0	38.4	21.1	16.9	32.1	16.4	16.4
LnGrp LOS	C		C	C	C	C	D	C	B	C	B	B
Approach Vol, veh/h		444			863			1484			1104	
Approach Delay, s/veh		29.8			25.8			21.1			19.2	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	32.4		13.9	9.2	29.5		16.9
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	12.0	62.0		24.0	12.5	61.0		38.4
Max Q Clear Time (g_c+I1), s	4.5	15.7		10.4	5.8	22.6		10.2
Green Ext Time (p_c), s	0.0	1.0		0.4	0.0	1.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

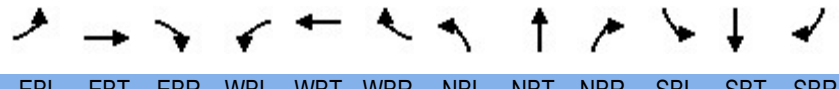


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	525	19	61	952	638	53	348	89	215	235	140
Future Volume (veh/h)	127	525	19	61	952	638	53	348	89	215	235	140
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	127	525	17	61	952	306	53	348	13	150	326	25
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	154	1970	64	115	1916	842	214	428	189	212	445	182
Arrive On Green	0.08	0.55	0.55	0.06	0.53	0.53	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1810	3567	115	1810	3610	1586	1810	3610	1593	1810	3800	1549
Grp Volume(v), veh/h	127	265	277	61	952	306	53	348	13	150	326	25
Grp Sat Flow(s),veh/h/ln	1810	1805	1877	1810	1805	1586	1810	1805	1593	1810	1900	1549
Q Serve(g_s), s	8.6	9.6	9.7	4.1	21.0	14.0	3.3	11.8	0.9	10.0	10.4	1.8
Cycle Q Clear(g_c), s	8.6	9.6	9.7	4.1	21.0	14.0	3.3	11.8	0.9	10.0	10.4	1.8
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	997	1037	115	1916	842	214	428	189	212	445	182
V/C Ratio(X)	0.83	0.27	0.27	0.53	0.50	0.36	0.25	0.81	0.07	0.71	0.73	0.14
Avail Cap(c_a), veh/h	237	997	1037	142	1916	842	271	540	238	294	617	252
HCM Platoon Ratio	1.00	1.00	1.00	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	56.3	14.7	14.7	56.7	18.7	17.1	50.0	53.8	49.0	53.1	53.3	49.5
Incr Delay (d2), s/veh	10.8	0.7	0.6	2.8	0.9	1.2	0.6	7.5	0.2	4.6	2.8	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	4.8	5.0	5.2	2.1	10.7	6.4	1.7	6.3	0.4	5.3	5.6	0.8
LnGrp Delay(d),s/veh	67.1	15.3	15.3	59.6	19.6	18.3	50.6	61.2	49.1	57.7	56.1	49.8
LnGrp LOS	E	B	B	E	B	B	D	E	D	E	E	D
Approach Vol, veh/h		669			1319			414			501	
Approach Delay, s/veh		25.2			21.2			59.5			56.3	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.2	70.9		19.5	12.5	73.6		19.3
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	10.6	51.0		* 19	9.8	57.6		20.3
Max Q Clear Time (g_c+I1), s	10.6	23.0		13.8	6.1	11.7		12.4
Green Ext Time (p_c), s	0.1	7.4		1.1	0.0	2.9		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	729	125	192	1097	18	287	10	948	147	906	301
Future Volume (veh/h)	12	729	125	192	1097	18	287	10	948	147	906	301
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	729	104	192	1097	17	287	10	536	147	906	219
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	907	127	233	1323	20	370	851	1614	279	2190	677
Arrive On Green	0.21	0.21	0.21	0.13	0.36	0.36	0.11	0.45	0.45	0.08	0.42	0.42
Sat Flow, veh/h	29	4310	605	1810	3637	56	3510	1900	3602	3510	5187	1605
Grp Volume(v), veh/h	303	267	275	192	544	570	287	10	536	147	906	219
Grp Sat Flow(s),veh/h/ln	1767	1573	1603	1810	1805	1888	1755	1900	1201	1755	1729	1605
Q Serve(g_s), s	5.0	20.2	20.5	12.9	34.3	34.4	10.0	0.4	12.1	5.0	15.3	11.4
Cycle Q Clear(g_c), s	20.2	20.2	20.5	12.9	34.3	34.4	10.0	0.4	12.1	5.0	15.3	11.4
Prop In Lane	0.04		0.38	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	402	331	337	233	657	687	370	851	1614	279	2190	677
V/C Ratio(X)	0.75	0.81	0.82	0.83	0.83	0.83	0.78	0.01	0.33	0.53	0.41	0.32
Avail Cap(c_a), veh/h	507	428	436	332	866	906	463	851	1614	295	2190	677
HCM Platoon Ratio	1.00	1.00	1.00	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	46.9	47.0	53.1	36.2	36.2	54.5	19.2	22.4	55.3	25.3	24.2
Incr Delay (d2), s/veh	3.4	6.5	7.0	7.6	4.0	3.8	4.8	0.0	0.6	0.6	0.6	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	10.3	9.3	9.7	6.9	17.8	18.6	5.1	0.2	4.1	2.5	7.4	5.3
LnGrp Delay(d),s/veh	50.0	53.4	54.1	60.7	40.2	40.1	59.3	19.2	22.9	55.8	25.9	25.4
LnGrp LOS	D	D	D	E	D	D	E	B	C	E	C	C
Approach Vol, veh/h		845			1306			833			1272	
Approach Delay, s/veh		52.4			43.2			35.4			29.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	61.1		50.5	16.7	57.9	19.2	31.3
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.5	40.9		60.0	15.5	* 35	21.9	34.0
Max Q Clear Time (g_c+I1), s	7.0	14.1		36.4	12.0	17.3	14.9	22.5
Green Ext Time (p_c), s	0.1	1.4		5.2	0.2	4.6	0.1	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	440	0	0	402	1088	170
Future Volume (veh/h)	440	0	0	402	1088	170
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	440	0	0	402	1247	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	928	0	0	1764	1356	605
Arrive On Green	0.49	0.00	0.00	0.49	0.37	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	440	0	0	402	1247	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	7.4	0.0	0.0	3.1	15.9	0.0
Cycle Q Clear(g_c), s	7.4	0.0	0.0	3.1	15.9	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	928	0	0	1764	1356	605
V/C Ratio(X)	0.47	0.00	0.00	0.23	0.92	0.00
Avail Cap(c_a), veh/h	928	0	0	1764	2233	996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.2	0.0	0.0	7.1	14.4	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.3	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	1.6	8.3	0.0
LnGrp Delay(d),s/veh	10.0	0.0	0.0	7.4	17.1	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	440			402	1247	
Approach Delay, s/veh	10.0			7.4	17.1	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		27.2				27.2		21.1
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		23.6				23.6		29.8
Max Q Clear Time (g_c+I1), s		9.4				5.1		17.9
Green Ext Time (p_c), s		0.4				0.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	216	0	351
Demand Flow Rate, veh/h	216	0	351
Vehicles Circulating, veh/h	0	351	0
Vehicles Exiting, veh/h	351	0	216
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	0.0	6.2
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	216	351
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	216	351
Cap Entry, veh/h	1130	1130
V/C Ratio	0.191	0.311
Control Delay, s/veh	4.9	6.2
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	7.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	205	19	26	320	11
Future Vol, veh/h	20	205	19	26	320	11
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	205	19	26	320	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	229	0	195	131
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1351	-	798	924
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	960	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1346	-	780	917
Mov Cap-2 Maneuver	-	-	-	-	780	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	784	-	-	1346	-
HCM Lane V/C Ratio	0.422	-	-	0.014	-
HCM Control Delay (s)	12.9	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	2.1	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	150	445	171	1022	124	242	69	15	42	188	74
Future Volume (veh/h)	36	150	445	171	1022	124	242	69	15	42	188	74
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	36	150	200	171	1022	117	156	190	3	42	188	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	1645	700	208	1566	179	193	250	197	175	231	197
Arrive On Green	0.09	0.46	0.46	0.11	0.48	0.48	0.11	0.13	0.13	0.10	0.12	0.12
Sat Flow, veh/h	1810	3610	1537	1810	3253	372	1810	1900	1495	1810	1900	1615
Grp Volume(v), veh/h	36	150	200	171	567	572	156	190	3	42	188	11
Grp Sat Flow(s),veh/h/ln	1810	1805	1537	1810	1805	1820	1810	1900	1495	1810	1900	1615
Q Serve(g_s), s	1.9	2.4	5.3	9.3	24.0	24.0	8.5	9.7	0.1	2.2	9.7	0.6
Cycle Q Clear(g_c), s	1.9	2.4	5.3	9.3	24.0	24.0	8.5	9.7	0.1	2.2	9.7	0.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	1645	700	208	869	877	193	250	197	175	231	197
V/C Ratio(X)	0.22	0.09	0.29	0.82	0.65	0.65	0.81	0.76	0.02	0.24	0.81	0.06
Avail Cap(c_a), veh/h	163	1645	700	353	869	877	341	546	429	175	358	304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	15.6	7.0	43.7	19.8	19.8	44.1	42.3	23.2	42.2	43.2	39.2
Incr Delay (d2), s/veh	0.7	0.1	1.0	7.9	3.8	3.8	7.8	4.7	0.0	0.7	7.9	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	1.0	1.2	3.1	5.1	12.7	12.8	4.7	5.4	0.1	1.1	5.6	0.3
LnGrp Delay(d),s/veh	43.4	15.7	8.0	51.5	23.6	23.6	51.9	47.0	23.3	42.9	51.1	39.3
LnGrp LOS	D	B	A	D	C	C	D	D	C	D	D	D
Approach Vol, veh/h		386			1310			349			241	
Approach Delay, s/veh		14.3			27.2			49.0			49.2	
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	16.7	51.1	14.7	18.4	14.1	53.7	15.9	17.3
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	19.7	38.0	9.0	29.0	9.1	48.6	19.0	19.0
Max Q Clear Time (g_c+I1), s	11.3	7.3	4.2	11.7	3.9	26.0	10.5	11.7
Green Ext Time (p_c), s	0.3	1.7	0.0	0.9	0.0	8.3	0.2	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Notes

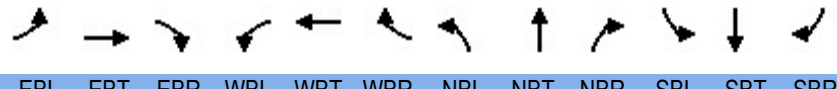


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	176	83	121	710	712	246
Future Volume (veh/h)	176	83	121	710	712	246
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	203	0	121	710	712	146
Adj No. of Lanes	2	1	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	289	129	148	4399	3807	1168
Arrive On Green	0.08	0.00	0.08	0.85	0.73	0.73
Sat Flow, veh/h	3619	1615	1810	5358	5358	1591
Grp Volume(v), veh/h	203	0	121	710	712	146
Grp Sat Flow(s),veh/h/ln	1810	1615	1810	1729	1729	1591
Q Serve(g_s), s	6.8	0.0	8.2	3.0	5.3	3.4
Cycle Q Clear(g_c), s	6.8	0.0	8.2	3.0	5.3	3.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	289	129	148	4399	3807	1168
V/C Ratio(X)	0.70	0.00	0.82	0.16	0.19	0.13
Avail Cap(c_a), veh/h	1036	463	391	4399	3807	1168
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	0.0	56.4	1.7	5.1	4.9
Incr Delay (d2), s/veh	3.1	0.0	7.8	0.1	0.1	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	3.5	0.0	4.4	1.4	2.5	1.5
LnGrp Delay(d),s/veh	59.1	0.0	64.3	1.8	5.2	5.1
LnGrp LOS	E		E	A	A	A
Approach Vol, veh/h	203			831	858	
Approach Delay, s/veh	59.1			10.9	5.2	
Approach LOS	E			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.3	96.6		14.2		110.8		
Change Period (Y+Rc), s	4.0	* 4.8		* 4.2		* 4.8		
Max Green Setting (Gmax), s	27.6	* 49		* 36		* 80		
Max Q Clear Time (g_c+I1), s	10.2	7.3		8.8		5.0		
Green Ext Time (p_c), s	0.2	6.4		0.7		5.9		

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	84	46	57	158	149	65	467	39	165	438	103
Future Volume (veh/h)	82	84	46	57	158	149	65	467	39	165	438	103
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.98	0.99		0.93	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	84	11	57	158	118	65	467	20	165	438	90
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	163	460	384	330	237	177	91	1908	813	193	1733	353
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.53	0.53	0.11	0.59	0.59
Sat Flow, veh/h	1092	1900	1584	1315	979	731	1810	3610	1538	1810	2961	603
Grp Volume(v), veh/h	82	84	11	57	0	276	65	467	20	165	265	263
Grp Sat Flow(s),veh/h/ln	1092	1900	1584	1315	0	1710	1810	1805	1538	1810	1805	1759
Q Serve(g_s), s	9.2	4.4	0.7	4.5	0.0	18.2	4.4	8.8	0.8	11.2	8.9	9.1
Cycle Q Clear(g_c), s	27.4	4.4	0.7	8.9	0.0	18.2	4.4	8.8	0.8	11.2	8.9	9.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	163	460	384	330	0	415	91	1908	813	193	1056	1029
V/C Ratio(X)	0.50	0.18	0.03	0.17	0.00	0.67	0.72	0.24	0.02	0.85	0.25	0.26
Avail Cap(c_a), veh/h	299	698	582	499	0	634	216	1908	813	404	1056	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	37.5	36.1	41.1	0.0	42.8	58.5	16.0	14.1	54.9	12.6	12.6
Incr Delay (d2), s/veh	1.8	0.1	0.0	0.2	0.0	1.4	3.9	0.3	0.1	4.1	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	2.9	2.3	0.3	1.6	0.0	8.7	2.3	4.4	0.3	5.8	4.6	4.5
LnGrp Delay(d),s/veh	56.9	37.7	36.1	41.2	0.0	44.2	62.4	16.3	14.1	59.0	13.2	13.2
LnGrp LOS	E	D	D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		177			333			552			693	
Approach Delay, s/veh		46.5			43.7			21.6			24.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.4	71.2		35.4	11.4	78.2		35.4
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	27.3	35.9		* 46	14.9	48.9		45.9
Max Q Clear Time (g_c+I1), s	13.2	10.8		20.2	6.4	11.1		29.4
Green Ext Time (p_c), s	0.2	2.2		1.6	0.0	2.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	895	0	426	1080	545	0	0	0	41	264	42
Future Volume (veh/h)	98	895	0	426	1080	545	0	0	0	41	264	42
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	98	895	0	426	1080	345				41	264	15
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	120	1001	0	492	1475	648				344	317	306
Arrive On Green	0.07	0.30	0.00	0.36	0.59	0.59				0.23	0.23	0.23
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	98	895	0	426	1080	345				41	264	15
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	6.3	27.4	0.0	39.5	37.5	22.6				2.7	23.3	1.1
Cycle Q Clear(g_c), s	6.3	27.4	0.0	39.5	37.5	22.6				2.7	23.3	1.1
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	120	1001	0	492	1475	648				344	317	306
V/C Ratio(X)	0.82	0.89	0.00	0.87	0.73	0.53				0.12	0.83	0.05
Avail Cap(c_a), veh/h	246	1390	0	655	1921	841				465	423	415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	68.4	51.7	0.0	47.3	24.2	25.3				43.9	58.7	43.2
Incr Delay (d2), s/veh	12.4	5.9	0.0	9.2	1.0	0.7				0.2	10.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	85.6	30.9	91.7				0.0	71.9	0.0
%ile BackOfQ(50%),veh/ln	4.4	18.4	0.0	34.3	28.7	37.2				1.3	20.8	1.1
LnGrp Delay(d),s/veh	80.8	57.6	0.0	142.1	56.1	117.7				44.1	140.7	43.2
LnGrp LOS	F	E		F	E	F				D	F	D
Approach Vol, veh/h		993			1851						320	
Approach Delay, s/veh		59.9			87.4						123.7	
Approach LOS		E			F						F	

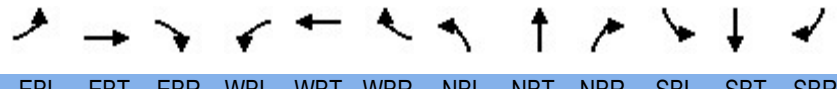
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	17.3	39.7		31.2	12.6	74.4		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	12.5	45.5		38.5	16.1	91.9		
Max Q Clear Time (g_c+I1), s	11.3	29.4		25.3	8.3	39.5		
Green Ext Time (p_c), s	1.3	5.8		1.4	0.1	12.9		

Intersection Summary	
HCM 2010 Ctrl Delay	82.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	440	45	334	314	231	62	820	538	310	1045	66
Future Volume (veh/h)	75	440	45	334	314	231	62	820	538	310	1045	66
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	440	40	334	314	34	62	820	347	310	1045	63
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	560	53	642	660	280	79	1066	469	409	1298	78
Arrive On Green	0.19	0.19	0.19	0.18	0.18	0.18	0.04	0.30	0.30	0.12	0.38	0.38
Sat Flow, veh/h	482	2963	282	3510	3610	1531	1810	3610	1586	3510	3452	208
Grp Volume(v), veh/h	292	0	263	334	314	34	62	820	347	310	546	562
Grp Sat Flow(s),veh/h/ln	1876	0	1850	1755	1805	1531	1810	1805	1586	1755	1805	1855
Q Serve(g_s), s	9.8	0.0	8.8	5.6	5.1	1.2	2.2	13.5	12.9	5.6	17.7	17.7
Cycle Q Clear(g_c), s	9.8	0.0	8.8	5.6	5.1	1.2	2.2	13.5	12.9	5.6	17.7	17.7
Prop In Lane	0.26		0.15	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	354	0	349	642	660	280	79	1066	469	409	679	698
V/C Ratio(X)	0.82	0.00	0.75	0.52	0.48	0.12	0.79	0.77	0.74	0.76	0.80	0.81
Avail Cap(c_a), veh/h	835	0	823	1896	1950	827	305	2891	1270	1050	1695	1742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	25.0	24.1	23.8	22.3	30.9	20.9	20.7	27.9	18.2	18.2
Incr Delay (d2), s/veh	1.9	0.0	1.2	0.2	0.2	0.1	6.3	0.4	0.9	1.1	0.9	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	5.2	0.0	4.6	2.7	2.5	0.5	1.2	6.8	5.7	2.8	8.8	9.1
LnGrp Delay(d),s/veh	27.3	0.0	26.2	24.3	24.0	22.3	37.1	21.4	21.6	29.0	19.1	19.0
LnGrp LOS	C		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		555			682			1229			1418	
Approach Delay, s/veh		26.8			24.1			22.2			21.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	28.5		15.3	11.1	23.3		15.5
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	11.0	61.2		29.0	19.5	52.2		35.2
Max Q Clear Time (g_c+I1), s	4.2	19.7		11.8	7.6	15.5		7.6
Green Ext Time (p_c), s	0.0	1.2		0.6	0.0	1.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

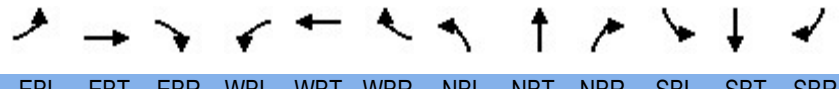


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1086	17	82	702	424	18	187	91	224	266	104
Future Volume (veh/h)	83	1086	17	82	702	424	18	187	91	224	266	104
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	1086	16	82	702	195	18	187	13	163	351	18
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	2031	30	130	2013	883	158	316	134	221	465	194
Arrive On Green	0.07	0.56	0.56	0.07	0.56	0.56	0.09	0.09	0.09	0.12	0.12	0.12
Sat Flow, veh/h	1810	3641	54	1810	3610	1583	1810	3610	1532	1810	3800	1586
Grp Volume(v), veh/h	83	538	564	82	702	195	18	187	13	163	351	18
Grp Sat Flow(s),veh/h/ln	1810	1805	1890	1810	1805	1583	1810	1805	1532	1810	1900	1586
Q Serve(g_s), s	5.2	21.8	21.8	5.1	12.4	7.2	1.1	5.8	0.9	10.1	10.4	1.2
Cycle Q Clear(g_c), s	5.2	21.8	21.8	5.1	12.4	7.2	1.1	5.8	0.9	10.1	10.4	1.2
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	1007	1054	130	2013	883	158	316	134	221	465	194
V/C Ratio(X)	0.63	0.53	0.53	0.63	0.35	0.22	0.11	0.59	0.10	0.74	0.76	0.09
Avail Cap(c_a), veh/h	184	1007	1054	184	2013	883	282	563	239	317	665	278
HCM Platoon Ratio	1.00	1.00	1.00	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	52.3	16.2	16.2	52.3	14.1	12.9	48.8	50.9	48.7	49.1	49.2	45.2
Incr Delay (d2), s/veh	3.8	2.0	1.9	3.7	0.5	0.6	0.3	1.8	0.3	5.2	3.0	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	2.7	11.3	11.8	2.7	6.3	3.3	0.5	3.0	0.4	5.3	5.7	0.5
LnGrp Delay(d),s/veh	56.1	18.2	18.1	56.0	14.6	13.5	49.1	52.7	49.0	54.3	52.2	45.4
LnGrp LOS	E	B	B	E	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1185			979			218			532	
Approach Delay, s/veh		20.8			17.8			52.2			52.6	
Approach LOS		C			B			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	13.0	69.3		14.8	13.0	69.3		18.9
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	8.4	47.2		* 18	11.8	47.2		20.3
Max Q Clear Time (g_c+I1), s	7.2	14.4		7.8	7.1	23.8		12.4
Green Ext Time (p_c), s	0.0	5.0		0.8	0.0	6.5		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1222	147	255	841	15	117	32	765	111	1270	208
Future Volume (veh/h)	23	1222	147	255	841	15	117	32	765	111	1270	208
Number	3	8	18	7	4	14	5	2	12	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		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	1222	135	255	841	14	117	32	303	111	1270	122
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	1369	150	296	1804	30	296	574	1087	295	1564	474
Arrive On Green	0.31	0.31	0.31	0.16	0.50	0.50	0.08	0.30	0.30	0.08	0.30	0.30
Sat Flow, veh/h	45	4467	490	1810	3632	60	3510	1900	3600	3510	5187	1572
Grp Volume(v), veh/h	501	434	445	255	418	437	117	32	303	111	1270	122
Grp Sat Flow(s),veh/h/ln	1813	1573	1616	1810	1805	1888	1755	1900	1200	1755	1729	1572
Q Serve(g_s), s	15.0	30.6	30.6	15.9	17.6	17.6	3.7	1.4	7.4	3.5	26.3	6.8
Cycle Q Clear(g_c), s	30.5	30.6	30.6	15.9	17.6	17.6	3.7	1.4	7.4	3.5	26.3	6.8
Prop In Lane	0.05		0.30	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	588	482	495	296	897	938	296	574	1087	295	1564	474
V/C Ratio(X)	0.85	0.90	0.90	0.86	0.47	0.47	0.39	0.06	0.28	0.38	0.81	0.26
Avail Cap(c_a), veh/h	625	515	529	312	951	994	303	574	1087	303	1564	474
HCM Platoon Ratio	1.00	1.00	1.00	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	38.1	38.5	38.5	47.2	19.1	19.1	50.3	28.7	30.9	50.3	37.5	30.7
Incr Delay (d2), s/veh	9.7	17.1	16.8	19.3	0.1	0.1	0.3	0.2	0.6	0.3	4.7	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	16.9	15.5	15.9	9.5	8.7	9.1	1.8	0.8	2.5	1.7	13.3	3.1
LnGrp Delay(d),s/veh	47.9	55.6	55.3	66.5	19.3	19.3	50.6	28.9	31.5	50.5	42.2	32.0
LnGrp LOS	D	E	E	E	B	B	D	C	C	D	D	C
Approach Vol, veh/h		1380			1110			452			1503	
Approach Delay, s/veh		52.7			30.1			36.3			42.0	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	40.1		62.6	13.3	40.1	22.1	40.6
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.0	31.3		61.1	9.0	* 31	19.0	38.0
Max Q Clear Time (g_c+I1), s	5.5	9.4		19.6	5.7	28.3	17.9	32.6
Green Ext Time (p_c), s	0.0	0.8		3.8	0.1	2.0	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	41.8
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	146	0	0	290	1019	91
Future Volume (veh/h)	146	0	0	290	1019	91
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	146	0	0	290	1104	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	969	0	0	1841	1230	549
Arrive On Green	0.51	0.00	0.00	0.51	0.34	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	146	0	0	290	1104	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	1.8	0.0	0.0	1.9	12.7	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	1.9	12.7	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	969	0	0	1841	1230	549
V/C Ratio(X)	0.15	0.00	0.00	0.16	0.90	0.00
Avail Cap(c_a), veh/h	969	0	0	1841	2554	1140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.7	0.0	0.0	5.7	13.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	1.0	6.5	0.0
LnGrp Delay(d),s/veh	6.0	0.0	0.0	5.9	14.8	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	146			290	1104	
Approach Delay, s/veh	6.0			5.9	14.8	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		17.9
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		3.8				3.9		14.7
Green Ext Time (p_c), s		0.1				0.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.8
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	367	0	180
Demand Flow Rate, veh/h	367	0	180
Vehicles Circulating, veh/h	0	180	0
Vehicles Exiting, veh/h	180	0	367
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.3	0.0	4.6
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	367	180
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	367	180
Cap Entry, veh/h	1130	1130
V/C Ratio	0.325	0.159
Control Delay, s/veh	6.3	4.6
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	32	372	48	45	165	23
Future Vol, veh/h	32	372	48	45	165	23
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	372	48	45	165	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	408	0	367	226
Stage 1	-	-	-	-	222	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1162	-	637	818
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	887	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1158	-	606	812
Mov Cap-2 Maneuver	-	-	-	-	606	-
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	847	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.3	13.2
HCM LOS			B

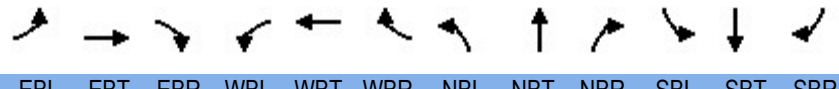
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	625	-	-	1158	-
HCM Lane V/C Ratio	0.301	-	-	0.041	-
HCM Control Delay (s)	13.2	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	1220	348	7	285	76	291	84	138	232	136	136
Future Volume (veh/h)	79	1220	348	7	285	76	291	84	138	232	136	136
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	1220	229	7	285	55	188	229	22	232	136	22
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	1648	702	130	1347	256	222	270	213	266	316	268
Arrive On Green	0.08	0.46	0.46	0.07	0.45	0.45	0.12	0.14	0.14	0.15	0.17	0.17
Sat Flow, veh/h	1810	3610	1537	1810	3011	572	1810	1900	1502	1810	1900	1615
Grp Volume(v), veh/h	79	1220	229	7	169	171	188	229	22	232	136	22
Grp Sat Flow(s),veh/h/ln	1810	1805	1537	1810	1805	1777	1810	1900	1502	1810	1900	1615
Q Serve(g_s), s	4.7	30.8	5.9	0.4	6.3	6.5	11.3	13.1	1.1	13.9	7.1	1.3
Cycle Q Clear(g_c), s	4.7	30.8	5.9	0.4	6.3	6.5	11.3	13.1	1.1	13.9	7.1	1.3
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	1648	702	130	808	795	222	270	213	266	316	268
V/C Ratio(X)	0.54	0.74	0.33	0.05	0.21	0.22	0.85	0.85	0.10	0.87	0.43	0.08
Avail Cap(c_a), veh/h	191	1648	702	130	808	795	360	308	243	375	323	275
HCM Platoon Ratio	1.00	1.00	1.00	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	49.0	24.8	6.1	48.0	18.7	18.8	47.7	46.5	26.5	46.4	41.6	39.2
Incr Delay (d2), s/veh	3.1	3.0	1.2	0.2	0.6	0.6	9.9	17.8	0.2	14.9	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	2.5	15.9	4.0	0.2	3.3	3.3	6.2	8.2	0.6	8.1	3.8	0.6
LnGrp Delay(d),s/veh	52.1	27.8	7.3	48.2	19.3	19.4	57.6	64.3	26.7	61.3	42.5	39.3
LnGrp LOS	D	C	A	D	B	B	E	E	C	E	D	D
Approach Vol, veh/h		1528			347			439			390	
Approach Delay, s/veh		26.0			19.9			59.5			53.5	
Approach LOS		C			B			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	13.1	55.8	21.3	20.9	14.1	54.8	18.7	23.4
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	8.0	50.7	23.0	18.0	11.7	47.0	22.1	18.9
Max Q Clear Time (g_c+I1), s	2.4	32.8	15.9	15.1	6.7	8.5	13.3	9.1
Green Ext Time (p_c), s	0.0	9.5	0.4	0.4	0.1	2.2	0.3	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	34.6
HCM 2010 LOS	C

Notes

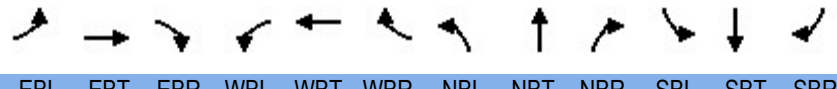


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	0	83	0	0	20	131	555	2	0	1050	268
Future Volume (veh/h)	217	0	83	0	0	20	131	555	2	0	1050	268
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	252	0	0	0	0	20	131	555	2	0	1050	131
Adj No. of Lanes	2	1	0	0	1	0	1	3	0	0	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	472	254	0	0	0	216	160	4193	15	0	3439	1062
Arrive On Green	0.13	0.00	0.00	0.00	0.00	0.13	0.09	0.79	0.79	0.00	0.66	0.66
Sat Flow, veh/h	2828	1900	0	0	0	1615	1810	5335	19	0	5358	1602
Grp Volume(v), veh/h	252	0	0	0	0	20	131	360	197	0	1050	131
Grp Sat Flow(s),veh/h/ln	1414	1900	0	0	0	1615	1810	1729	1897	0	1729	1602
Q Serve(g_s), s	9.9	0.0	0.0	0.0	0.0	1.3	8.3	2.9	2.9	0.0	9.9	3.5
Cycle Q Clear(g_c), s	11.2	0.0	0.0	0.0	0.0	1.3	8.3	2.9	2.9	0.0	9.9	3.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	472	254	0	0	0	216	160	2718	1491	0	3439	1062
V/C Ratio(X)	0.53	0.00	0.00	0.00	0.00	0.09	0.82	0.13	0.13	0.00	0.31	0.12
Avail Cap(c_a), veh/h	966	586	0	0	0	494	328	2718	1491	0	3439	1062
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	0.0	0.0	0.0	0.0	44.1	52.0	3.0	3.0	0.0	8.3	7.2
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.2	7.4	0.1	0.2	0.0	0.2	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	3.9	0.0	0.0	0.0	0.0	0.6	4.4	1.4	1.6	0.0	4.7	1.6
LnGrp Delay(d),s/veh	49.9	0.0	0.0	0.0	0.0	44.2	59.4	3.1	3.2	0.0	8.5	7.4
LnGrp LOS	D					D	E	A	A		A	A
Approach Vol, veh/h		252			20			688			1181	
Approach Delay, s/veh		49.9			44.2			13.8			8.4	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.3	81.7		20.0		96.0		20.0
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	21.6	* 46		* 36		* 71		35.5
Max Q Clear Time (g_c+I1), s	10.3	11.9		13.2		4.9		3.3
Green Ext Time (p_c), s	0.2	9.8		0.8		4.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	167	45	46	95	114	122	562	42	257	614	77
Future Volume (veh/h)	60	167	45	46	95	114	122	562	42	257	614	77
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.98	0.99		0.94	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	60	167	12	46	95	73	122	562	18	257	614	69
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	203	387	321	217	197	152	150	1824	778	288	1896	213
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.08	0.51	0.51	0.16	0.58	0.58
Sat Flow, veh/h	1200	1900	1578	1216	968	744	1810	3610	1539	1810	3259	366
Grp Volume(v), veh/h	60	167	12	46	0	168	122	562	18	257	339	344
Grp Sat Flow(s),veh/h/ln	1200	1900	1578	1216	0	1713	1810	1805	1539	1810	1805	1820
Q Serve(g_s), s	5.4	8.9	0.7	4.0	0.0	10.0	7.7	10.6	0.7	16.1	11.2	11.3
Cycle Q Clear(g_c), s	15.4	8.9	0.7	12.9	0.0	10.0	7.7	10.6	0.7	16.1	11.2	11.3
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	203	387	321	217	0	349	150	1824	778	288	1050	1059
V/C Ratio(X)	0.30	0.43	0.04	0.21	0.00	0.48	0.82	0.31	0.02	0.89	0.32	0.32
Avail Cap(c_a), veh/h	350	621	515	370	0	565	279	1824	778	482	1050	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	40.3	37.1	45.9	0.0	40.8	52.3	16.8	14.4	47.8	12.5	12.5
Incr Delay (d2), s/veh	0.6	0.6	0.0	0.4	0.0	0.8	4.1	0.4	0.1	6.5	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	4.7	0.3	1.4	0.0	4.8	4.0	5.3	0.3	8.6	5.8	5.9
LnGrp Delay(d),s/veh	48.2	40.9	37.1	46.3	0.0	41.5	56.4	17.2	14.4	54.3	13.3	13.3
LnGrp LOS	D	D	D	D		D	E	B	B	D	B	B
Approach Vol, veh/h		239			214			702			940	
Approach Delay, s/veh		42.5			42.6			24.0			24.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.5	63.7		28.7	14.7	72.6		28.7
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	30.9	31.9		* 38	17.9	44.9		37.9
Max Q Clear Time (g_c+I1), s	19.1	12.6		14.9	9.7	13.3		17.4
Green Ext Time (p_c), s	0.3	2.5		0.9	0.1	2.9		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	28.2
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	1359	0	101	1302	735	0	0	0	69	290	102
Future Volume (veh/h)	98	1359	0	101	1302	735	0	0	0	69	290	102
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	98	1359	0	101	1302	530				69	290	72
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	88	1463	0	107	1134	496				241	253	215
Arrive On Green	0.07	0.55	0.00	0.11	0.60	0.60				0.25	0.25	0.25
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	98	1359	0	101	1302	530				69	290	72
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	10.5	75.2	0.0	16.8	95.5	95.5				9.3	40.5	11.1
Cycle Q Clear(g_c), s	10.5	75.2	0.0	16.8	95.5	95.5				9.3	40.5	11.1
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	88	1463	0	107	1134	496				241	253	215
V/C Ratio(X)	1.12	0.93	0.00	0.94	1.15	1.07				0.29	1.15	0.34
Avail Cap(c_a), veh/h	88	1463	0	107	1134	496				241	253	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	74.8	33.1	0.0	70.5	32.2	32.2				52.2	59.8	54.9
Incr Delay (d2), s/veh	132.3	10.7	0.0	68.7	77.3	59.6				0.6	101.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				39.1	114.3	93.8
%ile BackOfQ(50%),veh/ln	7.1	29.7	0.0	6.5	37.1	30.0				8.0	28.3	17.4
LnGrp Delay(d),s/veh	207.1	43.8	0.0	139.1	109.5	91.9				91.9	275.7	149.6
LnGrp LOS	F	D		F	F	F				F	F	F
Approach Vol, veh/h		1457			1933						431	
Approach Delay, s/veh		54.8			106.2						225.2	
Approach LOS		D			F						F	

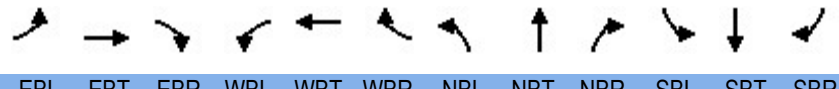
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	22.5	92.5		45.0	15.0	100.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	18.0	88.0		40.5	10.5	95.5		
Max Q Clear Time (g_c+I1), s	19.8	77.2		42.5	12.5	97.5		
Green Ext Time (p_c), s	0.0	6.9		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	100.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	276	64	291	469	428	88	1202	297	204	839	105
Future Volume (veh/h)	126	276	64	291	469	428	88	1202	297	204	839	105
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	276	54	291	469	86	88	1202	236	204	839	99
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	154	356	72	670	689	296	114	1354	597	291	1303	154
Arrive On Green	0.16	0.16	0.16	0.19	0.19	0.19	0.06	0.38	0.38	0.08	0.40	0.40
Sat Flow, veh/h	971	2245	455	3510	3610	1548	1810	3610	1592	3510	3241	382
Grp Volume(v), veh/h	240	0	216	291	469	86	88	1202	236	204	467	471
Grp Sat Flow(s),veh/h/ln	1851	0	1820	1755	1805	1548	1810	1805	1592	1755	1805	1818
Q Serve(g_s), s	9.2	0.0	8.3	5.4	8.9	3.5	3.5	22.9	8.0	4.1	15.3	15.3
Cycle Q Clear(g_c), s	9.2	0.0	8.3	5.4	8.9	3.5	3.5	22.9	8.0	4.1	15.3	15.3
Prop In Lane	0.52		0.25	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	294	0	289	670	689	296	114	1354	597	291	726	731
V/C Ratio(X)	0.82	0.00	0.75	0.43	0.68	0.29	0.77	0.89	0.40	0.70	0.64	0.64
Avail Cap(c_a), veh/h	606	0	596	1791	1842	790	346	3054	1347	599	1502	1513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	29.4	26.2	27.6	25.4	33.8	21.5	16.8	32.7	17.7	17.7
Incr Delay (d2), s/veh	2.1	0.0	1.5	0.2	0.4	0.2	4.2	0.8	0.2	1.2	0.4	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	4.8	0.0	4.3	2.6	4.5	1.5	1.9	11.5	3.5	2.1	7.6	7.7
LnGrp Delay(d),s/veh	31.9	0.0	30.9	26.3	28.0	25.6	38.0	22.3	17.0	33.9	18.0	18.0
LnGrp LOS	C		C	C	C	C	D	C	B	C	B	B
Approach Vol, veh/h		456			846			1526			1142	
Approach Delay, s/veh		31.4			27.2			22.4			20.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	33.5		14.6	9.6	31.5		17.6
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	14.0	61.0		24.0	12.5	62.0		37.4
Max Q Clear Time (g_c+I1), s	5.5	17.3		11.2	6.1	24.9		10.9
Green Ext Time (p_c), s	0.0	1.0		0.4	0.0	1.9		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

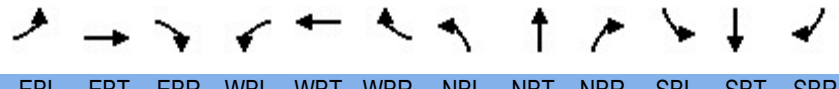


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	448	24	52	887	640	72	391	78	213	280	144
Future Volume (veh/h)	130	448	24	52	887	640	72	391	78	213	280	144
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	130	448	22	52	887	306	72	391	13	164	348	30
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	1875	92	109	1839	808	239	476	210	223	469	192
Arrive On Green	0.09	0.54	0.54	0.06	0.51	0.51	0.13	0.13	0.13	0.12	0.12	0.12
Sat Flow, veh/h	1810	3500	171	1810	3610	1586	1810	3610	1593	1810	3800	1552
Grp Volume(v), veh/h	130	231	239	52	887	306	72	391	13	164	348	30
Grp Sat Flow(s),veh/h/ln	1810	1805	1866	1810	1805	1586	1810	1805	1593	1810	1900	1552
Q Serve(g_s), s	8.8	8.5	8.5	3.5	20.0	14.7	4.5	13.2	0.9	10.9	11.0	2.2
Cycle Q Clear(g_c), s	8.8	8.5	8.5	3.5	20.0	14.7	4.5	13.2	0.9	10.9	11.0	2.2
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	967	1000	109	1839	808	239	476	210	223	469	192
V/C Ratio(X)	0.83	0.24	0.24	0.48	0.48	0.38	0.30	0.82	0.06	0.73	0.74	0.16
Avail Cap(c_a), veh/h	246	967	1000	133	1839	808	297	592	261	314	660	269
HCM Platoon Ratio	1.00	1.00	1.00	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	56.2	15.4	15.5	56.8	19.9	18.6	49.1	52.8	47.5	52.8	52.9	49.0
Incr Delay (d2), s/veh	10.2	0.6	0.6	2.4	0.9	1.4	0.7	7.5	0.1	5.3	2.8	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	4.9	4.4	4.5	1.8	10.2	6.7	2.3	7.1	0.4	5.8	6.0	0.9
LnGrp Delay(d),s/veh	66.4	16.0	16.0	59.2	20.9	20.0	49.8	60.3	47.6	58.1	55.7	49.3
LnGrp LOS	E	B	B	E	C	B	D	E	D	E	E	D
Approach Vol, veh/h		600			1245			476			542	
Approach Delay, s/veh		26.9			22.3			58.4			56.1	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.4	68.3		21.2	12.1	71.6		20.1
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	17.8	47.2		* 21	9.2	55.0		21.7
Max Q Clear Time (g_c+I1), s	10.8	22.0		15.2	5.5	10.5		13.0
Green Ext Time (p_c), s	0.1	6.7		1.3	0.0	2.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	625	147	151	1008	18	380	27	1097	95	1056	301
Future Volume (veh/h)	12	625	147	151	1008	18	380	27	1097	95	1056	301
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	625	115	151	1008	17	380	27	651	95	1056	221
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	803	144	191	1195	20	464	921	1747	272	2230	690
Arrive On Green	0.20	0.20	0.20	0.11	0.33	0.33	0.13	0.48	0.48	0.08	0.43	0.43
Sat Flow, veh/h	28	4043	727	1810	3631	61	3510	1900	3603	3510	5187	1605
Grp Volume(v), veh/h	259	244	250	151	501	524	380	27	651	95	1056	221
Grp Sat Flow(s),veh/h/ln	1647	1573	1578	1810	1805	1887	1755	1900	1201	1755	1729	1605
Q Serve(g_s), s	3.0	18.4	18.8	10.2	32.2	32.2	13.2	0.9	14.2	3.2	18.2	11.4
Cycle Q Clear(g_c), s	18.9	18.4	18.8	10.2	32.2	32.2	13.2	0.9	14.2	3.2	18.2	11.4
Prop In Lane	0.05		0.46	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	313	314	191	594	621	464	921	1747	272	2230	690
V/C Ratio(X)	0.72	0.78	0.80	0.79	0.84	0.84	0.82	0.03	0.37	0.35	0.47	0.32
Avail Cap(c_a), veh/h	469	415	417	263	784	820	576	921	1747	281	2230	690
HCM Platoon Ratio	1.00	1.00	1.00	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	46.8	47.5	47.7	54.6	38.9	38.9	52.8	16.8	20.3	54.7	25.5	23.6
Incr Delay (d2), s/veh	2.3	4.7	5.6	7.1	5.1	4.9	6.1	0.1	0.6	0.3	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	8.4	8.7	5.5	16.8	17.6	6.8	0.5	4.8	1.6	8.9	5.3
LnGrp Delay(d),s/veh	49.1	52.2	53.2	61.6	44.1	43.8	58.9	16.9	20.9	55.0	26.2	24.8
LnGrp LOS	D	D	D	E	D	D	E	B	C	D	C	C
Approach Vol, veh/h		752			1176			1058			1372	
Approach Delay, s/veh		51.5			46.2			34.4			28.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	65.7		46.1	20.0	58.8	16.3	29.8
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.6	47.1		54.3	19.5	* 37	17.2	33.0
Max Q Clear Time (g_c+I1), s	5.2	16.2		34.2	15.2	20.2	12.2	20.9
Green Ext Time (p_c), s	0.0	1.8		4.4	0.3	5.3	0.1	2.6

Intersection Summary		
HCM 2010 Ctrl Delay		38.5
HCM 2010 LOS		D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	206	0	0	203	1088	103
Future Volume (veh/h)	206	0	0	203	1088	103
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	206	0	0	203	1184	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	939	0	0	1785	1303	581
Arrive On Green	0.49	0.00	0.00	0.49	0.36	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	206	0	0	203	1184	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	2.8	0.0	0.0	1.4	14.1	0.0
Cycle Q Clear(g_c), s	2.8	0.0	0.0	1.4	14.1	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	939	0	0	1785	1303	581
V/C Ratio(X)	0.22	0.00	0.00	0.11	0.91	0.00
Avail Cap(c_a), veh/h	939	0	0	1785	2476	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.5	0.0	0.0	6.1	13.8	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	0.7	7.1	0.0
LnGrp Delay(d),s/veh	7.0	0.0	0.0	6.3	14.9	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	206			203	1184	
Approach Delay, s/veh	7.0			6.3	14.9	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		19.3
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		4.8				3.4		16.1
Green Ext Time (p_c), s		0.2				0.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.6
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	209	0	344
Demand Flow Rate, veh/h	209	0	344
Vehicles Circulating, veh/h	0	344	0
Vehicles Exiting, veh/h	344	0	209
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	0.0	6.1
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	209	344
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	209	344
Cap Entry, veh/h	1130	1130
V/C Ratio	0.185	0.304
Control Delay, s/veh	4.8	6.1
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	8.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	228	34	38	337	39
Future Vol, veh/h	76	228	34	38	337	39
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	76	228	34	38	337	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	308	0	304	198
Stage 1	-	-	-	-	194	-
Stage 2	-	-	-	-	110	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1264	-	692	848
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1259	-	668	842
Mov Cap-2 Maneuver	-	-	-	-	668	-
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	16.5
HCM LOS			C

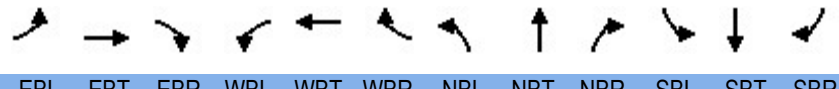
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	683	-	-	1259	-
HCM Lane V/C Ratio	0.551	-	-	0.027	-
HCM Control Delay (s)	16.5	-	-	7.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	3.4	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	216	445	171	1059	144	242	69	15	66	188	88
Future Volume (veh/h)	62	216	445	171	1059	144	242	69	15	66	188	88
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.92	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	62	216	199	171	1059	136	156	190	3	66	188	13
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	156	1684	717	207	1585	203	191	246	194	173	227	193
Arrive On Green	0.09	0.47	0.47	0.11	0.49	0.49	0.11	0.13	0.13	0.10	0.12	0.12
Sat Flow, veh/h	1810	3610	1538	1810	3206	411	1810	1900	1493	1810	1900	1615
Grp Volume(v), veh/h	62	216	199	171	596	599	156	190	3	66	188	13
Grp Sat Flow(s),veh/h/ln	1810	1805	1538	1810	1805	1812	1810	1900	1493	1810	1900	1615
Q Serve(g_s), s	3.4	3.6	5.3	9.7	26.0	26.1	8.8	10.1	0.1	3.6	10.1	0.7
Cycle Q Clear(g_c), s	3.4	3.6	5.3	9.7	26.0	26.1	8.8	10.1	0.1	3.6	10.1	0.7
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	1684	717	207	893	896	191	246	194	173	227	193
V/C Ratio(X)	0.40	0.13	0.28	0.83	0.67	0.67	0.82	0.77	0.02	0.38	0.83	0.07
Avail Cap(c_a), veh/h	158	1684	717	341	893	896	310	471	370	173	309	263
HCM Platoon Ratio	1.00	1.00	1.00	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	45.2	15.8	7.0	45.3	19.9	20.0	45.8	44.0	24.7	44.4	45.0	40.8
Incr Delay (d2), s/veh	1.6	0.2	1.0	8.3	3.9	4.0	8.4	5.1	0.0	1.4	12.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.8	3.2	5.3	13.9	14.0	4.9	5.6	0.1	1.9	6.1	0.3
LnGrp Delay(d),s/veh	46.9	16.0	8.0	53.6	23.9	23.9	54.2	49.1	24.7	45.8	57.5	41.0
LnGrp LOS	D	B	A	D	C	C	D	D	C	D	E	D
Approach Vol, veh/h		477			1366			349			267	
Approach Delay, s/veh		16.6			27.6			51.2			53.8	
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	17.0	53.9	15.0	18.7	14.1	56.8	16.1	17.5
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	19.7	41.1	9.0	25.9	9.1	51.7	17.9	17.0
Max Q Clear Time (g_c+I1), s	11.7	7.3	5.6	12.1	5.4	28.1	10.8	12.1
Green Ext Time (p_c), s	0.3	2.2	0.0	0.8	0.0	9.1	0.2	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.7
HCM 2010 LOS	C

Notes

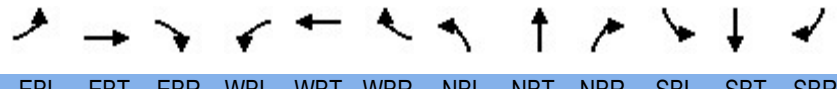


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	0	120	0	0	4	134	832	11	0	880	253
Future Volume (veh/h)	186	0	120	0	0	4	134	832	11	0	880	253
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	180	0	0	0	0	4	134	832	11	0	880	146
Adj No. of Lanes	2	1	0	0	1	0	1	3	0	0	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	468	232	0	0	0	197	164	4210	56	0	3491	1069
Arrive On Green	0.12	0.00	0.00	0.00	0.00	0.12	0.09	0.80	0.80	0.00	0.67	0.67
Sat Flow, veh/h	2870	1900	0	0	0	1615	1810	5276	70	0	5358	1589
Grp Volume(v), veh/h	180	0	0	0	0	4	134	545	298	0	880	146
Grp Sat Flow(s),veh/h/ln	1435	1900	0	0	0	1615	1810	1729	1888	0	1729	1589
Q Serve(g_s), s	6.8	0.0	0.0	0.0	0.0	0.3	8.4	4.4	4.4	0.0	7.7	3.8
Cycle Q Clear(g_c), s	7.1	0.0	0.0	0.0	0.0	0.3	8.4	4.4	4.4	0.0	7.7	3.8
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.04	0.00		1.00
Lane Grp Cap(c), veh/h	468	232	0	0	0	197	164	2759	1506	0	3491	1069
V/C Ratio(X)	0.38	0.00	0.00	0.00	0.00	0.02	0.82	0.20	0.20	0.00	0.25	0.14
Avail Cap(c_a), veh/h	1053	619	0	0	0	522	374	2759	1506	0	3491	1069
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	0.0	0.0	0.0	0.0	44.8	51.8	2.8	2.8	0.0	7.5	6.8
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	7.3	0.2	0.3	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	0.0	0.0	0.1	4.5	2.1	2.4	0.0	3.7	1.7
LnGrp Delay(d),s/veh	48.5	0.0	0.0	0.0	0.0	44.9	59.1	3.0	3.1	0.0	7.6	7.1
LnGrp LOS	D					D	E	A	A		A	A
Approach Vol, veh/h		180			4			977			1026	
Approach Delay, s/veh		48.5			44.9			10.7			7.6	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.5	82.9		18.6		97.4		18.6
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	24.6	* 41		* 38		* 69		37.5
Max Q Clear Time (g_c+I1), s	10.4	9.7		9.1		6.4		2.3
Green Ext Time (p_c), s	0.2	7.8		0.6		6.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	108	54	97	166	167	78	618	46	187	584	91
Future Volume (veh/h)	68	108	54	97	166	167	78	618	46	187	584	91
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.94	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	68	108	12	97	166	134	78	618	22	187	584	83
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	468	390	316	232	187	99	1850	787	215	1818	258
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.51	0.51	0.12	0.58	0.58
Sat Flow, veh/h	1071	1900	1585	1286	943	761	1810	3610	1537	1810	3154	447
Grp Volume(v), veh/h	68	108	12	97	0	300	78	618	22	187	333	334
Grp Sat Flow(s),veh/h/ln	1071	1900	1585	1286	0	1704	1810	1805	1537	1810	1805	1795
Q Serve(g_s), s	7.8	5.7	0.7	8.2	0.0	20.1	5.3	12.6	0.9	12.7	12.0	12.1
Cycle Q Clear(g_c), s	27.9	5.7	0.7	13.8	0.0	20.1	5.3	12.6	0.9	12.7	12.0	12.1
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	149	468	390	316	0	419	99	1850	787	215	1040	1035
V/C Ratio(X)	0.46	0.23	0.03	0.31	0.00	0.72	0.78	0.33	0.03	0.87	0.32	0.32
Avail Cap(c_a), veh/h	253	652	544	445	0	590	216	1850	787	389	1040	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	37.7	35.8	43.2	0.0	43.1	58.3	17.9	15.1	54.1	13.8	13.8
Incr Delay (d2), s/veh	1.6	0.2	0.0	0.4	0.0	1.9	5.0	0.5	0.1	4.2	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.0	0.3	2.9	0.0	9.7	2.8	6.4	0.4	6.6	6.2	6.2
LnGrp Delay(d),s/veh	57.5	37.8	35.8	43.6	0.0	45.0	63.3	18.4	15.1	58.3	14.6	14.6
LnGrp LOS	E	D	D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		188			397			718			854	
Approach Delay, s/veh		44.8			44.6			23.2			24.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.0	69.2		35.9	12.0	77.2		35.9
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	26.9	39.9		* 43	14.9	51.9		42.9
Max Q Clear Time (g_c+I1), s	14.7	14.6		22.1	7.3	14.1		29.9
Green Ext Time (p_c), s	0.2	3.0		1.8	0.0	2.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	991	0	340	1224	472	0	0	0	30	272	60
Future Volume (veh/h)	313	991	0	340	1224	472	0	0	0	30	272	60
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	313	991	0	340	1224	293				30	272	32
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	332	1339	0	402	1260	551				317	289	283
Arrive On Green	0.18	0.41	0.00	0.29	0.51	0.51				0.22	0.22	0.22
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	313	991	0	340	1224	293				30	272	32
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	27.0	35.4	0.0	42.6	75.9	28.7				2.6	32.6	3.2
Cycle Q Clear(g_c), s	27.0	35.4	0.0	42.6	75.9	28.7				2.6	32.6	3.2
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	332	1339	0	402	1260	551				317	289	283
V/C Ratio(X)	0.94	0.74	0.00	0.85	0.97	0.53				0.09	0.94	0.11
Avail Cap(c_a), veh/h	338	1472	0	407	1275	558				321	292	286
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	43.6	0.0	54.0	39.2	36.2				49.4	62.2	49.6
Incr Delay (d2), s/veh	34.0	1.8	0.0	15.0	18.7	0.9				0.1	37.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	109.6	130.2	126.3				0.0	135.9	0.0
%ile BackOfQ(50%),veh/ln	16.8	19.3	0.0	31.6	53.7	40.2				1.1	26.6	2.5
LnGrp Delay(d),s/veh	98.4	45.4	0.0	178.5	188.0	163.4				49.5	235.3	49.8
LnGrp LOS	F	D		F	F	F				D	F	D
Approach Vol, veh/h		1304			1857						334	
Approach Delay, s/veh		58.1			182.4						200.8	
Approach LOS		E			F						F	

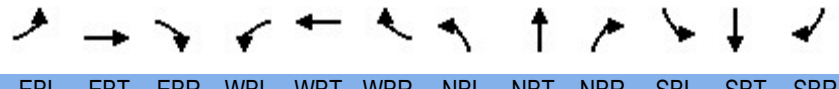
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	49.8	68.9		39.3	33.5	85.1		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	51.3	59.1		35.5	29.5	81.5		
Max Q Clear Time (g_c+I1), s	44.6	37.4		34.6	29.0	77.9		
Green Ext Time (p_c), s	0.6	7.5		0.2	0.1	2.7		

Intersection Summary		
HCM 2010 Ctrl Delay	137.8	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	448	45	364	330	243	62	820	559	316	1045	66
Future Volume (veh/h)	75	448	45	364	330	243	62	820	559	316	1045	66
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	448	40	364	330	38	62	820	361	316	1045	63
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	566	53	661	680	289	79	1060	466	413	1294	78
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.04	0.29	0.29	0.12	0.37	0.37
Sat Flow, veh/h	475	2974	278	3510	3610	1533	1810	3610	1586	3510	3452	208
Grp Volume(v), veh/h	296	0	267	364	330	38	62	820	361	316	546	562
Grp Sat Flow(s),veh/h/ln	1876	0	1850	1755	1805	1533	1810	1805	1586	1755	1805	1855
Q Serve(g_s), s	10.2	0.0	9.1	6.3	5.5	1.4	2.3	13.9	14.0	5.9	18.2	18.2
Cycle Q Clear(g_c), s	10.2	0.0	9.1	6.3	5.5	1.4	2.3	13.9	14.0	5.9	18.2	18.2
Prop In Lane	0.25		0.15	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	357	0	352	661	680	289	79	1060	466	413	677	695
V/C Ratio(X)	0.83	0.00	0.76	0.55	0.49	0.13	0.78	0.77	0.78	0.77	0.81	0.81
Avail Cap(c_a), veh/h	839	0	828	1843	1895	805	270	2810	1235	968	1647	1693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	25.7	24.6	24.3	22.6	31.8	21.6	21.7	28.7	18.8	18.8
Incr Delay (d2), s/veh	1.9	0.0	1.3	0.3	0.2	0.1	6.2	0.5	1.1	1.1	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	5.5	0.0	4.8	3.1	2.7	0.6	1.3	7.0	6.3	2.9	9.1	9.4
LnGrp Delay(d),s/veh	28.0	0.0	27.0	24.9	24.5	22.7	38.0	22.1	22.7	29.8	19.7	19.7
LnGrp LOS	C		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		563			732			1243			1424	
Approach Delay, s/veh		27.5			24.6			23.1			21.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	29.1		15.8	11.4	23.7		16.2
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	10.0	61.2		30.0	18.5	52.2		35.2
Max Q Clear Time (g_c+I1), s	4.3	20.2		12.2	7.9	16.0		8.3
Green Ext Time (p_c), s	0.0	1.2		0.6	0.0	1.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

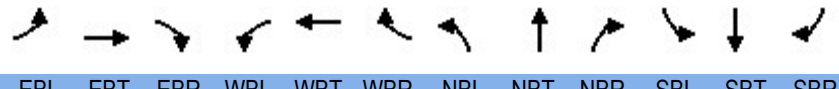


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1122	17	88	759	425	18	187	95	225	266	104
Future Volume (veh/h)	83	1122	17	88	759	425	18	187	95	225	266	104
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	1122	16	88	759	195	18	187	13	164	352	18
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	2032	29	132	2016	884	158	316	134	220	461	193
Arrive On Green	0.07	0.56	0.56	0.07	0.56	0.56	0.09	0.09	0.09	0.12	0.12	0.12
Sat Flow, veh/h	1810	3643	52	1810	3610	1583	1810	3610	1532	1810	3800	1586
Grp Volume(v), veh/h	83	556	582	88	759	195	18	187	13	164	352	18
Grp Sat Flow(s),veh/h/ln	1810	1805	1890	1810	1805	1583	1810	1805	1532	1810	1900	1586
Q Serve(g_s), s	5.2	22.8	22.8	5.5	13.6	7.2	1.1	5.8	0.9	10.2	10.4	1.2
Cycle Q Clear(g_c), s	5.2	22.8	22.8	5.5	13.6	7.2	1.1	5.8	0.9	10.2	10.4	1.2
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	1007	1054	132	2016	884	158	316	134	220	461	193
V/C Ratio(X)	0.63	0.55	0.55	0.67	0.38	0.22	0.11	0.59	0.10	0.75	0.76	0.09
Avail Cap(c_a), veh/h	184	1007	1054	178	2016	884	282	563	239	301	632	264
HCM Platoon Ratio	1.00	1.00	1.00	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	52.3	16.4	16.4	52.4	14.3	12.9	48.8	50.9	48.7	49.2	49.3	45.3
Incr Delay (d2), s/veh	3.8	2.2	2.1	4.2	0.5	0.6	0.3	1.8	0.3	6.5	3.7	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	2.7	11.9	12.4	2.9	6.9	3.3	0.5	3.0	0.4	5.5	5.7	0.5
LnGrp Delay(d),s/veh	56.1	18.6	18.5	56.6	14.9	13.5	49.1	52.7	49.0	55.8	53.0	45.5
LnGrp LOS	E	B	B	E	B	B	D	D	D	E	D	D
Approach Vol, veh/h		1221			1042			218			534	
Approach Delay, s/veh		21.1			18.1			52.2			53.6	
Approach LOS		C			B			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	13.0	69.4		14.8	13.1	69.3		18.8
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	11.8	48.2		* 18	11.4	48.6		19.3
Max Q Clear Time (g_c+I1), s	7.2	15.6		7.8	7.5	24.8		12.4
Green Ext Time (p_c), s	0.0	5.5		0.8	0.0	6.8		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1263	147	291	905	15	117	32	786	129	1270	208
Future Volume (veh/h)	23	1263	147	291	905	15	117	32	786	129	1270	208
Number	3	8	18	7	4	14	5	2	12	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		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	1263	136	291	905	14	117	32	333	129	1270	132
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	1381	148	326	1875	29	296	536	1016	298	1467	444
Arrive On Green	0.31	0.31	0.31	0.18	0.52	0.52	0.08	0.28	0.28	0.08	0.28	0.28
Sat Flow, veh/h	44	4477	479	1810	3637	56	3510	1900	3599	3510	5187	1569
Grp Volume(v), veh/h	515	447	460	291	449	470	117	32	333	129	1270	132
Grp Sat Flow(s),veh/h/ln	1808	1573	1618	1810	1805	1888	1755	1900	1200	1755	1729	1569
Q Serve(g_s), s	16.2	31.8	31.8	18.2	18.6	18.6	3.7	1.4	8.5	4.0	27.0	7.6
Cycle Q Clear(g_c), s	31.7	31.8	31.8	18.2	18.6	18.6	3.7	1.4	8.5	4.0	27.0	7.6
Prop In Lane	0.04		0.30	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	590	485	499	326	930	973	296	536	1016	298	1467	444
V/C Ratio(X)	0.87	0.92	0.92	0.89	0.48	0.48	0.39	0.06	0.33	0.43	0.87	0.30
Avail Cap(c_a), veh/h	608	502	516	326	949	993	303	536	1016	303	1467	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	38.7	38.7	46.5	18.1	18.1	50.3	30.4	32.9	50.4	39.5	32.6
Incr Delay (d2), s/veh	12.3	21.5	21.1	24.4	0.1	0.1	0.3	0.2	0.9	0.4	7.1	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	17.9	16.7	17.1	11.3	9.3	9.7	1.8	0.8	2.9	2.0	13.8	3.5
LnGrp Delay(d),s/veh	50.7	60.2	59.8	70.9	18.3	18.3	50.6	30.6	33.8	50.8	46.6	34.3
LnGrp LOS	D	E	E	E	B	B	D	C	C	D	D	C
Approach Vol, veh/h		1422			1210			482			1531	
Approach Delay, s/veh		56.6			30.9			37.7			45.9	
Approach LOS		E			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	37.8		64.8	13.3	37.9	24.0	40.8
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.0	31.4		61.0	9.0	* 32	19.9	37.0
Max Q Clear Time (g_c+I1), s	6.0	10.5		20.6	5.7	29.0	20.2	33.8
Green Ext Time (p_c), s	0.1	0.9		4.2	0.1	1.6	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	226	0	0	446	1019	114
Future Volume (veh/h)	226	0	0	446	1019	114
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	226	0	0	446	1125	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	961	0	0	1826	1249	557
Arrive On Green	0.51	0.00	0.00	0.51	0.35	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	226	0	0	446	1125	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	3.0	0.0	0.0	3.1	13.1	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	3.1	13.1	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	961	0	0	1826	1249	557
V/C Ratio(X)	0.24	0.00	0.00	0.24	0.90	0.00
Avail Cap(c_a), veh/h	961	0	0	1826	2534	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.1	0.0	0.0	6.2	13.8	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.3	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.6	6.6	0.0
LnGrp Delay(d),s/veh	6.7	0.0	0.0	6.5	14.8	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	226			446	1125	
Approach Delay, s/veh	6.7			6.5	14.8	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		18.3
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		5.0				5.1		15.1
Green Ext Time (p_c), s		0.2				0.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.8
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	370	0	183
Demand Flow Rate, veh/h	370	0	183
Vehicles Circulating, veh/h	0	183	0
Vehicles Exiting, veh/h	183	0	370
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.4	0.0	4.6
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	370	183
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	370	183
Cap Entry, veh/h	1130	1130
V/C Ratio	0.327	0.162
Control Delay, s/veh	6.4	4.6
LOS	A	A
95th %tile Queue, veh	1	1

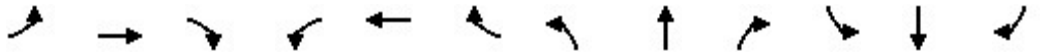
Intersection	
Int Delay, s/veh	4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	32	378	48	45	168	23
Future Vol, veh/h	32	378	48	45	168	23
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	378	48	45	168	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	414	0	370	229
Stage 1	-	-	-	-	225	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1156	-	634	815
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	887	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1152	-	602	809
Mov Cap-2 Maneuver	-	-	-	-	602	-
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.3	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	621	-	-	1152	-
HCM Lane V/C Ratio	0.308	-	-	0.042	-
HCM Control Delay (s)	13.4	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

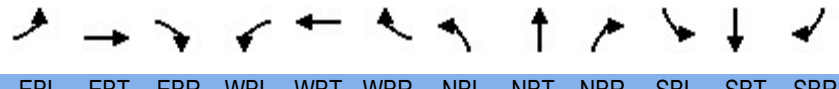


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	1222	348	7	286	79	291	84	138	238	136	136
Future Volume (veh/h)	79	1222	348	7	286	79	291	84	138	238	136	136
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	1222	229	7	286	57	188	229	22	238	136	22
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	146	1641	699	130	1334	261	222	269	213	271	321	273
Arrive On Green	0.08	0.45	0.45	0.07	0.45	0.45	0.12	0.14	0.14	0.15	0.17	0.17
Sat Flow, veh/h	1810	3610	1537	1810	2993	586	1810	1900	1502	1810	1900	1615
Grp Volume(v), veh/h	79	1222	229	7	171	172	188	229	22	238	136	22
Grp Sat Flow(s),veh/h/ln	1810	1805	1537	1810	1805	1774	1810	1900	1502	1810	1900	1615
Q Serve(g_s), s	4.7	31.1	6.0	0.4	6.5	6.7	11.3	13.1	1.1	14.4	7.1	1.3
Cycle Q Clear(g_c), s	4.7	31.1	6.0	0.4	6.5	6.7	11.3	13.1	1.1	14.4	7.1	1.3
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	1641	699	130	804	791	222	269	213	271	321	273
V/C Ratio(X)	0.54	0.74	0.33	0.05	0.21	0.22	0.85	0.85	0.10	0.88	0.42	0.08
Avail Cap(c_a), veh/h	190	1641	699	130	804	791	359	307	242	373	322	274
HCM Platoon Ratio	1.00	1.00	1.00	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	49.3	25.1	6.1	48.2	18.9	19.0	47.9	46.7	26.6	46.4	41.5	39.0
Incr Delay (d2), s/veh	3.1	3.1	1.3	0.2	0.6	0.6	10.0	18.1	0.2	15.9	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	2.5	16.2	4.1	0.2	3.4	3.4	6.3	8.2	0.6	8.4	3.8	0.6
LnGrp Delay(d),s/veh	52.4	28.2	7.3	48.4	19.5	19.6	57.9	64.8	26.9	62.3	42.3	39.2
LnGrp LOS	D	C	A	D	B	B	E	E	C	E	D	D
Approach Vol, veh/h		1530			350			439			396	
Approach Delay, s/veh		26.3			20.2			60.0			54.1	
Approach LOS		C			C			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	13.1	55.8	21.7	20.9	14.1	54.8	18.8	23.9
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	8.0	50.7	23.0	18.0	11.7	47.0	22.1	18.9
Max Q Clear Time (g_c+I1), s	2.4	33.1	16.4	15.1	6.7	8.7	13.3	9.1
Green Ext Time (p_c), s	0.0	9.4	0.4	0.4	0.1	2.2	0.3	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Notes

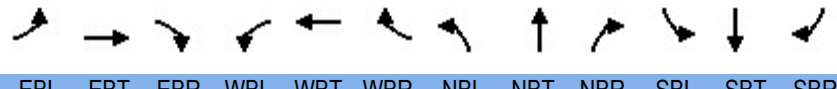


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	0	83	0	0	20	131	565	2	0	1066	288
Future Volume (veh/h)	228	0	83	0	0	20	131	565	2	0	1066	288
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	266	0	0	0	0	20	131	565	2	0	1066	142
Adj No. of Lanes	2	1	0	0	1	0	1	3	0	0	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	485	263	0	0	0	224	160	4169	15	0	3415	1054
Arrive On Green	0.14	0.00	0.00	0.00	0.00	0.14	0.09	0.78	0.78	0.00	0.66	0.66
Sat Flow, veh/h	2828	1900	0	0	0	1615	1810	5336	19	0	5358	1602
Grp Volume(v), veh/h	266	0	0	0	0	20	131	366	201	0	1066	142
Grp Sat Flow(s),veh/h/ln	1414	1900	0	0	0	1615	1810	1729	1897	0	1729	1602
Q Serve(g_s), s	10.5	0.0	0.0	0.0	0.0	1.3	8.3	3.0	3.0	0.0	10.3	3.9
Cycle Q Clear(g_c), s	11.8	0.0	0.0	0.0	0.0	1.3	8.3	3.0	3.0	0.0	10.3	3.9
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	485	263	0	0	0	224	160	2702	1482	0	3415	1054
V/C Ratio(X)	0.55	0.00	0.00	0.00	0.00	0.09	0.82	0.14	0.14	0.00	0.31	0.13
Avail Cap(c_a), veh/h	967	586	0	0	0	494	328	2702	1482	0	3415	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	0.0	0.0	0.0	0.0	43.6	52.0	3.1	3.1	0.0	8.5	7.4
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.2	7.4	0.1	0.2	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	0.0	0.0	0.6	4.4	1.5	1.6	0.0	4.9	1.8
LnGrp Delay(d),s/veh	49.7	0.0	0.0	0.0	0.0	43.8	59.4	3.2	3.3	0.0	8.8	7.7
LnGrp LOS	D					D	E	A	A		A	A
Approach Vol, veh/h		266			20			698			1208	
Approach Delay, s/veh		49.7			43.8			13.8			8.6	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.3	81.2		20.6		95.4		20.6
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	21.6	* 46		* 36		* 71		35.5
Max Q Clear Time (g_c+I1), s	10.3	12.3		13.8		5.0		3.3
Green Ext Time (p_c), s	0.2	10.0		0.9		4.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	167	45	46	95	117	122	564	42	263	617	85
Future Volume (veh/h)	65	167	45	46	95	117	122	564	42	263	617	85
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.98	0.99		0.94	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	65	167	12	46	95	76	122	564	18	263	617	76
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	200	387	321	217	193	155	150	1812	772	294	1874	230
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.08	0.50	0.50	0.16	0.58	0.58
Sat Flow, veh/h	1197	1900	1578	1216	949	759	1810	3610	1539	1810	3222	396
Grp Volume(v), veh/h	65	167	12	46	0	171	122	564	18	263	345	348
Grp Sat Flow(s),veh/h/ln	1197	1900	1578	1216	0	1709	1810	1805	1539	1810	1805	1813
Q Serve(g_s), s	5.9	8.9	0.7	4.0	0.0	10.3	7.7	10.7	0.7	16.5	11.5	11.5
Cycle Q Clear(g_c), s	16.2	8.9	0.7	12.9	0.0	10.3	7.7	10.7	0.7	16.5	11.5	11.5
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	200	387	321	217	0	348	150	1812	772	294	1050	1055
V/C Ratio(X)	0.32	0.43	0.04	0.21	0.00	0.49	0.82	0.31	0.02	0.90	0.33	0.33
Avail Cap(c_a), veh/h	337	604	502	360	0	549	279	1812	772	482	1050	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	40.3	37.1	45.9	0.0	40.9	52.3	17.0	14.6	47.6	12.5	12.6
Incr Delay (d2), s/veh	0.7	0.6	0.0	0.4	0.0	0.8	4.1	0.4	0.1	7.4	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.7	0.3	1.4	0.0	4.9	4.0	5.4	0.3	8.9	5.9	5.9
LnGrp Delay(d),s/veh	48.7	40.9	37.1	46.3	0.0	41.7	56.4	17.5	14.6	55.1	13.4	13.4
LnGrp LOS	D	D	D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		244			217			704			956	
Approach Delay, s/veh		42.8			42.6			24.2			24.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.9	63.3		28.7	14.7	72.6		28.7
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	30.8	32.9		* 37	17.9	45.9		36.9
Max Q Clear Time (g_c+I1), s	18.5	12.7		14.9	9.7	13.5		18.2
Green Ext Time (p_c), s	0.3	2.5		0.9	0.1	3.0		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1362	0	101	1302	736	0	0	0	71	290	103
Future Volume (veh/h)	100	1362	0	101	1302	736	0	0	0	71	290	103
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	100	1362	0	101	1302	531				71	290	73
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	88	1463	0	107	1134	496				241	253	215
Arrive On Green	0.07	0.55	0.00	0.11	0.60	0.60				0.25	0.25	0.25
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	100	1362	0	101	1302	531				71	290	73
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	10.5	75.6	0.0	16.8	95.5	95.5				9.6	40.5	11.2
Cycle Q Clear(g_c), s	10.5	75.6	0.0	16.8	95.5	95.5				9.6	40.5	11.2
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	88	1463	0	107	1134	496				241	253	215
V/C Ratio(X)	1.14	0.93	0.00	0.94	1.15	1.07				0.29	1.15	0.34
Avail Cap(c_a), veh/h	88	1463	0	107	1134	496				241	253	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	74.8	33.2	0.0	70.5	32.2	32.2				52.3	59.8	55.0
Incr Delay (d2), s/veh	139.9	10.9	0.0	68.7	77.3	60.3				0.7	101.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				39.5	114.3	94.4
%ile BackOfQ(50%),veh/ln	7.3	29.8	0.0	6.5	37.1	30.1				8.1	28.3	17.5
LnGrp Delay(d),s/veh	214.7	44.1	0.0	139.1	109.5	92.5				92.5	275.7	150.4
LnGrp LOS	F	D		F	F	F				F	F	F
Approach Vol, veh/h		1462			1934						434	
Approach Delay, s/veh		55.8			106.4						224.6	
Approach LOS		E			F						F	

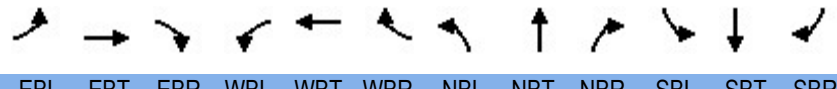
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	22.5	92.5		45.0	15.0	100.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	18.0	88.0		40.5	10.5	95.5		
Max Q Clear Time (g_c+I1), s	18.8	77.6		42.5	12.5	97.5		
Green Ext Time (p_c), s	0.0	6.7		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	100.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	301	64	333	489	443	88	1202	359	223	839	105
Future Volume (veh/h)	126	301	64	333	489	443	88	1202	359	223	839	105
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	301	55	333	489	91	88	1202	283	223	839	99
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	151	381	72	680	699	300	114	1340	591	307	1304	154
Arrive On Green	0.16	0.16	0.16	0.19	0.19	0.19	0.06	0.37	0.37	0.09	0.40	0.40
Sat Flow, veh/h	920	2317	439	3510	3610	1549	1810	3610	1592	3510	3241	382
Grp Volume(v), veh/h	254	0	228	333	489	91	88	1202	283	223	467	471
Grp Sat Flow(s),veh/h/ln	1854	0	1822	1755	1805	1549	1810	1805	1592	1755	1805	1818
Q Serve(g_s), s	10.2	0.0	9.2	6.5	9.7	3.9	3.7	24.2	10.5	4.8	16.1	16.1
Cycle Q Clear(g_c), s	10.2	0.0	9.2	6.5	9.7	3.9	3.7	24.2	10.5	4.8	16.1	16.1
Prop In Lane	0.50		0.24	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	305	0	300	680	699	300	114	1340	591	307	726	732
V/C Ratio(X)	0.83	0.00	0.76	0.49	0.70	0.30	0.77	0.90	0.48	0.73	0.64	0.64
Avail Cap(c_a), veh/h	578	0	568	1705	1754	752	329	2860	1261	616	1430	1441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	30.7	27.7	28.9	26.6	35.5	22.8	18.5	34.2	18.6	18.6
Incr Delay (d2), s/veh	2.3	0.0	1.5	0.2	0.5	0.2	4.2	0.9	0.2	1.2	0.4	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	5.4	0.0	4.8	3.2	4.9	1.7	2.0	12.2	4.6	2.4	8.0	8.0
LnGrp Delay(d),s/veh	33.4	0.0	32.2	27.9	29.4	26.8	39.7	23.7	18.7	35.5	18.9	18.9
LnGrp LOS	C		C	C	C	C	D	C	B	D	B	B
Approach Vol, veh/h		482			913			1573			1161	
Approach Delay, s/veh		32.8			28.6			23.7			22.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	35.0		15.7	10.2	32.6		18.5
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	14.0	61.0		24.0	13.5	61.0		37.4
Max Q Clear Time (g_c+I1), s	5.7	18.1		12.2	6.8	26.2		11.7
Green Ext Time (p_c), s	0.0	1.0		0.5	0.0	1.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

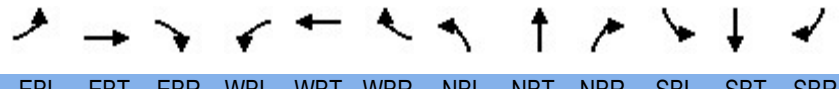


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	553	24	61	964	643	72	391	89	217	280	144
Future Volume (veh/h)	130	553	24	61	964	643	72	391	89	217	280	144
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	130	553	22	61	964	309	72	391	14	166	352	30
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	1881	75	115	1836	806	238	475	210	225	473	193
Arrive On Green	0.09	0.53	0.53	0.06	0.51	0.51	0.13	0.13	0.13	0.12	0.12	0.12
Sat Flow, veh/h	1810	3537	141	1810	3610	1586	1810	3610	1593	1810	3800	1552
Grp Volume(v), veh/h	130	282	293	61	964	309	72	391	14	166	352	30
Grp Sat Flow(s),veh/h/ln	1810	1805	1872	1810	1805	1586	1810	1805	1593	1810	1900	1552
Q Serve(g_s), s	8.8	10.8	10.9	4.1	22.4	14.9	4.5	13.2	1.0	11.1	11.2	2.2
Cycle Q Clear(g_c), s	8.8	10.8	10.9	4.1	22.4	14.9	4.5	13.2	1.0	11.1	11.2	2.2
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	960	996	115	1836	806	238	475	210	225	473	193
V/C Ratio(X)	0.83	0.29	0.29	0.53	0.53	0.38	0.30	0.82	0.07	0.74	0.74	0.16
Avail Cap(c_a), veh/h	246	960	996	140	1836	806	295	589	260	314	660	269
HCM Platoon Ratio	1.00	1.00	1.00	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	56.2	16.2	16.2	56.7	20.6	18.7	49.1	52.8	47.5	52.8	52.8	48.9
Incr Delay (d2), s/veh	10.2	0.8	0.8	2.8	1.1	1.4	0.7	7.6	0.1	5.6	2.9	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	4.9	5.6	5.8	2.1	11.4	6.8	2.3	7.1	0.4	5.9	6.1	0.9
LnGrp Delay(d),s/veh	66.4	17.0	17.0	59.6	21.7	20.1	49.8	60.4	47.7	58.4	55.7	49.2
LnGrp LOS	E	B	B	E	C	C	D	E	D	E	E	D
Approach Vol, veh/h		705			1334			477			548	
Approach Delay, s/veh		26.1			23.0			58.4			56.2	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.4	68.2		21.2	12.5	71.1		20.2
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	17.6	47.3		* 20	9.7	54.6		21.7
Max Q Clear Time (g_c+I1), s	10.8	24.4		15.2	6.1	12.9		13.2
Green Ext Time (p_c), s	0.1	7.1		1.3	0.0	3.1		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	745	147	199	1097	18	380	27	1159	147	1056	301
Future Volume (veh/h)	12	745	147	199	1097	18	380	27	1159	147	1056	301
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	745	124	199	1097	17	380	27	745	147	1056	218
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	913	150	239	1352	21	463	836	1585	279	2010	622
Arrive On Green	0.21	0.21	0.21	0.13	0.37	0.37	0.13	0.44	0.44	0.08	0.39	0.39
Sat Flow, veh/h	29	4254	697	1810	3637	56	3510	1900	3602	3510	5187	1604
Grp Volume(v), veh/h	323	276	282	199	544	570	380	27	745	147	1056	218
Grp Sat Flow(s),veh/h/ln	1822	1573	1584	1810	1805	1889	1755	1900	1201	1755	1729	1604
Q Serve(g_s), s	6.0	20.9	21.2	13.4	33.9	33.9	13.2	1.0	18.3	5.0	19.6	12.0
Cycle Q Clear(g_c), s	20.7	20.9	21.2	13.4	33.9	33.9	13.2	1.0	18.3	5.0	19.6	12.0
Prop In Lane	0.04		0.44	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	338	340	239	671	702	463	836	1585	279	2010	622
V/C Ratio(X)	0.77	0.82	0.83	0.83	0.81	0.81	0.82	0.03	0.47	0.53	0.53	0.35
Avail Cap(c_a), veh/h	506	415	418	326	846	885	559	836	1585	281	2010	622
HCM Platoon Ratio	1.00	1.00	1.00	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	46.5	46.8	46.9	52.9	35.3	35.3	52.8	19.9	24.7	55.3	29.4	27.1
Incr Delay (d2), s/veh	4.5	8.3	9.2	9.4	3.8	3.6	6.8	0.1	1.0	0.9	1.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	9.8	10.2	7.3	17.6	18.4	6.8	0.5	6.2	2.5	9.5	5.6
LnGrp Delay(d),s/veh	51.0	55.1	56.0	62.3	39.1	39.0	59.6	20.0	25.7	56.1	30.4	28.7
LnGrp LOS	D	E	E	E	D	D	E	B	C	E	C	C
Approach Vol, veh/h		881			1313			1152			1421	
Approach Delay, s/veh		53.9			42.6			36.8			32.8	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	60.1		51.5	20.0	53.5	19.6	31.8
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.0	42.8		58.6	18.9	* 33	21.5	33.0
Max Q Clear Time (g_c+I1), s	7.0	20.3		35.9	15.2	21.6	15.4	23.2
Green Ext Time (p_c), s	0.0	2.0		5.1	0.3	4.5	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	440	0	0	402	1088	170
Future Volume (veh/h)	440	0	0	402	1088	170
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	440	0	0	402	1247	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	928	0	0	1764	1356	605
Arrive On Green	0.49	0.00	0.00	0.49	0.37	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	440	0	0	402	1247	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	7.4	0.0	0.0	3.1	15.9	0.0
Cycle Q Clear(g_c), s	7.4	0.0	0.0	3.1	15.9	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	928	0	0	1764	1356	605
V/C Ratio(X)	0.47	0.00	0.00	0.23	0.92	0.00
Avail Cap(c_a), veh/h	928	0	0	1764	2233	996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.2	0.0	0.0	7.1	14.4	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.3	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	1.6	8.3	0.0
LnGrp Delay(d),s/veh	10.0	0.0	0.0	7.4	17.1	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	440			402	1247	
Approach Delay, s/veh	10.0			7.4	17.1	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		27.2				27.2		21.1
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		23.6				23.6		29.8
Max Q Clear Time (g_c+I1), s		9.4				5.1		17.9
Green Ext Time (p_c), s		0.4				0.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	216	0	351
Demand Flow Rate, veh/h	216	0	351
Vehicles Circulating, veh/h	0	351	0
Vehicles Exiting, veh/h	351	0	216
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	0.0	6.2
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	216	351
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	216	351
Cap Entry, veh/h	1130	1130
V/C Ratio	0.191	0.311
Control Delay, s/veh	4.9	6.2
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	8.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	233	34	38	344	39
Future Vol, veh/h	76	233	34	38	344	39
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	76	233	34	38	344	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	313	0	307	201
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	110	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1259	-	689	845
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1254	-	665	839
Mov Cap-2 Maneuver	-	-	-	-	665	-
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.8	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	679	-	-	1254	-
HCM Lane V/C Ratio	0.564	-	-	0.027	-
HCM Control Delay (s)	16.9	-	-	8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	3.5	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	218	445	171	1061	151	242	69	15	71	188	88
Future Volume (veh/h)	62	218	445	171	1061	151	242	69	15	71	188	88
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.92	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	62	218	199	171	1061	143	156	190	3	71	188	13
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	156	1684	717	207	1575	212	191	246	193	173	227	193
Arrive On Green	0.09	0.47	0.47	0.11	0.49	0.49	0.11	0.13	0.13	0.10	0.12	0.12
Sat Flow, veh/h	1810	3610	1538	1810	3185	429	1810	1900	1493	1810	1900	1615
Grp Volume(v), veh/h	62	218	199	171	601	603	156	190	3	71	188	13
Grp Sat Flow(s),veh/h/ln	1810	1805	1538	1810	1805	1809	1810	1900	1493	1810	1900	1615
Q Serve(g_s), s	3.4	3.6	5.3	9.7	26.4	26.5	8.8	10.1	0.1	3.9	10.1	0.7
Cycle Q Clear(g_c), s	3.4	3.6	5.3	9.7	26.4	26.5	8.8	10.1	0.1	3.9	10.1	0.7
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	1684	717	207	893	894	191	246	193	173	227	193
V/C Ratio(X)	0.40	0.13	0.28	0.83	0.67	0.67	0.82	0.77	0.02	0.41	0.83	0.07
Avail Cap(c_a), veh/h	158	1684	717	341	893	894	310	453	356	173	309	263
HCM Platoon Ratio	1.00	1.00	1.00	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	45.2	15.8	7.0	45.3	20.0	20.0	45.8	44.0	24.7	44.5	45.0	40.8
Incr Delay (d2), s/veh	1.6	0.2	1.0	8.3	4.0	4.1	8.4	5.1	0.0	1.5	12.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.8	3.2	5.3	14.0	14.1	4.9	5.7	0.1	2.0	6.1	0.3
LnGrp Delay(d),s/veh	46.9	16.0	7.9	53.6	24.1	24.1	54.2	49.1	24.8	46.0	57.5	41.0
LnGrp LOS	D	B	A	D	C	C	D	D	C	D	E	D
Approach Vol, veh/h		479			1375			349			272	
Approach Delay, s/veh		16.6			27.8			51.2			53.7	
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	17.0	53.9	15.0	18.6	14.1	56.8	16.1	17.5
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	19.7	41.1	10.0	24.9	9.1	51.7	17.9	17.0
Max Q Clear Time (g_c+I1), s	11.7	7.3	5.9	12.1	5.4	28.5	10.8	12.1
Green Ext Time (p_c), s	0.3	2.2	0.0	0.8	0.0	9.1	0.2	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

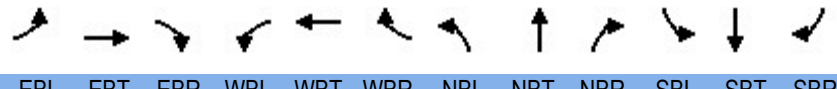


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	0	120	0	0	4	134	861	11	0	901	280
Future Volume (veh/h)	219	0	120	0	0	4	134	861	11	0	901	280
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	230	0	0	0	0	4	134	861	11	0	901	162
Adj No. of Lanes	2	1	0	0	1	0	1	3	0	0	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	502	254	0	0	0	216	163	4149	53	0	3430	1050
Arrive On Green	0.13	0.00	0.00	0.00	0.00	0.13	0.09	0.79	0.79	0.00	0.66	0.66
Sat Flow, veh/h	2870	1900	0	0	0	1615	1810	5279	67	0	5358	1588
Grp Volume(v), veh/h	230	0	0	0	0	4	134	564	308	0	901	162
Grp Sat Flow(s),veh/h/ln	1435	1900	0	0	0	1615	1810	1729	1888	0	1729	1588
Q Serve(g_s), s	8.8	0.0	0.0	0.0	0.0	0.2	8.4	4.8	4.8	0.0	8.3	4.5
Cycle Q Clear(g_c), s	9.0	0.0	0.0	0.0	0.0	0.2	8.4	4.8	4.8	0.0	8.3	4.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.04	0.00		1.00
Lane Grp Cap(c), veh/h	502	254	0	0	0	216	163	2718	1484	0	3430	1050
V/C Ratio(X)	0.46	0.00	0.00	0.00	0.00	0.02	0.82	0.21	0.21	0.00	0.26	0.15
Avail Cap(c_a), veh/h	1053	619	0	0	0	522	343	2718	1484	0	3430	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	0.0	0.0	0.0	43.6	51.8	3.2	3.2	0.0	8.1	7.4
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	7.4	0.2	0.3	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	0.0	0.0	0.1	4.5	2.3	2.6	0.0	4.0	2.0
LnGrp Delay(d),s/veh	48.2	0.0	0.0	0.0	0.0	43.7	59.2	3.3	3.5	0.0	8.2	7.7
LnGrp LOS	D					D	E	A	A		A	A
Approach Vol, veh/h		230			4			1006			1063	
Approach Delay, s/veh		48.2			43.7			10.8			8.2	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.5	81.5		20.0		96.0		20.0
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	22.6	* 43		* 38		* 69		37.5
Max Q Clear Time (g_c+I1), s	10.4	10.3		11.0		6.8		2.2
Green Ext Time (p_c), s	0.2	8.2		0.7		7.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	108	54	97	166	174	78	625	46	192	588	103
Future Volume (veh/h)	82	108	54	97	166	174	78	625	46	192	588	103
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.94	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	108	12	97	166	141	78	625	22	192	588	94
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	494	412	335	239	203	99	1790	761	220	1742	278
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.05	0.50	0.50	0.12	0.56	0.56
Sat Flow, veh/h	1065	1900	1585	1286	920	781	1810	3610	1535	1810	3096	493
Grp Volume(v), veh/h	82	108	12	97	0	307	78	625	22	192	342	340
Grp Sat Flow(s),veh/h/ln	1065	1900	1585	1286	0	1701	1810	1805	1535	1810	1805	1784
Q Serve(g_s), s	9.4	5.6	0.7	8.0	0.0	20.4	5.3	13.2	0.9	13.0	12.8	12.9
Cycle Q Clear(g_c), s	29.8	5.6	0.7	13.6	0.0	20.4	5.3	13.2	0.9	13.0	12.8	12.9
Prop In Lane	1.00		1.00	1.00		0.46	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	161	494	412	335	0	442	99	1790	761	220	1016	1004
V/C Ratio(X)	0.51	0.22	0.03	0.29	0.00	0.69	0.78	0.35	0.03	0.87	0.34	0.34
Avail Cap(c_a), veh/h	241	637	531	435	0	576	216	1790	761	404	1016	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	36.3	34.5	41.6	0.0	41.8	58.3	19.2	16.1	53.9	14.7	14.8
Incr Delay (d2), s/veh	1.8	0.2	0.0	0.4	0.0	2.0	5.0	0.5	0.1	4.1	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	2.9	3.0	0.3	2.9	0.0	9.8	2.8	6.7	0.4	6.8	6.6	6.6
LnGrp Delay(d),s/veh	57.1	36.5	34.5	42.0	0.0	43.7	63.3	19.7	16.2	58.1	15.6	15.7
LnGrp LOS	E	D	C	D		D	E	B	B	E	B	B
Approach Vol, veh/h		202			404			725			874	
Approach Delay, s/veh		44.7			43.3			24.3			25.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.3	67.1		37.6	12.0	75.4		37.6
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	27.3	39.9		* 42	14.9	52.9		41.9
Max Q Clear Time (g_c+I1), s	15.6	15.2		22.4	7.3	14.9		31.8
Green Ext Time (p_c), s	0.2	3.0		1.8	0.0	3.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	1000	0	340	1224	474	0	0	0	32	272	62
Future Volume (veh/h)	318	1000	0	340	1224	474	0	0	0	32	272	62
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	318	1000	0	340	1224	297				32	272	34
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	334	1341	0	402	1258	551				317	288	282
Arrive On Green	0.19	0.41	0.00	0.29	0.51	0.51				0.22	0.22	0.22
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	318	1000	0	340	1224	297				32	272	34
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	27.6	36.0	0.0	42.9	76.5	29.5				2.8	32.8	3.4
Cycle Q Clear(g_c), s	27.6	36.0	0.0	42.9	76.5	29.5				2.8	32.8	3.4
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	334	1341	0	402	1258	551				317	288	282
V/C Ratio(X)	0.95	0.75	0.00	0.85	0.97	0.54				0.10	0.94	0.12
Avail Cap(c_a), veh/h	336	1475	0	405	1268	555				320	291	285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	64.5	43.7	0.0	54.0	39.3	36.5				49.5	62.3	49.8
Incr Delay (d2), s/veh	36.6	1.9	0.0	15.2	19.0	1.0				0.1	37.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	110.2	130.8	128.9				0.0	136.6	0.0
%ile BackOfQ(50%),veh/ln	7.3	19.6	0.0	31.7	53.8	40.8				1.1	26.7	2.7
LnGrp Delay(d),s/veh	101.1	45.6	0.0	179.5	189.1	166.5				49.7	236.5	49.9
LnGrp LOS	F	D		F	F	F				D	F	D
Approach Vol, veh/h		1318			1861						338	
Approach Delay, s/veh		59.0			183.7						200.0	
Approach LOS		E			F						F	

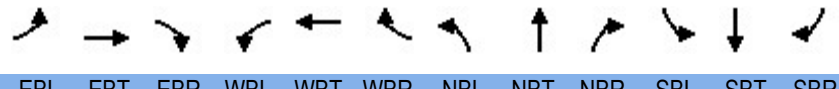
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	50.0	69.3		39.4	34.0	85.3		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	51.3	59.1		35.5	29.5	81.5		
Max Q Clear Time (g_c+I1), s	44.9	38.0		34.8	29.6	78.5		
Green Ext Time (p_c), s	0.6	7.5		0.1	0.0	2.3		

Intersection Summary		
HCM 2010 Ctrl Delay	138.5	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	487	48	353	339	260	62	868	576	365	1208	68
Future Volume (veh/h)	77	487	48	353	339	260	62	868	576	365	1208	68
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	487	43	353	339	63	62	868	385	365	1208	65
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	599	55	637	655	278	80	1079	474	452	1359	73
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.04	0.30	0.30	0.13	0.39	0.39
Sat Flow, veh/h	452	2999	277	3510	3610	1530	1810	3610	1586	3510	3478	187
Grp Volume(v), veh/h	320	0	287	353	339	63	62	868	385	365	626	647
Grp Sat Flow(s),veh/h/ln	1877	0	1851	1755	1805	1530	1810	1805	1586	1755	1805	1860
Q Serve(g_s), s	12.1	0.0	10.9	6.8	6.3	2.6	2.5	16.4	16.6	7.5	23.9	24.0
Cycle Q Clear(g_c), s	12.1	0.0	10.9	6.8	6.3	2.6	2.5	16.4	16.6	7.5	23.9	24.0
Prop In Lane	0.24		0.15	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	375	0	369	637	655	278	80	1079	474	452	705	727
V/C Ratio(X)	0.85	0.00	0.78	0.55	0.52	0.23	0.78	0.80	0.81	0.81	0.89	0.89
Avail Cap(c_a), veh/h	763	0	752	1670	1717	728	196	2499	1098	937	1548	1595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	28.0	27.5	27.3	25.8	34.9	23.9	23.9	31.3	21.0	21.0
Incr Delay (d2), s/veh	2.2	0.0	1.3	0.3	0.2	0.2	6.0	0.5	1.3	1.3	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	6.5	0.0	5.6	3.3	3.1	1.1	1.4	8.2	7.4	3.7	12.1	12.5
LnGrp Delay(d),s/veh	30.6	0.0	29.3	27.8	27.5	25.9	41.0	24.4	25.2	32.6	22.5	22.6
LnGrp LOS	C		C	C	C	C	D	C	C	C	C	C
Approach Vol, veh/h		607			755			1315			1638	
Approach Delay, s/veh		30.0			27.5			25.4			24.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	32.8		17.7	13.0	26.1		17.0
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	8.0	63.3		30.0	19.7	51.1		35.1
Max Q Clear Time (g_c+I1), s	4.5	26.0		14.1	9.5	18.6		8.8
Green Ext Time (p_c), s	0.0	1.5		0.6	0.1	1.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

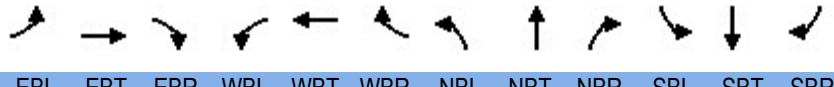


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1225	17	85	768	439	18	195	96	234	294	107
Future Volume (veh/h)	86	1225	17	85	768	439	18	195	96	234	294	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	1225	16	85	768	210	18	195	18	176	375	21
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	2007	26	131	1986	871	162	323	137	230	484	202
Arrive On Green	0.07	0.55	0.55	0.07	0.55	0.55	0.09	0.09	0.09	0.13	0.13	0.13
Sat Flow, veh/h	1810	3648	48	1810	3610	1583	1810	3610	1534	1810	3800	1586
Grp Volume(v), veh/h	86	606	635	85	768	210	18	195	18	176	375	21
Grp Sat Flow(s),veh/h/ln	1810	1805	1891	1810	1805	1583	1810	1805	1534	1810	1900	1586
Q Serve(g_s), s	5.4	26.4	26.4	5.3	14.1	8.0	1.1	6.0	1.3	10.9	11.1	1.4
Cycle Q Clear(g_c), s	5.4	26.4	26.4	5.3	14.1	8.0	1.1	6.0	1.3	10.9	11.1	1.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	993	1040	131	1986	871	162	323	137	230	484	202
V/C Ratio(X)	0.65	0.61	0.61	0.65	0.39	0.24	0.11	0.60	0.13	0.76	0.78	0.10
Avail Cap(c_a), veh/h	187	993	1040	162	1986	871	282	563	239	301	632	264
HCM Platoon Ratio	1.00	1.00	1.00	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	52.4	17.7	17.7	52.3	14.9	13.5	48.6	50.8	48.6	48.9	49.0	44.8
Incr Delay (d2), s/veh	4.0	2.8	2.7	4.9	0.6	0.7	0.3	1.8	0.4	8.2	4.5	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	2.8	13.9	14.5	2.8	7.2	3.7	0.5	3.1	0.5	6.0	6.1	0.6
LnGrp Delay(d),s/veh	56.4	20.5	20.3	57.2	15.5	14.2	48.9	52.6	49.1	57.1	53.5	45.0
LnGrp LOS	E	C	C	E	B	B	D	D	D	E	D	D
Approach Vol, veh/h		1327			1063			231			572	
Approach Delay, s/veh		22.7			18.6			52.1			54.3	
Approach LOS		C			B			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	13.0	68.4		15.1	13.0	68.4		19.5
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	12.0	48.0		* 18	10.4	49.6		19.3
Max Q Clear Time (g_c+I1), s	7.4	16.1		8.0	7.3	28.4		13.1
Green Ext Time (p_c), s	0.0	5.6		0.9	0.0	7.4		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1355	166	269	915	15	119	32	844	393	1601	216
Future Volume (veh/h)	24	1355	166	269	915	15	119	32	844	393	1601	216
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	1355	154	269	915	14	119	32	382	393	1601	130
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	1419	160	267	1793	27	297	483	915	475	1583	480
Arrive On Green	0.32	0.32	0.32	0.15	0.49	0.49	0.08	0.25	0.25	0.14	0.31	0.31
Sat Flow, veh/h	43	4450	502	1810	3638	56	3510	1900	3598	3510	5187	1572
Grp Volume(v), veh/h	556	482	495	269	454	475	119	32	382	393	1601	130
Grp Sat Flow(s),veh/h/ln	1809	1573	1613	1810	1805	1889	1755	1900	1199	1755	1729	1572
Q Serve(g_s), s	19.2	34.9	34.9	17.1	19.8	19.8	3.7	1.5	10.3	12.6	35.4	7.3
Cycle Q Clear(g_c), s	35.0	34.9	34.9	17.1	19.8	19.8	3.7	1.5	10.3	12.6	35.4	7.3
Prop In Lane	0.04		0.31	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	609	502	514	267	890	931	297	483	915	475	1583	480
V/C Ratio(X)	0.91	0.96	0.96	1.01	0.51	0.51	0.40	0.07	0.42	0.83	1.01	0.27
Avail Cap(c_a), veh/h	609	502	515	267	890	931	303	483	915	490	1583	480
HCM Platoon Ratio	1.00	1.00	1.00	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	38.4	38.8	38.8	49.5	19.9	19.9	50.3	32.8	36.1	48.8	40.3	30.5
Incr Delay (d2), s/veh	17.8	30.3	29.9	57.3	0.2	0.2	0.3	0.3	1.4	10.2	25.4	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	20.5	19.4	19.8	12.8	9.9	10.3	1.8	0.8	3.5	6.8	20.6	3.3
LnGrp Delay(d),s/veh	56.3	69.1	68.7	106.8	20.1	20.1	50.6	33.1	37.5	59.0	65.7	31.9
LnGrp LOS	E	E	E	F	C	C	D	C	D	E	F	C
Approach Vol, veh/h		1533			1198			533			2124	
Approach Delay, s/veh		64.3			39.6			40.2			62.4	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	34.6		62.2	13.3	40.5	20.2	42.0
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	15.3	29.0		57.2	9.0	* 35	16.1	37.0
Max Q Clear Time (g_c+I1), s	14.6	12.3		21.8	5.7	37.4	19.1	37.0
Green Ext Time (p_c), s	0.1	1.0		4.3	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.7
HCM 2010 LOS	E

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	534	0	0	354	1050	145
Future Volume (veh/h)	534	0	0	354	1050	145
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	534	0	0	354	1185	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	987	0	0	1875	1287	574
Arrive On Green	0.52	0.00	0.00	0.52	0.36	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	534	0	0	354	1185	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	9.9	0.0	0.0	2.8	16.6	0.0
Cycle Q Clear(g_c), s	9.9	0.0	0.0	2.8	16.6	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	987	0	0	1875	1287	574
V/C Ratio(X)	0.54	0.00	0.00	0.19	0.92	0.00
Avail Cap(c_a), veh/h	987	0	0	1875	1783	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.5	0.0	0.0	6.8	16.3	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.2	5.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	0.0	1.4	9.2	0.0
LnGrp Delay(d),s/veh	10.6	0.0	0.0	7.0	21.7	0.0
LnGrp LOS	B			A	C	
Approach Vol, veh/h	534			354	1185	
Approach Delay, s/veh	10.6			7.0	21.7	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		31.0				31.0		21.8
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		27.4				27.4		26.0
Max Q Clear Time (g_c+I1), s		11.9				4.8		18.6
Green Ext Time (p_c), s		0.5				0.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	378	305	472
Demand Flow Rate, veh/h	378	305	472
Vehicles Circulating, veh/h	252	133	101
Vehicles Exiting, veh/h	186	440	529
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.3	6.8	8.8
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	R	R	LT
Assumed Moves	R	R	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	378	305	472
Cap Entry Lane, veh/h	878	989	1021
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	378	305	472
Cap Entry, veh/h	878	989	1021
V/C Ratio	0.430	0.308	0.462
Control Delay, s/veh	9.3	6.8	8.8
LOS	A	A	A
95th %tile Queue, veh	2	1	2

Intersection	
Intersection Delay, s/veh	89.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	28	564	16	25	0	243	241	18	0	371	66
Future Vol, veh/h	62	28	564	16	25	0	243	241	18	0	371	66
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	62	28	564	16	25	0	243	241	18	0	371	66
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	143.4	13.6	67	42.7
HCM LOS	F	B	F	E

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	48%	9%	100%	0%	0%
Vol Thru, %	48%	4%	0%	100%	85%
Vol Right, %	4%	86%	0%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	502	654	16	25	437
LT Vol	243	62	16	0	0
Through Vol	241	28	0	25	371
RT Vol	18	564	0	0	66
Lane Flow Rate	502	654	16	25	437
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.987	1.234	0.044	0.065	0.859
Departure Headway (Hd)	7.835	6.793	10.583	10.059	7.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	467	536	340	358	463
Service Time	5.835	4.797	8.283	7.759	5.864
HCM Lane V/C Ratio	1.075	1.22	0.047	0.07	0.944
HCM Control Delay	67	143.4	13.8	13.5	42.7
HCM Lane LOS	F	F	B	B	E
HCM 95th-tile Q	12.7	25.2	0.1	0.2	8.8

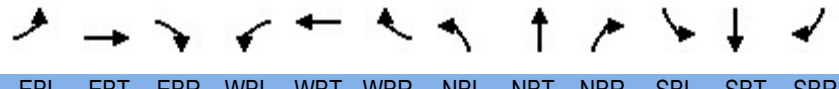


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	1258	359	7	296	143	300	251	142	259	342	184
Future Volume (veh/h)	351	1258	359	7	296	143	300	251	142	259	342	184
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.94	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	351	1258	240	7	296	122	276	285	26	259	342	70
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	382	1417	600	124	621	249	305	308	245	367	373	317
Arrive On Green	0.21	0.39	0.39	0.07	0.25	0.25	0.17	0.16	0.16	0.20	0.20	0.20
Sat Flow, veh/h	1810	3610	1529	1810	2485	995	1810	1900	1513	1810	1900	1615
Grp Volume(v), veh/h	351	1258	240	7	213	205	276	285	26	259	342	70
Grp Sat Flow(s),veh/h/ln	1810	1805	1529	1810	1805	1675	1810	1900	1513	1810	1900	1615
Q Serve(g_s), s	22.2	37.9	6.9	0.4	11.7	12.2	17.5	17.3	1.1	15.5	20.6	4.2
Cycle Q Clear(g_c), s	22.2	37.9	6.9	0.4	11.7	12.2	17.5	17.3	1.1	15.5	20.6	4.2
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	1417	600	124	451	418	305	308	245	367	373	317
V/C Ratio(X)	0.92	0.89	0.40	0.06	0.47	0.49	0.90	0.93	0.11	0.70	0.92	0.22
Avail Cap(c_a), veh/h	448	1417	600	124	451	418	340	308	245	419	391	332
HCM Platoon Ratio	1.00	1.00	1.00	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	33.1	7.0	50.8	37.2	37.4	47.6	48.2	17.3	43.2	45.9	39.4
Incr Delay (d2), s/veh	21.9	8.6	2.0	0.2	3.5	4.1	25.0	32.7	0.2	4.6	25.4	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	13.4	20.6	5.0	0.2	6.3	6.1	10.9	11.8	0.7	8.2	13.5	1.9
LnGrp Delay(d),s/veh	66.9	41.6	9.0	51.0	40.7	41.5	72.6	80.9	17.5	47.8	71.3	39.7
LnGrp LOS	E	D	A	D	D	D	E	F	B	D	E	D
Approach Vol, veh/h		1849			425			587			671	
Approach Delay, s/veh		42.2			41.3			74.2			58.9	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	50.9	28.7	24.0	29.7	34.3	24.8	27.9
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	8.0	45.8	27.0	18.9	28.9	24.9	21.9	24.0
Max Q Clear Time (g_c+I1), s	24.2	39.9	17.5	19.3	24.2	14.2	19.5	22.6
Green Ext Time (p_c), s	0.0	4.2	0.5	0.0	0.5	1.9	0.2	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	50.6
HCM 2010 LOS	D

Notes

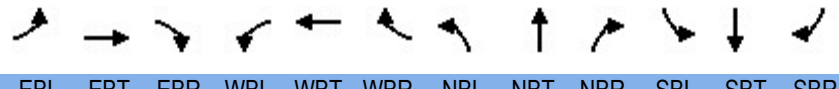


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	0	94	0	0	20	138	589	2	0	1240	285
Future Volume (veh/h)	240	0	94	0	0	20	138	589	2	0	1240	285
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	286	0	0	0	0	20	138	589	2	0	1240	148
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	502	274	0	0	0	233	167	2862	10	0	2343	1039
Arrive On Green	0.14	0.00	0.00	0.00	0.00	0.14	0.09	0.78	0.78	0.00	0.65	0.65
Sat Flow, veh/h	2828	1900	0	0	0	1615	1810	3690	13	0	3705	1601
Grp Volume(v), veh/h	286	0	0	0	0	20	138	288	303	0	1240	148
Grp Sat Flow(s),veh/h/ln	1414	1900	0	0	0	1615	1810	1805	1898	0	1805	1601
Q Serve(g_s), s	11.3	0.0	0.0	0.0	0.0	1.2	8.7	4.9	4.9	0.0	21.3	4.1
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.0	0.0	1.2	8.7	4.9	4.9	0.0	21.3	4.1
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	502	274	0	0	0	233	167	1400	1472	0	2343	1039
V/C Ratio(X)	0.57	0.00	0.00	0.00	0.00	0.09	0.83	0.21	0.21	0.00	0.53	0.14
Avail Cap(c_a), veh/h	820	488	0	0	0	411	250	1400	1472	0	2343	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	0.0	0.0	0.0	0.0	43.0	51.8	3.5	3.5	0.0	10.9	7.9
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.2	11.3	0.3	0.3	0.0	0.9	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	4.5	0.0	0.0	0.0	0.0	0.6	4.9	2.5	2.7	0.0	10.8	1.9
LnGrp Delay(d),s/veh	49.4	0.0	0.0	0.0	0.0	43.1	63.1	3.8	3.8	0.0	11.8	8.2
LnGrp LOS	D					D	E	A	A		B	A
Approach Vol, veh/h		286			20			729			1388	
Approach Delay, s/veh		49.4			43.1			15.0			11.4	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.7	80.1		21.3		94.7		21.3
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	16.0	* 57		* 30		* 77		29.5
Max Q Clear Time (g_c+I1), s	10.7	23.3		14.5		6.9		3.2
Green Ext Time (p_c), s	0.1	12.6		0.8		4.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	249	46	61	200	126	124	588	77	390	645	80
Future Volume (veh/h)	64	249	46	61	200	126	124	588	77	390	645	80
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.95	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	64	249	13	61	200	85	124	588	53	390	645	72
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	452	376	201	296	126	151	1436	607	420	1782	199
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.08	0.40	0.40	0.23	0.55	0.55
Sat Flow, veh/h	1091	1900	1580	1130	1243	528	1810	3610	1527	1810	3262	363
Grp Volume(v), veh/h	64	249	13	61	0	285	124	588	53	390	356	361
Grp Sat Flow(s),veh/h/ln	1091	1900	1580	1130	0	1772	1810	1805	1527	1810	1805	1820
Q Serve(g_s), s	6.6	13.3	0.7	5.8	0.0	16.9	7.8	13.6	2.5	24.5	13.0	13.0
Cycle Q Clear(g_c), s	23.5	13.3	0.7	19.1	0.0	16.9	7.8	13.6	2.5	24.5	13.0	13.0
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	162	452	376	201	0	422	151	1436	607	420	986	994
V/C Ratio(X)	0.39	0.55	0.03	0.30	0.00	0.68	0.82	0.41	0.09	0.93	0.36	0.36
Avail Cap(c_a), veh/h	232	573	477	277	0	541	239	1436	607	591	986	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	38.7	34.0	47.1	0.0	40.1	52.3	25.1	21.8	43.6	14.9	14.9
Incr Delay (d2), s/veh	1.2	0.8	0.0	0.6	0.0	1.8	5.8	0.9	0.3	14.3	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	2.0	7.1	0.3	1.8	0.0	8.5	4.2	7.0	1.1	13.9	6.7	6.8
LnGrp Delay(d),s/veh	51.9	39.5	34.0	47.8	0.0	41.9	58.1	26.0	22.1	57.8	15.9	15.9
LnGrp LOS	D	D	C	D		D	E	C	C	E	B	B
Approach Vol, veh/h		326			346			765			1107	
Approach Delay, s/veh		41.7			43.0			30.9			30.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.1	51.2		32.7	14.8	68.5		32.7
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	27.0	27.8		* 35	15.3	50.4		35.0
Max Q Clear Time (g_c+I1), s	26.5	15.6		21.1	9.8	15.0		25.5
Green Ext Time (p_c), s	0.5	2.3		1.4	0.1	3.1		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1535	0	147	1643	780	0	0	0	75	302	123
Future Volume (veh/h)	142	1535	0	147	1643	780	0	0	0	75	302	123
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	142	1535	0	147	1643	575				75	302	93
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	104	1521	0	104	1146	502				223	234	199
Arrive On Green	0.08	0.57	0.00	0.11	0.60	0.60				0.23	0.23	0.23
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	142	1535	0	147	1643	575				75	302	93
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	12.5	91.5	0.0	17.5	96.5	96.5				10.5	37.5	15.1
Cycle Q Clear(g_c), s	12.5	91.5	0.0	17.5	96.5	96.5				10.5	37.5	15.1
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	104	1521	0	104	1146	502				223	234	199
V/C Ratio(X)	1.36	1.01	0.00	1.41	1.43	1.15				0.34	1.29	0.47
Avail Cap(c_a), veh/h	104	1521	0	104	1146	502				223	234	199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	73.8	34.3	0.0	71.3	31.8	31.8				55.1	61.3	59.1
Incr Delay (d2), s/veh	213.2	25.3	0.0	232.3	200.3	87.0				0.9	158.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				49.0	109.0	136.6
%ile BackOfQ(50%),veh/ln	10.8	38.7	0.0	11.3	57.0	34.1				8.7	30.6	21.2
LnGrp Delay(d),s/veh	286.9	59.6	0.0	303.5	232.0	118.8				104.9	328.3	197.5
LnGrp LOS	F	F		F	F	F				F	F	F
Approach Vol, veh/h		1677			2365						470	
Approach Delay, s/veh		78.8			208.9						266.8	
Approach LOS		E			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	22.0	96.0		42.0	17.0	101.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	17.5	91.5		37.5	12.5	96.5		
Max Q Clear Time (g_c+I1), s	19.5	93.5		39.5	14.5	98.5		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		

Intersection Summary		
HCM 2010 Ctrl Delay	166.6	
HCM 2010 LOS	F	

Intersection	
Intersection Delay, s/veh	17.8
Intersection LOS	C

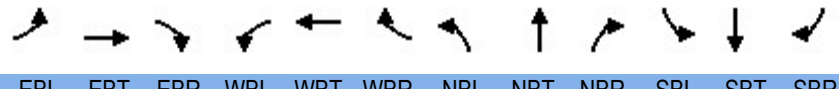
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	654	41	502	437
Demand Flow Rate, veh/h	654	41	502	437
Vehicles Circulating, veh/h	387	546	90	284
Vehicles Exiting, veh/h	334	46	951	303
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	4	4	4	0
Ped Cap Adj	0.999	0.999	0.999	1.000
Approach Delay, s/veh	29.7	6.2	9.2	11.2
Approach LOS	D	A	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	654	41	502	437
Cap Entry Lane, veh/h	767	655	1033	851
Entry HV Adj Factor	1.000	1.000	1.000	1.000
Flow Entry, veh/h	654	41	502	437
Cap Entry, veh/h	767	654	1032	851
V/C Ratio	0.853	0.063	0.486	0.514
Control Delay, s/veh	29.7	6.2	9.2	11.2
LOS	D	A	A	B
95th %tile Queue, veh	10	0	3	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	306	66	323	521	314	92	1349	324	233	879	108
Future Volume (veh/h)	130	306	66	323	521	314	92	1349	324	233	879	108
Number	7	4	14	3	8	18	1	6	16	5	2	12
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		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	130	306	56	323	521	-28	92	1349	263	233	879	102
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	151	376	71	681	700	313	118	1453	641	305	1395	162
Arrive On Green	0.16	0.16	0.16	0.19	0.19	0.00	0.07	0.40	0.40	0.09	0.43	0.43
Sat Flow, veh/h	930	2308	438	3510	3610	1615	1810	3610	1592	3510	3248	377
Grp Volume(v), veh/h	259	0	233	323	521	-28	92	1349	263	233	488	493
Grp Sat Flow(s),veh/h/ln	1854	0	1823	1755	1805	1615	1810	1805	1592	1755	1805	1820
Q Serve(g_s), s	12.5	0.0	11.2	7.5	12.4	0.0	4.6	32.7	10.8	5.9	19.4	19.4
Cycle Q Clear(g_c), s	12.5	0.0	11.2	7.5	12.4	0.0	4.6	32.7	10.8	5.9	19.4	19.4
Prop In Lane	0.50		0.24	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	302	0	297	681	700	313	118	1453	641	305	775	782
V/C Ratio(X)	0.86	0.00	0.78	0.47	0.74	-0.09	0.78	0.93	0.41	0.76	0.63	0.63
Avail Cap(c_a), veh/h	486	0	478	1342	1380	617	296	2507	1106	510	1230	1240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	36.8	32.8	34.8	0.0	42.2	26.1	19.6	40.9	20.4	20.4
Incr Delay (d2), s/veh	4.8	0.0	1.7	0.2	0.6	0.0	4.2	2.3	0.2	1.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	5.8	3.7	6.3	0.0	2.4	16.6	4.8	2.9	9.7	9.8
LnGrp Delay(d),s/veh	42.1	0.0	38.5	32.9	35.4	0.0	46.3	28.4	19.7	42.4	20.7	20.7
LnGrp LOS	D		D	C	D		D	C	B	D	C	C
Approach Vol, veh/h		492			816			1704			1214	
Approach Delay, s/veh		40.4			35.6			28.0			24.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	43.3		17.9	11.4	40.8		21.4
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	15.0	62.4		24.0	13.3	63.6		35.0
Max Q Clear Time (g_c+I1), s	6.6	21.4		14.5	7.9	34.7		14.4
Green Ext Time (p_c), s	0.0	1.1		0.4	0.0	2.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

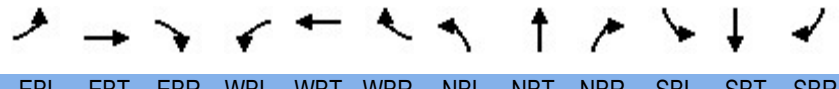


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	524	25	57	1028	447	74	417	82	222	287	149
Future Volume (veh/h)	135	524	25	57	1028	447	74	417	82	222	287	149
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	135	524	23	57	1028	113	74	417	17	170	360	35
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	1850	81	112	1798	790	250	498	220	228	478	195
Arrive On Green	0.09	0.53	0.53	0.06	0.50	0.50	0.14	0.14	0.14	0.13	0.13	0.13
Sat Flow, veh/h	1810	3520	154	1810	3610	1586	1810	3610	1593	1810	3800	1552
Grp Volume(v), veh/h	135	268	279	57	1028	113	74	417	17	170	360	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1870	1810	1805	1586	1810	1805	1593	1810	1900	1552
Q Serve(g_s), s	9.2	10.4	10.4	3.8	25.0	4.8	4.6	14.1	1.2	11.3	11.4	2.5
Cycle Q Clear(g_c), s	9.2	10.4	10.4	3.8	25.0	4.8	4.6	14.1	1.2	11.3	11.4	2.5
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	948	982	112	1798	790	250	498	220	228	478	195
V/C Ratio(X)	0.83	0.28	0.28	0.51	0.57	0.14	0.30	0.84	0.08	0.75	0.75	0.18
Avail Cap(c_a), veh/h	237	948	982	136	1798	790	294	586	259	308	648	265
HCM Platoon Ratio	1.00	1.00	1.00	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	56.0	16.5	16.5	56.8	22.0	17.0	48.4	52.5	47.0	52.7	52.8	48.9
Incr Delay (d2), s/veh	13.1	0.7	0.7	2.6	1.3	0.4	0.7	9.1	0.1	6.5	3.4	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	5.2	5.3	5.5	2.0	12.8	2.2	2.3	7.6	0.5	6.1	6.2	1.1
LnGrp Delay(d),s/veh	69.1	17.3	17.3	59.4	23.3	17.3	49.1	61.6	47.1	59.2	56.1	49.3
LnGrp LOS	E	B	B	E	C	B	D	E	D	E	E	D
Approach Vol, veh/h		682			1198			508			565	
Approach Delay, s/veh		27.5			24.5			59.3			56.6	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	66.9		21.9	12.4	70.3		20.4
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	16.4	48.4		* 20	9.4	55.4		21.3
Max Q Clear Time (g_c+I1), s	11.2	27.0		16.1	5.8	12.4		13.4
Green Ext Time (p_c), s	0.1	6.8		1.2	0.0	2.9		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.3
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	706	156	171	1170	15	374	27	1291	192	1114	316
Future Volume (veh/h)	12	706	156	171	1170	15	374	27	1291	192	1114	316
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	706	124	171	1170	14	374	27	845	192	1114	236
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	865	149	211	1316	16	457	857	1625	281	2079	643
Arrive On Green	0.22	0.22	0.22	0.12	0.36	0.36	0.13	0.45	0.45	0.08	0.40	0.40
Sat Flow, veh/h	20	3957	682	1810	3652	44	3510	1900	3603	3510	5187	1604
Grp Volume(v), veh/h	271	282	289	171	578	606	374	27	845	192	1114	236
Grp Sat Flow(s),veh/h/ln	1498	1573	1588	1810	1805	1891	1755	1900	1201	1755	1729	1604
Q Serve(g_s), s	2.3	21.3	21.7	11.5	37.7	37.7	13.0	1.0	21.0	6.7	20.5	12.9
Cycle Q Clear(g_c), s	22.3	21.3	21.7	11.5	37.7	37.7	13.0	1.0	21.0	6.7	20.5	12.9
Prop In Lane	0.04		0.43	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	344	347	211	650	681	457	857	1625	281	2079	643
V/C Ratio(X)	0.76	0.82	0.83	0.81	0.89	0.89	0.82	0.03	0.52	0.68	0.54	0.37
Avail Cap(c_a), veh/h	420	403	406	288	794	832	559	857	1625	337	2079	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	46.5	46.6	53.8	37.6	37.6	52.9	19.1	24.6	56.0	28.6	26.3
Incr Delay (d2), s/veh	5.2	9.5	10.5	8.3	9.3	9.0	6.4	0.1	1.2	2.8	1.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	10.2	10.6	6.2	20.5	21.4	6.7	0.5	7.1	3.3	10.0	6.0
LnGrp Delay(d),s/veh	50.2	56.0	57.1	62.2	47.0	46.6	59.3	19.2	25.8	58.8	29.6	27.9
LnGrp LOS	D	E	E	E	D	D	E	B	C	E	C	C
Approach Vol, veh/h		842			1355			1246			1542	
Approach Delay, s/veh		54.5			48.7			35.7			33.0	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	61.5		50.0	19.8	55.2	17.7	32.3
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.0	44.4		55.0	18.9	* 37	18.9	32.0
Max Q Clear Time (g_c+I1), s	13.7	23.0		39.7	15.0	22.5	13.5	24.3
Green Ext Time (p_c), s	0.1	2.3		4.9	0.3	5.3	0.1	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	41.6
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	378	0	0	359	1121	111
Future Volume (veh/h)	378	0	0	359	1121	111
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	378	0	0	359	1225	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	935	0	0	1776	1337	597
Arrive On Green	0.49	0.00	0.00	0.49	0.37	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	378	0	0	359	1225	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	6.0	0.0	0.0	2.7	15.4	0.0
Cycle Q Clear(g_c), s	6.0	0.0	0.0	2.7	15.4	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	935	0	0	1776	1337	597
V/C Ratio(X)	0.40	0.00	0.00	0.20	0.92	0.00
Avail Cap(c_a), veh/h	935	0	0	1776	2282	1018
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.7	0.0	0.0	6.8	14.3	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.3	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	1.4	7.9	0.0
LnGrp Delay(d),s/veh	9.0	0.0	0.0	7.1	16.4	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	378			359	1225	
Approach Delay, s/veh	9.0			7.1	16.4	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		27.0				27.0		20.6
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		23.4				23.4		30.0
Max Q Clear Time (g_c+I1), s		8.0				4.7		17.4
Green Ext Time (p_c), s		0.4				0.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	380	628	469
Demand Flow Rate, veh/h	380	628	469
Vehicles Circulating, veh/h	529	256	100
Vehicles Exiting, veh/h	355	313	809
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	15.2	17.4	8.8
Approach LOS	C	C	A

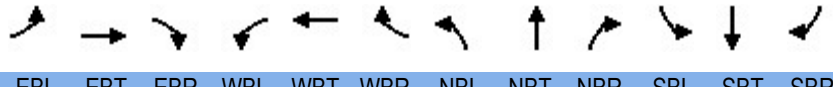
Lane	Left	Left	Left
Designated Moves	R	R	LT
Assumed Moves	R	R	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	380	628	469
Cap Entry Lane, veh/h	666	875	1022
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	380	628	469
Cap Entry, veh/h	666	875	1022
V/C Ratio	0.571	0.718	0.459
Control Delay, s/veh	15.2	17.4	8.8
LOS	C	C	A
95th %tile Queue, veh	4	6	2

Intersection	
Intersection Delay, s/veh	223.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	25	337	20	29	0	442	577	11	0	214	100
Future Vol, veh/h	51	25	337	20	29	0	442	577	11	0	214	100
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	51	25	337	20	29	0	442	577	11	0	214	100
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	28.5	13.7	373.2	19.7
HCM LOS	D	B	F	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	43%	12%	100%	0%	0%
Vol Thru, %	56%	6%	0%	100%	68%
Vol Right, %	1%	82%	0%	0%	32%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1030	413	20	29	314
LT Vol	442	51	20	0	0
Through Vol	577	25	0	29	214
RT Vol	11	337	0	0	100
Lane Flow Rate	1030	413	20	29	314
Geometry Grp	2	5	7	7	2
Degree of Util (X)	1.778	0.723	0.049	0.067	0.559
Departure Headway (Hd)	6.215	7.752	10.691	10.166	7.563
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	587	471	337	355	480
Service Time	4.268	5.752	8.391	7.866	5.563
HCM Lane V/C Ratio	1.755	0.877	0.059	0.082	0.654
HCM Control Delay	373.2	28.5	13.9	13.6	19.7
HCM Lane LOS	F	D	B	B	C
HCM 95th-tile Q	62	5.8	0.2	0.2	3.4

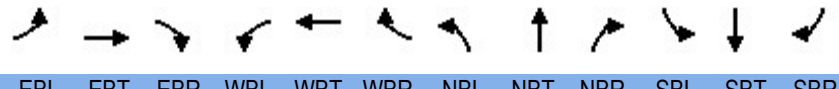


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	223	458	176	1099	75	249	366	15	126	306	313
Future Volume (veh/h)	149	223	458	176	1099	75	249	366	15	126	306	313
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	149	223	212	176	1099	67	249	366	3	126	306	238
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	179	1327	561	209	1324	81	279	406	328	220	344	293
Arrive On Green	0.10	0.37	0.37	0.12	0.38	0.38	0.15	0.21	0.21	0.12	0.18	0.18
Sat Flow, veh/h	1810	3610	1526	1810	3449	210	1810	1900	1533	1810	1900	1615
Grp Volume(v), veh/h	149	223	212	176	575	591	249	366	3	126	306	238
Grp Sat Flow(s),veh/h/ln	1810	1805	1526	1810	1805	1854	1810	1900	1533	1810	1900	1615
Q Serve(g_s), s	9.0	4.7	7.6	10.7	32.2	32.2	15.1	21.0	0.1	7.3	17.6	15.8
Cycle Q Clear(g_c), s	9.0	4.7	7.6	10.7	32.2	32.2	15.1	21.0	0.1	7.3	17.6	15.8
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	1327	561	209	693	712	279	406	328	220	344	293
V/C Ratio(X)	0.83	0.17	0.38	0.84	0.83	0.83	0.89	0.90	0.01	0.57	0.89	0.81
Avail Cap(c_a), veh/h	193	1327	561	303	693	712	306	474	383	220	374	318
HCM Platoon Ratio	1.00	1.00	1.00	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	49.4	23.8	11.5	48.4	31.1	31.1	46.4	42.8	19.9	46.4	44.6	43.9
Incr Delay (d2), s/veh	24.2	0.3	1.9	13.4	11.0	10.8	25.1	18.3	0.0	3.6	21.0	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	2.4	4.4	6.1	18.1	18.6	9.5	13.0	0.1	3.9	11.2	8.2
LnGrp Delay(d),s/veh	73.6	24.1	13.4	61.9	42.2	42.0	71.4	61.0	19.9	49.9	65.6	57.8
LnGrp LOS	E	C	B	E	D	D	E	E	B	D	E	E
Approach Vol, veh/h		584			1342			618			670	
Approach Delay, s/veh		32.8			44.7			65.0			59.9	
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	18.0	46.2	18.6	29.0	16.2	48.0	22.3	25.2
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	12.9	41.1	13.6	23.9	11.1	42.9	17.2	20.2
Max Q Clear Time (g_c+I1), s	11.7	9.6	9.3	23.0	11.0	34.2	17.1	19.6
Green Ext Time (p_c), s	0.2	2.2	0.1	0.9	0.0	4.8	0.1	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	49.6
HCM 2010 LOS	D

Notes

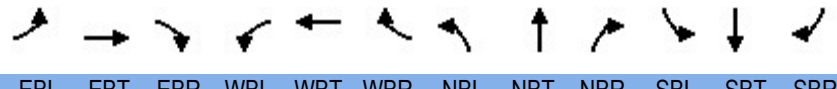


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	0	130	0	0	4	148	892	11	0	960	286
Future Volume (veh/h)	206	0	130	0	0	4	148	892	11	0	960	286
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	210	0	0	0	0	4	148	892	11	0	960	179
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	485	243	0	0	0	207	178	2892	36	0	2380	1047
Arrive On Green	0.13	0.00	0.00	0.00	0.00	0.13	0.10	0.79	0.79	0.00	0.66	0.66
Sat Flow, veh/h	2870	1900	0	0	0	1615	1810	3652	45	0	3705	1588
Grp Volume(v), veh/h	210	0	0	0	0	4	148	441	462	0	960	179
Grp Sat Flow(s),veh/h/ln	1435	1900	0	0	0	1615	1810	1805	1892	0	1805	1588
Q Serve(g_s), s	8.0	0.0	0.0	0.0	0.0	0.3	9.3	7.8	7.8	0.0	14.3	5.0
Cycle Q Clear(g_c), s	8.3	0.0	0.0	0.0	0.0	0.3	9.3	7.8	7.8	0.0	14.3	5.0
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	485	243	0	0	0	207	178	1429	1498	0	2380	1047
V/C Ratio(X)	0.43	0.00	0.00	0.00	0.00	0.02	0.83	0.31	0.31	0.00	0.40	0.17
Avail Cap(c_a), veh/h	905	521	0	0	0	439	312	1429	1498	0	2380	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	0.0	0.0	0.0	44.2	51.4	3.3	3.3	0.0	9.2	7.6
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	7.4	0.6	0.5	0.0	0.5	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	3.2	0.0	0.0	0.0	0.0	0.1	5.0	4.0	4.2	0.0	7.2	2.3
LnGrp Delay(d),s/veh	48.4	0.0	0.0	0.0	0.0	44.3	58.7	3.9	3.9	0.0	9.7	7.9
LnGrp LOS	D					D	E	A	A		A	A
Approach Vol, veh/h		210			4			1051			1139	
Approach Delay, s/veh		48.4			44.3			11.6			9.4	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	15.4	81.3		19.3		96.7		19.3
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	20.6	* 51		* 32		* 75		31.5
Max Q Clear Time (g_c+I1), s	11.3	16.3		10.3		9.8		2.3
Green Ext Time (p_c), s	0.2	9.2		0.6		7.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	175	55	176	286	102	80	651	83	223	620	97
Future Volume (veh/h)	72	175	55	176	286	102	80	651	83	223	620	97
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.94	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	175	13	176	286	69	80	651	59	223	620	89
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	151	512	428	294	394	95	102	1693	719	251	1737	249
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.47	0.47	0.14	0.55	0.55
Sat Flow, veh/h	1022	1900	1585	1210	1459	352	1810	3610	1532	1810	3148	451
Grp Volume(v), veh/h	72	175	13	176	0	355	80	651	59	223	355	354
Grp Sat Flow(s),veh/h/ln	1022	1900	1585	1210	0	1811	1810	1805	1532	1810	1805	1794
Q Serve(g_s), s	8.6	9.3	0.8	17.1	0.0	22.3	5.5	14.6	2.7	15.1	13.7	13.8
Cycle Q Clear(g_c), s	30.9	9.3	0.8	26.4	0.0	22.3	5.5	14.6	2.7	15.1	13.7	13.8
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	151	512	428	294	0	489	102	1693	719	251	996	990
V/C Ratio(X)	0.48	0.34	0.03	0.60	0.00	0.73	0.79	0.38	0.08	0.89	0.36	0.36
Avail Cap(c_a), veh/h	226	652	544	387	0	627	201	1693	719	418	996	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	36.7	33.6	47.3	0.0	41.5	58.2	21.5	18.3	52.9	15.6	15.7
Incr Delay (d2), s/veh	1.7	0.3	0.0	1.4	0.0	2.6	5.0	0.7	0.2	7.0	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	2.5	4.9	0.3	5.8	0.0	11.5	2.9	7.4	1.2	8.0	7.1	7.1
LnGrp Delay(d),s/veh	57.2	37.0	33.6	48.8	0.0	44.1	63.2	22.2	18.6	59.8	16.6	16.7
LnGrp LOS	E	D	C	D		D	E	C	B	E	B	B
Approach Vol, veh/h		260			531			790			932	
Approach Delay, s/veh		42.4			45.6			26.1			27.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.5	63.7		38.8	12.1	74.1		38.8
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	28.9	37.9		* 43	13.9	52.9		42.9
Max Q Clear Time (g_c+I1), s	17.1	16.6		28.4	7.5	15.8		32.9
Green Ext Time (p_c), s	0.2	3.1		2.0	0.0	3.1		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1058	0	508	1418	541	0	0	0	32	363	109
Future Volume (veh/h)	350	1058	0	508	1418	541	0	0	0	32	363	109
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	350	1058	0	508	1418	362				32	363	81
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	300	1056	0	466	1243	544				353	321	314
Arrive On Green	0.17	0.29	0.00	0.38	0.50	0.50				0.25	0.25	0.25
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	350	1058	0	508	1418	362				32	363	81
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	26.5	46.8	0.0	60.2	80.5	40.0				2.8	39.5	8.2
Cycle Q Clear(g_c), s	26.5	46.8	0.0	60.2	80.5	40.0				2.8	39.5	8.2
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	300	1056	0	466	1243	544				353	321	314
V/C Ratio(X)	1.17	1.00	0.00	1.09	1.14	0.67				0.09	1.13	0.26
Avail Cap(c_a), veh/h	300	1056	0	466	1243	544				353	321	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	66.8	56.6	0.0	49.9	39.8	39.7				46.4	60.3	48.5
Incr Delay (d2), s/veh	105.5	28.2	0.0	68.4	73.6	3.1				0.1	90.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	129.6	116.7	180.5				0.0	118.5	0.0
%ile BackOfQ(50%),veh/ln	22.0	27.4	0.0	49.4	65.0	51.6				1.1	35.2	6.3
LnGrp Delay(d),s/veh	172.2	84.8	0.0	247.9	230.1	223.3				46.5	269.2	48.9
LnGrp LOS	F	F		F	F	F				D	F	D
Approach Vol, veh/h		1408			2288						476	
Approach Delay, s/veh		106.5			232.9						216.8	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	64.7	51.3		44.0	31.0	85.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	60.3	46.8		39.5	26.5	80.5		
Max Q Clear Time (g_c+I1), s	62.2	48.8		41.5	28.5	82.5		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		

Intersection Summary		
HCM 2010 Ctrl Delay	188.4	
HCM 2010 LOS	F	

Intersection	
Intersection Delay, s/veh	29.7
Intersection LOS	D

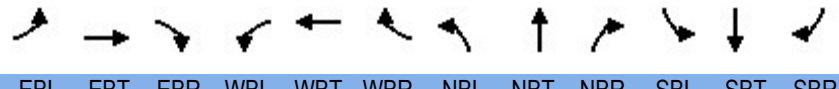
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	413	49	1030	314
Demand Flow Rate, veh/h	413	49	1030	314
Vehicles Circulating, veh/h	234	1070	76	491
Vehicles Exiting, veh/h	571	36	571	628
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	4	4	4	0
Ped Cap Adj	0.999	1.000	0.999	1.000
Approach Delay, s/veh	9.8	11.3	44.0	11.7
Approach LOS	A	B	E	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	413	49	1030	314
Cap Entry Lane, veh/h	894	388	1047	692
Entry HV Adj Factor	1.000	1.000	1.000	1.000
Flow Entry, veh/h	413	49	1030	314
Cap Entry, veh/h	894	388	1047	692
V/C Ratio	0.462	0.126	0.984	0.454
Control Delay, s/veh	9.8	11.3	44.0	11.7
LOS	A	B	E	B
95th %tile Queue, veh	2	0	19	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	496	48	369	355	272	62	868	587	371	1208	68
Future Volume (veh/h)	77	496	48	369	355	272	62	868	587	371	1208	68
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	496	43	369	355	75	62	868	396	371	1208	65
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	605	55	644	662	281	80	1089	479	455	1370	74
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.04	0.30	0.30	0.13	0.39	0.39
Sat Flow, veh/h	446	3010	273	3510	3610	1531	1810	3610	1587	3510	3478	187
Grp Volume(v), veh/h	324	0	292	369	355	75	62	868	396	371	626	647
Grp Sat Flow(s),veh/h/ln	1878	0	1851	1755	1805	1531	1810	1805	1587	1755	1805	1860
Q Serve(g_s), s	12.8	0.0	11.4	7.3	6.8	3.2	2.6	16.9	17.8	7.9	24.7	24.7
Cycle Q Clear(g_c), s	12.8	0.0	11.4	7.3	6.8	3.2	2.6	16.9	17.8	7.9	24.7	24.7
Prop In Lane	0.24		0.15	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	378	0	372	644	662	281	80	1089	479	455	711	733
V/C Ratio(X)	0.86	0.00	0.78	0.57	0.54	0.27	0.78	0.80	0.83	0.81	0.88	0.88
Avail Cap(c_a), veh/h	736	0	726	1610	1655	702	189	2372	1043	940	1493	1538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	0.0	29.0	28.5	28.3	26.8	36.2	24.6	24.9	32.4	21.5	21.6
Incr Delay (d2), s/veh	2.2	0.0	1.4	0.3	0.3	0.2	6.0	0.5	1.4	1.4	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	6.0	3.6	3.4	1.4	1.4	8.5	7.9	3.9	12.5	12.9
LnGrp Delay(d),s/veh	31.8	0.0	30.4	28.8	28.6	27.0	42.2	25.1	26.3	33.8	23.0	23.0
LnGrp LOS	C		C	C	C	C	D	C	C	C	C	C
Approach Vol, veh/h		616			799			1326			1644	
Approach Delay, s/veh		31.1			28.5			26.3			25.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	34.1		18.4	13.4	27.1		17.6
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	8.0	63.3		30.0	20.5	50.3		35.1
Max Q Clear Time (g_c+I1), s	4.6	26.7		14.8	9.9	19.8		9.3
Green Ext Time (p_c), s	0.0	1.5		0.6	0.1	1.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

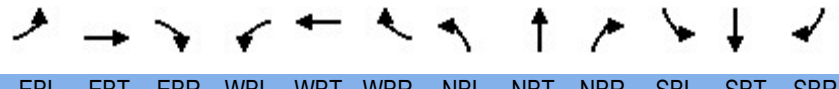


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1251	17	87	812	440	18	195	97	235	294	107
Future Volume (veh/h)	86	1251	17	87	812	440	18	195	97	235	294	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	1251	16	87	812	211	18	195	19	176	376	21
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	2006	26	132	1985	870	162	323	137	231	484	202
Arrive On Green	0.07	0.55	0.55	0.07	0.55	0.55	0.09	0.09	0.09	0.13	0.13	0.13
Sat Flow, veh/h	1810	3649	47	1810	3610	1583	1810	3610	1534	1810	3800	1586
Grp Volume(v), veh/h	86	619	648	87	812	211	18	195	19	176	376	21
Grp Sat Flow(s),veh/h/ln	1810	1805	1891	1810	1805	1583	1810	1805	1534	1810	1900	1586
Q Serve(g_s), s	5.4	27.2	27.3	5.4	15.2	8.0	1.1	6.0	1.3	10.9	11.1	1.4
Cycle Q Clear(g_c), s	5.4	27.2	27.3	5.4	15.2	8.0	1.1	6.0	1.3	10.9	11.1	1.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	992	1039	132	1985	870	162	323	137	231	484	202
V/C Ratio(X)	0.65	0.62	0.62	0.66	0.41	0.24	0.11	0.60	0.14	0.76	0.78	0.10
Avail Cap(c_a), veh/h	187	992	1039	162	1985	870	282	563	239	301	632	264
HCM Platoon Ratio	1.00	1.00	1.00	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	52.4	17.9	17.9	52.4	15.2	13.6	48.6	50.8	48.7	48.9	49.0	44.7
Incr Delay (d2), s/veh	4.0	3.0	2.8	5.6	0.6	0.7	0.3	1.8	0.5	8.1	4.5	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	2.8	14.4	15.0	2.9	7.7	3.7	0.5	3.1	0.6	6.0	6.2	0.6
LnGrp Delay(d),s/veh	56.4	20.8	20.7	58.0	15.8	14.2	48.9	52.6	49.1	57.0	53.5	45.0
LnGrp LOS	E	C	C	E	B	B	D	D	D	E	D	D
Approach Vol, veh/h		1353			1110			232			573	
Approach Delay, s/veh		23.0			18.8			52.0			54.3	
Approach LOS		C			B			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	13.0	68.4		15.1	13.1	68.4		19.5
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	12.0	48.0		* 18	10.4	49.6		19.3
Max Q Clear Time (g_c+I1), s	7.4	17.2		8.0	7.4	29.3		13.1
Green Ext Time (p_c), s	0.0	6.0		0.9	0.0	7.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1384	166	282	962	15	119	32	853	411	1601	216
Future Volume (veh/h)	24	1384	166	282	962	15	119	32	853	411	1601	216
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	1384	154	282	962	14	119	32	391	411	1601	130
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	1422	157	267	1795	26	297	474	897	493	1583	480
Arrive On Green	0.32	0.32	0.32	0.15	0.49	0.49	0.08	0.25	0.25	0.14	0.31	0.31
Sat Flow, veh/h	42	4459	493	1810	3641	53	3510	1900	3598	3510	5187	1572
Grp Volume(v), veh/h	565	492	505	282	477	499	119	32	391	411	1601	130
Grp Sat Flow(s),veh/h/ln	1805	1573	1616	1810	1805	1889	1755	1900	1199	1755	1729	1572
Q Serve(g_s), s	20.2	35.9	35.9	17.1	21.1	21.1	3.7	1.5	10.6	13.2	35.4	7.3
Cycle Q Clear(g_c), s	36.0	35.9	35.9	17.1	21.1	21.1	3.7	1.5	10.6	13.2	35.4	7.3
Prop In Lane	0.04		0.30	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	608	502	515	267	890	932	297	474	897	493	1583	480
V/C Ratio(X)	0.93	0.98	0.98	1.06	0.54	0.54	0.40	0.07	0.44	0.83	1.01	0.27
Avail Cap(c_a), veh/h	608	502	515	267	890	932	303	474	897	508	1583	480
HCM Platoon Ratio	1.00	1.00	1.00	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	38.8	39.1	39.1	49.5	20.3	20.3	50.3	33.3	36.7	48.5	40.3	30.5
Incr Delay (d2), s/veh	20.7	34.7	34.3	71.0	0.3	0.3	0.3	0.3	1.5	10.4	25.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.4	20.4	20.9	13.8	10.5	11.0	1.8	0.8	3.6	7.1	20.6	3.3
LnGrp Delay(d),s/veh	59.4	73.8	73.4	120.4	20.6	20.6	50.6	33.5	38.2	58.9	65.8	31.9
LnGrp LOS	E	E	E	F	C	C	D	C	D	E	F	C
Approach Vol, veh/h		1562			1258			542			2142	
Approach Delay, s/veh		68.5			43.0			40.7			62.4	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.8	34.0		62.2	13.3	40.5	20.2	42.0
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	15.3	28.4		57.2	9.0	* 35	16.1	37.0
Max Q Clear Time (g_c+I1), s	15.2	12.6		23.1	5.7	37.4	19.1	38.0
Green Ext Time (p_c), s	0.1	1.0		4.5	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.6
HCM 2010 LOS	E

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	590	0	0	451	1050	161
Future Volume (veh/h)	590	0	0	451	1050	161
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	590	0	0	451	1200	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	981	0	0	1864	1301	580
Arrive On Green	0.52	0.00	0.00	0.52	0.36	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	590	0	0	451	1200	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	11.6	0.0	0.0	3.7	16.9	0.0
Cycle Q Clear(g_c), s	11.6	0.0	0.0	3.7	16.9	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	981	0	0	1864	1301	580
V/C Ratio(X)	0.60	0.00	0.00	0.24	0.92	0.00
Avail Cap(c_a), veh/h	981	0	0	1864	1773	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.0	0.0	0.0	7.1	16.3	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.3	5.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.0	1.9	9.4	0.0
LnGrp Delay(d),s/veh	11.7	0.0	0.0	7.4	22.0	0.0
LnGrp LOS	B			A	C	
Approach Vol, veh/h	590			451	1200	
Approach Delay, s/veh	11.7			7.4	22.0	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		31.0				31.0		22.1
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		27.4				27.4		26.0
Max Q Clear Time (g_c+I1), s		13.6				5.7		18.9
Green Ext Time (p_c), s		0.6				0.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	381	338	536
Demand Flow Rate, veh/h	381	338	536
Vehicles Circulating, veh/h	285	136	101
Vehicles Exiting, veh/h	189	501	565
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.9	7.3	10.0
Approach LOS	A	A	A

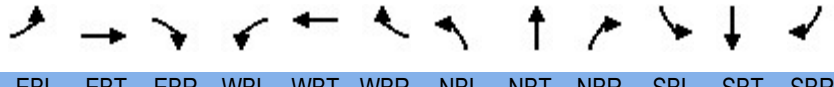
Lane	Left	Left	Left
Designated Moves	R	R	LT
Assumed Moves	R	R	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	381	338	536
Cap Entry Lane, veh/h	850	986	1021
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	381	338	536
Cap Entry, veh/h	850	986	1021
V/C Ratio	0.448	0.343	0.525
Control Delay, s/veh	9.9	7.3	10.0
LOS	A	A	A
95th %tile Queue, veh	2	2	3

Intersection	
Intersection Delay, s/veh	112.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	28	564	16	25	0	243	248	18	0	387	111
Future Vol, veh/h	87	28	564	16	25	0	243	248	18	0	387	111
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	87	28	564	16	25	0	243	248	18	0	387	111
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	175.7	14.2	79.3	67.6
HCM LOS	F	B	F	F

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	48%	13%	100%	0%	0%
Vol Thru, %	49%	4%	0%	100%	78%
Vol Right, %	4%	83%	0%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	509	679	16	25	498
LT Vol	243	87	16	0	0
Through Vol	248	28	0	25	387
RT Vol	18	564	0	0	111
Lane Flow Rate	509	679	16	25	498
Geometry Grp	2	5	7	7	2
Degree of Util (X)	1.027	1.312	0.045	0.067	0.985
Departure Headway (Hd)	8.229	7.068	11.151	10.625	8.08
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	443	523	323	339	453
Service Time	6.229	5.068	8.851	8.325	6.08
HCM Lane V/C Ratio	1.149	1.298	0.05	0.074	1.099
HCM Control Delay	79.3	175.7	14.4	14.1	67.6
HCM Lane LOS	F	F	B	B	F
HCM 95th-tile Q	13.7	28.6	0.1	0.2	12.4

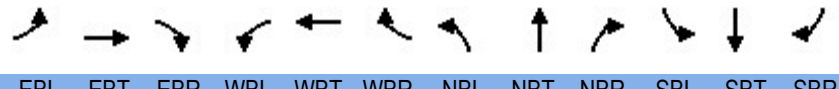


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	1258	359	7	296	146	300	251	142	267	342	192
Future Volume (veh/h)	355	1258	359	7	296	146	300	251	142	267	342	192
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.94	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	355	1258	240	7	296	125	276	285	26	267	342	78
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	385	1495	635	121	661	271	302	321	256	328	348	296
Arrive On Green	0.21	0.41	0.41	0.07	0.27	0.27	0.17	0.17	0.17	0.18	0.18	0.18
Sat Flow, veh/h	1810	3610	1532	1810	2466	1012	1810	1900	1517	1810	1900	1615
Grp Volume(v), veh/h	355	1258	240	7	214	207	276	285	26	267	342	78
Grp Sat Flow(s),veh/h/ln	1810	1805	1532	1810	1805	1673	1810	1900	1517	1810	1900	1615
Q Serve(g_s), s	23.1	37.6	7.1	0.4	11.8	12.4	18.0	17.6	1.1	17.0	21.5	5.0
Cycle Q Clear(g_c), s	23.1	37.6	7.1	0.4	11.8	12.4	18.0	17.6	1.1	17.0	21.5	5.0
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1495	635	121	484	449	302	321	256	328	348	296
V/C Ratio(X)	0.92	0.84	0.38	0.06	0.44	0.46	0.92	0.89	0.10	0.81	0.98	0.26
Avail Cap(c_a), veh/h	442	1495	635	121	484	449	302	380	303	328	348	296
HCM Platoon Ratio	1.00	1.00	1.00	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	46.3	31.6	7.3	52.5	36.5	36.7	49.2	48.8	17.4	47.2	48.8	42.0
Incr Delay (d2), s/veh	23.1	5.9	1.7	0.2	2.9	3.4	30.9	19.5	0.2	14.6	43.2	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	14.0	19.9	4.9	0.2	6.3	6.2	11.6	11.0	0.7	9.9	15.5	2.2
LnGrp Delay(d),s/veh	69.4	37.5	9.0	52.7	39.4	40.0	80.0	68.3	17.5	61.8	92.0	42.5
LnGrp LOS	E	D	A	D	D	D	F	E	B	E	F	D
Approach Vol, veh/h		1853			428			587			687	
Approach Delay, s/veh		39.9			39.9			71.6			74.6	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.1	54.8	26.7	25.4	30.6	37.3	25.1	27.0
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	28.0	49.7	18.0	24.0	29.3	28.4	20.0	22.0
Max Q Clear Time (g_c+I1), s	25.4	39.6	19.0	19.6	25.1	14.4	20.0	23.5
Green Ext Time (p_c), s	0.0	6.6	0.0	0.7	0.5	2.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.9
HCM 2010 LOS	D

Notes

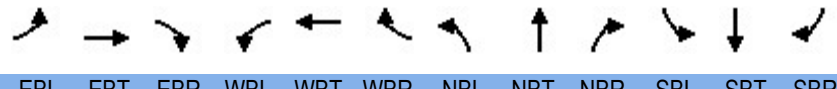


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	0	98	0	0	20	145	593	2	0	1246	292
Future Volume (veh/h)	244	0	98	0	0	20	145	593	2	0	1246	292
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	293	0	0	0	0	20	145	593	2	0	1246	155
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	508	278	0	0	0	237	174	2854	10	0	2320	1029
Arrive On Green	0.15	0.00	0.00	0.00	0.00	0.15	0.10	0.77	0.77	0.00	0.64	0.64
Sat Flow, veh/h	2828	1900	0	0	0	1615	1810	3690	12	0	3705	1601
Grp Volume(v), veh/h	293	0	0	0	0	20	145	290	305	0	1246	155
Grp Sat Flow(s),veh/h/ln	1414	1900	0	0	0	1615	1810	1805	1898	0	1805	1601
Q Serve(g_s), s	11.6	0.0	0.0	0.0	0.0	1.2	9.1	5.0	5.0	0.0	21.8	4.4
Cycle Q Clear(g_c), s	12.8	0.0	0.0	0.0	0.0	1.2	9.1	5.0	5.0	0.0	21.8	4.4
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	508	278	0	0	0	237	174	1396	1468	0	2320	1029
V/C Ratio(X)	0.58	0.00	0.00	0.00	0.00	0.08	0.83	0.21	0.21	0.00	0.54	0.15
Avail Cap(c_a), veh/h	796	472	0	0	0	397	265	1396	1468	0	2320	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	0.0	0.0	0.0	0.0	42.8	51.5	3.6	3.6	0.0	11.3	8.2
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.2	10.8	0.3	0.3	0.0	0.9	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	4.6	0.0	0.0	0.0	0.0	0.6	5.1	2.6	2.8	0.0	11.0	2.0
LnGrp Delay(d),s/veh	49.4	0.0	0.0	0.0	0.0	42.9	62.3	3.9	3.9	0.0	12.2	8.5
LnGrp LOS	D					D	E	A	A		B	A
Approach Vol, veh/h		293			20			740			1401	
Approach Delay, s/veh		49.4			42.9			15.3			11.8	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	15.2	79.4		21.5		94.5		21.5
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	17.6	* 57		* 29		* 78		28.5
Max Q Clear Time (g_c+I1), s	11.1	23.8		14.8		7.0		3.2
Green Ext Time (p_c), s	0.1	12.7		0.8		4.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	256	46	86	212	133	124	591	91	394	649	82
Future Volume (veh/h)	65	256	46	86	212	133	124	591	91	394	649	82
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.95	1.00		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	65	256	13	86	212	92	124	591	67	394	649	74
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	166	479	398	214	311	135	151	1377	582	424	1732	197
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.08	0.38	0.38	0.23	0.53	0.53
Sat Flow, veh/h	1073	1900	1581	1123	1235	536	1810	3610	1525	1810	3253	370
Grp Volume(v), veh/h	65	256	13	86	0	304	124	591	67	394	360	363
Grp Sat Flow(s),veh/h/ln	1073	1900	1581	1123	0	1772	1810	1805	1525	1810	1805	1818
Q Serve(g_s), s	6.8	13.5	0.7	8.3	0.0	18.0	7.8	14.0	3.3	24.7	13.5	13.5
Cycle Q Clear(g_c), s	24.7	13.5	0.7	21.8	0.0	18.0	7.8	14.0	3.3	24.7	13.5	13.5
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	166	479	398	214	0	446	151	1377	582	424	961	968
V/C Ratio(X)	0.39	0.53	0.03	0.40	0.00	0.68	0.82	0.43	0.12	0.93	0.37	0.38
Avail Cap(c_a), veh/h	220	573	477	274	0	541	239	1377	582	591	961	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	37.5	32.7	46.9	0.0	39.2	52.3	26.5	23.2	43.4	15.8	15.8
Incr Delay (d2), s/veh	1.1	0.7	0.0	0.9	0.0	2.2	5.8	1.0	0.4	14.6	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	2.1	7.2	0.3	2.6	0.0	9.1	4.2	7.2	1.5	14.1	7.0	7.1
LnGrp Delay(d),s/veh	51.4	38.2	32.7	47.8	0.0	41.4	58.1	27.5	23.6	58.0	16.9	17.0
LnGrp LOS	D	D	C	D		D	E	C	C	E	B	B
Approach Vol, veh/h		334			390			782			1117	
Approach Delay, s/veh		40.6			42.8			32.0			31.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.3	49.4		34.3	14.8	66.9		34.3
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	27.2	27.8		* 35	15.3	50.4		35.0
Max Q Clear Time (g_c+I1), s	26.7	16.0		23.8	9.8	15.5		26.7
Green Ext Time (p_c), s	0.5	2.3		1.4	0.1	3.1		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1535	0	155	1643	780	0	0	0	75	302	152
Future Volume (veh/h)	159	1535	0	155	1643	780	0	0	0	75	302	152
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	159	1535	0	155	1643	575				75	302	122
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	113	1505	0	110	1134	496				223	234	199
Arrive On Green	0.08	0.57	0.00	0.12	0.60	0.60				0.23	0.23	0.23
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	159	1535	0	155	1643	575				75	302	122
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	13.5	90.5	0.0	18.5	95.5	95.5				10.5	37.5	20.6
Cycle Q Clear(g_c), s	13.5	90.5	0.0	18.5	95.5	95.5				10.5	37.5	20.6
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	113	1505	0	110	1134	496				223	234	199
V/C Ratio(X)	1.41	1.02	0.00	1.41	1.45	1.16				0.34	1.29	0.61
Avail Cap(c_a), veh/h	113	1505	0	110	1134	496				223	234	199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	73.3	34.8	0.0	70.7	32.2	32.2				55.1	61.3	61.2
Incr Delay (d2), s/veh	230.2	28.4	0.0	228.7	206.9	91.8				0.9	158.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				49.0	109.0	187.8
%ile BackOfQ(50%),veh/ln	12.2	39.0	0.0	11.9	57.5	34.4				8.7	30.6	26.2
LnGrp Delay(d),s/veh	303.5	63.2	0.0	299.4	239.2	124.0				104.9	328.3	254.5
LnGrp LOS	F	F		F	F	F				F	F	F
Approach Vol, veh/h		1694			2373						499	
Approach Delay, s/veh		85.7			215.2						276.7	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	23.0	95.0		42.0	18.0	100.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	18.5	90.5		37.5	13.5	95.5		
Max Q Clear Time (g_c+I1), s	20.5	92.5		39.5	15.5	97.5		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		

Intersection Summary		
HCM 2010 Ctrl Delay	173.9	
HCM 2010 LOS	F	

Intersection	
Intersection Delay, s/veh	20.9
Intersection LOS	C

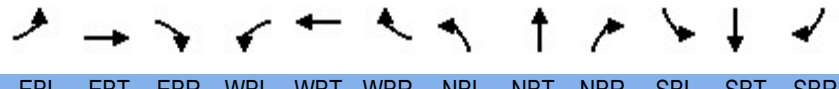
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	679	41	509	498
Demand Flow Rate, veh/h	679	41	509	498
Vehicles Circulating, veh/h	403	578	115	284
Vehicles Exiting, veh/h	379	46	967	335
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	4	4	4	0
Ped Cap Adj	0.999	0.999	0.999	1.000
Approach Delay, s/veh	36.1	6.4	9.7	13.0
Approach LOS	E	A	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	679	41	509	498
Cap Entry Lane, veh/h	755	634	1007	851
Entry HV Adj Factor	1.000	1.000	1.000	1.000
Flow Entry, veh/h	679	41	509	498
Cap Entry, veh/h	755	634	1007	851
V/C Ratio	0.900	0.065	0.506	0.585
Control Delay, s/veh	36.1	6.4	9.7	13.0
LOS	E	A	A	B
95th %tile Queue, veh	12	0	3	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	331	66	346	541	329	92	1349	357	252	879	108
Future Volume (veh/h)	130	331	66	346	541	329	92	1349	357	252	879	108
Number	7	4	14	3	8	18	1	6	16	5	2	12
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		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	130	331	56	346	541	-13	92	1349	296	252	879	102
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	400	70	688	708	317	117	1446	638	319	1402	163
Arrive On Green	0.17	0.17	0.17	0.20	0.20	0.00	0.06	0.40	0.40	0.09	0.43	0.43
Sat Flow, veh/h	886	2378	418	3510	3610	1615	1810	3610	1592	3510	3248	377
Grp Volume(v), veh/h	272	0	245	346	541	-13	92	1349	296	252	488	493
Grp Sat Flow(s),veh/h/ln	1856	0	1826	1755	1805	1615	1810	1805	1592	1755	1805	1820
Q Serve(g_s), s	14.0	0.0	12.6	8.6	13.9	0.0	4.9	35.0	13.4	6.9	20.6	20.6
Cycle Q Clear(g_c), s	14.0	0.0	12.6	8.6	13.9	0.0	4.9	35.0	13.4	6.9	20.6	20.6
Prop In Lane	0.48		0.23	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	312	0	307	688	708	317	117	1446	638	319	779	786
V/C Ratio(X)	0.87	0.00	0.80	0.50	0.76	-0.04	0.78	0.93	0.46	0.79	0.63	0.63
Avail Cap(c_a), veh/h	475	0	467	1257	1293	578	278	2297	1013	492	1134	1143
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	39.0	35.0	37.2	0.0	45.0	28.0	21.6	43.5	21.6	21.6
Incr Delay (d2), s/veh	7.5	0.0	2.8	0.2	0.7	0.0	4.3	3.7	0.2	2.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.0	6.6	4.2	7.0	0.0	2.6	18.2	5.9	3.4	10.2	10.3
LnGrp Delay(d),s/veh	47.1	0.0	41.8	35.3	37.8	0.0	49.3	31.8	21.8	45.6	22.0	21.9
LnGrp LOS	D		D	D	D		D	C	C	D	C	C
Approach Vol, veh/h		517			874			1737			1233	
Approach Delay, s/veh		44.6			37.4			31.0			26.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	46.2		19.4	12.4	43.1		22.8
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	15.0	61.4		25.0	13.7	62.2		35.0
Max Q Clear Time (g_c+I1), s	6.9	22.6		16.0	8.9	37.0		15.9
Green Ext Time (p_c), s	0.0	1.1		0.5	0.0	2.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

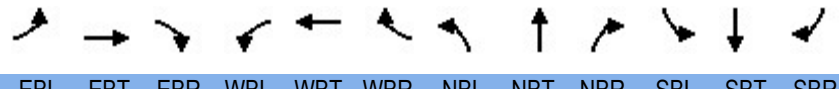


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	600	25	60	1086	450	74	417	86	226	287	149
Future Volume (veh/h)	135	600	25	60	1086	450	74	417	86	226	287	149
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	135	600	23	60	1086	116	74	417	21	171	364	35
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	1855	71	114	1795	788	250	498	220	229	482	197
Arrive On Green	0.09	0.52	0.52	0.06	0.50	0.50	0.14	0.14	0.14	0.13	0.13	0.13
Sat Flow, veh/h	1810	3543	136	1810	3610	1586	1810	3610	1593	1810	3800	1553
Grp Volume(v), veh/h	135	305	318	60	1086	116	74	417	21	171	364	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1873	1810	1805	1586	1810	1805	1593	1810	1900	1553
Q Serve(g_s), s	9.2	12.1	12.2	4.0	27.0	5.0	4.6	14.1	1.4	11.4	11.6	2.5
Cycle Q Clear(g_c), s	9.2	12.1	12.2	4.0	27.0	5.0	4.6	14.1	1.4	11.4	11.6	2.5
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	945	981	114	1795	788	250	498	220	229	482	197
V/C Ratio(X)	0.83	0.32	0.32	0.53	0.61	0.15	0.30	0.84	0.10	0.75	0.76	0.18
Avail Cap(c_a), veh/h	237	945	981	140	1795	788	294	586	259	308	648	265
HCM Platoon Ratio	1.00	1.00	1.00	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	56.0	17.1	17.1	56.8	22.6	17.1	48.4	52.5	47.1	52.6	52.7	48.8
Incr Delay (d2), s/veh	13.1	0.9	0.9	2.8	1.5	0.4	0.7	9.1	0.2	6.6	3.5	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	5.2	6.3	6.5	2.1	13.8	2.2	2.3	7.6	0.6	6.1	6.3	1.1
LnGrp Delay(d),s/veh	69.1	18.0	18.0	59.5	24.1	17.4	49.1	61.6	47.3	59.2	56.2	49.2
LnGrp LOS	E	B	B	E	C	B	D	E	D	E	E	D
Approach Vol, veh/h		758			1262			512			570	
Approach Delay, s/veh		27.1			25.2			59.2			56.7	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	66.7		21.9	12.5	70.0		20.5
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	11.4	48.4		* 20	9.7	55.1		21.3
Max Q Clear Time (g_c+I1), s	11.2	29.0		16.1	6.0	14.2		13.6
Green Ext Time (p_c), s	0.1	7.0		1.2	0.0	3.4		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	790	156	190	1234	15	374	27	1316	244	1114	316
Future Volume (veh/h)	12	790	156	190	1234	15	374	27	1316	244	1114	316
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	790	124	190	1234	14	374	27	870	244	1114	236
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	931	144	230	1393	16	455	794	1505	324	1974	610
Arrive On Green	0.23	0.23	0.23	0.13	0.38	0.38	0.13	0.42	0.42	0.09	0.38	0.38
Sat Flow, veh/h	19	4062	628	1810	3655	41	3510	1900	3602	3510	5187	1604
Grp Volume(v), veh/h	303	308	316	190	609	639	374	27	870	244	1114	236
Grp Sat Flow(s),veh/h/ln	1536	1573	1599	1810	1805	1892	1755	1900	1201	1755	1729	1604
Q Serve(g_s), s	3.7	23.4	23.7	12.8	39.4	39.4	13.0	1.0	23.2	8.5	21.2	13.4
Cycle Q Clear(g_c), s	24.2	23.4	23.7	12.8	39.4	39.4	13.0	1.0	23.2	8.5	21.2	13.4
Prop In Lane	0.04		0.39	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	361	367	230	688	721	455	794	1505	324	1974	610
V/C Ratio(X)	0.79	0.85	0.86	0.83	0.89	0.89	0.82	0.03	0.58	0.75	0.56	0.39
Avail Cap(c_a), veh/h	427	403	409	288	794	832	520	794	1505	351	1974	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	46.1	46.3	53.2	36.1	36.1	53.0	21.5	27.9	55.4	30.5	28.1
Incr Delay (d2), s/veh	7.7	13.5	14.3	12.1	9.7	9.4	8.1	0.1	1.6	7.0	1.2	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	11.5	11.9	7.2	21.5	22.5	6.8	0.6	7.9	4.4	10.3	6.2
LnGrp Delay(d),s/veh	52.5	59.7	60.6	65.3	45.9	45.5	61.1	21.6	29.6	62.4	31.7	30.0
LnGrp LOS	D	E	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		926			1438			1271			1594	
Approach Delay, s/veh		57.7			48.3			38.7			36.2	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	57.3		52.6	19.7	52.7	19.0	33.7
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	10.5	43.9		55.0	17.5	* 38	18.9	32.0
Max Q Clear Time (g_c+I1), s	10.5	25.2		41.4	15.0	23.2	14.8	26.2
Green Ext Time (p_c), s	0.1	2.4		4.9	0.2	5.4	0.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	43.9
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	539	0	0	484	1121	158
Future Volume (veh/h)	539	0	0	484	1121	158
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	539	0	0	484	1268	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	946	0	0	1797	1367	610
Arrive On Green	0.50	0.00	0.00	0.50	0.38	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	539	0	0	484	1268	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	10.5	0.0	0.0	4.1	17.8	0.0
Cycle Q Clear(g_c), s	10.5	0.0	0.0	4.1	17.8	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	946	0	0	1797	1367	610
V/C Ratio(X)	0.57	0.00	0.00	0.27	0.93	0.00
Avail Cap(c_a), veh/h	946	0	0	1797	1843	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.3	0.0	0.0	7.7	15.8	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0	0.4	6.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.0	2.1	10.0	0.0
LnGrp Delay(d),s/veh	11.8	0.0	0.0	8.1	21.9	0.0
LnGrp LOS	B			A	C	
Approach Vol, veh/h	539			484	1268	
Approach Delay, s/veh	11.8			8.1	21.9	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		30.0				30.0		23.0
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		26.4				26.4		27.0
Max Q Clear Time (g_c+I1), s		12.5				6.1		19.8
Green Ext Time (p_c), s		0.5				0.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	18.7
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	387	722	551
Demand Flow Rate, veh/h	387	722	551
Vehicles Circulating, veh/h	623	263	100
Vehicles Exiting, veh/h	362	388	910
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	19.0	25.0	10.3
Approach LOS	C	D	B

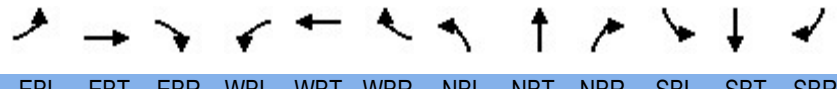
Lane	Left	Left	Left
Designated Moves	R	R	LT
Assumed Moves	R	R	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	387	722	551
Cap Entry Lane, veh/h	606	869	1022
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	387	722	551
Cap Entry, veh/h	606	869	1022
V/C Ratio	0.639	0.831	0.539
Control Delay, s/veh	19.0	25.0	10.3
LOS	C	D	B
95th %tile Queue, veh	5	10	3

Intersection	
Intersection Delay, s/veh	267.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	123	25	337	20	29	0	442	599	11	0	230	158
Future Vol, veh/h	123	25	337	20	29	0	442	599	11	0	230	158
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	123	25	337	20	29	0	442	599	11	0	230	158
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	50.1	15	467.1	30.5
HCM LOS	F	B	F	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	42%	25%	100%	0%	0%
Vol Thru, %	57%	5%	0%	100%	59%
Vol Right, %	1%	69%	0%	0%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1052	485	20	29	388
LT Vol	442	123	20	0	0
Through Vol	599	25	0	29	230
RT Vol	11	337	0	0	158
Lane Flow Rate	1052	485	20	29	388
Geometry Grp	2	5	7	7	2
Degree of Util (X)	1.986	0.893	0.052	0.071	0.728
Departure Headway (Hd)	6.796	8.371	11.846	11.317	8.307
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	537	437	304	318	438
Service Time	4.887	6.371	9.546	9.017	6.307
HCM Lane V/C Ratio	1.959	1.11	0.066	0.091	0.886
HCM Control Delay	467.1	50.1	15.2	14.9	30.5
HCM Lane LOS	F	F	C	B	D
HCM 95th-tile Q	70	9.5	0.2	0.2	5.8

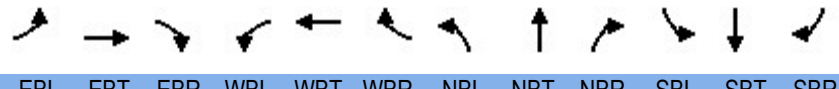


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	223	458	176	1099	85	249	366	15	133	306	322
Future Volume (veh/h)	161	223	458	176	1099	85	249	366	15	133	306	322
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	161	223	212	176	1099	77	249	366	3	133	306	247
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	189	1353	572	207	1313	92	277	400	322	222	342	291
Arrive On Green	0.10	0.37	0.37	0.11	0.38	0.38	0.15	0.21	0.21	0.12	0.18	0.18
Sat Flow, veh/h	1810	3610	1527	1810	3414	239	1810	1900	1532	1810	1900	1615
Grp Volume(v), veh/h	161	223	212	176	581	595	249	366	3	133	306	247
Grp Sat Flow(s),veh/h/ln	1810	1805	1527	1810	1805	1848	1810	1900	1532	1810	1900	1615
Q Serve(g_s), s	10.0	4.7	7.6	10.9	33.3	33.4	15.4	21.5	0.1	7.9	18.0	16.9
Cycle Q Clear(g_c), s	10.0	4.7	7.6	10.9	33.3	33.4	15.4	21.5	0.1	7.9	18.0	16.9
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	1353	572	207	694	711	277	400	322	222	342	291
V/C Ratio(X)	0.85	0.16	0.37	0.85	0.84	0.84	0.90	0.92	0.01	0.60	0.89	0.85
Avail Cap(c_a), veh/h	189	1353	572	258	694	711	284	431	348	222	366	311
HCM Platoon Ratio	1.00	1.00	1.00	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	50.3	23.8	11.4	49.6	31.9	31.9	47.5	44.1	20.3	47.4	45.7	45.3
Incr Delay (d2), s/veh	29.5	0.3	1.8	19.4	11.5	11.3	28.7	23.1	0.0	4.4	22.4	18.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	2.4	4.4	6.5	18.8	19.3	9.9	13.9	0.1	4.3	11.6	9.0
LnGrp Delay(d),s/veh	79.8	24.0	13.2	69.0	43.3	43.2	76.2	67.2	20.3	51.8	68.1	63.8
LnGrp LOS	E	C	B	E	D	D	E	E	C	D	E	E
Approach Vol, veh/h		596			1352			618			686	
Approach Delay, s/veh		35.2			46.6			70.6			63.4	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	47.9	19.0	29.1	17.0	49.0	22.6	25.6
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	13.0	39.5	14.0	25.9	11.9	43.9	17.9	22.0
Max Q Clear Time (g_c+I1), s	12.9	9.6	9.9	23.5	12.0	35.4	17.4	20.0
Green Ext Time (p_c), s	0.1	2.3	0.1	0.5	0.0	4.8	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	52.6
HCM 2010 LOS	D

Notes

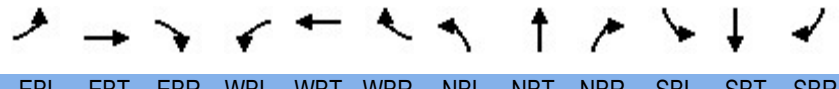


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	0	142	0	0	4	158	905	11	0	969	296
Future Volume (veh/h)	218	0	142	0	0	4	158	905	11	0	969	296
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	233	0	0	0	0	4	158	905	11	0	969	189
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	503	255	0	0	0	217	188	2869	35	0	2336	1027
Arrive On Green	0.13	0.00	0.00	0.00	0.00	0.13	0.10	0.79	0.79	0.00	0.65	0.65
Sat Flow, veh/h	2870	1900	0	0	0	1615	1810	3653	44	0	3705	1588
Grp Volume(v), veh/h	233	0	0	0	0	4	158	447	469	0	969	189
Grp Sat Flow(s),veh/h/ln	1435	1900	0	0	0	1615	1810	1805	1892	0	1805	1588
Q Serve(g_s), s	8.9	0.0	0.0	0.0	0.0	0.2	9.9	8.2	8.2	0.0	15.0	5.5
Cycle Q Clear(g_c), s	9.1	0.0	0.0	0.0	0.0	0.2	9.9	8.2	8.2	0.0	15.0	5.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	503	255	0	0	0	217	188	1418	1486	0	2336	1027
V/C Ratio(X)	0.46	0.00	0.00	0.00	0.00	0.02	0.84	0.32	0.32	0.00	0.41	0.18
Avail Cap(c_a), veh/h	905	521	0	0	0	439	312	1418	1486	0	2336	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	0.0	0.0	0.0	43.6	51.0	3.5	3.5	0.0	9.9	8.2
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	7.8	0.6	0.6	0.0	0.5	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	3.6	0.0	0.0	0.0	0.0	0.1	5.4	4.2	4.4	0.0	7.6	2.5
LnGrp Delay(d),s/veh	48.2	0.0	0.0	0.0	0.0	43.6	58.8	4.1	4.1	0.0	10.4	8.6
LnGrp LOS	D					D	E	A	A		B	A
Approach Vol, veh/h		233			4			1074			1158	
Approach Delay, s/veh		48.2			43.6			12.2			10.1	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	16.0	79.9		20.1		95.9		20.1
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	20.0	* 51		* 32		* 75		31.5
Max Q Clear Time (g_c+I1), s	11.9	17.0		11.1		10.2		2.2
Green Ext Time (p_c), s	0.2	9.3		0.7		7.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	196	55	207	303	112	80	660	122	235	626	100
Future Volume (veh/h)	76	196	55	207	303	112	80	660	122	235	626	100
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.94	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	196	13	207	303	79	80	660	98	235	626	92
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	154	546	456	302	412	107	102	1605	680	263	1675	246
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.06	0.44	0.44	0.15	0.53	0.53
Sat Flow, veh/h	1000	1900	1586	1187	1434	374	1810	3610	1530	1810	3136	460
Grp Volume(v), veh/h	76	196	13	207	0	382	80	660	98	235	360	358
Grp Sat Flow(s),veh/h/ln	1000	1900	1586	1187	0	1807	1810	1805	1530	1810	1805	1791
Q Serve(g_s), s	9.3	10.2	0.7	21.0	0.0	23.9	5.5	15.5	4.8	15.9	14.5	14.6
Cycle Q Clear(g_c), s	33.2	10.2	0.7	31.2	0.0	23.9	5.5	15.5	4.8	15.9	14.5	14.6
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	154	546	456	302	0	520	102	1605	680	263	964	956
V/C Ratio(X)	0.49	0.36	0.03	0.69	0.00	0.74	0.79	0.41	0.14	0.89	0.37	0.37
Avail Cap(c_a), veh/h	218	667	557	381	0	640	187	1605	680	418	964	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	35.4	32.0	47.8	0.0	40.2	58.2	23.6	20.6	52.4	17.0	17.0
Incr Delay (d2), s/veh	1.8	0.3	0.0	3.0	0.0	3.0	5.0	0.8	0.4	9.2	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	2.7	5.4	0.3	7.1	0.0	12.3	2.9	7.9	2.1	8.6	7.5	7.5
LnGrp Delay(d),s/veh	57.0	35.7	32.0	50.8	0.0	43.3	63.2	24.4	21.0	61.7	18.1	18.1
LnGrp LOS	E	D	C	D		D	E	C	C	E	B	B
Approach Vol, veh/h		285			589			838			953	
Approach Delay, s/veh		41.2			45.9			27.7			28.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	33.3	60.7		41.0	12.1	71.8		41.0
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	28.2	36.9		* 44	12.9	52.9		43.9
Max Q Clear Time (g_c+I1), s	17.9	17.5		33.2	7.5	16.6		35.2
Green Ext Time (p_c), s	0.3	3.2		2.0	0.0	3.2		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	398	1058	0	517	1418	541	0	0	0	32	363	146
Future Volume (veh/h)	398	1058	0	517	1418	541	0	0	0	32	363	146
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	398	1058	0	517	1418	362				32	363	118
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	334	1054	0	474	1212	530				344	313	306
Arrive On Green	0.18	0.29	0.00	0.38	0.49	0.49				0.24	0.24	0.24
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	398	1058	0	517	1418	362				32	363	118
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	29.5	46.7	0.0	61.3	78.5	41.0				2.8	38.5	12.4
Cycle Q Clear(g_c), s	29.5	46.7	0.0	61.3	78.5	41.0				2.8	38.5	12.4
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	334	1054	0	474	1212	530				344	313	306
V/C Ratio(X)	1.19	1.00	0.00	1.09	1.17	0.68				0.09	1.16	0.39
Avail Cap(c_a), veh/h	334	1054	0	474	1212	530				344	313	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	56.6	0.0	49.3	40.8	40.7				47.2	60.7	50.8
Incr Delay (d2), s/veh	112.6	28.7	0.0	67.9	85.7	3.6				0.1	101.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	127.5	116.5	196.6				0.0	118.2	0.0
%ile BackOfQ(50%),veh/ln	25.2	27.5	0.0	49.9	66.2	52.9				1.1	35.7	9.3
LnGrp Delay(d),s/veh	177.8	85.4	0.0	244.8	242.9	240.9				47.3	280.7	51.6
LnGrp LOS	F	F		F	F	F				D	F	D
Approach Vol, veh/h		1456			2297						513	
Approach Delay, s/veh		110.6			243.0						213.4	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	85.8	51.2		43.0	34.0	83.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	81.3	46.7		38.5	29.5	78.5		
Max Q Clear Time (g_c+I1), s	83.3	48.7		40.5	31.5	80.5		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	194.3
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	44.8
Intersection LOS	E

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	485	49	1052	388
Demand Flow Rate, veh/h	485	49	1052	388
Vehicles Circulating, veh/h	250	1164	148	491
Vehicles Exiting, veh/h	629	36	587	722
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	4	4	4	0
Ped Cap Adj	0.999	1.000	0.999	1.000
Approach Delay, s/veh	11.8	12.5	72.8	14.5
Approach LOS	B	B	F	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	485	49	1052	388
Cap Entry Lane, veh/h	880	353	974	692
Entry HV Adj Factor	1.000	1.000	1.000	1.000
Flow Entry, veh/h	485	49	1052	388
Cap Entry, veh/h	880	353	974	692
V/C Ratio	0.551	0.139	1.080	0.561
Control Delay, s/veh	11.8	12.5	72.8	14.5
LOS	B	B	F	B
95th %tile Queue, veh	3	0	25	4

Intersection	
Intersection Delay, s/veh	12.0
Intersection LOS	B

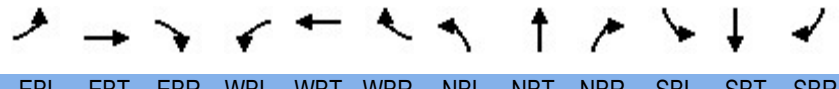
Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	1
Conflicting Circle Lanes	1	2	1	1
Adj Approach Flow, veh/h	485	49	1052	388
Demand Flow Rate, veh/h	485	49	1052	388
Vehicles Circulating, veh/h	250	1164	148	491
Vehicles Exiting, veh/h	629	36	587	722
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	4	4	4	0
Ped Cap Adj	0.999	1.000	0.996	1.000
Approach Delay, s/veh	11.8	8.5	11.3	14.5
Approach LOS	B	A	B	B

Lane	Left	Left	Left	Right	Left
Designated Moves	LTR	LTR	L	TR	LTR
Assumed Moves	LTR	LTR	L	TR	LTR
RT Channelized					
Lane Util	1.000	1.000	0.420	0.580	1.000
Critical Headway, s	5.193	4.113	5.193	5.193	5.193
Entry Flow, veh/h	485	49	442	610	388
Cap Entry Lane, veh/h	880	500	974	974	692
Entry HV Adj Factor	1.000	1.000	1.000	1.000	1.000
Flow Entry, veh/h	485	49	442	610	388
Cap Entry, veh/h	880	500	971	971	692
V/C Ratio	0.551	0.098	0.455	0.629	0.561
Control Delay, s/veh	11.8	8.5	9.0	12.9	14.5
LOS	B	A	A	B	B
95th %tile Queue, veh	3	0	2	5	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	486	49	362	336	251	65	877	605	362	1211	68
Future Volume (veh/h)	77	486	49	362	336	251	65	877	605	362	1211	68
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	486	44	362	336	54	65	877	414	362	1211	65
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	594	56	637	655	277	84	1119	492	446	1382	74
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.05	0.31	0.31	0.13	0.40	0.40
Sat Flow, veh/h	452	2991	283	3510	3610	1530	1810	3610	1587	3510	3479	187
Grp Volume(v), veh/h	320	0	287	362	336	54	65	877	414	362	628	648
Grp Sat Flow(s),veh/h/ln	1877	0	1850	1755	1805	1530	1810	1805	1587	1755	1805	1860
Q Serve(g_s), s	12.7	0.0	11.3	7.2	6.5	2.3	2.7	17.0	18.7	7.7	24.7	24.8
Cycle Q Clear(g_c), s	12.7	0.0	11.3	7.2	6.5	2.3	2.7	17.0	18.7	7.7	24.7	24.8
Prop In Lane	0.24		0.15	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	372	0	367	637	655	277	84	1119	492	446	717	739
V/C Ratio(X)	0.86	0.00	0.78	0.57	0.51	0.19	0.78	0.78	0.84	0.81	0.88	0.88
Avail Cap(c_a), veh/h	707	0	697	1601	1646	698	188	2453	1078	889	1508	1554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	29.3	28.8	28.4	26.7	36.3	24.2	24.8	32.7	21.4	21.5
Incr Delay (d2), s/veh	2.3	0.0	1.4	0.3	0.2	0.1	5.7	0.5	1.5	1.4	1.4	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	6.8	0.0	5.9	3.5	3.2	1.0	1.5	8.5	8.4	3.8	12.5	12.9
LnGrp Delay(d),s/veh	32.1	0.0	30.7	29.1	28.7	26.9	42.0	24.7	26.3	34.1	22.8	22.8
LnGrp LOS	C		C	C	C	C	D	C	C	C	C	C
Approach Vol, veh/h		607			752			1356			1638	
Approach Delay, s/veh		31.4			28.7			26.0			25.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	34.6		18.3	13.3	27.9		17.6
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	8.0	64.3		29.0	19.5	52.3		35.1
Max Q Clear Time (g_c+I1), s	4.7	26.8		14.7	9.7	20.7		9.2
Green Ext Time (p_c), s	0.0	1.5		0.6	0.1	1.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

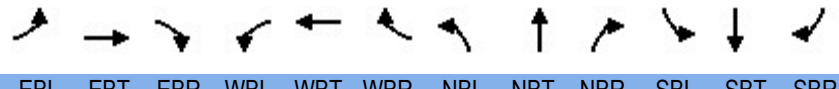


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1250	17	88	765	439	18	195	101	234	294	107
Future Volume (veh/h)	86	1250	17	88	765	439	18	195	101	234	294	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	1250	16	88	765	210	18	195	23	176	375	21
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	2006	26	132	1986	871	162	324	138	230	484	202
Arrive On Green	0.07	0.55	0.55	0.07	0.55	0.55	0.09	0.09	0.09	0.13	0.13	0.13
Sat Flow, veh/h	1810	3649	47	1810	3610	1583	1810	3610	1534	1810	3800	1586
Grp Volume(v), veh/h	86	618	648	88	765	210	18	195	23	176	375	21
Grp Sat Flow(s),veh/h/ln	1810	1805	1891	1810	1805	1583	1810	1805	1534	1810	1900	1586
Q Serve(g_s), s	5.4	27.2	27.2	5.5	14.0	8.0	1.1	6.0	1.6	10.9	11.1	1.4
Cycle Q Clear(g_c), s	5.4	27.2	27.2	5.5	14.0	8.0	1.1	6.0	1.6	10.9	11.1	1.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	992	1039	132	1986	871	162	324	138	230	484	202
V/C Ratio(X)	0.65	0.62	0.62	0.67	0.39	0.24	0.11	0.60	0.17	0.76	0.78	0.10
Avail Cap(c_a), veh/h	187	992	1039	162	1986	871	282	563	239	301	632	264
HCM Platoon Ratio	1.00	1.00	1.00	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	52.4	17.9	17.9	52.4	14.9	13.5	48.5	50.8	48.8	48.9	49.0	44.8
Incr Delay (d2), s/veh	4.0	2.9	2.8	6.0	0.6	0.7	0.3	1.8	0.6	8.2	4.5	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	2.8	14.4	15.0	3.0	7.1	3.7	0.5	3.1	0.7	6.0	6.1	0.6
LnGrp Delay(d),s/veh	56.4	20.8	20.7	58.4	15.5	14.2	48.8	52.6	49.4	57.1	53.5	45.0
LnGrp LOS	E	C	C	E	B	B	D	D	D	E	D	D
Approach Vol, veh/h		1352			1063			236			572	
Approach Delay, s/veh		23.0			18.8			52.0			54.3	
Approach LOS		C			B			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	13.0	68.4		15.1	13.1	68.4		19.5
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	12.0	48.0		* 18	10.4	49.6		19.3
Max Q Clear Time (g_c+I1), s	7.4	16.0		8.0	7.5	29.2		13.1
Green Ext Time (p_c), s	0.0	5.6		0.9	0.0	7.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1363	187	286	908	15	125	32	880	171	1653	216
Future Volume (veh/h)	24	1363	187	286	908	15	125	32	880	171	1653	216
Number	3	8	18	7	4	14	5	2	12	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		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	1363	175	286	908	14	125	32	418	171	1653	130
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	1360	173	268	1765	27	298	592	1121	302	1621	492
Arrive On Green	0.31	0.31	0.31	0.15	0.49	0.49	0.08	0.31	0.31	0.09	0.31	0.31
Sat Flow, veh/h	42	4383	559	1810	3637	56	3510	1900	3600	3510	5187	1573
Grp Volume(v), veh/h	568	493	501	286	451	471	125	32	418	171	1653	130
Grp Sat Flow(s),veh/h/ln	1811	1573	1600	1810	1805	1888	1755	1900	1200	1755	1729	1573
Q Serve(g_s), s	20.7	36.0	36.0	17.2	19.9	19.9	3.9	1.4	10.5	5.4	36.3	7.2
Cycle Q Clear(g_c), s	36.0	36.0	36.0	17.2	19.9	19.9	3.9	1.4	10.5	5.4	36.3	7.2
Prop In Lane	0.04		0.35	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	594	488	496	268	876	917	298	592	1121	302	1621	492
V/C Ratio(X)	0.96	1.01	1.01	1.07	0.51	0.51	0.42	0.05	0.37	0.57	1.02	0.26
Avail Cap(c_a), veh/h	594	488	496	268	876	917	303	592	1121	321	1621	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	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	40.0	40.0	49.4	20.5	20.5	50.4	28.0	31.1	50.9	39.9	29.9
Incr Delay (d2), s/veh	26.2	42.9	42.7	73.5	0.2	0.2	0.4	0.2	1.0	1.1	27.4	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	22.5	21.4	21.7	14.0	9.9	10.4	1.9	0.7	3.6	2.7	21.4	3.3
LnGrp Delay(d),s/veh	66.0	83.0	82.7	122.9	20.7	20.7	50.7	28.1	32.1	52.0	67.2	31.2
LnGrp LOS	E	F	F	F	C	C	D	C	C	D	F	C
Approach Vol, veh/h		1562			1208			575			1954	
Approach Delay, s/veh		76.7			44.9			35.9			63.5	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	41.2		61.3	13.3	41.4	20.3	41.0
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.6	35.5		56.3	9.0	* 36	16.2	36.0
Max Q Clear Time (g_c+I1), s	7.4	12.5		21.9	5.9	38.3	19.2	38.0
Green Ext Time (p_c), s	0.1	1.1		4.2	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	60.2
HCM 2010 LOS	E

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	357	0	0	407	1050	173
Future Volume (veh/h)	357	0	0	407	1050	173
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	357	0	0	407	1211	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	929	0	0	1766	1328	592
Arrive On Green	0.49	0.00	0.00	0.49	0.37	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	357	0	0	407	1211	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	5.4	0.0	0.0	3.0	14.6	0.0
Cycle Q Clear(g_c), s	5.4	0.0	0.0	3.0	14.6	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	929	0	0	1766	1328	592
V/C Ratio(X)	0.38	0.00	0.00	0.23	0.91	0.00
Avail Cap(c_a), veh/h	929	0	0	1766	2449	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.4	0.0	0.0	6.7	13.8	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.3	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	1.5	7.4	0.0
LnGrp Delay(d),s/veh	8.6	0.0	0.0	7.0	14.9	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	357			407	1211	
Approach Delay, s/veh	8.6			7.0	14.9	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		19.8
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		7.4				5.0		16.6
Green Ext Time (p_c), s		0.3				0.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.9
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	378	0	185
Demand Flow Rate, veh/h	378	0	185
Vehicles Circulating, veh/h	0	185	0
Vehicles Exiting, veh/h	185	0	378
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.5	0.0	4.6
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	378	185
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	378	185
Cap Entry, veh/h	1130	1130
V/C Ratio	0.335	0.164
Control Delay, s/veh	6.5	4.6
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	5.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	645	48	46	258	24
Future Vol, veh/h	33	645	48	46	258	24
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	33	645	48	46	258	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	682	0	506	364
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	920	-	530	685
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	916	-	498	680
Mov Cap-2 Maneuver	-	-	-	-	498	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	836	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.7	20.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	510	-	-	916	-
HCM Lane V/C Ratio	0.553	-	-	0.052	-
HCM Control Delay (s)	20.4	-	-	9.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	3.3	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	1259	359	7	299	143	300	87	142	260	140	215
Future Volume (veh/h)	389	1259	359	7	299	143	300	87	142	260	140	215
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	389	1259	240	7	299	122	194	236	26	260	140	101
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	424	1610	685	127	703	279	227	273	216	292	341	290
Arrive On Green	0.23	0.45	0.45	0.07	0.28	0.28	0.13	0.14	0.14	0.16	0.18	0.18
Sat Flow, veh/h	1810	3610	1536	1810	2494	990	1810	1900	1503	1810	1900	1615
Grp Volume(v), veh/h	389	1259	240	7	214	207	194	236	26	260	140	101
Grp Sat Flow(s),veh/h/ln	1810	1805	1536	1810	1805	1679	1810	1900	1503	1810	1900	1615
Q Serve(g_s), s	23.8	33.7	6.4	0.4	11.0	11.5	11.9	13.8	1.1	16.0	7.4	6.2
Cycle Q Clear(g_c), s	23.8	33.7	6.4	0.4	11.0	11.5	11.9	13.8	1.1	16.0	7.4	6.2
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	1610	685	127	509	473	227	273	216	292	341	290
V/C Ratio(X)	0.92	0.78	0.35	0.05	0.42	0.44	0.85	0.86	0.12	0.89	0.41	0.35
Avail Cap(c_a), veh/h	540	1610	685	127	509	473	358	301	238	366	341	290
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	26.8	6.2	49.3	33.3	33.4	48.7	47.6	16.4	46.7	41.3	40.8
Incr Delay (d2), s/veh	17.9	3.9	1.4	0.2	2.5	2.9	11.2	20.7	0.2	19.6	0.8	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	14.0	17.7	4.4	0.2	5.8	5.7	6.7	8.8	0.7	9.6	4.0	2.8
LnGrp Delay(d),s/veh	60.3	30.7	7.6	49.5	35.8	36.3	59.9	68.2	16.6	66.3	42.1	41.5
LnGrp LOS	E	C	A	D	D	D	E	E	B	E	D	D
Approach Vol, veh/h		1888			428			456			501	
Approach Delay, s/veh		33.8			36.3			61.7			54.5	
Approach LOS		C			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	55.8	23.3	21.5	31.7	37.2	19.4	25.4
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	8.0	50.7	23.0	18.0	33.9	24.8	22.5	18.5
Max Q Clear Time (g_c+I1), s	2.4	35.7	18.0	15.8	25.8	13.5	13.9	9.4
Green Ext Time (p_c), s	0.0	8.8	0.3	0.3	0.8	1.9	0.3	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.2
HCM 2010 LOS	D

Notes

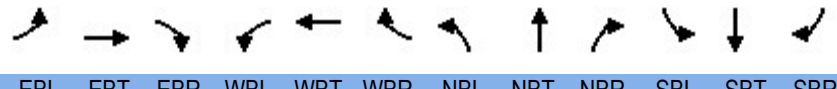


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	0	85	0	0	20	134	615	2	0	1322	293
Future Volume (veh/h)	257	0	85	0	0	20	134	615	2	0	1322	293
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	294	0	0	0	0	20	134	615	2	0	1322	156
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	509	279	0	0	0	237	162	2853	9	0	2342	1039
Arrive On Green	0.15	0.00	0.00	0.00	0.00	0.15	0.09	0.77	0.77	0.00	0.65	0.65
Sat Flow, veh/h	2828	1900	0	0	0	1615	1810	3691	12	0	3705	1601
Grp Volume(v), veh/h	294	0	0	0	0	20	134	301	316	0	1322	156
Grp Sat Flow(s),veh/h/ln	1414	1900	0	0	0	1615	1810	1805	1898	0	1805	1601
Q Serve(g_s), s	11.6	0.0	0.0	0.0	0.0	1.2	8.4	5.3	5.3	0.0	23.5	4.4
Cycle Q Clear(g_c), s	12.9	0.0	0.0	0.0	0.0	1.2	8.4	5.3	5.3	0.0	23.5	4.4
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	509	279	0	0	0	237	162	1395	1467	0	2342	1039
V/C Ratio(X)	0.58	0.00	0.00	0.00	0.00	0.08	0.83	0.22	0.22	0.00	0.56	0.15
Avail Cap(c_a), veh/h	796	472	0	0	0	397	250	1395	1467	0	2342	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	0.0	0.0	0.0	0.0	42.7	51.9	3.6	3.6	0.0	11.3	7.9
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.2	10.3	0.4	0.3	0.0	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	4.6	0.0	0.0	0.0	0.0	0.6	4.7	2.7	2.9	0.0	11.9	2.0
LnGrp Delay(d),s/veh	49.3	0.0	0.0	0.0	0.0	42.9	62.2	3.9	3.9	0.0	12.3	8.2
LnGrp LOS	D					D	E	A	A		B	A
Approach Vol, veh/h		294			20			751			1478	
Approach Delay, s/veh		49.3			42.9			14.3			11.9	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.4	80.1		21.5		94.5		21.5
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	16.0	* 58		* 29		* 78		28.5
Max Q Clear Time (g_c+I1), s	10.4	25.5		14.9		7.3		3.2
Green Ext Time (p_c), s	0.1	13.6		0.8		4.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	240	46	55	164	130	124	588	42	458	646	84
Future Volume (veh/h)	72	240	46	55	164	130	124	588	42	458	646	84
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.95	1.00		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	240	13	55	164	89	124	588	18	458	646	76
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	176	441	366	200	263	143	151	1324	558	488	1791	210
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.08	0.37	0.37	0.27	0.55	0.55
Sat Flow, veh/h	1120	1900	1580	1139	1134	616	1810	3610	1523	1810	3241	381
Grp Volume(v), veh/h	72	240	13	55	0	253	124	588	18	458	359	363
Grp Sat Flow(s),veh/h/ln	1120	1900	1580	1139	0	1750	1810	1805	1523	1810	1805	1816
Q Serve(g_s), s	7.2	12.9	0.7	5.2	0.0	15.1	7.8	14.3	0.9	28.7	12.9	12.9
Cycle Q Clear(g_c), s	22.2	12.9	0.7	18.1	0.0	15.1	7.8	14.3	0.9	28.7	12.9	12.9
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	176	441	366	200	0	406	151	1324	558	488	997	1004
V/C Ratio(X)	0.41	0.54	0.04	0.28	0.00	0.62	0.82	0.44	0.03	0.94	0.36	0.36
Avail Cap(c_a), veh/h	255	573	477	283	0	534	239	1324	558	622	997	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	39.2	34.5	47.1	0.0	40.0	52.3	27.8	23.5	41.4	14.5	14.5
Incr Delay (d2), s/veh	1.1	0.8	0.0	0.5	0.0	1.2	5.8	1.1	0.1	17.7	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	2.3	6.8	0.3	1.7	0.0	7.4	4.2	7.3	0.4	16.8	6.7	6.7
LnGrp Delay(d),s/veh	51.1	39.9	34.5	47.7	0.0	41.2	58.1	28.9	23.7	59.2	15.5	15.5
LnGrp LOS	D	D	C	D		D	E	C	C	E	B	B
Approach Vol, veh/h		325			308			730			1180	
Approach Delay, s/veh		42.2			42.3			33.7			32.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	36.4	47.6		32.0	14.8	69.2		32.0
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	31.3	25.8		* 35	15.3	50.4		35.0
Max Q Clear Time (g_c+I1), s	30.7	16.3		20.1	9.8	14.9		24.2
Green Ext Time (p_c), s	0.6	2.0		1.2	0.1	3.1		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	1543	0	123	1649	781	0	0	51	77	313	104
Future Volume (veh/h)	101	1543	0	123	1649	781	0	0	51	77	313	104
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	101	1543	0	123	1649	576				77	313	74
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	79	1470	0	117	1170	512				229	241	204
Arrive On Green	0.06	0.55	0.00	0.12	0.62	0.62				0.24	0.24	0.24
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	101	1543	0	123	1649	576				77	313	74
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	9.5	88.4	0.0	19.6	98.5	98.5				10.7	38.5	11.6
Cycle Q Clear(g_c), s	9.5	88.4	0.0	19.6	98.5	98.5				10.7	38.5	11.6
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	79	1470	0	117	1170	512				229	241	204
V/C Ratio(X)	1.28	1.05	0.00	1.05	1.41	1.12				0.34	1.30	0.36
Avail Cap(c_a), veh/h	79	1470	0	117	1170	512				229	241	204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	75.2	35.8	0.0	70.2	30.7	30.7				54.4	60.8	56.8
Incr Delay (d2), s/veh	192.1	37.8	0.0	98.6	189.6	78.8				0.9	162.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	0.0	0.0				46.5	105.5	108.2
%ile BackOfQ(50%),veh/ln	7.7	40.0	0.0	8.3	56.5	33.7				8.7	31.5	18.2
LnGrp Delay(d),s/veh	267.3	73.6	0.0	169.2	220.3	109.5				101.7	328.5	166.1
LnGrp LOS	F	F		F	F	F				F	F	F
Approach Vol, veh/h		1644			2348						464	
Approach Delay, s/veh		85.5			190.4						265.0	
Approach LOS		F			F						F	

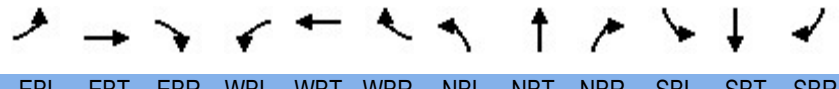
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	24.1	92.9		43.0	14.0	103.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	19.6	88.4		38.5	9.5	98.5		
Max Q Clear Time (g_c+I1), s	21.6	90.4		40.5	11.5	100.5		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		

Intersection Summary		
HCM 2010 Ctrl Delay	159.5	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	494	49	392	352	263	65	877	626	368	1211	68
Future Volume (veh/h)	77	494	49	392	352	263	65	877	626	368	1211	68
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	494	44	392	352	66	65	877	435	368	1211	65
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	89	597	56	650	669	284	84	1140	501	447	1402	75
Arrive On Green	0.20	0.20	0.20	0.19	0.19	0.19	0.05	0.32	0.32	0.13	0.40	0.40
Sat Flow, veh/h	446	3002	280	3510	3610	1532	1810	3610	1587	3510	3479	187
Grp Volume(v), veh/h	324	0	291	392	352	66	65	877	435	368	628	648
Grp Sat Flow(s),veh/h/ln	1878	0	1850	1755	1805	1532	1810	1805	1587	1755	1805	1860
Q Serve(g_s), s	13.6	0.0	12.2	8.4	7.2	3.0	2.9	17.9	21.1	8.3	26.0	26.1
Cycle Q Clear(g_c), s	13.6	0.0	12.2	8.4	7.2	3.0	2.9	17.9	21.1	8.3	26.0	26.1
Prop In Lane	0.24		0.15	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	374	0	368	650	669	284	84	1140	501	447	727	750
V/C Ratio(X)	0.87	0.00	0.79	0.60	0.53	0.23	0.78	0.77	0.87	0.82	0.86	0.86
Avail Cap(c_a), veh/h	667	0	657	1509	1551	658	177	2311	1016	838	1421	1464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	31.1	30.5	30.0	28.3	38.5	25.3	26.3	34.7	22.3	22.3
Incr Delay (d2), s/veh	2.4	0.0	1.5	0.3	0.2	0.2	5.6	0.4	1.8	1.5	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	7.3	0.0	6.4	4.1	3.6	1.3	1.6	9.0	9.4	4.1	13.2	13.6
LnGrp Delay(d),s/veh	34.1	0.0	32.6	30.9	30.3	28.5	44.1	25.7	28.2	36.2	23.5	23.6
LnGrp LOS	C		C	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		615			810			1377			1644	
Approach Delay, s/veh		33.4			30.4			27.3			26.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	36.9		19.2	13.9	29.8		18.7
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	8.0	64.3		29.0	19.5	52.3		35.1
Max Q Clear Time (g_c+I1), s	4.9	28.1		15.6	10.3	23.1		10.4
Green Ext Time (p_c), s	0.0	1.5		0.6	0.1	1.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

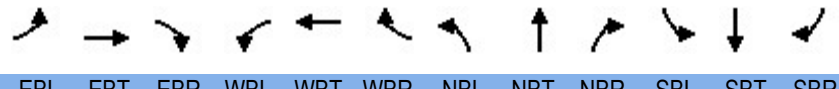


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1286	17	94	822	440	18	195	105	235	294	107
Future Volume (veh/h)	86	1286	17	94	822	440	18	195	105	235	294	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	1286	16	94	822	211	18	195	27	176	376	21
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	2003	25	134	1984	870	162	324	138	231	484	202
Arrive On Green	0.07	0.55	0.55	0.07	0.55	0.55	0.09	0.09	0.09	0.13	0.13	0.13
Sat Flow, veh/h	1810	3651	45	1810	3610	1583	1810	3610	1534	1810	3800	1586
Grp Volume(v), veh/h	86	636	666	94	822	211	18	195	27	176	376	21
Grp Sat Flow(s),veh/h/ln	1810	1805	1891	1810	1805	1583	1810	1805	1534	1810	1900	1586
Q Serve(g_s), s	5.4	28.5	28.5	5.9	15.4	8.0	1.1	6.0	1.9	10.9	11.1	1.4
Cycle Q Clear(g_c), s	5.4	28.5	28.5	5.9	15.4	8.0	1.1	6.0	1.9	10.9	11.1	1.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	990	1037	134	1984	870	162	324	138	231	484	202
V/C Ratio(X)	0.65	0.64	0.64	0.70	0.41	0.24	0.11	0.60	0.20	0.76	0.78	0.10
Avail Cap(c_a), veh/h	187	990	1037	162	1984	870	282	563	239	301	632	264
HCM Platoon Ratio	1.00	1.00	1.00	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	52.4	18.2	18.2	52.5	15.2	13.6	48.5	50.8	48.9	48.9	49.0	44.7
Incr Delay (d2), s/veh	4.0	3.2	3.1	8.8	0.6	0.7	0.3	1.8	0.7	8.1	4.5	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	2.8	15.0	15.7	3.3	7.8	3.7	0.5	3.1	0.8	6.0	6.2	0.6
LnGrp Delay(d),s/veh	56.4	21.4	21.3	61.3	15.9	14.2	48.8	52.6	49.6	57.0	53.5	45.0
LnGrp LOS	E	C	C	E	B	B	D	D	D	E	D	D
Approach Vol, veh/h		1388			1127			240			573	
Approach Delay, s/veh		23.5			19.4			52.0			54.3	
Approach LOS		C			B			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	13.0	68.4		15.1	13.2	68.2		19.5
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	12.0	48.0		* 18	10.4	49.6		19.3
Max Q Clear Time (g_c+I1), s	7.4	17.4		8.0	7.9	30.5		13.1
Green Ext Time (p_c), s	0.0	6.0		0.9	0.0	7.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1404	187	322	972	15	125	32	901	189	1653	216
Future Volume (veh/h)	24	1404	187	322	972	15	125	32	901	189	1653	216
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	1404	175	322	972	14	125	32	439	189	1653	130
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	1403	174	298	1859	27	298	544	1031	302	1492	451
Arrive On Green	0.32	0.32	0.32	0.16	0.51	0.51	0.08	0.29	0.29	0.09	0.29	0.29
Sat Flow, veh/h	41	4398	544	1810	3642	52	3510	1900	3599	3510	5187	1570
Grp Volume(v), veh/h	582	506	516	322	482	504	125	32	439	189	1653	130
Grp Sat Flow(s),veh/h/ln	1806	1573	1604	1810	1805	1889	1755	1900	1200	1755	1729	1570
Q Serve(g_s), s	21.2	37.0	37.0	19.1	20.7	20.7	3.9	1.4	11.5	6.0	33.4	7.5
Cycle Q Clear(g_c), s	37.0	37.0	37.0	19.1	20.7	20.7	3.9	1.4	11.5	6.0	33.4	7.5
Prop In Lane	0.04		0.34	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	608	502	512	298	921	964	298	544	1031	302	1492	451
V/C Ratio(X)	0.96	1.01	1.01	1.08	0.52	0.52	0.42	0.06	0.43	0.63	1.11	0.29
Avail Cap(c_a), veh/h	608	502	512	298	921	964	303	544	1031	339	1492	451
HCM Platoon Ratio	1.00	1.00	1.00	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	39.3	39.5	39.5	48.4	19.0	19.0	50.4	30.0	33.6	51.2	41.3	32.1
Incr Delay (d2), s/veh	25.8	42.0	41.8	75.3	0.3	0.3	0.4	0.2	1.3	1.8	58.9	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	22.9	21.9	22.3	15.8	10.4	10.9	1.9	0.8	3.9	3.0	24.0	3.4
LnGrp Delay(d),s/veh	65.1	81.5	81.3	123.8	19.2	19.2	50.7	30.2	34.9	53.0	100.2	33.7
LnGrp LOS	E	F	F	F	B	B	D	C	C	D	F	C
Approach Vol, veh/h		1603			1308			596			1972	
Approach Delay, s/veh		75.5			45.0			38.0			91.3	
Approach LOS		E			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	38.3		64.2	13.3	38.5	22.2	42.0
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	10.3	32.0		59.2	9.0	* 33	18.1	37.0
Max Q Clear Time (g_c+I1), s	9.0	13.5		22.7	5.9	35.4	21.1	39.0
Green Ext Time (p_c), s	0.1	1.2		4.6	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.8
HCM 2010 LOS	E

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	437	0	0	563	1050	196
Future Volume (veh/h)	437	0	0	563	1050	196
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	437	0	0	563	1233	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	936	0	0	1778	1343	599
Arrive On Green	0.49	0.00	0.00	0.49	0.37	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	437	0	0	563	1233	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	7.3	0.0	0.0	4.5	15.7	0.0
Cycle Q Clear(g_c), s	7.3	0.0	0.0	4.5	15.7	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	936	0	0	1778	1343	599
V/C Ratio(X)	0.47	0.00	0.00	0.32	0.92	0.00
Avail Cap(c_a), veh/h	936	0	0	1778	2216	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.1	0.0	0.0	7.4	14.5	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.5	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	2.3	8.2	0.0
LnGrp Delay(d),s/veh	9.8	0.0	0.0	7.8	17.1	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	437			563	1233	
Approach Delay, s/veh	9.8			7.8	17.1	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		27.4				27.4		20.9
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		23.8				23.8		29.6
Max Q Clear Time (g_c+I1), s		9.3				6.5		17.7
Green Ext Time (p_c), s		0.4				0.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.9
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	381	0	188
Demand Flow Rate, veh/h	381	0	188
Vehicles Circulating, veh/h	0	188	0
Vehicles Exiting, veh/h	188	0	381
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.5	0.0	4.7
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	381	188
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	381	188
Cap Entry, veh/h	1130	1130
V/C Ratio	0.337	0.166
Control Delay, s/veh	6.5	4.7
LOS	A	A
95th %tile Queue, veh	2	1

Intersection	
Int Delay, s/veh	6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	651	48	46	261	24
Future Vol, veh/h	33	651	48	46	261	24
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	33	651	48	46	261	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	688	0	509	367
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	916	-	528	683
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	913	-	496	678
Mov Cap-2 Maneuver	-	-	-	-	496	-
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	835	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.7	20.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	507	-	-	913	-
HCM Lane V/C Ratio	0.562	-	-	0.053	-
HCM Control Delay (s)	20.8	-	-	9.2	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	3.4	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	1261	359	7	300	146	300	87	142	266	140	215
Future Volume (veh/h)	389	1261	359	7	300	146	300	87	142	266	140	215
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.93	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	389	1261	240	7	300	125	194	236	26	266	140	101
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	424	1589	676	128	686	278	227	274	217	299	349	296
Arrive On Green	0.23	0.44	0.44	0.07	0.28	0.28	0.13	0.14	0.14	0.17	0.18	0.18
Sat Flow, veh/h	1810	3610	1535	1810	2477	1004	1810	1900	1503	1810	1900	1615
Grp Volume(v), veh/h	389	1261	240	7	216	209	194	236	26	266	140	101
Grp Sat Flow(s),veh/h/ln	1810	1805	1535	1810	1805	1676	1810	1900	1503	1810	1900	1615
Q Serve(g_s), s	23.7	33.9	6.4	0.4	11.1	11.6	11.9	13.7	1.1	16.2	7.3	6.1
Cycle Q Clear(g_c), s	23.7	33.9	6.4	0.4	11.1	11.6	11.9	13.7	1.1	16.2	7.3	6.1
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	1589	676	128	500	464	227	274	217	299	349	296
V/C Ratio(X)	0.92	0.79	0.36	0.05	0.43	0.45	0.85	0.86	0.12	0.89	0.40	0.34
Avail Cap(c_a), veh/h	527	1589	676	128	500	464	361	303	240	385	349	296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	27.2	6.2	48.9	33.5	33.7	48.3	47.2	16.2	46.1	40.6	40.1
Incr Delay (d2), s/veh	18.6	4.2	1.5	0.2	2.7	3.1	10.9	20.2	0.2	18.4	0.7	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	14.0	17.7	4.4	0.2	5.9	5.8	6.6	8.7	0.7	9.7	3.9	2.8
LnGrp Delay(d),s/veh	60.8	31.4	7.7	49.1	36.3	36.9	59.2	67.4	16.5	64.6	41.4	40.8
LnGrp LOS	E	C	A	D	D	D	E	E	B	E	D	D
Approach Vol, veh/h		1890			432			456			507	
Approach Delay, s/veh		34.4			36.8			61.0			53.4	
Approach LOS		C			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	54.8	23.6	21.4	31.5	36.4	19.3	25.7
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	8.0	49.7	24.0	18.0	32.9	24.8	22.5	19.5
Max Q Clear Time (g_c+I1), s	2.4	35.9	18.2	15.7	25.7	13.6	13.9	9.3
Green Ext Time (p_c), s	0.0	8.3	0.4	0.3	0.8	1.9	0.3	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.4
HCM 2010 LOS	D

Notes

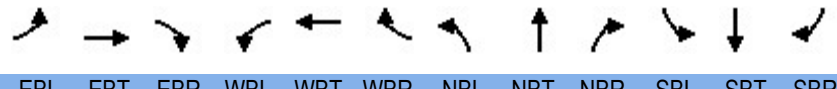


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	0	85	0	0	20	134	625	2	0	1338	313
Future Volume (veh/h)	268	0	85	0	0	20	134	625	2	0	1338	313
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	305	0	0	0	0	20	134	625	2	0	1338	176
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	519	286	0	0	0	243	162	2840	9	0	2329	1033
Arrive On Green	0.15	0.00	0.00	0.00	0.00	0.15	0.09	0.77	0.77	0.00	0.65	0.65
Sat Flow, veh/h	2828	1900	0	0	0	1615	1810	3691	12	0	3705	1601
Grp Volume(v), veh/h	305	0	0	0	0	20	134	306	321	0	1338	176
Grp Sat Flow(s),veh/h/ln	1414	1900	0	0	0	1615	1810	1805	1898	0	1805	1601
Q Serve(g_s), s	12.1	0.0	0.0	0.0	0.0	1.2	8.4	5.5	5.5	0.0	24.2	5.1
Cycle Q Clear(g_c), s	13.3	0.0	0.0	0.0	0.0	1.2	8.4	5.5	5.5	0.0	24.2	5.1
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	519	286	0	0	0	243	162	1389	1460	0	2329	1033
V/C Ratio(X)	0.59	0.00	0.00	0.00	0.00	0.08	0.83	0.22	0.22	0.00	0.57	0.17
Avail Cap(c_a), veh/h	796	472	0	0	0	397	250	1389	1460	0	2329	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	0.0	0.0	0.0	42.4	51.9	3.7	3.7	0.0	11.6	8.2
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.0	0.0	0.1	10.3	0.4	0.3	0.0	1.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	0.0	0.0	0.0	0.6	4.7	2.9	3.0	0.0	12.2	2.4
LnGrp Delay(d),s/veh	49.2	0.0	0.0	0.0	0.0	42.5	62.2	4.1	4.1	0.0	12.6	8.6
LnGrp LOS	D					D	E	A	A		B	A
Approach Vol, veh/h		305			20			761			1514	
Approach Delay, s/veh		49.2			42.5			14.3			12.2	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.4	79.6		21.9		94.1		21.9
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	16.0	* 58		* 29		* 78		28.5
Max Q Clear Time (g_c+I1), s	10.4	26.2		15.3		7.5		3.2
Green Ext Time (p_c), s	0.1	13.9		0.9		4.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	240	46	55	164	133	124	590	42	464	649	92
Future Volume (veh/h)	77	240	46	55	164	133	124	590	42	464	649	92
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.95	1.00		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	77	240	13	55	164	92	124	590	18	464	649	84
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	175	442	367	201	260	146	151	1310	552	494	1766	228
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.08	0.36	0.36	0.27	0.55	0.55
Sat Flow, veh/h	1118	1900	1580	1139	1119	628	1810	3610	1522	1810	3201	414
Grp Volume(v), veh/h	77	240	13	55	0	256	124	590	18	464	366	367
Grp Sat Flow(s),veh/h/ln	1118	1900	1580	1139	0	1747	1810	1805	1522	1810	1805	1809
Q Serve(g_s), s	7.7	12.9	0.7	5.2	0.0	15.3	7.8	14.4	0.9	29.1	13.2	13.2
Cycle Q Clear(g_c), s	23.0	12.9	0.7	18.0	0.0	15.3	7.8	14.4	0.9	29.1	13.2	13.2
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	175	442	367	201	0	406	151	1310	552	494	996	999
V/C Ratio(X)	0.44	0.54	0.04	0.27	0.00	0.63	0.82	0.45	0.03	0.94	0.37	0.37
Avail Cap(c_a), veh/h	252	573	477	283	0	533	239	1310	552	622	996	999
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	39.1	34.4	47.0	0.0	40.0	52.3	28.2	23.8	41.2	14.6	14.6
Incr Delay (d2), s/veh	1.3	0.8	0.0	0.5	0.0	1.2	5.8	1.1	0.1	18.2	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	2.5	6.8	0.3	1.7	0.0	7.5	4.2	7.4	0.4	17.1	6.8	6.8
LnGrp Delay(d),s/veh	51.7	39.9	34.5	47.6	0.0	41.2	58.1	29.3	23.9	59.4	15.6	15.7
LnGrp LOS	D	D	C	D		D	E	C	C	E	B	B
Approach Vol, veh/h		330			311			732			1197	
Approach Delay, s/veh		42.4			42.4			34.0			32.6	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.7	47.2		32.1	14.8	69.1		32.1
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	30.9	25.8		* 35	15.3	50.4		35.0
Max Q Clear Time (g_c+I1), s	31.1	16.4		20.0	9.8	15.2		25.0
Green Ext Time (p_c), s	0.6	2.0		1.3	0.1	3.2		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.5
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	1546	0	123	1649	782	0	0	51	79	313	105
Future Volume (veh/h)	103	1546	0	123	1649	782	0	0	51	79	313	105
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				15	10	20
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1400	1400	0	1000	1000	1000				1000	1000	1000
Adj Flow Rate, veh/h	103	1546	0	123	1649	577				79	313	75
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	79	1470	0	117	1170	512				229	241	204
Arrive On Green	0.06	0.55	0.00	0.12	0.62	0.62				0.24	0.24	0.24
Sat Flow, veh/h	1333	2730	0	952	1900	832				952	1000	849
Grp Volume(v), veh/h	103	1546	0	123	1649	577				79	313	75
Grp Sat Flow(s),veh/h/ln	1333	1330	0	952	950	832				952	1000	849
Q Serve(g_s), s	9.5	88.4	0.0	19.6	98.5	98.5				11.0	38.5	11.8
Cycle Q Clear(g_c), s	9.5	88.4	0.0	19.6	98.5	98.5				11.0	38.5	11.8
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	79	1470	0	117	1170	512				229	241	204
V/C Ratio(X)	1.30	1.05	0.00	1.05	1.41	1.13				0.34	1.30	0.37
Avail Cap(c_a), veh/h	79	1470	0	117	1170	512				229	241	204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	75.2	35.8	0.0	70.2	30.7	30.7				54.5	60.8	56.9
Incr Delay (d2), s/veh	201.5	38.5	0.0	98.6	189.6	79.5				0.9	162.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	0.0	0.0				47.1	105.5	109.1
%ile BackOfQ(50%),veh/ln	7.9	40.1	0.0	8.3	56.5	33.8				8.8	31.5	18.3
LnGrp Delay(d),s/veh	276.8	74.3	0.0	169.2	220.3	110.2				102.4	328.5	167.0
LnGrp LOS	F	F		F	F	F				F	F	F
Approach Vol, veh/h		1649			2349						467	
Approach Delay, s/veh		86.9			190.6						264.3	
Approach LOS		F			F						F	

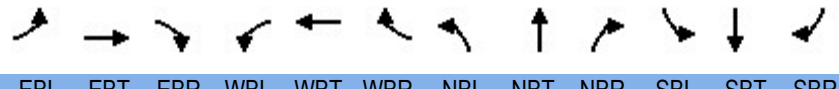
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	24.1	92.9		43.0	14.0	103.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	19.6	88.4		38.5	9.5	98.5		
Max Q Clear Time (g_c+I1), s	21.6	90.4		40.5	11.5	100.5		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		

Intersection Summary		
HCM 2010 Ctrl Delay	160.0	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	307	66	343	521	487	93	1352	347	233	879	108
Future Volume (veh/h)	130	307	66	343	521	487	93	1352	347	233	879	108
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	130	307	56	343	521	145	93	1352	286	233	879	102
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	151	376	71	681	700	300	119	1455	642	305	1395	162
Arrive On Green	0.16	0.16	0.16	0.19	0.19	0.19	0.07	0.40	0.40	0.09	0.43	0.43
Sat Flow, veh/h	928	2311	438	3510	3610	1549	1810	3610	1592	3510	3248	377
Grp Volume(v), veh/h	260	0	233	343	521	145	93	1352	286	233	488	493
Grp Sat Flow(s),veh/h/ln	1854	0	1823	1755	1805	1549	1810	1805	1592	1755	1805	1820
Q Serve(g_s), s	12.5	0.0	11.3	8.0	12.5	7.6	4.6	32.8	12.0	6.0	19.4	19.4
Cycle Q Clear(g_c), s	12.5	0.0	11.3	8.0	12.5	7.6	4.6	32.8	12.0	6.0	19.4	19.4
Prop In Lane	0.50		0.24	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	302	0	297	681	700	300	119	1455	642	305	775	782
V/C Ratio(X)	0.86	0.00	0.79	0.50	0.74	0.48	0.78	0.93	0.45	0.77	0.63	0.63
Avail Cap(c_a), veh/h	464	0	456	1452	1493	641	295	2444	1078	485	1187	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	36.9	33.1	34.9	32.9	42.3	26.2	19.9	41.0	20.5	20.5
Incr Delay (d2), s/veh	6.3	0.0	2.2	0.2	0.6	0.4	4.1	2.7	0.2	1.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	5.9	3.9	6.3	3.3	2.5	16.9	5.3	2.9	9.7	9.8
LnGrp Delay(d),s/veh	43.8	0.0	39.1	33.3	35.5	33.4	46.4	28.8	20.1	42.5	20.8	20.8
LnGrp LOS	D		D	C	D	C	D	C	C	D	C	C
Approach Vol, veh/h		493			1009			1731			1214	
Approach Delay, s/veh		41.6			34.4			28.3			25.0	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	43.4		18.0	11.5	41.0		21.4
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	15.0	60.4		23.0	12.7	62.2		38.0
Max Q Clear Time (g_c+I1), s	6.6	21.4		14.5	8.0	34.8		14.5
Green Ext Time (p_c), s	0.0	1.1		0.4	0.0	2.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

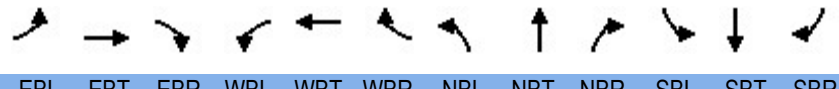


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	549	25	63	1043	664	74	417	86	222	287	149
Future Volume (veh/h)	135	549	25	63	1043	664	74	417	86	222	287	149
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	135	549	23	63	1043	330	74	417	21	170	360	35
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	1850	77	116	1802	791	250	498	220	226	474	194
Arrive On Green	0.09	0.52	0.52	0.06	0.50	0.50	0.14	0.14	0.14	0.12	0.12	0.12
Sat Flow, veh/h	1810	3528	148	1810	3610	1586	1810	3610	1593	1810	3800	1552
Grp Volume(v), veh/h	135	280	292	63	1043	330	74	417	21	170	360	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1871	1810	1805	1586	1810	1805	1593	1810	1900	1552
Q Serve(g_s), s	9.2	10.9	11.0	4.2	25.4	16.5	4.6	14.1	1.4	11.3	11.4	2.5
Cycle Q Clear(g_c), s	9.2	10.9	11.0	4.2	25.4	16.5	4.6	14.1	1.4	11.3	11.4	2.5
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	947	981	116	1802	791	250	498	220	226	474	194
V/C Ratio(X)	0.84	0.30	0.30	0.54	0.58	0.42	0.30	0.84	0.10	0.75	0.76	0.18
Avail Cap(c_a), veh/h	223	947	981	143	1802	791	294	586	259	294	617	252
HCM Platoon Ratio	1.00	1.00	1.00	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	56.0	16.7	16.7	56.7	22.1	19.8	48.4	52.5	47.1	52.8	52.9	49.0
Incr Delay (d2), s/veh	15.8	0.8	0.8	2.9	1.4	1.6	0.7	9.1	0.2	7.7	4.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	5.7	5.9	2.2	12.9	7.5	2.3	7.6	0.6	6.1	6.3	1.1
LnGrp Delay(d),s/veh	71.8	17.5	17.5	59.7	23.4	21.4	49.1	61.6	47.3	60.5	56.9	49.4
LnGrp LOS	E	B	B	E	C	C	D	E	D	E	E	D
Approach Vol, veh/h		707			1436			512			565	
Approach Delay, s/veh		27.9			24.5			59.2			57.5	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	67.0		21.9	12.6	70.2		20.3
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	11.4	50.4		* 20	9.9	55.9		20.3
Max Q Clear Time (g_c+I1), s	11.2	27.4		16.1	6.2	13.0		13.4
Green Ext Time (p_c), s	0.1	7.9		1.2	0.0	3.1		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	728	162	211	1157	19	429	27	1321	144	1132	316
Future Volume (veh/h)	12	728	162	211	1157	19	429	27	1321	144	1132	316
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	728	130	211	1157	18	429	27	875	144	1132	236
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	882	155	251	1371	21	510	826	1566	279	1915	592
Arrive On Green	0.21	0.21	0.21	0.14	0.38	0.38	0.15	0.43	0.43	0.08	0.37	0.37
Sat Flow, veh/h	27	4132	725	1810	3637	57	3510	1900	3602	3510	5187	1603
Grp Volume(v), veh/h	309	278	283	211	574	601	429	27	875	144	1132	236
Grp Sat Flow(s),veh/h/ln	1732	1573	1578	1810	1805	1888	1755	1900	1201	1755	1729	1603
Q Serve(g_s), s	5.3	21.1	21.5	14.2	36.3	36.3	14.9	1.0	22.7	4.9	22.0	13.6
Cycle Q Clear(g_c), s	21.3	21.1	21.5	14.2	36.3	36.3	14.9	1.0	22.7	4.9	22.0	13.6
Prop In Lane	0.04		0.46	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	400	336	337	251	680	712	510	826	1566	279	1915	592
V/C Ratio(X)	0.77	0.83	0.84	0.84	0.84	0.84	0.84	0.03	0.56	0.52	0.59	0.40
Avail Cap(c_a), veh/h	458	390	391	303	794	831	576	826	1566	281	1915	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	46.5	47.0	47.1	52.5	35.6	35.6	52.0	20.3	26.4	55.2	31.8	29.2
Incr Delay (d2), s/veh	5.8	10.6	11.8	14.1	6.4	6.2	8.9	0.1	1.4	0.7	1.3	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	10.9	10.2	10.5	8.1	19.2	20.1	7.8	0.5	7.7	2.4	10.7	6.4
LnGrp Delay(d),s/veh	52.3	57.6	58.9	66.7	42.0	41.8	60.9	20.3	27.8	55.9	33.2	31.2
LnGrp LOS	D	E	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		870			1386			1331			1512	
Approach Delay, s/veh		56.1			45.7			38.3			35.0	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	59.5		52.1	21.7	51.2	20.4	31.7
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.0	46.4		55.0	19.5	* 36	19.9	31.0
Max Q Clear Time (g_c+I1), s	16.3	24.7		38.3	16.9	24.0	16.2	23.5
Green Ext Time (p_c), s	0.0	2.4		5.0	0.3	5.0	0.1	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	381	0	0	462	1121	170
Future Volume (veh/h)	381	0	0	462	1121	170
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	381	0	0	462	1280	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	904	0	0	1717	1391	621
Arrive On Green	0.48	0.00	0.00	0.48	0.38	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	381	0	0	462	1280	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	6.2	0.0	0.0	3.6	15.9	0.0
Cycle Q Clear(g_c), s	6.2	0.0	0.0	3.6	15.9	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	904	0	0	1717	1391	621
V/C Ratio(X)	0.42	0.00	0.00	0.27	0.92	0.00
Avail Cap(c_a), veh/h	904	0	0	1717	2382	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.1	0.0	0.0	7.4	13.8	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.4	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	1.9	8.2	0.0
LnGrp Delay(d),s/veh	9.5	0.0	0.0	7.8	15.9	0.0
LnGrp LOS	A			A	B	
Approach Vol, veh/h	381			462	1280	
Approach Delay, s/veh	9.5			7.8	15.9	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.0				26.0		21.1
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		22.4				22.4		31.0
Max Q Clear Time (g_c+I1), s		8.2				5.6		17.9
Green Ext Time (p_c), s		0.4				0.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	215	0	354
Demand Flow Rate, veh/h	215	0	354
Vehicles Circulating, veh/h	0	354	0
Vehicles Exiting, veh/h	354	0	215
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	0.0	6.2
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	215	354
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	215	354
Cap Entry, veh/h	1130	1130
V/C Ratio	0.190	0.313
Control Delay, s/veh	4.9	6.2
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	15

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	368	35	39	453	39
Future Vol, veh/h	77	368	35	39	453	39
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	77	368	35	39	453	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	449	0	378	269
Stage 1	-	-	-	-	265	-
Stage 2	-	-	-	-	113	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1122	-	628	775
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	917	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1118	-	604	769
Mov Cap-2 Maneuver	-	-	-	-	604	-
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	885	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	30.3
HCM LOS			D

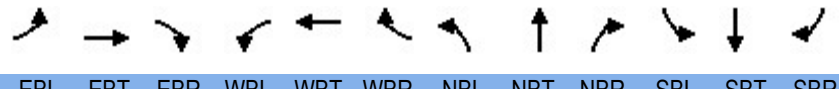
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	614	-	-	1118	-
HCM Lane V/C Ratio	0.801	-	-	0.031	-
HCM Control Delay (s)	30.3	-	-	8.3	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	8	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	227	458	176	1101	158	249	71	15	123	194	484
Future Volume (veh/h)	133	227	458	176	1101	158	249	71	15	123	194	484
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.92	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	133	227	212	176	1101	150	160	196	3	123	194	409
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	163	1357	574	208	1275	173	189	244	192	368	432	367
Arrive On Green	0.09	0.38	0.38	0.12	0.40	0.40	0.10	0.13	0.13	0.20	0.23	0.23
Sat Flow, veh/h	1810	3610	1527	1810	3179	432	1810	1900	1492	1810	1900	1615
Grp Volume(v), veh/h	133	227	212	176	624	627	160	196	3	123	194	409
Grp Sat Flow(s),veh/h/ln	1810	1805	1527	1810	1805	1806	1810	1900	1492	1810	1900	1615
Q Serve(g_s), s	8.3	4.8	6.1	10.9	36.2	36.4	9.9	11.5	0.2	6.7	10.1	26.0
Cycle Q Clear(g_c), s	8.3	4.8	6.1	10.9	36.2	36.4	9.9	11.5	0.2	6.7	10.1	26.0
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	1357	574	208	724	724	189	244	192	368	432	367
V/C Ratio(X)	0.82	0.17	0.37	0.85	0.86	0.87	0.84	0.80	0.02	0.33	0.45	1.11
Avail Cap(c_a), veh/h	172	1357	574	316	724	724	204	397	312	368	432	367
HCM Platoon Ratio	1.00	1.00	1.00	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	51.2	23.8	7.4	49.7	31.4	31.5	50.3	48.5	27.5	39.0	38.1	44.2
Incr Delay (d2), s/veh	24.6	0.3	1.8	12.3	12.9	13.1	25.2	6.1	0.0	0.5	0.7	81.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.4	4.4	6.2	20.6	20.8	6.3	6.5	0.1	3.4	5.4	19.9
LnGrp Delay(d),s/veh	75.8	24.1	9.2	61.9	44.3	44.6	75.5	54.5	27.5	39.5	38.8	126.0
LnGrp LOS	E	C	A	E	D	D	E	D	C	D	D	F
Approach Vol, veh/h		572			1427			359			726	
Approach Delay, s/veh		30.6			46.6			63.7			88.1	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	48.1	28.3	19.8	15.4	51.0	17.1	31.0
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	20.0	36.8	15.0	23.9	10.9	45.9	12.9	26.0
Max Q Clear Time (g_c+I1), s	12.9	8.1	8.7	13.5	10.3	38.4	11.9	28.0
Green Ext Time (p_c), s	0.3	2.3	0.1	0.7	0.0	4.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.4
HCM 2010 LOS	E

Notes

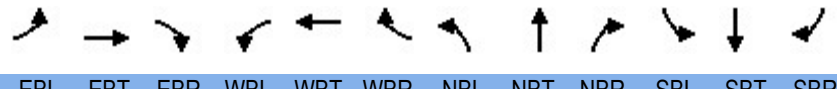


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	0	123	0	0	4	138	941	11	0	1006	304
Future Volume (veh/h)	220	0	123	0	0	4	138	941	11	0	1006	304
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	217	0	0	0	0	4	138	941	11	0	1006	197
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	491	247	0	0	0	210	167	2887	34	0	2394	1053
Arrive On Green	0.13	0.00	0.00	0.00	0.00	0.13	0.09	0.79	0.79	0.00	0.66	0.66
Sat Flow, veh/h	2870	1900	0	0	0	1615	1810	3655	43	0	3705	1588
Grp Volume(v), veh/h	217	0	0	0	0	4	138	465	487	0	1006	197
Grp Sat Flow(s),veh/h/ln	1435	1900	0	0	0	1615	1810	1805	1892	0	1805	1588
Q Serve(g_s), s	8.3	0.0	0.0	0.0	0.0	0.3	8.7	8.4	8.4	0.0	15.1	5.5
Cycle Q Clear(g_c), s	8.5	0.0	0.0	0.0	0.0	0.3	8.7	8.4	8.4	0.0	15.1	5.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	491	247	0	0	0	210	167	1426	1495	0	2394	1053
V/C Ratio(X)	0.44	0.00	0.00	0.00	0.00	0.02	0.83	0.33	0.33	0.00	0.42	0.19
Avail Cap(c_a), veh/h	905	521	0	0	0	439	281	1426	1495	0	2394	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	0.0	0.0	0.0	44.0	51.7	3.4	3.4	0.0	9.1	7.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	7.5	0.6	0.6	0.0	0.5	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	3.3	0.0	0.0	0.0	0.0	0.1	4.7	4.4	4.6	0.0	7.6	2.5
LnGrp Delay(d),s/veh	48.4	0.0	0.0	0.0	0.0	44.1	59.2	4.1	4.0	0.0	9.7	7.9
LnGrp LOS	D					D	E	A	A		A	A
Approach Vol, veh/h		217			4			1090			1203	
Approach Delay, s/veh		48.4			44.1			11.0			9.4	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.7	81.7		19.6		96.4		19.6
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	18.0	* 53		* 32		* 75		31.5
Max Q Clear Time (g_c+I1), s	10.7	17.1		10.5		10.4		2.3
Green Ext Time (p_c), s	0.1	10.0		0.7		7.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	171	55	140	216	193	80	654	59	252	622	106
Future Volume (veh/h)	78	171	55	140	216	193	80	654	59	252	622	106
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.94	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	171	13	140	216	160	80	654	35	252	622	98
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	155	559	467	330	291	215	102	1546	654	280	1635	257
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.06	0.43	0.43	0.15	0.53	0.53
Sat Flow, veh/h	1007	1900	1586	1215	988	732	1810	3610	1528	1810	3102	488
Grp Volume(v), veh/h	78	171	13	140	0	376	80	654	35	252	361	359
Grp Sat Flow(s),veh/h/ln	1007	1900	1586	1215	0	1719	1810	1805	1528	1810	1805	1784
Q Serve(g_s), s	9.5	8.7	0.7	12.6	0.0	24.7	5.5	15.8	1.7	17.1	14.8	14.9
Cycle Q Clear(g_c), s	34.2	8.7	0.7	21.4	0.0	24.7	5.5	15.8	1.7	17.1	14.8	14.9
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	155	559	467	330	0	506	102	1546	654	280	951	940
V/C Ratio(X)	0.50	0.31	0.03	0.42	0.00	0.74	0.79	0.42	0.05	0.90	0.38	0.38
Avail Cap(c_a), veh/h	212	667	557	403	0	609	187	1546	654	433	951	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.3	34.2	31.4	42.5	0.0	39.8	58.2	24.9	20.9	51.9	17.5	17.5
Incr Delay (d2), s/veh	1.9	0.2	0.0	0.6	0.0	3.6	5.0	0.9	0.2	10.7	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	2.7	4.6	0.3	4.3	0.0	12.2	2.9	8.1	0.7	9.4	7.6	7.6
LnGrp Delay(d),s/veh	57.1	34.4	31.4	43.1	0.0	43.4	63.2	25.8	21.1	62.6	18.6	18.7
LnGrp LOS	E	C	C	D		D	E	C	C	E	B	B
Approach Vol, veh/h		262			516			769			972	
Approach Delay, s/veh		41.0			43.3			29.5			30.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.5	58.6		41.9	12.1	71.0		41.9
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	29.3	35.9		* 44	12.9	52.9		43.9
Max Q Clear Time (g_c+I1), s	19.1	17.8		26.7	7.5	16.9		36.2
Green Ext Time (p_c), s	0.3	3.0		2.3	0.0	3.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	1070	0	456	1421	508	0	0	10	37	368	65
Future Volume (veh/h)	318	1070	0	456	1421	508	0	0	10	37	368	65
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	318	1070	0	456	1421	329				37	368	37
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	277	1103	0	442	1258	551				362	329	322
Arrive On Green	0.15	0.31	0.00	0.36	0.51	0.51				0.25	0.25	0.25
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	318	1070	0	456	1421	329				37	368	37
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	24.5	46.8	0.0	57.1	81.5	34.3				3.2	40.5	3.6
Cycle Q Clear(g_c), s	24.5	46.8	0.0	57.1	81.5	34.3				3.2	40.5	3.6
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	277	1103	0	442	1258	551				362	329	322
V/C Ratio(X)	1.15	0.97	0.00	1.03	1.13	0.60				0.10	1.12	0.11
Avail Cap(c_a), veh/h	277	1103	0	442	1258	551				362	329	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	54.8	0.0	51.5	39.3	38.1				45.8	59.7	46.0
Incr Delay (d2), s/veh	100.0	20.1	0.0	51.3	68.8	1.8				0.1	85.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	143.6	116.6	147.5				0.0	117.1	0.0
%ile BackOfQ(50%),veh/ln	19.9	26.4	0.0	45.8	64.6	45.6				1.3	35.3	2.9
LnGrp Delay(d),s/veh	167.8	74.9	0.0	246.3	224.7	187.4				45.9	262.3	46.1
LnGrp LOS	F	E		F	F	F				D	F	D
Approach Vol, veh/h		1388			2206						442	
Approach Delay, s/veh		96.2			223.6						226.1	
Approach LOS		F			F						F	

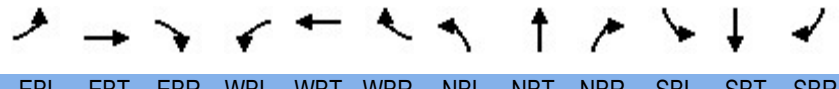
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	61.6	53.4		45.0	29.0	86.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	57.1	48.9		40.5	24.5	81.5		
Max Q Clear Time (g_c+I1), s	59.1	48.8		42.5	26.5	83.5		
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	0.0		

Intersection Summary		
HCM 2010 Ctrl Delay	180.1	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	332	66	385	541	502	93	1352	409	252	879	108
Future Volume (veh/h)	130	332	66	385	541	502	93	1352	409	252	879	108
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	130	332	56	385	541	160	93	1352	348	252	879	102
Adj No. of Lanes	0	2	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	400	70	688	707	304	119	1448	639	319	1402	163
Arrive On Green	0.17	0.17	0.17	0.20	0.20	0.20	0.07	0.40	0.40	0.09	0.43	0.43
Sat Flow, veh/h	884	2381	417	3510	3610	1549	1810	3610	1592	3510	3248	377
Grp Volume(v), veh/h	273	0	245	385	541	160	93	1352	348	252	488	493
Grp Sat Flow(s),veh/h/ln	1856	0	1826	1755	1805	1549	1810	1805	1592	1755	1805	1820
Q Serve(g_s), s	14.0	0.0	12.6	9.7	13.9	9.1	5.0	35.1	16.4	6.9	20.7	20.7
Cycle Q Clear(g_c), s	14.0	0.0	12.6	9.7	13.9	9.1	5.0	35.1	16.4	6.9	20.7	20.7
Prop In Lane	0.48		0.23	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	312	0	307	688	707	304	119	1448	639	319	779	786
V/C Ratio(X)	0.87	0.00	0.80	0.56	0.76	0.53	0.78	0.93	0.54	0.79	0.63	0.63
Avail Cap(c_a), veh/h	436	0	429	1341	1379	592	277	2322	1024	448	1124	1134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	39.1	35.6	37.2	35.3	45.1	28.1	22.5	43.6	21.7	21.7
Incr Delay (d2), s/veh	10.6	0.0	4.7	0.3	0.7	0.5	4.2	3.6	0.3	4.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	6.7	4.7	7.0	3.9	2.6	18.2	7.2	3.5	10.2	10.3
LnGrp Delay(d),s/veh	50.3	0.0	43.8	35.8	37.9	35.8	49.3	31.7	22.7	47.6	22.0	22.0
LnGrp LOS	D		D	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		518			1086			1793			1233	
Approach Delay, s/veh		47.2			36.9			30.9			27.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.4	46.3		19.5	12.4	43.3		22.8
Change Period (Y+Rc), s	3.0	4.0		3.0	3.5	4.0		3.6
Max Green Setting (Gmax), s	15.0	61.0		23.0	12.5	63.0		37.4
Max Q Clear Time (g_c+I1), s	7.0	22.7		16.0	8.9	37.1		15.9
Green Ext Time (p_c), s	0.0	1.1		0.4	0.0	2.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

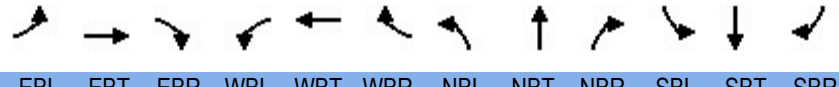


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	654	25	72	1120	667	74	417	97	226	287	149
Future Volume (veh/h)	135	654	25	72	1120	667	74	417	97	226	287	149
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	135	654	23	72	1120	333	74	417	32	171	364	35
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	1860	65	120	1804	793	247	492	217	227	478	195
Arrive On Green	0.09	0.52	0.52	0.07	0.50	0.50	0.14	0.14	0.14	0.13	0.13	0.13
Sat Flow, veh/h	1810	3555	125	1810	3610	1586	1810	3610	1593	1810	3800	1552
Grp Volume(v), veh/h	135	332	345	72	1120	333	74	417	32	171	364	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1875	1810	1805	1586	1810	1805	1593	1810	1900	1552
Q Serve(g_s), s	9.2	13.4	13.4	4.8	28.1	16.6	4.6	14.1	2.2	11.4	11.6	2.5
Cycle Q Clear(g_c), s	9.2	13.4	13.4	4.8	28.1	16.6	4.6	14.1	2.2	11.4	11.6	2.5
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	944	981	120	1804	793	247	492	217	227	478	195
V/C Ratio(X)	0.84	0.35	0.35	0.60	0.62	0.42	0.30	0.85	0.15	0.75	0.76	0.18
Avail Cap(c_a), veh/h	223	944	981	165	1804	793	279	557	246	294	617	252
HCM Platoon Ratio	1.00	1.00	1.00	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	56.0	17.4	17.4	56.8	22.7	19.8	48.6	52.7	47.6	52.8	52.8	48.9
Incr Delay (d2), s/veh	15.8	1.0	1.0	3.6	1.6	1.6	0.7	10.6	0.3	7.7	4.1	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	5.3	6.9	7.2	2.5	14.4	7.6	2.3	7.7	1.0	6.2	6.3	1.1
LnGrp Delay(d),s/veh	71.8	18.4	18.4	60.3	24.3	21.4	49.3	63.3	47.9	60.5	57.0	49.3
LnGrp LOS	E	B	B	E	C	C	D	E	D	E	E	D
Approach Vol, veh/h		812			1525			523			570	
Approach Delay, s/veh		27.3			25.4			60.4			57.6	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	67.1		21.7	12.9	70.0		20.4
Change Period (Y+Rc), s	4.6	4.6		* 4.7	4.6	4.6		4.7
Max Green Setting (Gmax), s	11.4	51.4		* 19	11.4	55.4		20.3
Max Q Clear Time (g_c+I1), s	11.2	30.1		16.1	6.8	15.4		13.6
Green Ext Time (p_c), s	0.1	8.3		0.9	0.0	3.8		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	848	162	259	1246	19	429	27	1383	196	1132	316
Future Volume (veh/h)	12	848	162	259	1246	19	429	27	1383	196	1132	316
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	848	130	259	1246	18	429	27	937	196	1132	236
Adj No. of Lanes	0	3	0	1	2	0	2	1	3	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	987	150	297	1524	22	505	746	1415	281	1706	527
Arrive On Green	0.23	0.23	0.23	0.16	0.42	0.42	0.14	0.39	0.39	0.08	0.33	0.33
Sat Flow, veh/h	25	4307	652	1810	3642	53	3510	1900	3602	3510	5187	1602
Grp Volume(v), veh/h	361	311	318	259	617	647	429	27	937	196	1132	236
Grp Sat Flow(s),veh/h/ln	1817	1573	1594	1810	1805	1889	1755	1900	1201	1755	1729	1602
Q Serve(g_s), s	7.7	23.7	24.0	17.4	37.8	37.8	14.9	1.1	26.7	6.8	23.4	14.5
Cycle Q Clear(g_c), s	23.6	23.7	24.0	17.4	37.8	37.8	14.9	1.1	26.7	6.8	23.4	14.5
Prop In Lane	0.03		0.41	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	361	365	297	755	791	505	746	1415	281	1706	527
V/C Ratio(X)	0.81	0.86	0.87	0.87	0.82	0.82	0.85	0.04	0.66	0.70	0.66	0.45
Avail Cap(c_a), veh/h	492	403	408	332	838	877	522	746	1415	281	1706	527
HCM Platoon Ratio	1.00	1.00	1.00	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	46.0	46.3	46.4	50.9	32.1	32.1	52.2	23.4	31.1	56.0	36.0	33.0
Incr Delay (d2), s/veh	8.0	14.6	15.4	18.5	5.2	5.0	11.5	0.1	2.5	6.3	2.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	11.7	12.1	10.2	19.8	20.9	8.0	0.6	9.2	3.5	11.5	6.8
LnGrp Delay(d),s/veh	54.0	60.9	61.7	69.4	37.3	37.1	63.7	23.5	33.6	62.4	38.1	35.8
LnGrp LOS	D	E	E	E	D	D	E	C	C	E	D	D
Approach Vol, veh/h		990			1523			1393			1564	
Approach Delay, s/veh		58.7			42.7			42.7			40.8	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	54.2		57.3	21.5	46.2	23.7	33.7
Change Period (Y+Rc), s	4.5	5.1		5.0	4.5	* 5.1	4.1	5.0
Max Green Setting (Gmax), s	9.0	43.4		58.0	17.6	* 35	21.9	32.0
Max Q Clear Time (g_c+I1), s	9.8	28.7		39.8	16.9	25.4	19.4	26.0
Green Ext Time (p_c), s	0.0	2.4		5.7	0.1	4.3	0.1	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Notes



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	615	0	0	661	1121	237
Future Volume (veh/h)	615	0	0	661	1121	237
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	0	0	1900	1900	1900
Adj Flow Rate, veh/h	615	0	0	661	1342	0
Adj No. of Lanes	1	0	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	916	0	0	1741	1435	640
Arrive On Green	0.48	0.00	0.00	0.48	0.40	0.00
Sat Flow, veh/h	1900	0	0	3800	3619	1615
Grp Volume(v), veh/h	615	0	0	661	1342	0
Grp Sat Flow(s),veh/h/ln	1900	0	0	1805	1810	1615
Q Serve(g_s), s	13.5	0.0	0.0	6.3	19.4	0.0
Cycle Q Clear(g_c), s	13.5	0.0	0.0	6.3	19.4	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	916	0	0	1741	1435	640
V/C Ratio(X)	0.67	0.00	0.00	0.38	0.94	0.00
Avail Cap(c_a), veh/h	916	0	0	1741	1799	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.8	0.0	0.0	8.9	15.8	0.0
Incr Delay (d2), s/veh	3.9	0.0	0.0	0.6	7.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.0	3.3	11.0	0.0
LnGrp Delay(d),s/veh	14.7	0.0	0.0	9.6	23.4	0.0
LnGrp LOS	B			A	C	
Approach Vol, veh/h	615			661	1342	
Approach Delay, s/veh	14.7			9.6	23.4	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		29.9				29.9		24.6
Change Period (Y+Rc), s		3.6				3.6		3.0
Max Green Setting (Gmax), s		26.3				26.3		27.1
Max Q Clear Time (g_c+I1), s		15.5				8.3		21.4
Green Ext Time (p_c), s		0.6				0.9		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	5.8
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	0	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	222	0	361
Demand Flow Rate, veh/h	222	0	361
Vehicles Circulating, veh/h	0	361	0
Vehicles Exiting, veh/h	361	0	222
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	0.0	6.3
Approach LOS	A	-	A

Lane	Left	Left
Designated Moves	R	LT
Assumed Moves	R	LT
RT Channelized		
Lane Util	1.000	1.000
Critical Headway, s	5.193	5.193
Entry Flow, veh/h	222	361
Cap Entry Lane, veh/h	1130	1130
Entry HV Adj Factor	1.000	1.000
Flow Entry, veh/h	222	361
Cap Entry, veh/h	1130	1130
V/C Ratio	0.196	0.319
Control Delay, s/veh	4.9	6.3
LOS	A	A
95th %tile Queue, veh	1	1

Intersection	
Int Delay, s/veh	15.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	373	35	39	460	39
Future Vol, veh/h	77	373	35	39	460	39
Conflicting Peds, #/hr	0	4	4	0	4	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	77	373	35	39	460	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	454	0	381	272
Stage 1	-	-	-	-	268	-
Stage 2	-	-	-	-	113	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1117	-	625	772
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	917	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1113	-	601	766
Mov Cap-2 Maneuver	-	-	-	-	601	-
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	885	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	31.8
HCM LOS			D

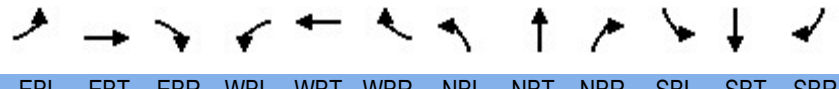
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	611	-	-	1113	-
HCM Lane V/C Ratio	0.817	-	-	0.031	-
HCM Control Delay (s)	31.8	-	-	8.3	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	8.4	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	229	458	176	1103	165	249	71	15	128	194	484
Future Volume (veh/h)	133	229	458	176	1103	165	249	71	15	128	194	484
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.92	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	133	229	212	176	1103	157	160	196	3	128	194	409
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	163	1390	589	207	1295	184	189	244	191	353	415	353
Arrive On Green	0.09	0.39	0.39	0.11	0.41	0.41	0.10	0.13	0.13	0.19	0.22	0.22
Sat Flow, veh/h	1810	3610	1528	1810	3160	449	1810	1900	1492	1810	1900	1615
Grp Volume(v), veh/h	133	229	212	176	629	631	160	196	3	128	194	409
Grp Sat Flow(s),veh/h/ln	1810	1805	1528	1810	1805	1803	1810	1900	1492	1810	1900	1615
Q Serve(g_s), s	8.3	4.8	6.1	10.9	36.1	36.4	9.9	11.5	0.2	7.0	10.2	25.0
Cycle Q Clear(g_c), s	8.3	4.8	6.1	10.9	36.1	36.4	9.9	11.5	0.2	7.0	10.2	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	1390	589	207	740	739	189	244	191	353	415	353
V/C Ratio(X)	0.82	0.16	0.36	0.85	0.85	0.85	0.84	0.80	0.02	0.36	0.47	1.16
Avail Cap(c_a), veh/h	172	1390	589	278	740	739	204	380	299	353	415	353
HCM Platoon Ratio	1.00	1.00	1.00	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	51.2	23.1	7.3	49.7	30.6	30.7	50.3	48.5	27.5	39.9	38.9	44.7
Incr Delay (d2), s/veh	24.6	0.3	1.7	16.7	11.8	12.1	25.2	6.8	0.0	0.6	0.8	98.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.4	4.3	6.4	20.4	20.5	6.3	6.5	0.1	3.6	5.4	20.8
LnGrp Delay(d),s/veh	75.8	23.4	9.0	66.4	42.4	42.7	75.5	55.3	27.6	40.5	39.8	143.5
LnGrp LOS	E	C	A	E	D	D	E	E	C	D	D	F
Approach Vol, veh/h		574			1436			359			731	
Approach Delay, s/veh		30.2			45.5			64.1			97.9	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	49.2	27.3	19.8	15.4	52.0	17.1	30.0
Change Period (Y+Rc), s	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.0
Max Green Setting (Gmax), s	17.6	40.2	15.0	22.9	10.9	46.9	12.9	25.0
Max Q Clear Time (g_c+I1), s	12.9	8.1	9.0	13.5	10.3	38.4	11.9	27.0
Green Ext Time (p_c), s	0.2	2.3	0.1	0.7	0.0	5.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.2
HCM 2010 LOS	E

Notes

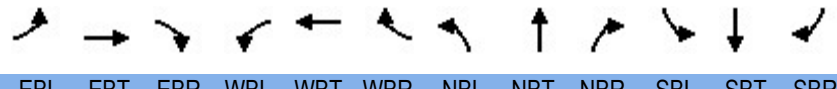


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	0	123	0	0	4	138	970	11	0	1027	331
Future Volume (veh/h)	253	0	123	0	0	4	138	970	11	0	1027	331
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	250	0	0	0	0	4	138	970	11	0	1027	224
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	517	264	0	0	0	225	167	2855	32	0	2361	1038
Arrive On Green	0.14	0.00	0.00	0.00	0.00	0.14	0.09	0.78	0.78	0.00	0.65	0.65
Sat Flow, veh/h	2870	1900	0	0	0	1615	1810	3656	41	0	3705	1588
Grp Volume(v), veh/h	250	0	0	0	0	4	138	479	502	0	1027	224
Grp Sat Flow(s),veh/h/ln	1435	1900	0	0	0	1615	1810	1805	1893	0	1805	1588
Q Serve(g_s), s	9.6	0.0	0.0	0.0	0.0	0.2	8.7	9.2	9.2	0.0	16.0	6.6
Cycle Q Clear(g_c), s	9.8	0.0	0.0	0.0	0.0	0.2	8.7	9.2	9.2	0.0	16.0	6.6
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	517	264	0	0	0	225	167	1409	1478	0	2361	1038
V/C Ratio(X)	0.48	0.00	0.00	0.00	0.00	0.02	0.83	0.34	0.34	0.00	0.43	0.22
Avail Cap(c_a), veh/h	905	521	0	0	0	439	281	1409	1478	0	2361	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	0.0	0.0	0.0	43.1	51.7	3.8	3.8	0.0	9.7	8.1
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	7.5	0.7	0.6	0.0	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	0.0	0.0	0.0	0.1	4.7	4.8	5.0	0.0	8.0	3.0
LnGrp Delay(d),s/veh	48.0	0.0	0.0	0.0	0.0	43.1	59.2	4.5	4.4	0.0	10.3	8.6
LnGrp LOS	D					D	E	A	A		B	A
Approach Vol, veh/h		250			4			1119			1251	
Approach Delay, s/veh		48.0			43.1			11.2			10.0	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.7	80.7		20.6		95.4		20.6
Change Period (Y+Rc), s	4.0	* 4.8		* 4.5		* 4.8		4.5
Max Green Setting (Gmax), s	18.0	* 53		* 32		* 75		31.5
Max Q Clear Time (g_c+I1), s	10.7	18.0		11.8		11.2		2.2
Green Ext Time (p_c), s	0.1	10.3		0.8		8.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	171	55	140	216	200	80	661	59	257	626	118
Future Volume (veh/h)	92	171	55	140	216	200	80	661	59	257	626	118
Number	3	8	18	7	4	14	5	2	12	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	1.00		0.95	1.00		0.94	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	92	171	13	140	216	167	80	661	35	257	626	110
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	168	587	490	350	299	231	102	1485	627	285	1561	274
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.06	0.41	0.41	0.16	0.51	0.51
Sat Flow, veh/h	1003	1900	1587	1215	968	749	1810	3610	1525	1810	3044	534
Grp Volume(v), veh/h	92	171	13	140	0	383	80	661	35	257	371	365
Grp Sat Flow(s),veh/h/ln	1003	1900	1587	1215	0	1717	1810	1805	1525	1810	1805	1773
Q Serve(g_s), s	11.2	8.5	0.7	12.4	0.0	24.8	5.5	16.5	1.7	17.4	15.7	15.8
Cycle Q Clear(g_c), s	36.0	8.5	0.7	20.9	0.0	24.8	5.5	16.5	1.7	17.4	15.7	15.8
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	168	587	490	350	0	530	102	1485	627	285	925	909
V/C Ratio(X)	0.55	0.29	0.03	0.40	0.00	0.72	0.79	0.45	0.06	0.90	0.40	0.40
Avail Cap(c_a), veh/h	211	667	557	405	0	609	187	1485	627	433	925	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	32.8	30.1	40.8	0.0	38.4	58.2	26.5	22.2	51.7	18.7	18.7
Incr Delay (d2), s/veh	2.0	0.2	0.0	0.6	0.0	3.3	5.0	1.0	0.2	11.5	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	3.2	4.5	0.3	4.2	0.0	12.3	2.9	8.4	0.8	9.6	8.2	8.0
LnGrp Delay(d),s/veh	56.5	33.0	30.1	41.3	0.0	41.7	63.2	27.5	22.3	63.2	20.0	20.0
LnGrp LOS	E	C	C	D		D	E	C	C	E	B	C
Approach Vol, veh/h		276			523			776			993	
Approach Delay, s/veh		40.7			41.6			30.9			31.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.8	56.5		43.7	12.1	69.2		43.7
Change Period (Y+Rc), s	5.1	5.1		* 5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	29.9	35.9		* 44	12.9	52.9		43.9
Max Q Clear Time (g_c+I1), s	19.4	18.5		26.8	7.5	17.8		38.0
Green Ext Time (p_c), s	0.3	3.0		2.3	0.0	3.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	1079	0	456	1421	510	0	0	10	39	368	67
Future Volume (veh/h)	323	1079	0	456	1421	510	0	0	10	39	368	67
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	20	50	50				0	13	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	0	1300	1300	1300				1500	1300	1500
Adj Flow Rate, veh/h	323	1079	0	456	1421	331				39	368	39
Adj No. of Lanes	1	2	0	1	2	1				1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	288	1103	0	442	1243	544				362	329	322
Arrive On Green	0.16	0.31	0.00	0.36	0.50	0.50				0.25	0.25	0.25
Sat Flow, veh/h	1810	3705	0	1238	2470	1081				1429	1300	1273
Grp Volume(v), veh/h	323	1079	0	456	1421	331				39	368	39
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1238	1235	1081				1429	1300	1273
Q Serve(g_s), s	25.5	47.4	0.0	57.1	80.5	35.1				3.4	40.5	3.8
Cycle Q Clear(g_c), s	25.5	47.4	0.0	57.1	80.5	35.1				3.4	40.5	3.8
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	288	1103	0	442	1243	544				362	329	322
V/C Ratio(X)	1.12	0.98	0.00	1.03	1.14	0.61				0.11	1.12	0.12
Avail Cap(c_a), veh/h	288	1103	0	442	1243	544				362	329	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	55.0	0.0	51.5	39.8	39.1				45.9	59.7	46.0
Incr Delay (d2), s/veh	89.2	21.8	0.0	51.3	74.6	2.0				0.1	85.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	143.6	116.5	155.5				0.0	117.1	0.0
%ile BackOfQ(50%),veh/ln	19.9	27.0	0.0	45.8	65.1	46.8				1.3	35.3	3.0
LnGrp Delay(d),s/veh	156.5	76.9	0.0	246.3	230.8	196.5				46.0	262.3	46.2
LnGrp LOS	F	E		F	F	F				D	F	D
Approach Vol, veh/h		1402			2208						446	
Approach Delay, s/veh		95.2			228.9						224.5	
Approach LOS		F			F						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	61.6	53.4		45.0	30.0	85.0		
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s	57.1	48.9		40.5	25.5	80.5		
Max Q Clear Time (g_c+I1), s	59.1	49.4		42.5	27.5	82.5		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		

Intersection Summary		
HCM 2010 Ctrl Delay	182.2	
HCM 2010 LOS	F	

Appendix D

Volume Spreadsheets

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: El Camino Real & Whipple Ave
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	68	973	291	229	309	334	502	796	56	18	410	75	4061
Approved Project Trips													
610 Walnut Street	0	14	0	0	0	0	0	2	0	4	1	0	21
1180 Main Street	0	12	0	0	0	0	0	2	0	0	0	0	14
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	1	0	0	0	0	0	0	0	1
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	8	19	2	3	0	0	1	2	20	20	0	75
1175 Marshall Street	0	0	0	0	9	0	0	0	0	0	9	0	18
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	1	0	0	0	0	0	0	0	0	1
1409 El Camino Real	0	3	0	0	0	1	24	11	3	1	0	0	43
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	1	0	0	0	0	12	6	1	0	0	0	20
Stanford Precise Plan	-2	25	0	-1	-8	-1	0	0	0	0	0	0	13
2075 Broadway	0	9	0	0	0	0	0	2	0	2	0	0	13
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	-2	72	19	2	5	0	36	24	6	27	30	0	219
Background Conditions	66	1045	310	231	314	334	538	820	62	45	440	75	4280
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	6	12	16	30	21	0	0	0	8	0	93
Net Project Trips	0	0	6	12	16	30	21	0	0	0	8	0	93
Existing + Project	68	973	297	241	325	364	523	796	56	18	418	75	4154
Background + Project	66	1045	316	243	330	364	559	820	62	45	448	75	4373
Existing Conditions with Blomquist Extention	68	973	291	235	311	334	502	790	54	18	410	75	4061
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	87	0	0	0	0	0	17	0	0	0	0	104
505 East Bayshore Avenue	0	0	1	2	3	2	1	0	0	0	1	0	10
690 Veterans	0	0	0	0	0	0	0	0	0	0	1	0	1
1125 Arguello Street	0	0	1	3	1	0	0	0	0	0	0	0	5
Toyota 101	0	0	17	6	8	7	22	0	0	0	22	0	82
South Main Mixed-Use	0	40	0	0	0	0	0	12	0	0	0	0	52
Harbor View	0	6	28	5	3	0	0	1	0	2	11	0	56
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	133	47	16	15	9	23	30	0	2	35	0	310
Cumulative Conditions	68	1208	365	260	339	353	576	868	62	48	487	77	4712
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	6	12	16	16	11	0	0	0	9	0	70
Net Cumulative Proj. Trips	0	0	6	12	16	16	11	0	0	0	9	0	70
Cumulative w/ Project	68	1208	371	272	355	369	587	868	62	48	496	77	4782
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	68	1211	362	251	336	362	605	877	65	49	486	77	4749
Cumulative w/ Project	68	1211	368	263	352	392	626	877	65	49	494	77	4842

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: El Camino Real Whipple Ave
Peak Hour: PM Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor: Future Growth % Per Year 1.000
Number of Years Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	105	808	178	400	440	287	278	1152	66	48	252	126	4140
Approved Project Trips													
610 Walnut Street	0	3	0	0	1	0	0	13	3	1	0	0	21
1180 Main Street	0	2	0	0	0	0	0	11	0	0	0	0	13
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	1	0	0	0	0	0	1	0	2
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	5	11	17	21	0	0	7	14	11	11	0	97
1175 Marshall Street	0	0	0	0	6	0	0	0	0	0	8	0	14
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	1	0	0	0	0	0	0	0	0	0	1
1409 El Camino Real	0	11	0	0	0	3	13	6	2	3	0	0	38
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	6	0	0	0	1	6	3	0	1	0	0	17
Stanford Precise Plan	0	0	14	11	0	0	0	0	0	-1	4	0	28
2075 Broadway	0	4	0	0	0	0	0	10	3	1	0	0	18
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	31	26	28	29	4	19	50	22	16	24	0	249
Background Conditions	105	839	204	428	469	291	297	1202	88	64	276	126	4389
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	19	15	20	42	62	0	0	0	25	0	183
Net Project Trips	0	0	19	15	20	42	62	0	0	0	25	0	183
Existing + Project	105	808	197	415	460	329	340	1152	66	48	277	126	4323
Background + Project	105	839	223	443	489	333	359	1202	88	64	301	126	4572
Existing Conditions with Blomquist Extention	105	808	178	230	441	287	278	1151	65	48	252	126	3969
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	-1	0	0	0	0	0	61	0	0	0	0	60
505 East Bayshore Avenue	0	0	2	1	2	2	3	0	0	0	3	0	13
690 Veterans	0	0	0	0	1	0	0	0	0	0	1	0	2
1125 Arguello Street	0	0	3	2	1	0	0	0	0	0	1	0	7
Toyota 101	0	0	12	18	24	21	16	0	0	0	16	0	107
South Main Mixed-Use	0	15	0	0	0	0	0	46	0	0	0	0	61
Harbor View	0	1	6	28	11	0	0	6	3	1	2	0	58
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	15	23	49	39	23	19	113	3	1	23	0	308
Cumulative Conditions	108	879	233	314	521	323	324	1349	92	66	306	130	4645
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	19	15	20	23	33	0	0	0	25	0	135
Net Cumulative Proj. Trips	0	0	19	15	20	23	33	0	0	0	25	0	135
Cumulative w/ Project	108	879	252	329	541	346	357	1349	92	66	331	130	4780
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	108	879	233	487	521	343	347	1352	93	66	307	130	4866
Cumulative w/ Project	108	879	252	502	541	385	409	1352	93	66	332	130	5049

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Winslow St/Industrial & Whipple Ave
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	103	208	220	424	699	82	91	139	16	8	1038	79	3107
Approved Project Trips													
610 Walnut Street	0	10	0	0	0	0	0	2	0	0	0	0	12
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	1	0	0	0	0	0	0	0	1
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	2	2	0	1	0	0	0	2	9	16	0	32
1175 Marshall Street	0	46	0	0	0	0	0	46	0	0	0	0	92
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	1	0	0	0	0	0	0	0	1
1409 El Camino Real	1	0	0	0	0	0	0	0	0	0	21	3	25
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	11	1	12
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	2	0	0	0	0	0	0	0	0	0	2
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	1	58	4	0	3	0	0	48	2	9	48	4	177
Background Conditions	104	266	224	424	702	82	91	187	18	17	1086	83	3284
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	1	1	57	6	4	0	0	0	36	0	105
Net Project Trips	0	0	1	1	57	6	4	0	0	0	36	0	105
Existing + Project	103	208	221	425	756	88	95	139	16	8	1074	79	3212
Background + Project	104	266	225	425	759	88	95	187	18	17	1122	83	3389
Existing Conditions with Blomquist Extention	103	208	220	424	707	82	91	139	16	8	1038	79	3115
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	22	0	0	0	0	0	4	0	0	0	0	26
505 East Bayshore Avenue	0	0	0	0	7	0	0	0	0	0	2	0	9
690 Veterans	0	0	3	2	0	0	0	0	0	0	1	0	6
1125 Arguello Street	0	0	0	0	2	0	0	0	0	0	6	1	9
Toyota 101	0	0	0	0	21	1	2	0	0	0	60	0	84
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor View	0	0	0	0	8	0	0	0	0	0	39	0	46
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	22	3	2	38	1	2	4	0	0	108	1	180
Cumulative Conditions	107	294	234	439	768	85	96	195	18	17	1225	86	3566
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	1	1	44	2	1	0	0	0	26	0	75
Net Cumulative Proj. Trips	0	0	1	1	44	2	1	0	0	0	26	0	75
Cumulative w/ Project	107	294	235	440	812	87	97	195	18	17	1251	86	3641
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	107	294	234	439	765	88	101	195	18	17	1250	86	3594
Cumulative w/ Project	107	294	235	440	822	94	105	195	18	17	1286	86	3699

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Winslow St/Industrial W Whipple Ave
Peak Hour: PM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	140	235	211	635	875	52	78	348	53	19	420	127	3193
Approved Project Trips													
610 Walnut Street	0	2	0	0	0	0	0	10	0	0	0	0	12
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	1	0	0	0	0	0	1	0	2
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	1	1	2	11	0	0	2	19	5	9	0	50
1175 Marshall Street	0	42	0	0	0	0	0	31	0	0	0	0	73
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	1	0	1
1409 El Camino Real	3	0	0	0	0	0	0	0	0	0	11	2	16
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	1	0	0	0	0	0	0	0	0	0	6	1	8
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	1	3	0	0	0	0	0	0	0	0	4
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	4	45	2	5	12	0	0	43	19	5	28	3	166
Background Conditions	144	280	213	640	887	52	78	391	72	24	448	130	3359
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	4	3	77	9	11	0	0	0	105	0	209
Net Project Trips	0	0	4	3	77	9	11	0	0	0	105	0	209
Existing + Project	140	235	215	638	952	61	89	348	53	19	525	127	3402
Background + Project	144	280	217	643	964	61	89	391	72	24	553	130	3568
Existing Conditions with Blomquist Extention	140	235	211	424	877	52	78	348	53	19	420	127	2984
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	15	0	0	0	0	15
505 East Bayshore Avenue	0	0	0	0	5	0	0	0	0	0	8	0	13
690 Veterans	0	0	3	5	1	0	0	0	0	0	1	0	10
1125 Arguello Street	1	0	0	0	6	0	0	0	0	0	4	1	12
Toyota 101	0	0	0	0	62	3	2	0	0	0	43	0	110
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor View	0	0	0	0	39	0	0	0	0	0	9	0	48
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	1	0	3	5	113	3	2	15	0	0	65	1	208
Cumulative Conditions	149	287	222	447	1028	57	82	417	74	25	524	135	3446
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	4	3	58	3	4	0	0	0	76	0	148
Net Cumulative Proj. Trips	0	0	4	3	58	3	4	0	0	0	76	0	148
Cumulative w/ Project	149	287	226	450	1086	60	86	417	74	25	600	135	3594
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	149	287	222	664	1043	63	86	417	74	25	549	135	3714
Cumulative w/ Project	149	287	226	667	1120	72	97	417	74	25	654	135	3923

Intersection Number: 3
Traffix Node Number: 3
Intersection Name: Veterans Blvd & Whipple Ave
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	208	1043	109	15	864	224	665	13	112	116	1190	23	4582
Approved Project Trips													
610 Walnut Street	0	36	0	0	0	0	5	0	0	0	0	0	41
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	-4	0	0	0	0	0	14	0	0	0	0	10
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	1	0	0	0	0	0	0	1	1	0	0	3
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	5	0	0	0	0	0	5
SM County Government Center	0	83	0	0	0	10	10	0	2	18	0	0	123
1175 Marshall Street	0	69	0	0	0	0	69	0	0	0	0	0	138
707 Bradford Street	0	0	0	0	0	0	0	5	0	0	0	0	5
612 Jefferson Ave	0	0	0	0	0	0	1	0	1	0	0	0	2
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	21	0	21
851 Main Street	0	0	0	0	0	22	7	0	1	2	0	0	32
103 Wilson Street	0	3	0	0	0	0	0	0	0	0	11	0	14
Stanford Precise Plan	0	21	2	0	-23	-1	0	0	0	8	0	0	7
2075 Broadway	0	18	0	0	0	0	3	0	0	2	0	0	23
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	227	2	0	-23	31	100	19	5	31	32	0	424
Background Conditions	208	1270	111	15	841	255	765	32	117	147	1222	23	5006
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	18	0	64	36	21	0	0	0	41	0	180
Net Project Trips	0	0	18	0	64	36	21	0	0	0	41	0	180
Existing + Project	208	1043	127	15	928	260	686	13	112	116	1231	23	4762
Background + Project	208	1270	129	15	905	291	786	32	117	147	1263	23	5186
Existing Conditions with Blomquist Extention	208	1043	224	15	877	224	665	13	107	116	1190	23	4705
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	163	0	0	0	0	32	0	0	0	0	0	195
505 East Bayshore Avenue	0	0	2	0	7	2	1	0	0	0	3	0	15
690 Veterans	0	4	0	0	0	0	3	0	2	3	0	0	12
1125 Arguello Street	2	0	0	0	0	0	0	0	0	0	6	0	8
Toyota 101	0	0	55	0	22	5	14	0	0	0	63	0	159
South Main Mixed-Use	0	30	0	0	0	0	9	0	0	0	0	0	39
Harbor View	0	103	103	0	5	0	0	0	3	13	25	0	252
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	2	300	160	0	34	7	59	0	5	16	97	0	680
Cumulative Conditions	216	1601	393	15	915	269	844	32	119	166	1355	24	5949
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	18	0	47	13	9	0	0	0	29	0	116
Net Cumulative Proj. Trips	0	0	18	0	47	13	9	0	0	0	29	0	116
Cumulative w/ Project	216	1601	411	15	962	282	853	32	119	166	1384	24	6065
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	216	1653	171	15	908	286	880	32	125	187	1363	24	5860
Cumulative w/ Project	216	1653	189	15	972	322	901	32	125	187	1404	24	6040

Intersection Number: 3
Traffix Node Number: 3
Intersection Name: Veterans Blvd Whipple Ave
Peak Hour: PM Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor: Future Growth % Per Year 1.000
Number of Years Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	301	906	95	18	1008	144	886	10	287	125	609	12	4401
Approved Project Trips													
610 Walnut Street	0	7	0	0	0	0	33	0	0	0	0	0	40
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	12	0	0	0	0	0	-1	0	0	0	0	11
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	6	0	0	0	0	0	0	1	1	0	0	8
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	14	0	0	0	0	0	14
SM County Government Center	0	46	0	0	0	6	77	0	13	10	0	0	152
1175 Marshall Street	0	63	0	0	0	0	47	0	0	0	0	0	110
707 Bradford Street	0	0	0	0	0	0	0	5	0	0	0	0	5
612 Jefferson Ave	0	1	0	0	0	0	1	0	0	1	0	0	3
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	11	0	11
851 Main Street	0	0	0	0	0	1	18	0	2	0	0	0	21
103 Wilson Street	0	11	0	0	0	0	0	0	0	0	6	0	17
Stanford Precise Plan	0	-3	0	0	0	0	2	13	74	9	-1	0	94
2075 Broadway	0	7	0	0	0	0	19	0	3	1	0	0	30
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	150	0	0	0	7	211	17	93	22	16	0	516
Background Conditions	301	1056	95	18	1008	151	1097	27	380	147	625	12	4917
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	52	0	89	48	62	0	0	0	120	0	371
Net Project Trips	0	0	52	0	89	48	62	0	0	0	120	0	371
Existing + Project	301	906	147	18	1097	192	948	10	287	125	729	12	4772
Background + Project	301	1056	147	18	1097	199	1159	27	380	147	745	12	5288
Existing Conditions with Blomquist Extention	301	906	119	15	1043	144	886	10	255	125	609	12	4425
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	-2	0	0	0	0	114	0	0	0	0	0	112
505 East Bayshore Avenue	0	0	7	0	5	1	2	0	0	0	8	0	23
690 Veterans	0	4	0	0	0	0	7	0	6	3	0	0	20
1125 Arguello Street	6	0	0	0	0	0	0	0	0	0	4	0	10
Toyota 101	0	0	39	0	65	15	10	0	0	0	45	0	174
South Main Mixed-Use	0	11	0	0	0	0	34	0	0	0	0	0	45
Harbor View	0	24	24	0	26	0	0	0	13	3	6	0	95
1548 Maple Street (w/ Blomquist Ext)	0	0	10	0	0	0	0	0	0	0	0	0	10
Total Approved Trips	6	37	70	0	96	16	167	0	19	6	63	0	479
Cumulative Conditions	316	1114	192	15	1170	171	1291	27	374	156	706	12	5546
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	52	0	64	19	25	0	0	0	84	0	244
Net Cumulative Proj. Trips	0	0	52	0	64	19	25	0	0	0	84	0	244
Cumulative w/ Project	316	1114	244	15	1234	190	1316	27	374	156	790	12	5790
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	316	1132	144	19	1157	211	1321	27	429	162	728	12	5658
Cumulative w/ Project	316	1132	196	19	1246	259	1383	27	429	162	848	12	6029

Intersection Number: 4
Traffix Node Number: 4
Intersection Name: US 101 NB Off-Ramp & Whipple Ave
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	0	290	0	91	0	1019	0	146	0	1546
Approved Project Trips													
610 Walnut Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	0	0	0	0	0	0	0	0	0	0	0	0
1175 Marshall Street	0	0	0	0	0	0	0	0	0	0	0	0	0
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	0	0	290	0	91	0	1019	0	146	0	1546
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	156	0	23	0	0	0	80	0	259
Net Project Trips	0	0	0	0	156	0	23	0	0	0	80	0	259
Existing + Project	0	0	0	0	446	0	114	0	1019	0	226	0	1805
Background + Project	0	0	0	0	446	0	114	0	1019	0	226	0	1805
Existing Conditions with Blomquist Extention	0	0	0	0	276	0	85	0	1019	0	261	0	1641
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	0	0	0	0	0
505 East Bayshore Avenue	0	0	0	0	16	0	2	0	0	0	5	0	23
690 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
1125 Arguello Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Toyota 101	0	0	0	0	49	0	55	0	0	0	132	0	236
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor View	0	0	0	0	5	0	0	0	0	0	128	0	133
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	10	0	0	0	0	0	0	0	10
Total Approved Trips	0	0	0	0	70	0	57	0	0	0	265	0	392
Cumulative Conditions	0	0	0	0	354	0	145	0	1050	0	534	0	2083
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	0	0	97	0	16	0	0	0	56	0	169
Net Cumulative Proj. Trips	0	0	0	0	97	0	16	0	0	0	56	0	169
Cumulative w/ Project	0	0	0	0	451	0	161	0	1050	0	590	0	2252
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	0	0	0	0	407	0	173	0	1050	0	357	0	1987
Cumulative w/ Project	0	0	0	0	563	0	196	0	1050	0	437	0	2246

Intersection Number: 4
Traffix Node Number: 4
Intersection Name: US 101 NB Off-Ramp Whipple Ave
Peak Hour: PM
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use
Date of Analysis: 09/16/19

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	0	203	0	103	0	1088	0	206	0	1600
Approved Project Trips													
610 Walnut Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	0	0	0	0	0	0	0	0	0	0	0	0
1175 Marshall Street	0	0	0	0	0	0	0	0	0	0	0	0	0
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	0	0	203	0	103	0	1088	0	206	0	1600
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	199	0	67	0	0	0	234	0	500
Net Project Trips	0	0	0	0	199	0	67	0	0	0	234	0	500
Existing + Project	0	0	0	0	402	0	170	0	1088	0	440	0	2100
Background + Project	0	0	0	0	402	0	170	0	1088	0	440	0	2100
Existing Conditions with Blomquist Extention	0	0	0	0	198	0	63	0	1088	0	230	0	1579
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	0	0	0	0	0
505 East Bayshore Avenue	0	0	0	0	11	0	7	0	0	0	18	0	36
690 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
1125 Arguello Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Toyota 101	0	0	0	0	141	0	39	0	0	0	94	0	274
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor View	0	0	0	0	3	0	0	0	0	0	29	0	33
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	10	0	0	0	0	0	10	0	20
Total Approved Trips	0	0	0	0	155	0	46	0	0	0	141	0	343
Cumulative Conditions	0	0	0	0	359	0	111	0	1121	0	378	0	1970
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	0	0	0	125	0	47	0	0	0	161	0	333
Net Cumulative Proj. Trips	0	0	0	0	125	0	47	0	0	0	161	0	333
Cumulative w/ Project	0	0	0	0	484	0	158	0	1121	0	539	0	2303
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	0	0	0	0	462	0	170	0	1121	0	381	0	2134
Cumulative w/ Project	0	0	0	0	661	0	237	0	1121	0	615	0	2634

Intersection Number: 5
Traffix Node Number: 5
Intersection Name: East Bayshore Rd & Bair Island Rd
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	180	367	0	0	0	0	0	0	0	0	547
Approved Project Trips													
610 Walnut Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	0	0	0	0	0	0	0	0	0	0	0	0
1175 Marshall Street	0	0	0	0	0	0	0	0	0	0	0	0	0
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	180	367	0	0	0	0	0	0	0	0	547
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	3	3	0	0	0	0	0	0	0	0	6
Net Project Trips	0	0	3	3	0	0	0	0	0	0	0	0	6
Existing + Project	0	0	183	370	0	0	0	0	0	0	0	0	553
Background + Project	0	0	183	370	0	0	0	0	0	0	0	0	553
Existing Conditions with Blomquist Extention	0	162	129	269	0	98	51	115	0	0	0	0	824
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	0	0	0	0	0
505 East Bayshore Avenue	0	11	0	0	0	0	0	4	0	0	0	0	15
690 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
1125 Arguello Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Toyota 101	0	33	0	0	0	0	0	88	0	0	0	0	121
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor View	0	128	0	0	0	0	0	41	0	0	0	0	169
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	20	0	0	0	0	20
Total Approved Trips	0	172	0	0	0	0	0	133	0	0	0	0	305
Cumulative Conditions	0	339	133	277	0	101	53	252	0	0	0	0	1154
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	61	3	3	0	0	0	33	0	0	0	0	100
Net Cumulative Proj. Trips	0	61	3	3	0	0	0	33	0	0	0	0	100
Cumulative w/ Project	0	400	136	280	0	101	53	285	0	0	0	0	1254
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	0	0	185	378	0	0	0	0	0	0	0	0	563
Cumulative w/ Project	0	0	188	381	0	0	0	0	0	0	0	0	569

Intersection Number:	5
Traffix Node Number:	5
Intersection Name:	East Bayshore Rd Bair Island Rd
Peak Hour:	PM
Count Date:	09/10/19
Scenario:	557 E Bayshore Mixed-Use

Date of Analysis: 09/16/19

RC Growth Factor: Future Growth % Per Year 1.000
Number of Years: Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	344	209	0	0	0	0	0	0	0	0	553
Approved Project Trips													
610 Walnut Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	0	0	0	0	0	0	0	0	0	0	0	0
1175 Marshall Street	0	0	0	0	0	0	0	0	0	0	0	0	0
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	344	209	0	0	0	0	0	0	0	0	553
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	7	7	0	0	0	0	0	0	0	0	14
Net Project Trips	0	0	7	7	0	0	0	0	0	0	0	0	14
Existing + Project	0	0	351	216	0	0	0	0	0	0	0	0	567
Background + Project	0	0	351	216	0	0	0	0	0	0	0	0	567
Existing Conditions with Blomquist Extention	0	80	248	272	0	97	96	230	0	0	0	0	1023
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	0	0	0	0	0
505 East Bayshore Avenue	0	7	0	0	0	0	0	12	0	0	0	0	19
690 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
1125 Arguello Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Toyota 101	0	94	0	0	0	0	0	63	0	0	0	0	157
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor View	0	29	0	0	0	0	0	217	0	0	0	0	246
1548 Maple Street (w/ Blomquist Ext)	0	20	0	0	0	0	0	10	0	0	0	0	30
Total Approved Trips	0	130	0	0	0	0	0	292	0	0	0	0	422
Cumulative Conditions	0	213	256	280	0	100	99	529	0	0	0	0	1476
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	0	75	7	7	0	0	0	94	0	0	0	0	183
Net Cumulative Proj. Trips	0	75	7	7	0	0	0	94	0	0	0	0	183
Cumulative w/ Project	0	288	263	287	0	100	99	623	0	0	0	0	1659
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	0	0	354	215	0	0	0	0	0	0	0	0	569
Cumulative w/ Project	0	0	361	222	0	0	0	0	0	0	0	0	583

Intersection Number: 6
Traffix Node Number: 6
Intersection Name: Blomquist St & Maple St
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	0	18	16	17	0	129	347	26	0	553
Approved Project Trips													
610 Walnut Street	0	0	0	0	0	0	0	0	10	1	0	0	11
1180 Main Street	0	0	0	0	6	0	0	0	0	0	1	0	7
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	21	32	6	0	0	0	5	0	64
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	0	0	0	0	0	0	0	0	0	0	0	0
1175 Marshall Street	0	0	0	0	0	0	0	0	23	23	0	0	46
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	0	0	0	0	3	1	0	0	4
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	0	0	27	32	6	0	36	25	6	0	132
Background Conditions	0	0	0	0	45	48	23	0	165	372	32	0	685
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	0	0	0	0	3	6	0	0	9
Net Project Trips	0	0	0	0	0	0	0	0	3	6	0	0	9
Existing + Project	0	0	0	0	18	16	17	0	132	353	26	0	562
Background + Project	0	0	0	0	45	48	23	0	168	378	32	0	694
Existing Conditions with Blomquist Extention	36	223	0	0	18	16	17	166	129	347	26	0	978
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	54	11	0	0	65
505 East Bayshore Avenue	7	3	0	0	0	0	0	1	0	0	0	2	13
690 Veterans	0	0	0	0	0	0	0	0	1	1	0	0	2
1125 Arguello Street	0	0	0	0	0	0	0	0	1	2	0	0	3
Toyota 101	22	10	0	0	0	0	0	28	0	0	0	60	120
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	13	0	0	13
Harbor View	0	128	0	0	0	0	0	41	18	155	0	0	342
1548 Maple Street (w/ Blomquist Ext)	10	0	0	0	0	10	0	0	0	0	0	0	20
Total Approved Trips	29	141	0	0	0	0	0	70	74	182	0	62	558
Cumulative Conditions	66	371	0	0	25	16	18	241	243	564	28	62	1634
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	45	16	0	0	0	0	0	7	0	0	0	25	93
Net Cumulative Proj. Trips	45	16	0	0	0	0	0	7	0	0	0	25	93
Cumulative w/ Project	111	387	0	0	25	16	18	248	243	564	28	87	1727
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	0	0	0	0	46	48	24	0	258	645	33	0	1054
Cumulative w/ Project	0	0	0	0	46	48	24	0	261	651	33	0	1063

Intersection Number:	6		
Traffix Node Number:	6		
Intersection Name:	Blomquist St	Maple St	
Peak Hour:	PM		Date of Analysis: 09/16/19
Count Date:	09/10/19		
Scenario:	557 E Bayshore Mixed-Use		
RC Growth Factor:			Future Growth % Per Year 1.000
Number of Years			Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	0	0	0	0	26	19	11	0	313	200	20	0	589
Approved Project Trips													
610 Walnut Street	0	0	0	0	0	0	0	0	2	9	0	0	11
1180 Main Street	0	0	0	0	2	0	0	0	0	0	4	0	6
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	0	0	0	10	15	28	0	0	0	52	0	105
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	0	0	0
SM County Government Center	0	0	0	0	0	0	0	0	0	0	0	0	0
1175 Marshall Street	0	0	0	0	0	0	0	0	21	16	0	0	37
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	0	0	0	0	1	3	0	0	4
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	0	0	12	15	28	0	24	28	56	0	163
Background Conditions	0	0	0	0	38	34	39	0	337	228	76	0	752
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	0	0	0	0	7	5	0	0	12
Net Project Trips	0	0	0	0	0	0	0	0	7	5	0	0	12
Existing + Project	0	0	0	0	26	19	11	0	320	205	20	0	601
Background + Project	0	0	0	0	38	34	39	0	344	233	76	0	764
Existing Conditions with Blomquist Extention	29	149	0	0	26	19	11	326	313	200	20	0	1093
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	-1	38	0	0	37
505 East Bayshore Avenue	5	2	0	0	0	0	0	4	0	0	0	8	19
690 Veterans	0	0	0	0	0	0	0	0	1	2	0	0	3
1125 Arguello Street	0	0	0	0	0	0	0	0	2	1	0	0	3
Toyota 101	65	29	0	0	0	0	0	20	0	0	0	43	157
South Main Mixed-Use	0	0	0	0	0	0	0	0	0	26	0	0	26
Harbor View	0	29	0	0	0	0	0	217	94	36	0	0	376
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	10	10	0	0	0	10	30
Total Approved Trips	70	60	0	0	0	0	0	241	96	103	0	51	621
Cumulative Conditions	100	214	0	0	29	20	11	577	442	337	25	51	1805
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	58	16	0	0	0	0	0	22	0	0	0	72	168
Net Cumulative Proj. Trips	58	16	0	0	0	0	0	22	0	0	0	72	168
Cumulative w/ Project	158	230	0	0	29	20	11	599	442	337	25	123	1973
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	0	0	0	0	39	35	39	0	453	368	77	0	1011
Cumulative w/ Project	0	0	0	0	39	35	39	0	460	373	77	0	1023

Intersection Number: 7
Traffix Node Number: 7
Intersection Name: Blomquist St & Seaport Blvd
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 11/06/18
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	106	136	204	39	217	7	138	84	291	348	1161	73	2804
Approved Project Trips													
610 Walnut Street	0	0	1	10	2	0	0	0	0	0	0	0	13
1180 Main Street	0	0	0	0	5	0	0	0	0	0	1	0	6
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	30	0	3	1	0	0	0	0	0	0	0	6	40
1401 Broadway and 2201 Bay Road	0	0	0	0	50	0	0	0	0	0	46	0	96
SM County Government Center	0	0	0	0	5	0	0	0	0	0	0	0	5
1175 Marshall Street	0	0	23	23	0	0	0	0	0	0	0	0	46
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	2	0	0	0	0	0	7	0	9
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	1	0	0	0	0	0	4	0	5
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	1	3	3	0	0	0	0	0	1	0	8
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	30	0	28	37	68	0	0	0	0	0	59	6	228
Background Conditions	136	136	232	76	285	7	138	84	291	348	1220	79	3032
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	6	3	1	0	0	0	0	0	2	0	12
Net Project Trips	0	0	6	3	1	0	0	0	0	0	2	0	12
Existing + Project	106	136	210	42	218	7	138	84	291	348	1163	73	2816
Background + Project	136	136	238	79	286	7	138	84	291	348	1222	79	3044
Existing Conditions with Blomquist Extention	133	332	204	39	217	7	138	244	291	348	1161	79	3193
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	11	54	0	0	0	0	0	0	0	0	65
505 East Bayshore Avenue	2	0	2	1	0	0	0	0	0	0	0	1	6
690 Veterans	0	0	1	1	0	0	0	0	0	0	0	0	2
1125 Arguello Street	0	0	2	1	0	0	0	0	0	0	0	0	3
Toyota 101	5	0	5	10	0	0	0	0	0	0	0	14	34
South Main Mixed-Use	10	0	3	0	4	0	0	0	0	0	3	0	20
Harbor View	30	0	0	0	0	0	0	0	0	0	0	255	285
1548 Maple Street (w/ Blomquist Ext)	10	0	0	0	0	0	0	0	0	0	0	0	10
Total Approved Trips	47	0	24	67	4	0	0	0	0	0	3	270	415
Cumulative Conditions	184	342	259	143	296	7	142	251	300	359	1258	351	3892
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	8	0	8	3	0	0	0	0	0	0	0	4	23
Net Cumulative Proj. Trips	8	0	8	3	0	0	0	0	0	0	0	4	23
Cumulative w/ Project	192	342	267	146	296	7	142	251	300	359	1258	355	3915
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	215	140	260	143	299	7	142	87	300	359	1259	389	3600
Cumulative w/ Project	215	140	266	146	300	7	142	87	300	359	1261	389	3612

Intersection Number: 7
Traffix Node Number: 7
Intersection Name: Blomquist St Seaport Blvd
Peak Hour: PM Date of Analysis: 09/16/19
Count Date: 11/06/18
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor: Future Growth % Per Year 1.000
Number of Years Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	74	188	37	117	1020	171	15	69	242	445	148	36	2562
Approved Project Trips													
610 Walnut Street	0	0	9	2	0	0	0	0	0	0	2	0	13
1180 Main Street	0	0	0	0	1	0	0	0	0	0	4	0	5
353 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	14	0	1	3	0	0	0	0	0	0	0	26	44
1401 Broadway and 2201 Bay Road	0	0	0	0	23	0	0	0	0	0	53	0	76
SM County Government Center	0	0	0	0	3	0	0	0	0	0	0	0	3
1175 Marshall Street	0	0	16	21	0	0	0	0	0	0	0	0	37
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	0	0	0	0	0	0	0	0	0	0	0	0
1409 El Camino Real	0	0	0	0	7	0	0	0	0	0	4	0	11
851 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
103 Wilson Street	0	0	0	0	4	0	0	0	0	0	2	0	6
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	3	1	1	0	0	0	0	0	3	0	8
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	14	0	29	27	39	0	0	0	0	0	68	26	203
Background Conditions	88	188	66	144	1059	171	15	69	242	445	216	62	2765
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	5	7	2	0	0	0	0	0	2	0	16
Net Project Trips	0	0	5	7	2	0	0	0	0	0	2	0	16
Existing + Project	74	188	42	124	1022	171	15	69	242	445	150	36	2578
Background + Project	88	188	71	151	1061	171	15	69	242	445	218	62	2781
Existing Conditions with Blomquist Extention	114	297	37	39	1020	171	15	355	242	445	148	76	2959
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	38	-1	0	0	0	0	0	0	0	0	37
505 East Bayshore Avenue	1	0	1	2	0	0	0	0	0	0	0	2	6
690 Veterans	0	0	2	1	0	0	0	0	0	0	0	0	3
1125 Arguello Street	0	0	1	2	0	0	0	0	0	0	0	0	3
Toyota 101	15	0	15	7	0	0	0	0	0	0	0	10	47
South Main Mixed-Use	22	0	3	0	9	0	0	0	0	0	3	0	37
Harbor View	158	0	0	0	0	0	0	0	0	0	0	59	217
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	20	20
Total Approved Trips	196	0	60	11	9	0	0	0	0	0	3	71	350
Cumulative Conditions	313	306	126	75	1099	176	15	366	249	458	223	149	3558
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	9	0	7	10	0	0	0	0	0	0	0	12	38
Net Cumulative Proj. Trips	9	0	7	10	0	0	0	0	0	0	0	12	38
Cumulative w/ Project	322	306	133	85	1099	176	15	366	249	458	223	161	3596
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	484	194	123	158	1101	176	15	71	249	458	227	133	3389
Cumulative w/ Project	484	194	128	165	1103	176	15	71	249	458	229	133	3405

Intersection Number: 8
Traffix Node Number: 8
Intersection Name: Veterans Blvd & Jefferson Ave
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 01/31/18
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	226	863	0	0	0	0	0	389	87	76	0	201	1842
Approved Project Trips													
610 Walnut Street	27	18	0	0	0	0	0	3	40	5	0	4	97
1180 Main Street	1	0	0	0	0	0	0	0	1	0	0	0	2
353 Main Street	0	-4	0	0	0	0	0	14	0	0	0	0	10
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	2	0	0	0	0	0	1	0	0	0	0	3
1401 Broadway and 2201 Bay Road	0	11	0	0	0	0	0	5	0	0	0	0	16
SM County Government Center	0	2	0	0	0	0	0	12	0	0	0	0	14
1175 Marshall Street	0	125	0	0	0	0	0	125	0	0	0	0	250
707 Bradford Street	9	0	0	0	0	0	0	0	0	0	0	10	19
612 Jefferson Ave	0	0	0	0	0	0	0	0	1	2	0	2	5
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	13	0	0	0	0	0	3	0	0	0	0	16
103 Wilson Street	3	0	0	0	0	0	0	0	0	0	0	0	3
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	2	18	0	0	0	0	0	3	0	0	0	0	23
849 Veterans	0	2	0	20	0	0	2	0	2	0	0	0	26
Total Approved Trips	42	187	0	20	0	0	2	166	44	7	0	16	484
Background Conditions	268	1050	0	20	0	0	2	555	131	83	0	217	2326
Project Trips Under Existing and Background Conditions													
Project Trips	20	16	0	0	0	0	0	10	0	0	0	11	57
Net Project Trips	20	16	0	0	0	0	0	10	0	0	0	11	57
Existing + Project	246	879	0	0	0	0	0	399	87	76	0	212	1899
Background + Project	288	1066	0	20	0	0	2	565	131	83	0	228	2383
Existing Conditions with Blomquist Extention	226	863	0	0	0	0	0	384	87	76	0	201	1837
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	0	0	0	0	0
505 East Bayshore Avenue	1	1	0	0	0	0	0	0	1	0	0	0	3
690 Veterans	6	6	0	0	0	0	0	9	0	0	0	8	29
1125 Arguello Street	0	10	0	0	0	0	0	3	0	0	0	0	13
Toyota 101	3	2	0	0	0	0	0	5	3	9	0	9	31
South Main Mixed-Use	0	30	0	0	0	0	0	9	0	0	0	0	39
Harbor View	0	116	0	0	0	0	0	3	0	0	0	0	119
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	10	165	0	0	0	0	0	29	4	9	0	17	234
Cumulative Conditions	285	1240	0	20	0	0	2	589	138	94	0	240	2608
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	7	6	0	0	0	0	0	4	7	4	0	4	32
Net Cumulative Proj. Trips	7	6	0	0	0	0	0	4	7	4	0	4	32
Cumulative w/ Project	292	1246	0	20	0	0	2	593	145	98	0	244	2640
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	293	1322	0	20	0	0	2	615	134	85	0	257	2728
Cumulative w/ Project	313	1338	0	20	0	0	2	625	134	85	0	268	2785

Intersection Number: 8
Traffix Node Number: 8
Intersection Name: Veterans Blvd Jefferson Ave
Peak Hour: PM Date of Analysis: 09/16/19
Count Date: 01/31/18
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor: Future Growth % Per Year 1.000
Number of Years Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	219	691	0	0	0	0	0	681	121	83	0	143	1938
Approved Project Trips													
610 Walnut Street	5	3	0	0	0	0	0	17	7	36	0	24	92
1180 Main Street	5	0	0	0	0	0	0	0	4	0	0	0	9
353 Main Street	0	12	0	0	0	0	0	-1	0	0	0	0	11
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	0	8	0	0	0	0	0	1	0	0	0	0	9
1401 Broadway and 2201 Bay Road	0	24	0	0	0	0	0	14	0	0	0	0	38
SM County Government Center	0	16	0	0	0	0	0	7	0	0	0	0	23
1175 Marshall Street	0	113	0	0	0	0	0	85	0	0	0	0	198
707 Bradford Street	10	0	0	0	0	0	0	0	0	0	0	11	21
612 Jefferson Ave	2	0	0	0	0	0	0	0	2	1	0	1	6
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	-1	0	0	0	0	0	9	0	0	0	0	8
103 Wilson Street	11	0	0	0	0	0	0	0	0	0	0	0	11
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	1	7	0	0	0	0	0	19	0	0	0	3	30
849 Veterans	0	7	0	4	0	0	11	0	0	0	0	4	26
Total Approved Trips	34	189	0	4	0	0	11	151	13	37	0	43	482
Background Conditions	253	880	0	4	0	0	11	832	134	120	0	186	2420
Project Trips Under Existing and Background Conditions													
Project Trips	27	21	0	0	0	0	0	29	0	0	0	33	110
Net Project Trips	27	21	0	0	0	0	0	29	0	0	0	33	110
Existing + Project	246	712	0	0	0	0	0	710	121	83	0	176	2048
Background + Project	280	901	0	4	0	0	11	861	134	120	0	219	2530
Existing Conditions with Blomquist Extention	219	691	0	0	0	0	0	649	121	83	0	143	1906
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	0	0	0	0	0	0	0	0	0
505 East Bayshore Avenue	1	0	0	0	0	0	0	1	1	1	0	1	5
690 Veterans	15	16	0	0	0	0	0	10	0	0	0	9	50
1125 Arguello Street	0	7	0	0	0	0	0	11	0	0	0	0	18
Toyota 101	10	6	0	0	0	0	0	4	9	6	0	6	41
South Main Mixed-Use	0	11	0	0	0	0	0	34	0	0	0	0	45
Harbor View	0	27	0	0	0	0	0	13	0	0	0	0	40
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	26	67	0	0	0	0	0	73	10	7	0	16	199
Cumulative Conditions	286	960	0	4	0	0	11	892	148	130	0	206	2636
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	10	9	0	0	0	0	0	13	10	12	0	12	66
Net Cumulative Proj. Trips	10	9	0	0	0	0	0	13	10	12	0	12	66
Cumulative w/ Project	296	969	0	4	0	0	11	905	158	142	0	218	2702
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	304	1006	0	4	0	0	11	941	138	123	0	220	2747
Cumulative w/ Project	331	1027	0	4	0	0	11	970	138	123	0	253	2857

Intersection Number: 9
Traffix Node Number: 9
Intersection Name: Veterans Blvd & Maple St
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	77	447	231	84	65	29	40	397	71	43	162	60	1706
Approved Project Trips													
610 Walnut Street	0	3	1	3	7	5	0	19	40	0	1	0	79
1180 Main Street	0	0	0	0	12	0	0	0	0	0	1	0	13
353 Main Street	0	14	0	0	0	0	0	-4	0	0	0	0	10
1690 Broadway	0	0	0	3	0	0	0	0	2	0	0	0	5
1548 Maple Street	0	0	2	1	8	12	2	0	0	0	2	0	27
1401 Broadway and 2201 Bay Road	0	11	0	0	0	0	0	5	0	0	0	0	16
SM County Government Center	0	2	0	0	0	0	0	12	0	0	0	0	14
1175 Marshall Street	0	134	23	23	0	0	0	134	0	0	0	0	314
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	2	0	0	0	0	0	0	0	0	0	0	2
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	1	0	0	0	0	0	-1	9	2	0	0	11
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	3	0	0	0	0	0	1	0	4
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	167	26	30	30	17	2	165	51	2	5	0	495
Background Conditions	77	614	257	114	95	46	42	562	122	45	167	60	2201
Project Trips Under Existing and Background Conditions													
Project Trips	8	3	6	3	0	0	0	2	0	0	0	5	27
Net Project Trips	8	3	6	3	0	0	0	2	0	0	0	5	27
Existing + Project	85	450	237	87	65	29	40	399	71	43	162	65	1733
Background + Project	85	617	263	117	95	46	42	564	122	45	167	65	2228
Existing Conditions with Blomquist Extention	77	447	231	80	105	29	40	397	71	43	162	60	1742
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	54	0	0	0	0	0	11	0	65
505 East Bayshore Avenue	0	0	0	1	2	4	1	0	0	0	1	0	9
690 Veterans	0	5	1	1	0	0	0	7	0	0	0	0	14
1125 Arguello Street	0	8	2	1	0	0	0	3	0	0	0	0	14
Toyota 101	1	1	9	10	6	14	36	3	0	0	15	2	97
South Main Mixed-Use	0	0	3	0	0	0	-1	0	0	0	10	0	12
Harbor View	0	4	113	2	8	8	0	1	0	0	42	0	177
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	10	10	0	0	0	0	0	0	20
Total Approved Trips	1	18	128	15	70	26	36	14	0	0	79	2	388
Cumulative Conditions	80	645	390	126	200	61	77	588	124	46	249	64	2650
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	2	4	4	7	12	25	14	3	0	0	7	1	79
Net Cumulative Proj. Trips	2	4	4	7	12	25	14	3	0	0	7	1	79
Cumulative w/ Project	82	649	394	133	212	86	91	591	124	46	256	65	2729
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	84	646	458	130	164	55	42	588	124	46	240	72	2649
Cumulative w/ Project	92	649	464	133	164	55	42	590	124	46	240	77	2676

Intersection Number:	9		
Traffix Node Number:	9		
Intersection Name:	Veterans Blvd	Maple St	
Peak Hour:	PM		Date of Analysis: 09/16/19
Count Date:	09/10/19		
Scenario:	557 E Bayshore Mixed-Use		
RC Growth Factor:			Future Growth % Per Year 1.000
Number of Years			Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	91	434	160	142	158	57	39	460	65	46	84	68	1804
Approved Project Trips													
610 Walnut Street	0	18	3	1	1	34	0	3	7	2	6	0	75
1180 Main Street	0	0	0	0	2	0	0	0	0	0	8	0	10
353 Main Street	0	-1	0	0	0	0	0	12	0	0	0	0	11
1690 Broadway	0	0	0	2	0	0	0	0	2	0	0	0	4
1548 Maple Street	0	0	8	1	4	6	7	0	0	0	7	0	33
1401 Broadway and 2201 Bay Road	0	24	0	0	0	0	0	14	0	0	0	0	38
SM County Government Center	0	16	0	0	0	0	0	7	0	0	0	0	23
1175 Marshall Street	0	91	16	21	0	0	0	121	0	0	0	0	249
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	1	0	0	0	0	0	2	0	0	0	0	3
1409 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
851 Main Street	0	1	0	0	0	0	0	-1	4	6	0	0	10
103 Wilson Street	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanford Precise Plan	--	--	--	--	--	--	--	--	--	--	--	--	0
2075 Broadway	0	0	0	0	1	0	0	0	0	0	3	0	4
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	150	27	25	8	40	7	158	13	8	24	0	460
Background Conditions	91	584	187	167	166	97	46	618	78	54	108	68	2264
Project Trips Under Existing and Background Conditions													
Project Trips	12	4	5	7	0	0	0	7	0	0	0	14	49
Net Project Trips	12	4	5	7	0	0	0	7	0	0	0	14	49
Existing + Project	103	438	165	149	158	57	39	467	65	46	84	82	1853
Background + Project	103	588	192	174	166	97	46	625	78	54	108	82	2313
Existing Conditions with Blomquist Extention	91	434	160	55	216	57	39	457	65	46	84	68	1772
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	-1	0	0	0	0	0	38	0	37
505 East Bayshore Avenue	0	0	1	1	1	3	5	0	0	0	2	0	13
690 Veterans	0	14	2	1	0	0	0	8	0	0	0	0	25
1125 Arguello Street	0	5	1	2	0	0	0	9	0	0	0	0	17
Toyota 101	3	3	6	7	16	39	26	2	0	0	11	2	115
South Main Mixed-Use	0	0	3	0	0	0	12	0	0	0	10	0	25
Harbor View	0	1	26	10	43	41	0	3	0	0	10	0	134
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	10	0	10
Total Approved Trips	3	23	39	21	59	83	43	22	0	0	71	2	366
Cumulative Conditions	97	620	223	102	286	176	83	651	80	55	175	72	2619
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	3	6	12	10	17	31	39	9	0	0	21	4	152
Net Cumulative Proj. Trips	3	6	12	10	17	31	39	9	0	0	21	4	152
Cumulative w/ Project	100	626	235	112	303	207	122	660	80	55	196	76	2771
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	106	622	252	193	216	140	59	654	80	55	171	78	2626
Cumulative w/ Project	118	626	257	200	216	140	59	661	80	55	171	92	2675

Intersection Number: 10
Traffix Node Number: 10
Intersection Name: Veterans Blvd & Woodside Rd
Peak Hour: AM
Date of Analysis: 09/16/19
Count Date: 09/10/19
Scenario: 557 E Bayshore Mixed-Use

RC Growth Factor:
Future Growth % Per Year 1.000
Number of Years
Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	38	171	80	584	1006	90	0	0	0	0	1289	36	3294
Approved Project Trips													
610 Walnut Street	1	7	0	53	0	0	0	0	0	0	0	5	66
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	-4	0	0	0	0	0	14	0	10
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	1	11	0	1	6	11	0	0	0	0	1	0	31
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	8	3	11
SM County Government Center	0	0	0	0	0	0	0	0	0	0	2	0	2
1175 Marshall Street	37	97	0	97	0	0	0	0	0	0	0	37	268
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	2	0	0	0	0	0	0	0	0	0	0	2
1409 El Camino Real	0	0	0	0	9	0	0	0	0	0	7	0	16
851 Main Street	0	0	0	0	14	0	0	0	0	0	2	0	16
103 Wilson Street	0	0	0	0	5	0	0	0	0	0	4	0	9
Stanford Precise Plan	25	0	-11	0	238	0	0	0	0	0	31	17	300
2075 Broadway	0	2	0	0	28	0	0	0	0	0	1	0	31
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	64	119	-11	151	296	11	0	0	0	0	70	62	762
Background Conditions	102	290	69	735	1302	101	0	0	0	0	1359	98	4056
Project Trips Under Existing and Background Conditions													
Project Trips	1	0	2	1	0	0	0	0	0	0	3	2	9
Net Project Trips	1	0	2	1	0	0	0	0	0	0	3	2	9
Existing + Project	39	171	82	585	1006	90	0	0	0	0	1292	38	3303
Background + Project	103	290	71	736	1302	101	0	0	0	0	1362	100	4065
Existing Conditions with Blomquist Extention	38	171	80	584	1006	117	0	0	0	0	1289	36	3321
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	228	0	0	0	0	0	0	0	228
505 East Bayshore Avenue	5	0	0	0	0	2	0	0	0	0	0	2	9
690 Veterans	1	4	0	5	0	0	0	0	0	0	0	2	12
1125 Arguello Street	0	8	0	3	0	0	0	0	0	0	0	0	11
Toyota 101	15	0	0	3	0	5	0	0	0	0	0	39	62
South Main Mixed-Use	0	-2	0	16	63	0	0	0	0	0	3	0	80
Harbor View	0	8	4	1	26	20	0	0	0	0	135	0	193
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	10	0	0	0	0	0	0	0	10
Total Approved Trips	21	18	4	28	317	27	0	0	0	0	138	43	595
Cumulative Conditions	123	302	75	780	1643	147	0	0	0	0	1535	142	4748
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	29	0	0	0	0	8	0	0	0	0	0	17	54
Net Cumulative Proj. Trips	29	0	0	0	0	8	0	0	0	0	0	17	54
Cumulative w/ Project	152	302	75	780	1643	155	0	0	0	0	1535	159	4802
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	104	313	77	781	1649	123	51	0	0	0	1543	101	4742
Cumulative w/ Project	105	313	79	782	1649	123	51	0	0	0	1546	103	4751

Intersection Number:	10
Traffix Node Number:	10
Intersection Name:	Veterans Blvd Woodside Rd
Peak Hour:	PM
Count Date:	09/10/19
Scenario:	557 E Bayshore Mixed-Use

Date of Analysis: 09/16/19

RC Growth Factor: Future Growth % Per Year 1.000
Number of Years: Number of Years to Buildout 3

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	40	264	39	543	1080	426	0	0	0	0	886	93	3371
Approved Project Trips													
610 Walnut Street	5	47	2	10	0	0	0	0	0	0	0	1	65
1180 Main Street	0	0	0	0	0	0	0	0	0	0	0	0	0
353 Main Street	0	0	0	0	12	0	0	0	0	0	-1	0	11
1690 Broadway	0	0	0	0	0	0	0	0	0	0	0	0	0
1548 Maple Street	1	5	0	6	3	5	0	0	0	0	6	1	27
1401 Broadway and 2201 Bay Road	0	0	0	0	0	0	0	0	0	0	22	2	24
SM County Government Center	0	0	0	0	0	0	0	0	0	0	15	0	15
1175 Marshall Street	25	66	0	88	0	0	0	0	0	0	0	33	212
707 Bradford Street	0	0	0	0	0	0	0	0	0	0	0	0	0
612 Jefferson Ave	0	1	0	2	0	0	0	0	0	0	0	0	3
1409 El Camino Real	0	0	0	0	37	0	0	0	0	0	4	0	41
851 Main Street	0	0	0	0	3	0	0	0	0	0	7	0	10
103 Wilson Street	0	0	0	0	18	0	0	0	0	0	2	0	20
Stanford Precise Plan	-11	-124	-11	-177	61	-91	0	0	0	0	47	183	-123
2075 Broadway	0	13	0	0	10	0	0	0	0	0	3	0	26
849 Veterans	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	20	8	-9	-71	144	-86	0	0	0	0	105	220	331
Background Conditions	60	272	30	472	1224	340	0	0	0	0	991	313	3702
Project Trips Under Existing and Background Conditions													
Project Trips	2	0	2	2	0	0	0	0	0	0	9	5	20
Net Project Trips	2	0	2	2	0	0	0	0	0	0	9	5	20
Existing + Project	42	264	41	545	1080	426	0	0	0	0	895	98	3391
Background + Project	62	272	32	474	1224	340	0	0	0	0	1000	318	3722
Existing Conditions with Blomquist Extention	40	264	39	581	1080	466	0	0	0	0	886	93	3449
Cumulative Project Trips with Blomquist Extention													
Sequoia Station Transit Sub-Area	0	0	0	0	-3	0	0	0	0	0	0	0	-3
505 East Bayshore Avenue	3	0	0	0	0	1	0	0	0	0	0	5	9
690 Veterans	4	10	0	6	0	0	0	0	0	0	0	2	22
1125 Arguello Street	0	5	0	9	0	0	0	0	0	0	0	0	14
Toyota 101	42	0	0	2	0	15	0	0	0	0	0	28	87
South Main Mixed-Use	0	32	0	-1	31	0	0	0	0	0	15	0	77
Harbor View	0	41	1	3	137	103	0	0	0	0	32	0	316
1548 Maple Street (w/ Blomquist Ext)	0	0	0	0	0	0	0	0	0	0	10	0	10
Total Approved Trips	49	88	1	19	165	119	0	0	0	0	47	35	522
Cumulative Conditions	109	363	32	541	1418	508	0	0	0	0	1058	350	4380
Project Trips Under Cumulative Conditions with Blomquist Extention													
Cumulative Project Trips	37	0	0	0	0	9	0	0	0	0	0	48	94
Net Cumulative Proj. Trips	37	0	0	0	0	9	0	0	0	0	0	48	94
Cumulative w/ Project	146	363	32	541	1418	517	0	0	0	0	1058	398	4474
Cumulative Scenario without Blomquist Extension													
Cumulative w/o Project	65	368	37	508	1421	456	10	0	0	0	1070	318	4253
Cumulative w/ Project	67	368	39	510	1421	456	10	0	0	0	1079	323	4273

Appendix E

Signal Warrant Worksheet

Blomquist St & Maple St

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: SJ date: 12/12/19

Major Street: Maple St — Critical Approach Speed* (mph) 25

Minor Street: Blomquist St — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)……..……..……..……..

In built up area of isolated community of < 10,000 population……..……..……..

☐ or ☐ **Rural (R)**

☑ **Urban (U)**

AM PEAK PERIOD

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

	AM PEAK PERIOD							
	Existing	Existing + Proj	Background	Background + Proj	Cumulative No Proj	Cumulative	Cumulative No Proj (No BE)	Cumulative (No BE)
Minor Street Approach Direction w/ Highest Delay	NB	NB	NB	NB	NB	NB	NB	NB
Highest Minor Street Average Delay (sec/veh)	11.2	11.2	13.2	13.4	67.0	79.3	20.4	20.8
Corresponding Minor Street Approach Volume (veh/hr)	146	149	188	191	502	509	282	285
Minor Street Total Delay (veh-hrs)	0.5	0.5	0.7	0.7	9.3	11.2	1.6	1.6
Total Entering Volume (veh/hr)	553	562	685	694	1634	1727	1054	1063
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	Yes	Yes	No	No
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**No**

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the

PART B

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Cumulative No Proj	Cumulative	Cumulative No Proj (No BE)	Cumulative (No BE)
Major Street - Both Approaches	Maple St	X		407	413	497	503	695	720	772	778
Minor Street - Highest Approach	Blomquist St	X		146	149	188	191	502	509	282	285
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**No**

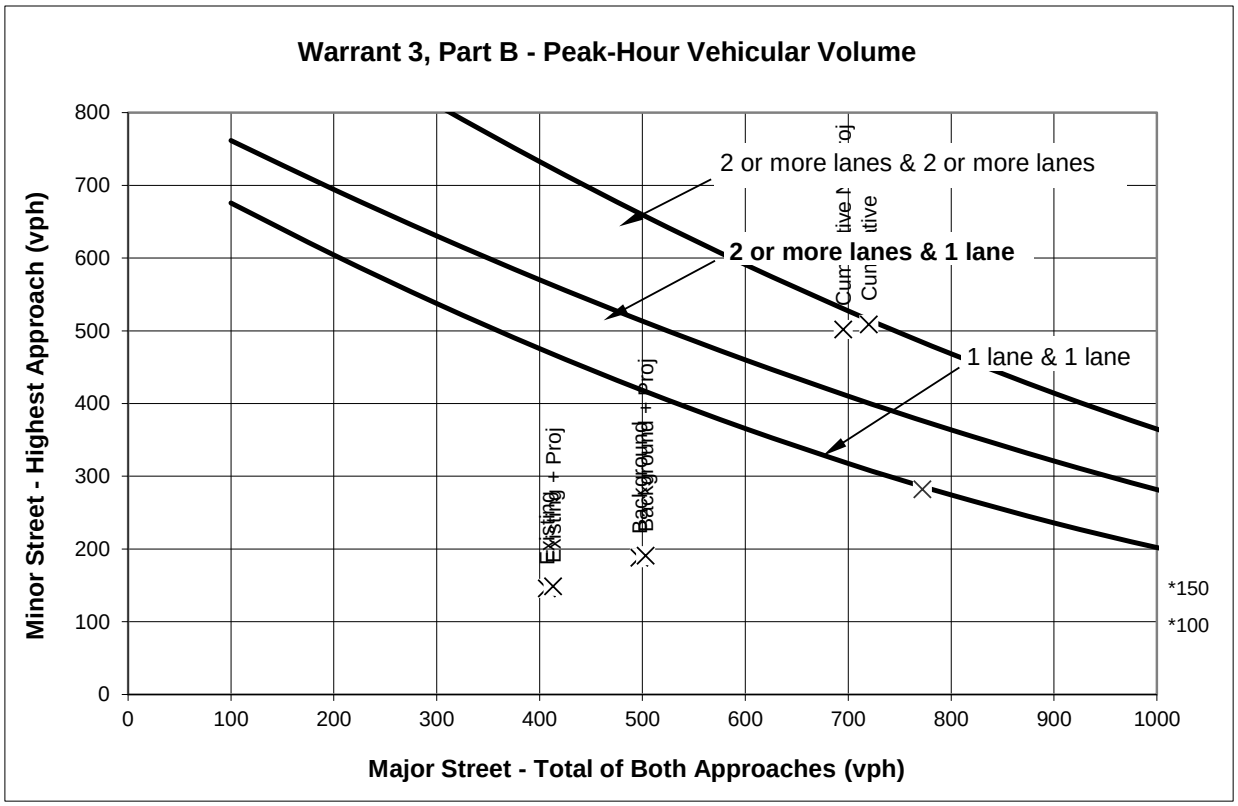
The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California).

Notes:

Blomquist St & Maple St

Blomquist St & Maple St **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Cumulative No Proj	Cumulative	Cumulative No Proj (No BE)	Cumulative (No BE)
Major Street - Both Approaches	Maple St	X		407	413	497	503	695	720	772	778
Minor Street - Highest Approach	Blomquist St	X		146	149	188	191	502	509	282	285
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**No**

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Blomquist St & Maple St

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: SJ date: 12/12/19

Major Street: Maple St — Critical Approach Speed* (mph) 25

Minor Street: Blomquist St — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)……..……..……..……..

In built up area of isolated community of < 10,000 population……..……..……..

☐ or ☐ **Rural (R)**

☑ **Urban (U)**

PM PEAK HOUR

Warrant 3 - Peak Hour

The need for a traffic control signal should be considered if an engineering study finds that the criteria in either of the following two categories (Parts A and B) are met:

PART A

(All parts 1, 2, and 3 below must be satisfied)

PM PEAK HOUR

	Existing	Existing + Proj	Background	Background + Proj	Cumulative No Proj	Cumulative	Cumulative No Proj (No BE)	Cumulative (No BE)
Minor Street Approach Direction w/ Highest Delay	NB	NB	NB	NB	NB	NB	NB	NB
Highest Minor Street Average Delay (sec/veh)	12.7	12.9	16.5	16.9	373.2	467.1	30.3	31.8
Corresponding Minor Street Approach Volume (veh/hr)	324	331	376	383	1030	1052	492	499
Minor Street Total Delay (veh-hrs)	1.1	1.2	1.7	1.8	106.8	136.5	4.1	4.4
Total Entering Volume (veh/hr)	589	601	752	764	1806	1974	1011	1023
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No	Yes	Yes	Yes	Yes
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**	**Yes**

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the

PART B

PM PEAK HOUR

		Approach Lanes: One	Approach Lanes: 2 or More	Existing	Existing + Proj	Background	Background + Proj	Cumulative No Proj	Cumulative	Cumulative No Proj (No BE)	Cumulative (No BE)
Major Street - Both Approaches	Maple St	X		265	270	376	381	462	534	534	524
Minor Street - Highest Approach	Blomquist St	X		324	331	376	383	1030	1052	492	499
Signal Warranted based on Part B?				**No**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**	**Yes**

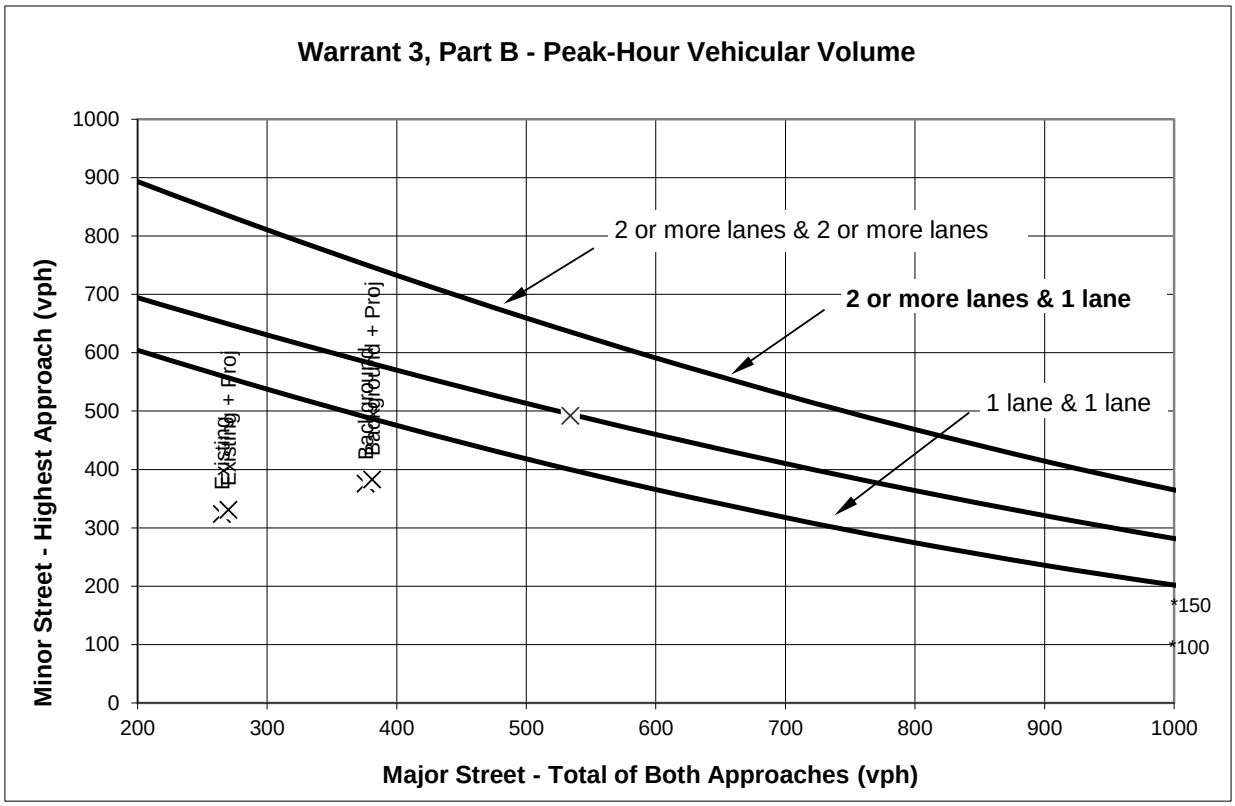
The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 20090 Edition, as amended for use in California

Notes:

Blomquist St & Maple St

Blomquist St & Maple St **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

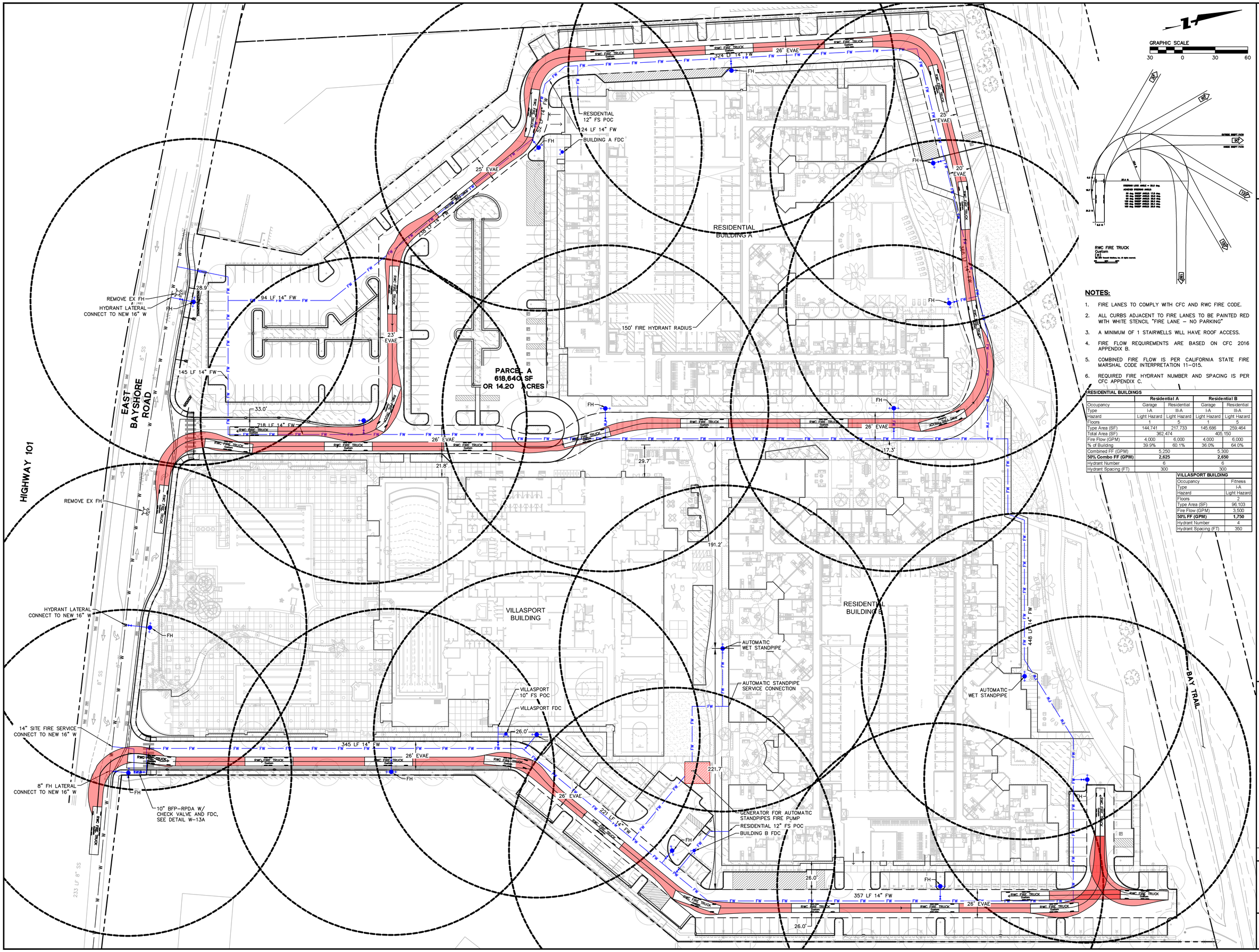
		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Cumulative No Proj	Cumulative	Cumulative No Proj (No BE)	Cumulative (No BE)
Major Street - Both Approaches	Maple St	X		265	270	376	381	462	534	534	524
Minor Street - Highest Approach	Blomquist St	X		324	331	376	383	1030	1052	492	499
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**	**Yes**

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Appendix F

Truck Access Analysis

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NOTES:

1. FIRE LANES TO COMPLY WITH CFC AND RWC FIRE CODE.
2. ALL CURBS ADJACENT TO FIRE LANES TO BE PAINTED RED WITH WHITE STENCIL "FIRE LANE – NO PARKING"
3. A MINIMUM OF 1 STAIRWELLS WILL HAVE ROOF ACCESS.
4. FIRE FLOW REQUIREMENTS ARE BASED ON CFC 2016 APPENDIX B.
5. COMBINED FIRE FLOW IS PER CALIFORNIA STATE FIRE MARSHAL CODE INTERPRETATION 11-015.
6. REQUIRED FIRE HYDRANT NUMBER AND SPACING IS PER CFC APPENDIX C.

RESIDENTIAL BUILDINGS				
	Residential A		Residential B	
Occupancy	Garage	Residential	Garage	Residential
Type	I-A	II-A	I-A	II-A
Hazard	Light Hazard	Light Hazard	Light Hazard	Light Hazard
Floors	1	5	1	5
Type Area (SF)	144,741	217,733	145,686	259,464
Total Area (SF)	362,474		405,150	
Fire Flow (GPM)	4,000	6,000	4,000	6,000
% of Building	39.9%	60.1%	36.0%	64.0%
Combined FF (GPM)	5,250		5,300	
50% Combo FF (GPM)	**2,625**		**2,650**	
Hydrant Number	6		6	
Hydrant Spacing (FT)	300		300	

VILLASPORT BUILDING	
Occupancy	Fitness
Type	I-A
Hazard	Light Hazard
Floors	2
Type Area (SF)	96,103
Fire Flow (GPM)	3,500
50% FF (GPM)	**1,750**
Hydrant Number	4
Hydrant Spacing (FT)	350

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557 EAST BAYSHORE ROAD
VESTING TENTATIVE PARCEL MAP
FIRE ACCESS PLAN
SAN MATEO COUNTY
CALIFORNIA
REDWOOD CITY

Revisions	No.

Date 7.25.19
Scale AS SHOWN
Design JCW
Drawn SKS
Approved MAO
Job No 20020125

Drawing Number:
TM-9.0
11 OF 15

VTM SUBMITTAL #2 – NOT FOR CONSTRUCTION

DRAWING NAME: \\BKF-SF\vol4\2002\020125_Sutfy_Redwood City\ENG\VTM\SHEETS\TM-9.0 FIRE TRUCK ACCESS ASSESSMENT.dwg
PLOT DATE: 07-23-19
PLOTTED BY: wats

VTM SUBMITTAL #2 – NOT FOR CONSTRUCTION

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557 EAST BAYSHORE ROAD
VESTING TENTATIVE PARCEL MAP
TRASH TRUCK ACCESS ASSESSMENT

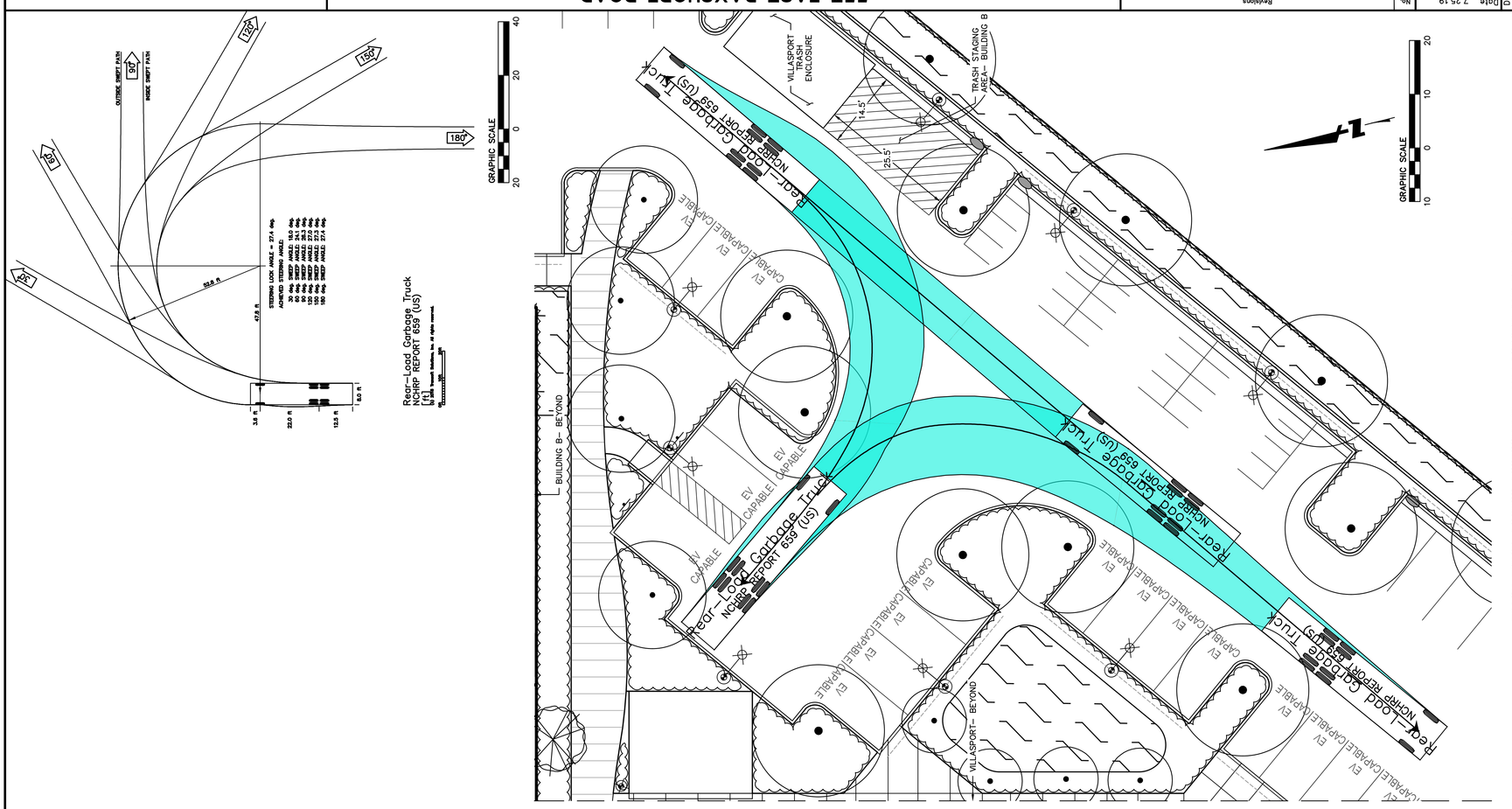
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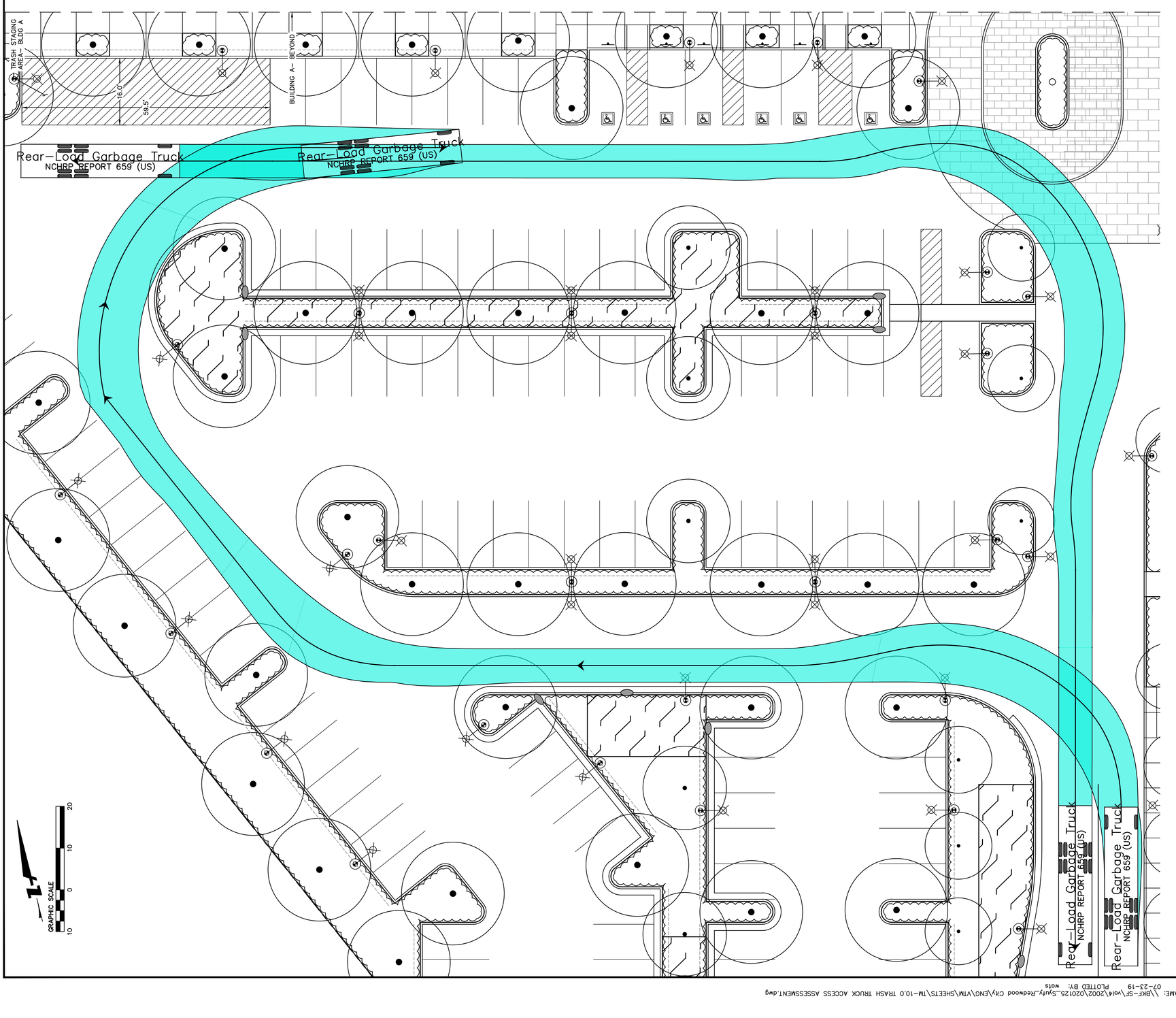
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		Date 7.25.19
		Scale AS SHOWN
		Design JCW
		Drawn SKS
		Approved MAO
		Job No 20020125

Drawing Number: TM–10.0
12 OF 15

TRASH TRUCK ACCESS ASSESSMENT – VILLASPORT AND BUILDING B



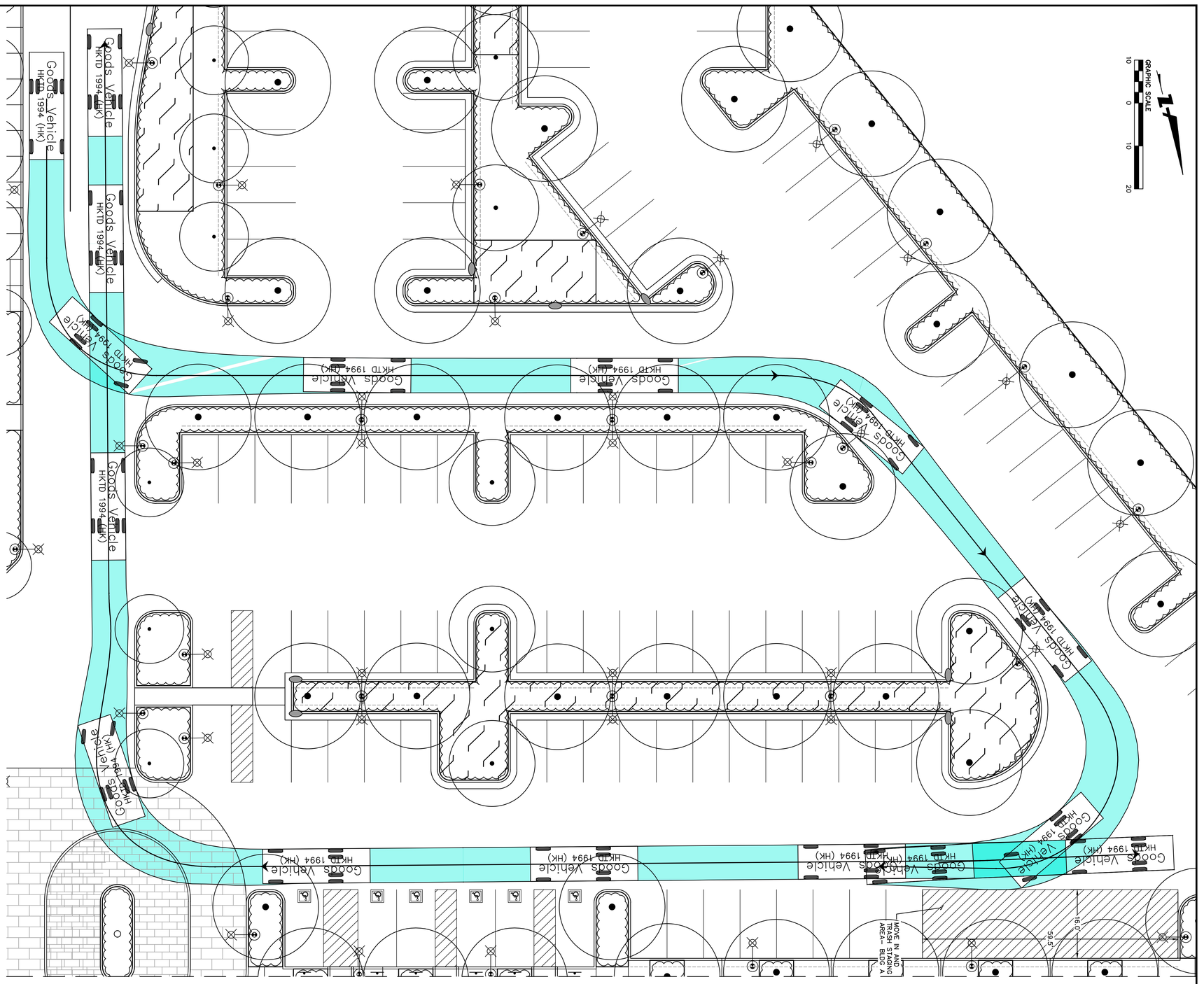
TRASH TRUCK ACCESS ASSESSMENT – BUILDING A



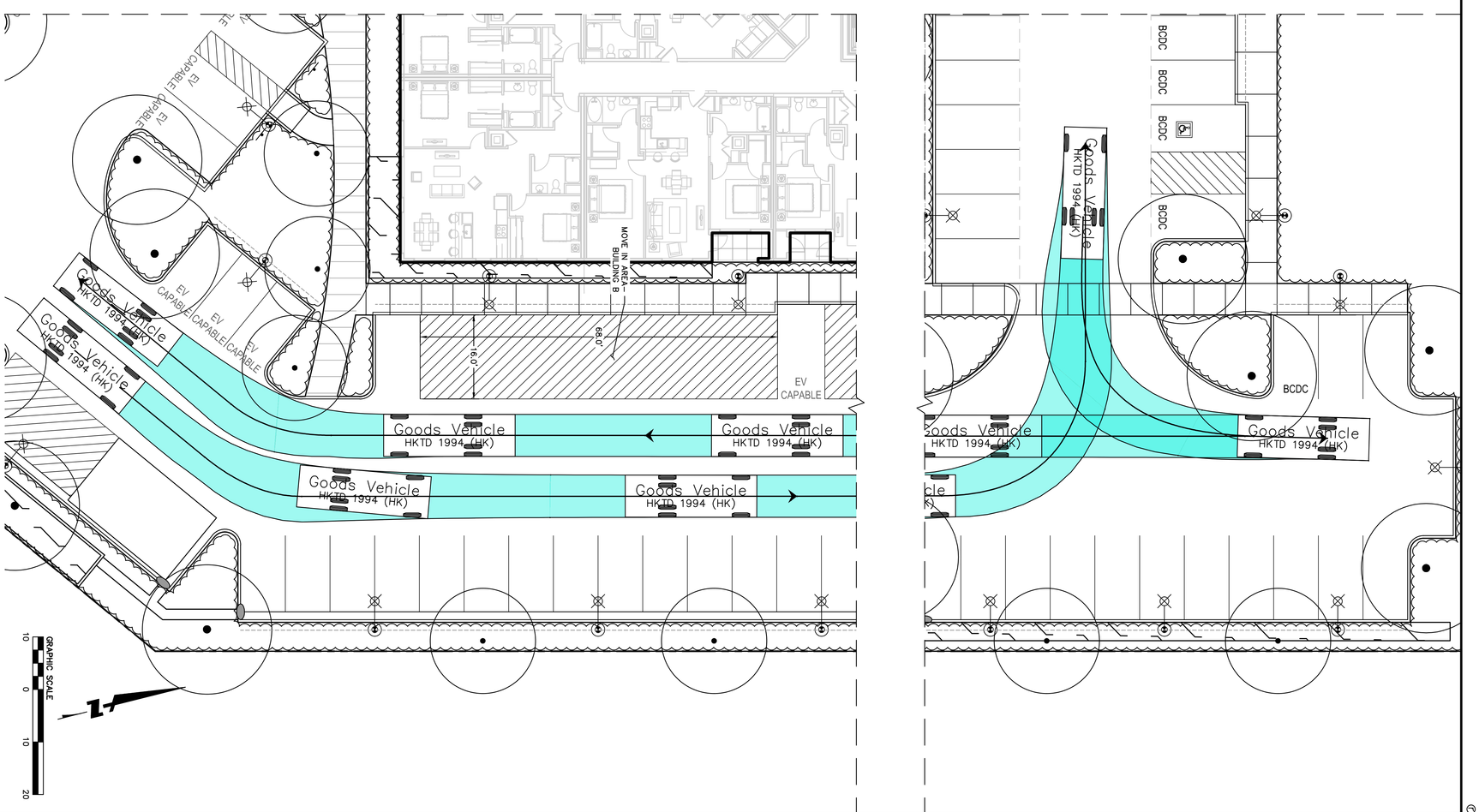
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PLOT DATE: 07-23-19 PLOTTED BY: wats

MOVING VAN ACCESS ASSESSMENT – BUILDING A



MOVING VAN ACCESS ASSESSMENT – BUILDING B



Drawing Number:	Date	7.25.19	No.	Revisions
TM-11.0	Scale	AS SHOWN		
13 OF 15	Design	JCW		
	Drawn	SKS		
	Approved	MAO		
	Job No	20020125		

557 EAST BAYSHORE ROAD
VESTING TENTATIVE PARCEL MAP
MOVING VAN ACCESS ASSESSMENT

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