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6TH ST AND 11TH ST CORRIDOR FEASIBILITY STUDY

FINAL REPORT

July 2020

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City of Bremerton

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INTRODUCTION

This report summarizes the context, methods, analyses, results, findings, and recommendations associated with the 6th St/11th St Corridor Feasibility Study. This study represents a planning-level feasibility analysis for major roadway improvements along two key arterial corridors in Bremerton.

BACKGROUND AND PROJECT NEEDS

Study Area

The study area, shown in **Figure 1,** consists of the following corridors:

- 6th St/Kitsap Way from 11th St to Pacific Ave (1.50 mi)
- 11th St from Kitsap Way to Pacific Ave (1.40 mi)

The study corridors connect the principal arterials Washington Ave and Warren Ave (SR 303) to the principal arterial Kitsap Way (SR 310). Both corridors provide indirect access from SR 3 to Downtown Bremerton, the Bremerton Ferry Terminal, Olympic College, and East Bremerton. 6th St and 11th St represent two of the three major east-west arterial routes in the Bremerton core. Burwell St (SR 304) represents the other major arterial route. The study corridors are described in detail below.

6th St/Kitsap Way Corridor

The 6th St/Kitsap Way corridor consists of two arterial routes: 6th St and Kitsap Way. 6th St is a minor arterial route from N Callow Ave to Pacific Ave. The route consists of a four-lane section from N Callow Ave to Park Ave and transitions to a two-lane section east of Park Ave. Posted speed is 25 mph.

Kitsap Way is a principal arterial route from 11th St to N Callow Ave. The route is designated by Washington State Department of Transportation (WSDOT) as SR 310, a Highway of Statewide Significance (HSS). Posted speed is 35 mph from 11th St to Cambrian Ave and 25 mph from Cambrian Ave to Callow Ave. **Table 1** describes the 6th St/Kitsap Way corridor.

Table 1. 6th St/Kitsap Way Existing Cross-Sections

Limits	11th St to N Callow Ave	N Callow Ave to Park Ave	Park Ave to Pacific Ave
Distance	0.27 mi	1.08 mi	0.15 mi
Functional Classification	Principal Arterial	Minor Arterial	Minor Arterial
Posted Speed	25 – 35 mph	25 mph	25 mph
Maximum Grade	10%	10%	6%
Right-of-Way Width	72 ft	60 ft	60 ft
Paved Width	70 ft	44 ft	42 ft
Through Lanes	four 14-ft lanes	four 11-ft lanes	two 13-ft lanes
Median/TWLTL	14-ft striped median	None	None
On-Street Parking	None	None	two 8-ft lanes
Sidewalk Width	two 5-6-ft sidewalks	two 5-ft sidewalks	two 5-ft sidewalks
Bike Facilities	Shared bike lane (sharrows)	None	None

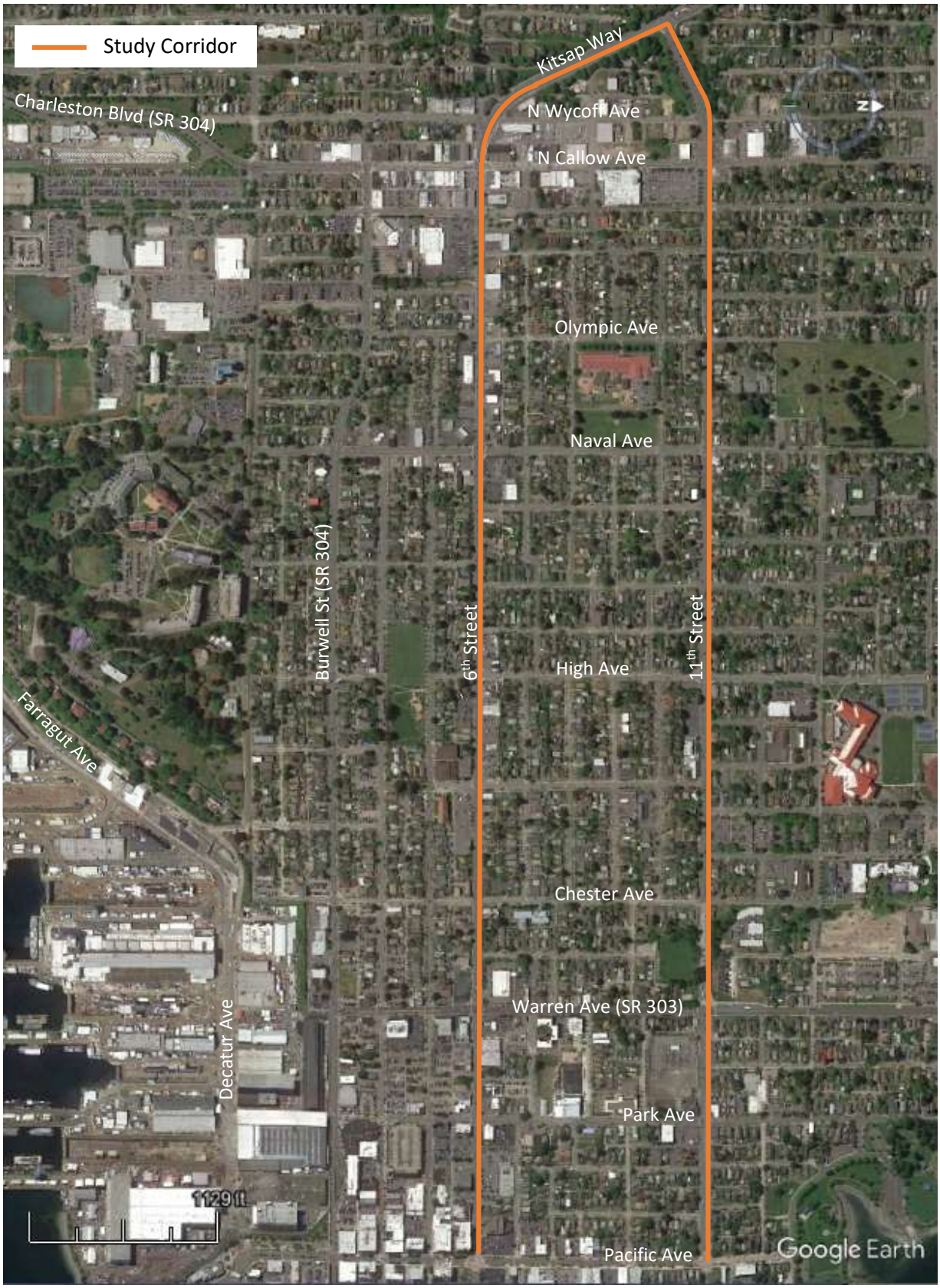


Figure 1. Study Area

11th St Corridor

11th St is a principal arterial route between Kitsap Way and Pacific Ave. The corridor includes a four-lane section from Kitsap Way to Park Ave, and a two-lane section from Park Ave to Pacific Ave. Posted speed is 30 mph. **Table 2** describes the 11th St corridor.

Table 2. 11th St Corridor Existing Cross-Sections

Limits	Kitsap Way to Warren Ave (SR 303)	Warren Ave (SR 303) to Park Ave	Park Ave to Pacific Ave
Distance	1.12 mi	0.13 mi	0.15 mi
Functional Classification	Principal Arterial	Principal Arterial	Principal Arterial
Posted Speed	30 mph	30 mph	30 mph
Maximum Grade	>15%	1%	5%
Right-of-Way Width	60 ft	77 ft	77 ft
Paved Width	44 ft	62 ft	62 ft
Through Lanes	four 11-ft lanes	four 12-ft lanes	two 17-ft lanes
Median/TWLTL	None	9-ft striped median	12-foot TWLTL
On-Street Parking	None	None	two 8-ft lanes
Sidewalk Width	two 5-ft sidewalks	two 5-ft sidewalks	two 5-ft sidewalks
Bike Facilities	None	5-foot shoulder on northern side	None

Burwell St (SR 304) Corridor

Burwell St (SR 304) is a principal arterial connecting the Bremerton Transportation Center to Charleston Blvd and SR 3. The corridor consists of two eastbound through lanes and one westbound through lane, with on-street parking along the north side from Warren Ave to Hewitt Ave. SR 304 is an HSS route.

Project Context

This section describes the planning and policy background relevant to the 6th St/Kitsap Way and 11th St corridors.

Bremerton Downtown Regional Center Subarea Plan (2007)

The subarea plan proposes a road diet on 6th St to include two travel lanes, a center left-turn lane, and two bike lanes within the existing pavement section. The subarea plan focuses on the section of 6th St located in the downtown core, west of Warren Ave.

Bremerton Non-Motorized Transportation Plan (2007)

The 2007 Bremerton Non-Motorized Transportation Plan proposes a road diet on 6th St to include two travel lanes, a center left-turn lane, and two bike lanes within the existing pavement section. The proposed road diet would extend from Callow Ave to Park Ave.

City of Bremerton Comprehensive Plan (2016)

The Transportation Element of the 2016 Comprehensive Plan describes the policy context for each study corridor. The Transportation Element quantifies the attractiveness of nonmotorized travel at the census block level using an active transportation index. The index is calculated based on eight weighted factors, including proximity to major nonmotorized demand generators, population and employment density, diversity of land use, and age. The resulting active transportation map indicates that 6th St and 11th St serve the areas of Bremerton with the highest potential nonmotorized demand.

The Transportation Element pedestrian priority and bicycle priority network maps specify where nonmotorized infrastructure should be provided in the long-term. Pedestrian priority routes are defined along the full length of both study corridors. Bicycle priority routes are defined on 6th St from Warren Ave to Callow Ave, on Kitsap Way from Callow Ave to the SR 3 interchange, and on 11th St from Warren Ave to Washington Ave.

Mode split targets are identified for Downtown Bremerton as shown in **Table 3**. The 2010 mode share estimates come from Puget Sound Regional Council (PSRC) regional travel survey, while the 2036 targets reflect the City of Bremerton's stated policy goal of prioritizing transportation investments which accommodate all travel modes within the Downtown Bremerton Regional Growth Center.

Table 3. Mode Split Targets for Downtown Bremerton Regional Growth Center

Mode	2010 Survey	2036 Target
Drive Alone	69%	66%
Carpool	9%	10%
Transit	13%	14%
Walk/Bike	9%	10%

Source: Bremerton 2016 Comprehensive Plan Transportation Element

Level-of-Service Policy (2016)

The 2016 Comprehensive Plan established a minimum level-of-service (LOS) standard of LOS E for local roadways. WSDOT designates SR 310 (Kitsap Way) and SR 304 (Burwell St) as HSS with minimum LOS standard of LOS D. The WSDOT designates SR 303 (Warren Ave) as a non-HSS, with a minimum LOS standard of LOS E/Mitigated, meaning that congestion should be mitigated (such as transit) when PM peak hour LOS falls below LOS E.

Freight and Goods Transportation System (2017)

In Washington State, the highway and roadway system are rated according to the amount of freight and goods that are carried by truck on the system. The Washington State Freight and Goods Transportation System (FGTS) is a ranking of roads in Washington State by annual gross freight tonnage carried. Roads are ranked from T-1, carrying over 10 million tons of freight per year, to T-5, which carry less than 100,000 tons of freight per year.

The 6th St and 11th St corridors are classified T-3 freight routes, which carry between 300,000 and 4 million tons of freight per year. 6th St carries 913,000 tons per year, with approximately 420 trucks per day. 11th St carries 3,899,000 tons per year, with approximately 1,490 trucks per day.

Complete Streets Program (2018)

In November 2018 Bremerton City Council adopted Ordinance No. 5354, establishing a Complete Streets program under Bremerton Municipal Code (BMC) Chapter 11.10. The program, which applies to all phases of City transportation capital projects, requires consideration for all travel modes. The Complete Streets Program vision statement is provided below for reference.

> *The City of Bremerton's vision for complete streets is of a community in which all residents and visitors, regardless of their age, ability, or financial resources, can have access to an affordable, safe, and accessible transportation system that meets or exceeds their travel needs. The City shall seek to create a well-connected, well-balanced, local and regional transportation system for all modes of*

travel including, but not limited to, walking, biking, driving, riding public transit, delivering goods and services, and emergency response transportation. The City recognizes that safe, comfortable, convenient travel for users of all ages and abilities encourages the use of public rights-of-way and can improve the environment, encourage physical activity and promote a vibrant, healthy, equitable, and livable community. (BMC 11.10.010)

SR 303 Corridor Study (2020)

The ongoing SR 303 Corridor Study will evaluate transportation improvement alternatives for the SR 303 (Warren Ave/Wheaton Way) corridor from Burwell St (SR 304) to McWilliams Rd, including the intersections of 6th St & Warren Ave and 11th St & Warren Ave. The study is scheduled for completion in mid-2020.

Project Needs and Performance Targets

Project needs and performance targets were developed with consideration for the goals and policies identified in the City of Bremerton Comprehensive Plan and by the WSDOT.

The study corridors should provide safe access and mobility for all transportation modes. They must support anticipated PM peak hour travel demand through 2040, preserve property access, and maintain local and regional mobility standards. The following baseline Project needs have been identified:

- **Safety:** Improve safety for motorized and nonmotorized users
- **Operations**: maintain minimum intersection Level of Service (LOS) standards of:
    - **LOS D** along SR 310 (Kitsap Way)
    - **LOS E** on all other intersections

The following contextual Project needs were also identified:

- **Access**: Maintain property access along 6th St and 11th St
- **Nonmotorized transportation**: Improve access for pedestrian and bicycle travel, consistent with City of Bremerton Comprehensive Plan goals and policies.

2019 CONDITIONS

This section summarizes the 2019 traffic volume, operations, and safety conditions in the study area.

Data Collection

Traffic Volumes

Intersection turning movement volumes were collected on Tuesday, January 9, 2018 and during the week of September 11, 2019 at key intersections along and near the study corridors. The PM peak hour intersection volumes are summarized in **Table 4**.

Intersection volumes were collected between 2:00 PM and 7:00 PM. The PM peak hour, defined as the highest four consecutive 15-minute volume intervals, occurred between 3:30 PM and 4:45 PM for most study intersections. This peaking pattern reflects the combined impacts of Naval Base Kitsap shift changes and the typical weekday afternoon commute peak period.

Table 4. Intersection Count Locations

ID	Intersection	Control Type[1]	Count Date	PM Count Period	PM Peak Hour[2]	Peak Hour Volume
6th St/Kitsap Way Corridor						
10	Kitsap Way & 11th Ave	Signal	01/09/18	2:00 – 7:00	3:45 – 4:45	3,260
11	Kitsap Way & Wycoff Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	1,920
12	6th St & Callow Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	2,410
13	6th St & Montgomery Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	1,910
14	6th St & Naval Ave	Signal	01/09/18	2:00 – 7:00	3:30 – 4:30	2,610
16	6th St & Veneta Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	1,690
17	6th St & Warren Ave	Signal	01/09/18	2:00 – 7:00	3:30 – 4:30	2,600
18	6th St & Park Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	1,310
15	6th St & High Ave	HAWK	01/09/18	3:00 – 5:00	3:30 – 4:30	1,680
19	6th St & Pacific Ave	AWSC	01/09/18	3:00 – 5:00	3:30 – 4:30	930
327	Kitsap Way & Cambrian	TWSC	09/11/19	3:00 – 5:00	3:30 – 4:30	1,570
11th St Corridor						
22	11th St & Warren Ave	Signal	01/09/18	2:00 – 7:00	3:45 – 4:45	3,910
30	11th St & Callow Ave	Signal	01/09/18	3:00 – 5:00	3:45 – 4:45	2,470
31	11th St & Naval Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	2,630
32	11th St & High Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	2,530
33	11th St & Park Ave	Signal	01/09/18	3:00 – 5:00	3:30 – 4:30	1,280
87	11th St & Veneta Ave	TWSC	09/11/19	3:00 – 5:00	3:45 – 4:45	2,290
88	11th St & Pacific Ave	AWSC	09/10/19	3:00 – 5:00	3:45 – 4:45	900
High-Interest Locations in Vicinity						
21	Burwell St & Warren Ave	Signal	01/09/18	2:00 – 7:00	2:30 – 3:30	1,570
23	Warren Ave & 13th St	Signal	01/10/18	3:00 – 5:00	4:00 – 5:00	3,400
37	Burwell St & Naval Ave	Signal	01/09/18	3:00 – 5:00	3:15 – 4:15	2,660
135	Burwell St & Chester Ave	HAWK	09/11/19	3:00 – 5:00	3:15 – 4:15	1,440
137	Wheaton Way & Broad St	Signal	09/11/19	3:00 – 5:00	3:45 – 4:45	3,000
307	15th St & Naval Ave	Signal	09/10/19	3:00 – 6:00	4:00 – 5:00	560

[1]Signal = signalized intersection; AWSC = all-way stop; TWSC = minor-approach stop; HAWK=pedestrian hybrid beacon
[2]Period with highest four consecutive 15-minute volume intervals

Roadway Characteristics

Transportation Solutions, Inc. conducted site visits and reviewed Google Earth Pro and Bing Maps satellite and street-level photography to determine existing roadway characteristics including roadway geometry, channelization, intersection control, turn restrictions, and posted speeds.

Signal Timing

Current traffic signal timing plans were obtained from City of Bremerton and WSDOT staffs for signalized intersections in the study area.

Crash Analysis

Crash records were obtained from the WSDOT for the five-year period from 2014 through 2018. Crash trends for each corridor are summarized below in **Table 5** and **Table 6**.

Table 5. Crashes by Severity, 2014-2018

Corridor		No Injury	Possible Injury	Evident Injury	Serious Injury	Total
6th St	5yr Total	98	44	11	3	156
	Annual Avg.	19.6	8.8	2.2	0.6	31.2
11th St	5yr Total	150	56	19	1	226
	Annual Avg.	30.0	11.2	3.8	0.2	45.2

Table 6. Crashes by Type, 2014-2018

Corridor		Rear-End	Entering	Turning	Sideswipe	Fixed Object	Ped/ Bike	Other
6th St	5yr Total	34	47	35	17	8	9	6
	Annual Avg.	6.8	9.4	7.0	3.4	1.6	1.8	1.2
11th St	5yr Total	110	34	42	19	11	6	4
	Annual Avg.	22.0	6.8	8.4	3.8	2.2	1.2	0.8

6th St/Kitsap Way Corridor

A total of 156 crashes were reported during the 2014-2018 period, an average of 31.2 crashes per year. 58 crashes (37 percent) involved at least one injury, and three crashes involved serious injuries. Serious injury crashes included:

- 8/14/2014 at Wycoff Ave: A cyclist was struck by vehicle entering 6th St/Kitsap Way from northbound on Wycoff Ave. No cause was cited.
- 1/27/2016 at Montgomery Ave: An eastbound motorcyclist was struck by a westbound left-turning vehicle. Driver inattention was cited.
- 4/14/2017 at Naval Ave: An eastbound motorcyclist was struck by a westbound left-turning vehicle. Driver inattention was cited.

Predominant crash types for the 6th St corridor are entering (30%) and rear-end (22%) type collisions. These trends are typical for congested corridors with a mix of signalized and unsignalized intersections.

11th St Corridor

A total of 226 crashes were reported during the 2014-2018 period, an average of 45.2 crashes per year. 76 crashes (34 percent) involved at least one injury. One serious injury crash occurred on September 29, 2014 at the Ohio Ave intersection when an eastbound passenger car struck a pedestrian. Driver distraction was cited as a contributing factor.

Rear-end collisions represent the predominant crash type on 11th St, constituting 49 percent of all crashes. This trend is typical for congested signalized corridors with unexpected stopping.

Crash Rates

Crash rates were calculated for each corridor based on the crash records and average daily traffic volumes reported for year 2017. Roadway crash rates, summarized in **Table 7**, are typically expressed in terms of crashes per 100 million (100M) vehicle-miles traveled (VMT) and are calculated using the following equation:

$$R = \frac{C\ X\ 100{,}000{,}000}{V\ X\ 365\ X\ N\ X\ L}$$

where:

R = Crash rate expressed as crashes per 100M VMT,
C = Total number of crashes in the study period,
V = Average daily traffic (ADT) volume,
N = Number of years of crash data, and
L = Length of roadway segment in miles

Table 7. Corridor Crash Rates, 2014-2018

Corridor	Length (mi)	ADT[1] (veh. /day)	Total Crashes[2]	Crash Rate[3] (/ 100M VMT)
6th St/Kitsap Way (11th St to Pacific Ave)	1.4	13,000	156	436.3
11th St (Kitsap Way to Pacific Ave)	1.4	20,000	226	443.1
Kitsap County Average[4]				175.4
Washington State Average[4]				196.2

[1]Average daily traffic volume, per 2017 counts
[2]Total crashes, 2014-2018
[3]Crashes per 100 million vehicle miles traveled
[4]Source: 2015 Annual Collision Summary (WSDOT)

The *2015 Annual Collision Summary* published by WSDOT indicates an average crash rate of 175.4 crashes per 100M VMT for Kitsap County and average crash rate of 196.2 crashes per 100M VMT statewide. Crash rates for 6th St and for 11th St are 436.3 and 443.1, respectively, or approximately 2.5 times the countywide average.

Multimodal Facilities

6th St/Kitsap Way Corridor

6th St includes curb, gutter, and 5-foot sidewalks on both sides. No buffer is provided. From Callow to Park Ave, the traversable sidewalk width is constrained by utility poles, foliage, and other obstructions. The absence of a physical buffer from the arterial roadway, combined with the narrow width and presence of obstructions along the sidewalk create an uncomfortable pedestrian experience along the 6th St corridor. 6th St includes an eastbound bike lane along the southern side from Pacific Ave to Washington Ave. No other bicycle facilities exist along 6th St.

Kitsap Way includes five-to-six-foot wide sidewalks on both sides of the street, with no buffer. The outside travel lanes between 11th St and Callow Ave are striped as shared bike facilities.

The 6th St/Kitsap Way corridor is served by the following Kitsap Transit routes:

- **Route 22** stops at the Gateway Park & Ride and provides access to the Bremerton Transportation Center.
- **Route 26** provides weekday and Saturday service, making multiple stops along 6th St including at the Gateway Park & Ride. The route provides access to the Bremerton Transportation Center, Bremerton Municipal Court, Gateway Park & Ride, Peninsula Community Health, Bay Vista residential development, and other major trip generators.
- **Route 202** provides weekday service, with a stop on 6th St east of High Ave.

The Gateway Center Park & Ride at 6th St and Montgomery is reserved for same-day bus commuters only and includes 105 parking spaces. Kitsap Transit Routes 22, 26, and 202 serve the park and ride.

11th St Corridor

Curb, gutter, and five-foot sidewalks exist along both sides of the corridor. From Warren Ave to Kitsap Way, the traversable sidewalk width is constrained by utility poles, foliage, and other obstructions. No buffer exists between the existing sidewalk and the outside travel lanes. No bike facilities are provided.

The 11th St corridor is served by the following Kitsap Transit routes:

- **Route 15** provides weekday shuttle service between the Crossroads Park & Ride and McWilliams Park & Ride to the north and Bremerton Transportation Center to the south. It includes stops on 11th St between Warren Ave and Washington Ave.
- **Route 24** provides Monday through Saturday service between the Bremerton Transportation Center and the West Bremerton Transit Center with stops at Olympic College and Bremerton High School. The route includes one stop at 11th St and Callow Ave.
- **Route 212** provides service between Silverdale Transit Center and Bremerton Transportation Center, with stops at West Bremerton Transit Center and Safeway. The route includes stops along 11th St at Callow Ave, Naval Ave, and High Ave before turning south onto Warren Ave.
- **Route 217** provides service between Silverdale Transit Center and Bremerton Transportation Center with stops at Crossroads Park & Ride, McWilliams Park & Ride, and East Bremerton Transit Center. The route includes stops at Pacific Ave and Park Ave along 11th St.
- **Route 301** provides express service between Poulsbo to the north and Bremerton Transportation Center to the south, with stops at key locations including Crossroads Park & Ride, McWilliams Park & Ride, East Bremerton Transit Center, and Olympic College. The route includes stops along 11th St between Warren Ave and Washington Ave.

Traffic Operations

Intersection Level of Service

Level of Service (LOS) is a qualitative description of the operating performance of an element of transportation infrastructure such as a roadway or an intersection. Levels of Service are typically expressed as a letter score from LOS A, representing free flow conditions with minimal delays, to LOS F, representing breakdown flow with high delays. Intersection LOS is based on the average delay experienced by a vehicle traveling through an intersection. Delay at a signalized intersection can be caused by waiting for the signal or waiting for the queue ahead to clear the signal. Delay at unsignalized intersections is caused by waiting for a gap in traffic or waiting for a queue to clear the intersection.

Table 8 shows the LOS and delay thresholds for signal, roundabout and stop-controlled intersections. At signal and all-way stop-sign controlled intersections, LOS thresholds are based on average control delay for all vehicles using the intersection. For minor approach stop-controlled intersections, delay is reported for the controlled movement with the worst (highest) delay.

Table 8. Intersection Level-of-Service Thresholds

LOS	Signal and Roundabout Delay (sec/veh)	Stop-Controlled Delay (sec/veh)
A	≤10	≤10
B	>10 – 20	>10 – 15
C	>20 – 35	>15 – 25
D	>35 – 55	>25 – 35
E	>55 – 80	>35 – 50
F	>80	>50

Signalized and stop-controlled intersections were evaluated in Synchro 9 software using Highway Capacity Manual 2010 (HCM2010) methodologies. **Table 9** summarizes the 2019 PM peak hour intersection LOS results for key intersections along the study corridors**.** Detailed LOS reports are provided in **Appendix A**.

Table 9. 2019 PM Peak Hour Existing Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave[3]	Signal	WB	D (42.3)	C (30.7)
11	Kitsap Way & Wycoff Ave	Signal	NB	E (56.7)	A (5.9)
12	6th St & Callow Ave	Signal	NB	D (54.9)	B (15.9)
13	6th St & Montgomery Ave	Signal	NB	D (53.0)	A (8.1)
14	6th St & Naval Ave	Signal	SB	D (39.8)	C (23.7)
16	6th St & Veneta Ave	Signal	NB	C (26.9)	A (8.2)
17	6th St & Warren Ave	Signal	WB	F (123)	E (61.8)
18	6th St & Park Ave	Signal	NB	B (15.6)	B (14.1)
15	6th St & High Ave	HAWK	NB	C (20.0)	C (20.0)
19	6th St & Pacific Ave	AWSC	WB	C (19.6)	C (17.8)
327	Kitsap Way & Cambrian Ave	TWSC	NB	C (16.2)	C (16.2)
11th St Corridor					
22	11th St & Warren Ave	Signal	NB	F (115)	F (82.4)
30	11th St & Callow Ave	Signal	SB	D (40.0)	B (14.3)
31	11th St & Naval Ave	Signal	SB	D (43.9)	C (21.4)
32	11th St & High Ave	Signal	SB	D (47.3)	B (12.4)
33	11th St & Park Ave	Signal	NB	C (31.6)	B (19.8)
87	11th St & Veneta Ave	TWSC	NB	D (27.3)	D (27.3)
88	11th St & Pacific Ave	AWSC	WB	C (19.2)	C (16.8)
Nearby High-Interest Locations					
21	Burwell St & Warren Ave	Signal	NB	F (98.1)	C (29.2)
23	Warren Ave & 13th St	Signal	EB	E (75.9)	B (13.5)
37	Burwell St & Naval Ave	Signal	SB	D (52.4)	D (40.8)
135	Burwell St & Chester Ave	HAWK	NB	E (36.5)	E (36.5)
137	Wheaton Way & Broad St	Signal	EB	F (103)	A (6.1)

Table 9. 2019 PM Peak Hour Existing Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]
307	15th St & Naval Ave	Signal	EB	A (5.8)	A (5.7)

[1]Signal = signalized intersection; AWSC = all-way stop; TWSC = minor-approach stop; HAWK=pedestrian hybrid beacon (evaluated as a TWSC)
[2]Overall delay for TWSC intersections represents worst movement. For all other intersections, overall delay represents intersection average;
[3]Intersection analyzed using Highway Capacity Manual 2000 (HCM 2000) methodology due to HCM2010 limitations.

On 6th St/Kitsap Way, the study intersections satisfy the City of Bremerton LOS E standard and the WSDOT LOS D (HSS intersections) and LOS E/Mitigated (non-HSS intersections) standards.

On 11th St, the study intersections satisfy the local standards except 11th St and Warren Ave. The 11th St and Warren Ave intersection operates at LOS F and will require mitigation to satisfy the WSDOT LOS E/Mitigated standard for SR 303.

Nearby intersections satisfy the local standards except Burwell St and Chester Ave. The Burwell St and Chester Ave intersection currently operates at LOS E and will require mitigation to satisfy the WSDOT LOS D standard for SR 304.

Vehicle Queuing

Average 2019 PM peak hour vehicle queues for signalized intersections along the study corridors are summarized in **Table 11**. Average queues were analyzed for both directions of each study corridor, with the worst (longest) queue for each lane group reported. Average queues indicate the queue condition that the average driver is likely to experience in the PM peak hour. Queues may be longer or shorter at a given moment, but average queue provides a common reference point to measure driver experience. Average queues are based on Synchro queueing analyses.

The average westbound vehicle queue on 6th St stacks from the Callow Ave intersection through the adjacent Montgomery Ave intersection. The average queue exceeds the available storage by about 230 feet.

Table 11. 2019 PM Peak Hour Existing Queuing

ID	Intersection	Approach	Storage (ft)[1]	Average Queue (ft)[2]
6th St/Kitsap Way Corridor				
10	Kitsap Way & 11th Ave	EB	1,920	310
		WB	1,080	290
		SB	770	280
11	Kitsap Way & Wycoff Ave	EB	1,080	50
		WB	220	80
12	6th St & Callow Ave	EB	220	145
		WB	200	**430**
13	6th St & Montgomery Ave	EB	200	45
		WB	1,380	140
14	6th St & Naval Ave	EB	1,380	115
		WB	1,880	295
16	6th St & Veneta Ave	EB	1,880	40
		WB	1,270	105
17	6th St & Warren Ave	EB	1,270	240
		WB	600	355
18	6th St & Park Ave	EB	600	75
		WB	750	130
11th St Corridor				
22	11th St & Warren Ave	EB	1,900	165
		WB	580	380
30	11th St & Callow Ave	EB	765	130
		WB	1,650	195
31	11th St & Naval Ave	EB	1,650	160
		WB	1,255	270
32	11th St & High Ave	EB	1,255	55
		WB	1,900	275
33	11th St & Park Ave	EB	580	65
		WB	730	150

[1]Distance to nearest signalized intersection, rounded to the nearest multiple of 5 feet
[2]Average queue, rounded to the nearest multiple of 5 feet; "**Bold**" indicates average queue exceeds available storage

Multimodal Level of Service

Multimodal Levels of Service (MMLOS) were calculated for the 6th St/Kitsap Way and 11th St corridors using an updated implementation of the HCM 2010 pedestrian and bicycle link LOS methodologies. The MMLOS methodology used in this analysis is currently used by Oregon Department of Transportation (ODOT) for project-level pedestrian and bicycle LOS analyses and is described in the *Analysis Procedures Manual Version 2* (ODOT 2018).

Similar to vehicle LOS, multimodal LOS scores are based on user experience (satisfaction) and use a grading scale from best (LOS A) to worst (LOS F). The MMLOS methodology uses a probabilistic approach to estimate a likely range of user perceptions for a given roadway segment. Pedestrian LOS is calculated for each direction of travel based on four variables: sidewalk width, directional traffic volume, number of through traffic lanes by direction, and posted speed limit. Similarly, bicycle LOS is calculated for each direction of travel based on four variables: number of through traffic lanes per direction, presence of bike lane or paved shoulder, posted speed limit, and presence of unsignalized conflicts.

By using a probabilistic approach to quantify traveler satisfaction, MMLOS reflects the range of experiences of pedestrians and bicyclists with various levels of confidence and ability. The methodology reports a range of LOS scores based on the most likely user experience for a given roadway segment.

Pedestrian and bicycle LOS were calculated for each study corridor. Corridors were broken into segments based on direction, traffic volume, number of lanes, and presence of multimodal facilities. MMLOS results are summarized in **Table 10** for the existing roadway conditions and traffic volumes.

Table 10. 2019 PM Peak Hour Existing Nonmotorized LOS

Segment	Limits	Pedestrian LOS		Bicycle LOS	
		EB	WB	EB	WB
Kitsap Way	11th St to Callow Ave	C	E	C-F	C-F
6th St	Callow Ave to Naval Ave	E	E	C-F	C-F
	Naval Ave to Warren Ave	E	E	C-F	C-F
	Warren Ave to Park Ave	C	E	C-F	C-F
	Park Ave to Pacific Ave	B-C	B-C	C	C
11th St	Kitsap Way to Naval Ave	E	E	C	C-F
	Naval Ave to Warren Ave	E	E	C-F	C-F
	Warren Ave to Park Ave	B-C	E	C-F	C-F
	Park Ave to Pacific Ave	B-C	C	C	C

The 6th St/Kitsap Way corridor currently operates with pedestrian LOS E and bicycle LOS C-F for most of the study corridor. The Callow Ave to Warren Ave segment experiences the lowest pedestrian LOS, with pedestrian LOS E and bicycle LOS C-F in both directions of travel.

11th St operates with pedestrian LOS E in both directions from Kitsap Way to Warren Ave. Westbound bicycle LOS is C-F from Park Ave to Kitsap Way.

TRAVEL DEMAND FORECASTING

Travel Demand Model Background

As part of this study, Transportation Solutions developed a citywide travel demand model which will be used to calculate future PM peak hour traffic forecasts for the study area. The travel demand model will be provided to the City of Bremerton at the conclusion of this study and may be used for other transportation planning and policy applications.

The 2019 Bremerton travel demand model reflects current residential and non-residential development, ferry demand, street network characteristics, and general travel behavior patterns in the City of Bremerton. The model was calibrated to reflect counted 2018 and 2019 PM peak hour traffic volumes described earlier in this document. The calibrated model allows traffic volume forecasts to be generated for various future development and transportation improvement project scenarios.

The following sections describe the development and calibration of the travel demand model, including the transportation network (i.e. travel supply) and land use (i.e. travel demand) components, model procedures, and calibration results.

Transportation Network Development

The travel demand model street network architecture was developed and refined based on a link/node architecture which Transportation Solutions has applied to numerous similar travel demand models throughout western Washington, including the WSDOT SR 16/SR 3 Corridor Congestion Study. Modeled street segments (links) and intersections (nodes) were refined based on review of satellite and street-level photography as well as feedback from City of Bremerton staff.

Existing Land Use

Existing development was modeled in two residential and nine non-residential categories, as indicated in **Table 12**. Land use was based on the WSDOT SR 16/SR 3 Corridor Congestion Study, City of Bremerton Comprehensive Plan, and Kitsap County travel demand model, and was reviewed by City staff.

Table 12. Travel Demand Model Land Use Categories

Land Use Category	Short Code	Units
Single-Family	SFDU	Dwelling Units
Multi-Family	MFDU	Dwelling Units
Retail	RETAIL	Employees
Financial, Insurance, Real Estate, and Services	FIRES	Employees
Government	GOV	Employees
Education	EDU	Employees
Wholesale Trade, Transportation, and Utilities	WTU	Employees
Manufacturing	MAN	Employees
Construction and Resources	CONRES	Employees
National Defense	MIL	Employees
Park & Ride	PNR	Spaces

Land use was spatially aggregated to 125 Transportation Analysis Zones (TAZs) in and around the City of Bremerton. Land use external to the Bremerton area was modeled using 8 external TAZs, with external trips modeled based on observed traffic volumes at network boundary locations.

Travel Demand Model Methods and Assumptions

Trip Generation

Modeled PM peak hour trip generation rates were based upon data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual 10th Edition* and rates used in the calibrated WSDOT SR 16/SR 3 travel demand model. Trips were modeled based on five trip purposes: **home-to-work** (HW), **work-to-home** (WH), **home-to-other** (HO), **other-to-home** (OH), and **non-home based** (NHB) trips. Trip rates were also defined according to trip origins (O) and destinations (D). Calibrated trip generation rates are identified in **Table 13**.

Table 13. Calibrated PM Peak Hour Trip Generation Rates

Land Use Category	Units	HW-O	HW-D	WH-O	WH-D	HO-O	HO-D	OH-O	OH-D	NHB-O	NHB-D	Total
Single-Family (SFDU)	DU	0.041	0.000	0.000	0.277	0.259	0.000	0.000	0.376	0.105	0.072	1.130
Multi-Family (MFDU)	DU	0.021	0.000	0.000	0.127	0.133	0.000	0.000	0.257	0.054	0.038	0.620
Retail (RETAIL)	Empl	0.000	0.075	0.083	0.000	0.000	0.280	0.308	0.000	0.277	0.254	1.278
Financial, Insurance, Real Estate, and Services (FIRES)	Empl	0.000	0.009	0.124	0.000	0.000	0.022	0.144	0.000	0.066	0.049	0.414
Government (GOV)	Empl	0.000	0.019	0.239	0.000	0.000	0.033	0.183	0.000	0.159	0.066	0.711
Education (EDU)	Empl	0.000	0.076	0.283	0.000	0.000	0.238	0.463	0.000	0.143	0.380	1.584
Wholesale Trade, Transportation, and Utilities (WTU)	Empl	0.000	0.037	0.124	0.000	0.000	0.055	0.129	0.000	0.095	0.092	0.531
Manufacturing (MAN)	Empl	0.000	0.017	0.110	0.000	0.000	0.013	0.127	0.000	0.091	0.057	0.414
Construction and Resources (CONRES)	Empl	0.000	0.038	0.221	0.000	0.000	0.000	0.000	0.000	0.064	0.027	0.414
National Defense (MIL)	Empl	0.000	0.003	0.006	0.000	0.000	0.013	0.023	0.000	0.018	0.010	0.073
Park & Ride (PNR)	Spaces	0.000	0.000	0.222	0.000	0.000	0.060	0.092	0.000	0.032	0.055	0.462

Trip Distribution

Trips were distributed between TAZs using a gravity model, which is based on the principle that the attraction between two bodies is directly proportional to the bodies' masses and inversely proportional to the distance between the bodies. For the purposes of travel demand modeling, a TAZ's "mass" is represented by the number of trips generated by (produced by or attracted to) the TAZ, while the distance factor is represented by route travel time.

The gravity model calculates the attraction between any two TAZs using the following utility function:

$$f(U) = a * (U^b) * (e^{cU})$$

In the utility function, U is defined as travel time between zones. The parameters a, b, and c are calibration factors which influence the weight of travel time in the gravity model. The gravity parameters used in the 2017 model are shown in **Table 14** and were calibrated based on observed traffic volumes and consistent with guidance from *NCHRP Report 716* (TRB 2012).

Table 14. Trip Distribution Gravity Model Parameters

Trip Purpose	Model Parameter		
	a	b	c
Home-to-Work (HW)	28,507	-0.503	-0.078
Work-to-Home (WH)	28,507	-0.503	-0.078
Home-to-Other (HO)	139,173	-2.383	-0.090
Other-to-Home (OH)	139,173	-2.383	-0.090
Non-Home Based (NHB)	219,133	-2.703	-0.029

Traffic Assignment

Trips were assigned to the roadway network using an equilibrium assignment process which allocated vehicle trips between origins and destinations along the route with the least impedance, where impedance was defined based on travel time. The assignment routine updated network impedance iteratively to reflect network congestion, re-assigning traffic until an equilibrium solution was found – i.e. until no vehicle can decrease its travel time by shifting to a new path.

Network impedance settings and volume-delay functions (VDFs) for links, nodes, and turns were modeled consistent with other citywide and regional planning models throughout western Washington, including the WSDOT SR 16/SR 3 travel demand model.

Travel Demand Model Calibration

Travel demand model calibration consists of adjusting model procedures and formulas to allow the model to best represent local travel behavior for a known condition. This may involve adjusting trip generation rates, trip distribution gravity model parameters, and other more detailed model parameters including network volume-delay functions and model procedure settings.

Travel demand model validation consists of comparing the model's traffic assignment output to actual traffic counts or other available data to establish correlation between the base-year model and base-year data.

A well-calibrated model, when populated with land use and street network data that existed at the time traffic counts were collected, will generate traffic volumes that closely correlate with traffic counts. Calibration errors should be minimal and evenly distributed to consider a model "validated" and therefore suitable for use in planning and design studies.

The 2019 model was calibrated according to best practices identified in *National Cooperative Highway Research Program Report 765: Analytical Travel Forecasting Approaches for Project-Level Planning and Design* (TRB 2014) and *Travel Model Validation and Reasonableness Checking Manual Second Edition* (FHWA 2010). 2018 and 2019 PM peak hour intersection turning movement counts were aggregated to obtain 695 street segment counts. The model-assigned traffic volumes were checked against the street segment counts and the model was calibrated to improve the correlation between the modeled and counted traffic volumes.

The most common statistical measures of travel demand model accuracy are the coefficient of determination (R^2) and the percent root-mean square error (%RMSE) statistics. The R^2 statistic can be interpreted as a "goodness of fit" statistic and measures the strength of the linear relationship between

the calculated model volumes and observed (counted) traffic volumes. Percent RMSE measures the average error between the modeled and observed traffic volumes and can be calculated as shown:

$$\%\text{RMSE} = 100 \text{ x } \frac{\sqrt{\frac{\sum(\text{Assignment Errors})^2}{\text{Number of Links}}}}{\text{Average Count}}$$

R^2 and %RMSE measure the degree to which modeled volumes correspond to observed count data. Perfection would be 100 percent correlation of modeled volumes to counts (R^2 = 1.00, %RMSE = 0). R^2 values above 0.88 are desirable, per *Model Validation and Reasonableness Checking Manual*.

There are no national standards for R^2 or %RMSE. However, the Federal Highway Administration (FHWA) provides guidelines for model calibration. **Table 15** shows that the 2019 model calibration meets the recommended values of the FHWA guidelines. The calibrated model has an R^2 statistic of 0.95, which represents a very close correlation between traffic counts and modeled volumes.

Table 15. Model Calibration Statistics

Calibration Statistic	FHWA Recommended Value	2019 Model Statistic
R-Squared	≥ 0.88	0.95
%RMSE	≤ 35%	23%
%In[1]	≥ 75%	93%

[1]%In represents the percent of assigned volumes within the NCHRP Report 765 recommended allowable error curves. The maximum value is 100 percent; the higher the value the more accurate the model.

Although the Bremerton model was well calibrated, there were still some minor differences between the 2019 raw model volumes and the 2019 traffic counts. The minor differences were post-processed and assembled into a correction matrix. The correction matrix was incorporated in the total trip table to obtain error-corrected model volumes. The 2019 corrected model volumes were used as a baseline from which to compare future traffic volume growth.

Land Use Forecast

Long-range (2040) housing and employment growth forecasts were confirmed by City of Bremerton staff and were modeled consistent with the Land Use Element of the 2016 Bremerton Comprehensive Plan. The growth forecast assumed partial build-out of the Puget Sound Industrial Center (PSIC-B), with 4,000 new employees assumed by 2040. Growth forecasts by TAZ are available upon request.

Travel demand growth external to the City of Bremerton model area was modeled using PSRC Vision 2040 travel demand growth forecasts, provided by PSRC staff.

Traffic Volumes

2040 PM peak hour traffic volume forecasts are summarized in **Table 16**. The operational impacts of the travel demand growth forecast are summarized in the following sections.

Table 16. 2040 PM Peak Hour Traffic Volume Forecasts

ID	Intersection	Control Type[1]	2019 PM Volume (vph)	2040 PM Volume (vph)	Growth (%)
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave[3]	Signal	3,260	3,620	11%
11	Kitsap Way & Wycoff Ave	Signal	1,920	2,320	21%
12	6th St & Callow Ave	Signal	2,410	2,910	21%
13	6th St & Montgomery Ave	Signal	1,910	2,470	29%
14	6th St & Naval Ave	Signal	2,610	3,050	17%
16	6th St & Veneta Ave	Signal	1,690	2,040	21%
17	6th St & Warren Ave	Signal	2,600	3,170	22%
18	6th St & Park Ave	Signal	1,310	1,810	38%
15	6th St & High Ave	HAWK	1,680	2,040	21%
19	6th St & Pacific Ave	AWSC	930	1,420	53%
327	Kitsap Way & Cambrian	TWSC	1,570	1,730	10%
11th St Corridor					
22	11th St & Warren Ave	Signal	3,910	4,790	23%
30	11th St & Callow Ave	Signal	2,470	2,780	13%
31	11th St & Naval Ave	Signal	2,630	2,940	12%
32	11th St & High Ave	Signal	2,530	2,980	18%
33	11th St & Park Ave	Signal	1,280	1,720	34%
87	11th St & Veneta Ave	TWSC	2,290	2,720	19%
88	11th St & Pacific Ave	AWSC	900	1,290	43%
High-Interest Locations in Vicinity					
21	Burwell St & Warren Ave	Signal	1,570	1,860	18%
23	Warren Ave & 13th St	Signal	3,400	3,970	17%
37	Burwell St & Naval Ave	Signal	2,660	3,110	17%
135	Burwell St & Chester Ave	HAWK	1,440	1,830	27%
137	Wheaton Way & Broad St	Signal	3,000	3,590	20%
307	15th St & Naval Ave	Signal	560	670	20%

[1]Signal = signalized intersection; AWSC = all-way stop; TWSC = minor-approach stop; HAWK=pedestrian hybrid beacon (evaluated as a TWSC)
[2]Overall delay for TWSC intersections represents worst movement. For all other intersections, overall delay represents intersection average;
[3]Intersection analyzed using HCM 2000 methodology due to HCM2010 limitations.

PM peak hour traffic volume along 6th St west of Naval Ave is anticipated to increase from 1,780 vehicles per hour (vph) in 2019 to 2,280 vph in 2040. On 11th St, PM peak hour volume will increase from 2,080 vph in 2019 to 2,350 in 2040.

Anticipated traffic volume growth is characterized by a growing eastbound demand surge in addition to continued growth of the existing westbound PM peak hour demand surge. The eastbound demand surge will be driven in part by new employment at PSIC-B, with a small proportion of employees anticipated to travel through the study area to housing in east Bremerton during the PM peak hour.

CORRIDOR IMPROVEMENT ALTERNATIVES

This study evaluated four future network improvement scenarios for the 6th St and 11th St corridors, as described below. The scenarios described below are conceptual in nature and may be refined in future analyses. All future year analyses focused on the 2040 PM peak hour of travel.

A 2040 baseline, or No Action, scenario assumed no changes to the existing channelization, intersection control, or turn treatments in the study area. The baseline scenario assumed minor signal timing improvements at signalized study intersections, as these represent low-cost operational improvements which require no additional hardware.

In addition to the No Action scenario, 2040 conditions were modeled for three improvement scenarios: 6th St Road Diet, 11th St Road Diet, and 6th St/11th St Couplet.

Road diets are characterized by the removal of travel lanes from a roadway to use the available space for other uses and travel modes. Four-lane to three-lane road diets have a variety of safety benefits and, when applied properly, have little or no negative impact on roadway capacity.

A typical four-lane to three-lane road diet improves safety by reducing the number of conflict points for vehicle traffic, as shown in **Figure 2** and summarized below:

- Major approach movements:
  - Reduce rear-end crash rate by removing left-turning vehicles from through lanes
  - Reduce left-turn crashes by reducing number of opposing lanes of traffic
  - Reduce sideswipe crash rate by separating opposing through traffic lanes
  - Reduce sideswipe and rear-end crash rate by eliminating speed differential between adjacent through lanes
- Minor approach movements:
  - Reduce entering crash rate by simplifying right-turn gap-acceptance decision-making
  - Reduce crossing crash rate by reducing crossing lanes for through movements
  - Reduce left-turn crash rate by reducing crossing lanes required for left-turn movements

Road diets typically provide nonmotorized improvements such as sidewalks, bike lanes, and buffer zones between nonmotorized areas and travel lanes. These improvements improve pedestrian and bicycle safety by reducing nonmotorized users' exposure to vehicle traffic. By providing nonmotorized facilities, road diets provide a more welcoming environment for pedestrians and bicyclists, encouraging nonmotorized demand and improving overall livability for a corridor. Road diets have been demonstrated to reduce crash rates between 19 and 47 percent.

Effective application of road diets requires consideration of a roadway's role in the overall transportation network, as well as anticipated travel demand patterns and community priorities.

Four-lane to three-lane road diets have been applied successfully throughout western Washington on roads serving volumes up to 30,000 ADT. Corridor operations under a road diet are highly influenced by intersection operations; consideration for intersection treatments are therefore key to successful road diets on medium- to high-volume corridors.

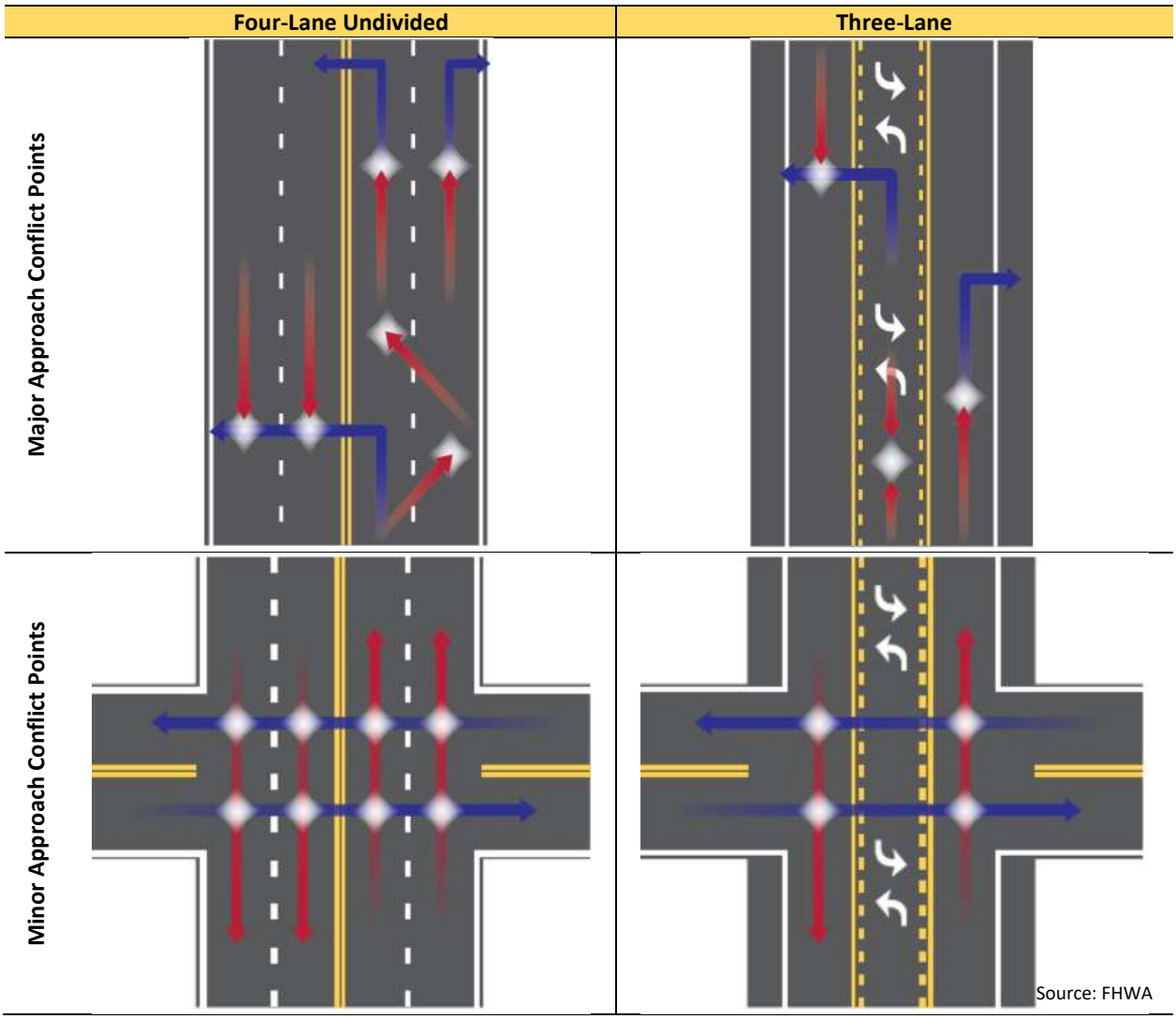


Figure 2. Conflict Points Before and After Road Diet

6th St Road Diet

This alternative assumed that the 6th St/Kitsap Way corridor is improved to a 3-lane cross-section between 11th St and Pacific Ave. Travel lane and bike lane improvements would utilize the existing curb-to-curb width, and ADA-compliant sidewalks would be provided within the existing right-of-way. A conceptual cross-section is shown in **Figure 3.**

Kitsap Ave between 11th St and Cambrian Ave would include two lanes westbound and one lane eastbound, with sidewalks and bike lanes.

6th St between Cambrian Ave to Park Ave would include one through lane in each direction and a center two-way left-turn lane.

6th St between Park Ave and Pacific Ave would include two through lanes (both 10-feet wide) and a two-way left-turn lane. This section would retain the existing on-street parking along the northern side of the roadway. Six-foot sidewalks and 5-foot bike lanes will be provided on both sides of the roadway.

At the intersection of 6th St and Warren Ave, the existing three-lane eastbound approach will be restriped as a two-lane approach with an exclusive left and shared through-right lane. The westbound approach will be maintained as a three-lane approach, with the curbside through-right lane restriped as an exclusive right-turn bay. Signalized left-turn treatments on the east and west approaches will be converted for protected and permissive left-turn phasing.

The operational analysis for this alternative assumed optimized signal timings and preservation of existing pedestrian phasing and timings.

11th St Road Diet

This scenario assumes that the 11th St corridor is converted to a three-lane cross-section between Callow Ave and Park Ave. Similar to the 6th St Road Diet scenario, improvements to travel lanes and bike lanes would occur within the existing pavement section.

11th St between Kitsap Way and Callow Ave would retain its current four-lane cross-section to continue to serve left-turn demand from Kitsap Way and right-turn demand from 11th St. The improvement scenario upgrades the existing sidewalks to be 6-feet wide and adds 5-foot wide bike lanes.

At Callow Ave, 11th St would transition from a four-lane to three-lane section. The eastbound approach would include an exclusive left-turn lane and a shared through-right turn lane. Sidewalks and bike lanes would be provided on both sides of the street.

At the intersection of 11th St and Warren Ave, the existing three-lane eastbound approach, including dual left-turn lanes) will be retained. The outside lane of the westbound (11th St) approach would be restriped from a shared through-right to an exclusive right-turn lane.

11th St between Warren Ave and Park Ave would include a three-lane cross-section. At the Park Ave intersection, the north and south legs would be restriped to provide exclusive left-turn and shared through-right turn lanes.

11th St between Park Ave and Pacific Ave would be restriped to a three-lane cross-section with bike lanes on both sides of the roadway. On-street parking would also be preserved on both sides of 11th St.

The operational analysis for this alternative assumed optimized signal timings and preservation of existing pedestrian phasing and timings.

6th St/11th St Couplet

One-way roadway couplets can provide operational and safety benefits over two-way arterial routes and can serve a beneficial role in an urban street network. In general, one-way couplets provide safety benefits by reducing conflict points and simplifying crossing decisions for both vehicle and nonmotorized demand through a corridor. By removing opposing traffic conflicts, one-way couplets improve operations and increase travel speed along a corridor, thereby encouraging pass-through demand. By encouraging higher speeds and pass-through demand, one-way couplets generally emphasize vehicular capacity at the expense of pedestrian/bicycle comfort and neighborhood livability.

The FHWA recommends couplets be located less than 0.25 miles apart to prevent confusion for non-local drivers and to minimize out-of-direction travel. The 6th St and 11th St corridors are located exactly 0.25 miles apart, at the limit of the FHWA-recommended spacing.

The 6th St/11th St Couplet alternative assumes the 6th St/Kitsap Way is converted to a three-lane eastbound corridor between 11th St and Warren Ave and 11th St is converted to a complementary three-lane westbound section between Warren Ave and Kitsap Way. A conceptual couplet cross-section is shown in **Figure 4.**

The couplets would support nonmotorized improvements, including a minimum of minimum six-foot sidewalks on both sides and a 12-foot two-way cycle track on one side. Signal timing improvements would be required to accommodate contra-flow bicycle demand at signalized intersections.

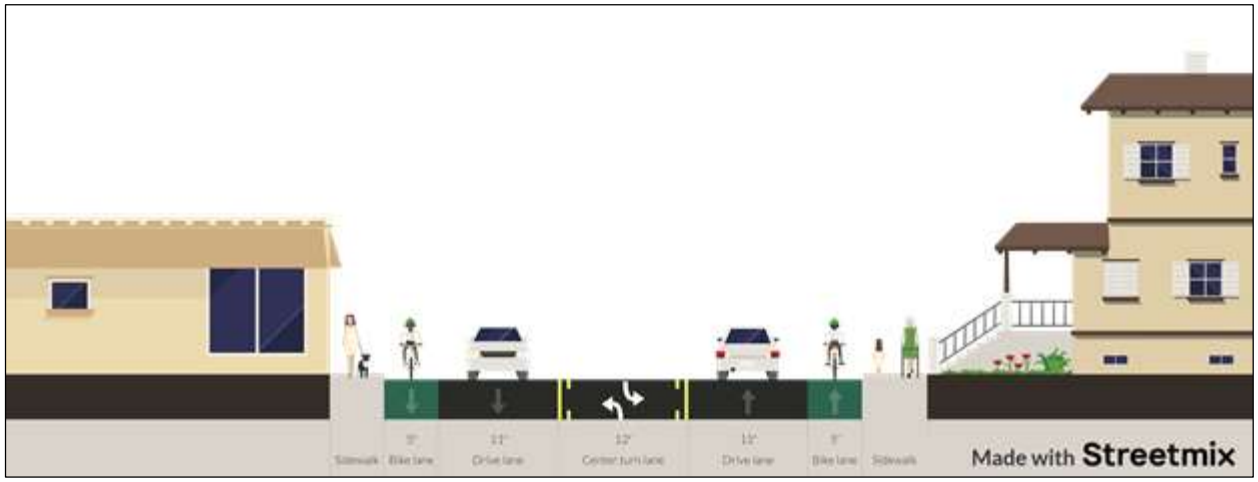


Figure 3. Road Diet Conceptual Section

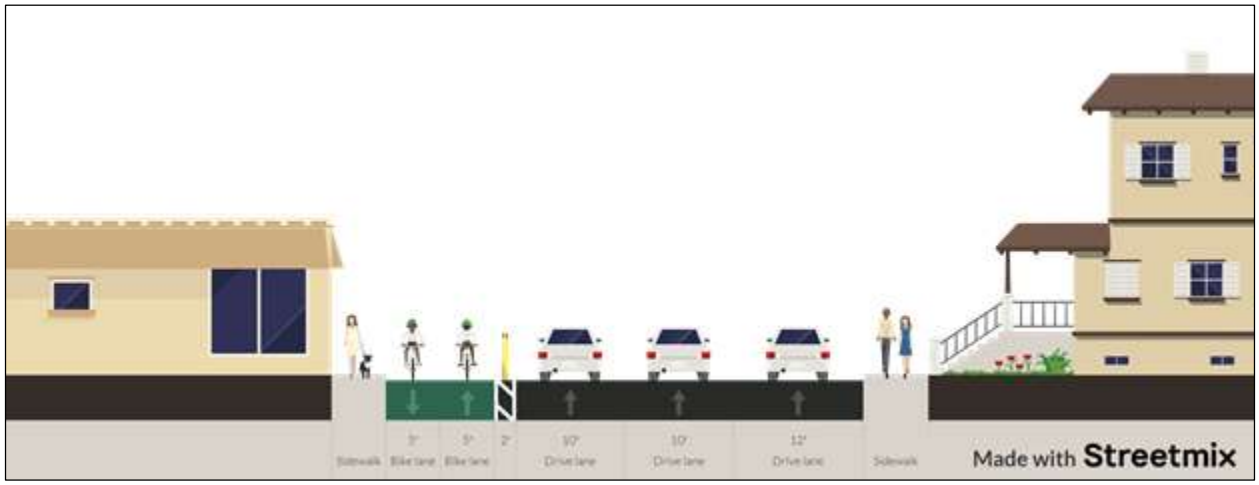


Figure 4. One-Way Couplet Conceptual Section

2040 CONDITIONS

2040 conditions for each scenario are summarized below for each of the following categories:

- Safety
- Operations
- Property access
- Nonmotorized facilities
- Transit
- On-street parking

Operational analyses are based on travel demand forecasts generated by the Bremerton planning model and include the anticipated travel diversion associated with each scenario. Intersection LOS are summarized for intersections along each study corridor and key intersections in the study area vicinity.

2040 No Action

Safety

Existing conditions are characterized by high crash rates, with rear-end, entering, and turning crashes constituting the majority of collisions. Both study corridors exhibit crash rates approximately 2.5 times the Kitsap County average. The crash rate is anticipated to increase in proportion to the increases in travel demand on both corridors.

Operations

Intersection LOS for the 2040 PM peak hour No Action scenario is summarized in **Table 17.** Detailed LOS reports are provided in **Appendix B.**

Table 17. 2040 PM Peak Hour No Action Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave[3]	Signal	WB	E (58.4)	D (39.9)
11	Kitsap Way & Wycoff Ave	Signal	NB	D (54.4)	B (12.0)
12	6th St & Callow Ave	Signal	NB	D (43.5)	B (14.2)
13	6th St & Montgomery Ave	Signal	NB	D (49.8)	A (9.8)
14	6th St & Naval Ave	Signal	SB	D (49.5)	D (39.8)
16	6th St & Veneta Ave	Signal	NB	D (36.8)	B (12.4)
17	6th St & Warren Ave	Signal	EB	F (82.8)	E (56.9)
18	6th St & Park Ave	Signal	NB	C (24.8)	C (20.5)
15	6th St & High Ave	HAWK	NB	E (45.3)	E (45.3)
19	6th St & Pacific Ave	AWSC	NB	D (34.8)	D (26.9)
327	Kitsap Way & Cambrian Ave	TWSC	NB	C (17.9)	C (17.9)
11th St Corridor					
22	**11th St & Warren Ave**	**Signal**	**WB**	**F (141)**	**F (94.1)**
30	11th St & Callow Ave	Signal	SB	D (40.0)	B (15.2)
31	11th St & Naval Ave	Signal	NB	D (42.1)	C (22.9)
32	11th St & High Ave	Signal	NB	D (46.8)	B (16.3)
33	11th St & Park Ave	Signal	NB	F (223)	E (70.1)
87	11th St & Veneta Ave	TWSC	NB	C (16.7)	C (16.7)
88	11th St & Pacific Ave	AWSC	NB	E (38.9)	D (31.8)
High-Interest Locations in Vicinity					
21	Burwell St & Warren Ave	Signal	NB	F (96.5)	D (36.0)
23	Warren Ave & 13th St	Signal	EB	F (139)	C (23.6)
37	Burwell St & Naval Ave	Signal	WB	D (53.8)	D (44.6)
135	**Burwell St & Chester Ave**	**HAWK**	**NB**	**F (107)**	**F (107)**

Table 17. 2040 PM Peak Hour No Action Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]
137	Wheaton Way & Broad St	Signal	EB	F (104)	A (4.9)
307	15th St & Naval Ave	Signal	NB	A (6.6)	A (5.9)

[1]Signal = signalized intersection; AWSC = all-way stop; TWSC = minor-approach stop; HAWK=pedestrian hybrid beacon (evaluated as a TWSC)
[2]Overall delay for TWSC intersections represents worst movement. For all other intersections, overall delay represents intersection average.
[3]Intersection analyzed using HCM 2000 methodology due to HCM2010 limitations.

On 6th St/Kitsap Way the study intersections satisfy the City of Bremerton LOS E standard and the WSDOT LOS D (HSS intersections) and LOS E/Mitigated (non-HSS intersections) standards.

On 11th St the study intersections satisfy the local standards except 11th St and Warren Ave. The 11th St and Warren Ave intersection currently operates at LOS F and is forecast to continue to operate at LOS F under 2040 No Action conditions. The overall delay at the 11th St and Warren Ave intersection increases by about 11.7 seconds, the eastbound approach delay increases by 19.1 seconds, and the westbound approach delay increases by 43 seconds in the 2040 No Action condition, relative to 2019.

Nearby intersections satisfy the local standards except Burwell St and Chester Ave. The Burwell St and Chester Ave intersection currently operates at LOS E and will degrade to LOS F. Burwell St and Chester Ave would require mitigation to satisfy the WSDOT LOS D standard for SR 304.

Average 2040 PM peak hour No Action scenario vehicle queues for signalized intersections along the study corridors are summarized in **Table 18**.

Table 18. 2040 PM Peak Hour No Action Queuing

ID	Intersection	Approach	Storage[1] (ft)	2019 Existing Queue[2] (ft)	2040 No Action Queue[2] (ft)
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave	EB	1,920	310	380
		WB	1,080	290	360
		SB	770	280	360
11	Kitsap Way & Wycoff Ave	EB	1,080	50	70
		WB	220	80	**230**
12	6th St & Callow Ave	EB	220	145	**270**
		WB	200	**430**	**550**
13	6th St & Montgomery Ave	EB	200	45	100
		WB	1,380	140	220
14	6th St & Naval Ave	EB	1,380	115	245
		WB	1,880	295	~430
16	6th St & Veneta Ave	EB	1,880	40	80
		WB	1,270	105	155
17	6th St & Warren Ave	EB	1,270	240	355
		WB	600	355	425
18	6th St & Park Ave	EB	600	75	145
		WB	750	130	145
11th St Corridor					
22	11th St & Warren Ave	EB	1,900	165	~650
		WB	580	380	~565
30	11th St & Callow Ave	EB	765	130	85

Table 18. 2040 PM Peak Hour No Action Queuing

ID	Intersection	Approach	Storage[1] (ft)	2019 Existing Queue[2] (ft)	2040 No Action Queue[2] (ft)
		WB	1,650	195	295
31	11th St & Naval Ave	EB	1,650	160	120
		WB	1,255	270	325
32	11th St & High Ave	EB	1,255	55	140
		WB	1,900	275	330
33	11th St & Park Ave	EB	580	65	80
		WB	730	150	180

[1]Distance to nearest signalized intersection, rounded to the nearest multiple of 5 feet.
[2]Average queue, rounded to the nearest multiple of 5 feet; "**Bold**" indicates average queue exceeds available storage.
~ Volume exceeds capacity; average queue is based on estimated queue length after two signal cycles.

In general, No Action vehicle queues will increase relative to 2019 as travel demand grows throughout the study area.

At Kitsap Way and Wycoff Ave, the average westbound queue on Kitsap Way/6th St is forecast to exceed the available storage by 10 feet, extending into the Callow Ave intersection.

At 6th St and Callow Ave, the average eastbound queue on 6th St is forecast to exceed the available storage by 50 feet and extend into the Wycoff Ave intersection. Like existing conditions, the average westbound queue on 6th St continues to extend from Callow Ave to and Montgomery Ave. The No Action westbound queue exceeds the storage length by about 350 feet and extends into the Montgomery Ave intersection.

At 6th St and Naval Ave, westbound travel demand exceeds the available capacity; therefore, future queues may be longer than reported. The potential for queues extending from Naval Ave to High Ave is not anticipated to be significant, and the available westbound storage is 75% greater than the reported average westbound queue.

At 11th St and Warren Ave, eastbound and westbound demand exceed the available capacity; therefore, queues may be longer than reported. The potential for eastbound queues extending from Warren Ave to High Ave are not anticipated to be significant, and the available eastbound storage is 65% greater than the average westbound queue. The potential for westbound queues extending from Warren Ave to Park Ave is high, and the available eastbound storage is only 2% greater than the average eastbound queues, and the 95th-percentile westbound queues are computed to extend past Park Ave.

Access

As travel demand increases through the study area, left-turn access to and from stop-controlled minor approaches will become more difficult during the PM peak hour of travel. Left-turn movements will experience high delay, limiting access to businesses and homes along the corridor.

Nonmotorized Facilities

Pedestrian and bicycle LOS for the 2040 PM peak hour No Action scenario are summarized in **Table 19**.

Table 19. 2040 PM Peak Hour No Action Nonmotorized LOS

Segment	Limits	Pedestrian LOS		Bicycle LOS	
		EB	WB	EB	WB
Kitsap Way	11th St to Callow Ave	C	E	C-F	C-F
6th St	Callow Ave to Naval Ave	E	E	C-F	C-F
	Naval Ave to Warren Ave	E	E	C-F	C-F
	Warren Ave to Park Ave	C	E	C-F	C-F
	Park Ave to Pacific Ave	B-C	B-C	C	C
11th St	Kitsap Way to Naval Ave	E	E	C	C-F
	Naval Ave to Warren Ave	E	E	C-F	C-F
	Warren Ave to Park Ave	B-C	E	C-F	C-F
	Park Ave to Pacific Ave	B-C	C	C	C

From Naval Ave to Warren Ave, both study corridors will operate with pedestrian LOS E and bicycle LOS C-F. These results indicate an undesirable experience for most nonmotorized users for the length of each study corridor.

Transit Service

The existing four-lane undivided sections require buses to stop in the outside travel lanes of 6th St and 11th St. This creates a safety hazard as vehicles change lanes to overtake stopped buses, increasing the potential for rear-end or sideswipe collisions.

On-Street Parking

6th St includes on-street parking along the north side from Pacific Ave to Park Ave and along the south side from Pacific Ave to 250 feet east of Park Ave.

11th St includes on-street parking along the north side from Pacific Ave to Park Ave and along the south side from Pacific Ave to 250 feet east of Warren Ave.

2040 with 6th St Road Diet

Safety

The predominant crash types on 6th St are rear-end (30%) and entering (22%) type collisions. A road diet is anticipated to provide the following safety benefits relevant to these crash types:

- Reduce rear-end crashes by removing left-turning vehicles from the inside through lanes, thereby eliminating unexpected stops in the travel lanes
- Reduce entering crashes by:
    - Reducing the number of lanes which vehicles must cross to enter the traffic stream
    - Providing a center refuge lane which will facilitate two-stage left-turn movements, reducing unsafe driver behavior which can result from high-delay left-turn movements

The Highway Safety Manual (HSM), published by the American Association of State Highway Transportation Officials (AASHTO), indicates an anticipated 29 percent reduction in total crashes when converting from a four-lane undivided street to a three-lane street.

Operations

The 6th St road diet alternative will not result in significant traffic redistribution. Approximately 100 vph are anticipated to divert to 11th St with another 100 vph diverting to Burwell St.

Table 20 summarizes the traffic operations analysis with the 6th St road diet alternative. Detailed LOS reports are provided in **Appendix B**.

Table 20. 2040 PM Peak Hour 6th St Road Diet Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave[3]	Signal	WB	E (58.7)	D (41.0)
11	Kitsap Way & Wycoff Ave	Signal	NB	F (178)	D (48.8)
12	6th St & Callow Ave	Signal	NB	F (189)	D (44.9)
13	6th St & Montgomery Ave	Signal	NB	D (51.0)	C (28.6)
14	6th St & Naval Ave	Signal	NB	E (67.6)	D (44.9)
16	6th St & Veneta Ave	Signal	NB	D (43.6)	B (17.2)
17	6th St & Warren Ave	Signal	NB	E (77.7)	E (67.8)
18	6th St & Park Ave	Signal	NB	C (31.1)	C (21.6)
15	6th St & High Ave	HAWK	NB	C (15.5)	C (15.5)
19	6th St & Pacific Ave	AWSC	NB	D (34.0)	D (25.9)
327	Kitsap Way & Cambrian Ave	TWSC	NB	C (16.2)	C (16.2)
11th St Corridor					
22	**11th St & Warren Ave**	**Signal**	**WB**	**F (147)**	**F (97.4)**
30	11th St & Callow Ave	Signal	SB	D (40.1)	B (16.5)
31	11th St & Naval Ave	Signal	SB	D (42.5)	C (25.1)
32	11th St & High Ave	Signal	NB	D (46.9)	B (16.1)
33	11th St & Park Ave	Signal	NB	F (248)	E (76.2)
87	11th St & Veneta Ave	TWSC	NB	C (16.6)	C (16.6)
88	11th St & Pacific Ave	AWSC	NB	E (35.1)	D (30.6)
Nearby High-Interest Locations					
21	Burwell St & Warren Ave	Signal	NB	F (96.4)	D (35.6)
23	Warren Ave & 13th St	Signal	EB	F (98.0)	C (20.0)
37	**Burwell St & Naval Ave**	**Signal**	**SB**	**F (103)**	**E (62.2)**
135	**Burwell St & Chester Ave**	**HAWK**	**NB**	**F (260)**	**F (260)**
137	Wheaton Way & Broad St	Signal	EB	F (104)	A (4.9)
307	15th St & Naval Ave	Signal	NB	A (6.7)	A (5.9)

[1]Signal = signalized intersection; AWSC = all-way stop; TWSC = minor-approach stop; HAWK=pedestrian hybrid beacon (evaluated as a TWSC)
[2]Overall delay for TWSC intersections represents worst movement. For all other intersections, overall delay represents intersection average;
[3]Intersection analyzed using HCM 2000 methodology due to HCM2010 limitations.

On 6th St/Kitsap Way, study intersections satisfy the City of Bremerton LOS E standard and the WSDOT LOS D (HSS intersections) and LOS E/Mitigated (non-HSS intersections) standards.

With the 6th St road diet alternative, the 6th St and Warren Ave intersection is forecast to continue to operate at LOS E. Implementation of protected-permissive left-turns from the 6th St approaches will allow the intersection to maintain LOS E despite the removal of one through lane in each direction.

To maintain minimum intersection LOS standards at signalized intersections along 6th St, signal timing will need to be modified to allocate additional green time to the 6th St approaches. This will allow all

intersections to continue to operate at LOS E or better. However, some approaches will degrade to LOS E or F. This operational tradeoff is consistent with 6th St's classification as a minor arterial and is permitted under City of Bremerton and WSDOT LOS policy.

On 11th St, the study intersections satisfy the local standards except 11th St and Warren Ave. The 11th St and Warren Ave intersection will continue to operate at LOS F under the 2040 No Action and 6th St Road Diet scenarios. Relative to the No Action scenario, overall delay at the 11th St and Warren Ave intersection increases by about 3.3 seconds, the eastbound approach delay increases by 7.7 seconds, and the westbound approach delay increases by 5.5 seconds in the 6th St Road Diet scenario.

Nearby intersections satisfy the local standards except Burwell St and Naval Ave and Burwell St and Chester Ave. The Burwell St and Navel Ave intersection is forecast to decrease from LOS D in the future No Action conditions to LOS E with the road diet. The Burwell St and Chester Ave intersection will continue to operate at LOS F with the road diet and future No Action conditions.

Average 2040 PM vehicle queues with the 6th St Road Diet for signalized intersections along the study corridors are summarized in **Table 21**.

Table 21. 2040 PM Peak Hour 6th St Road Diet Queueing

ID	Intersection	Approach	Storage[1] (ft)	2040 No Action Queue[2] (ft)	2040 6th St Diet Queue[2] (ft)
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave	EB	1,920	380	390
		WB	1,080	360	355
		SB	770	360	305
11	Kitsap Way & Wycoff Ave	EB	1,080	70	310
		WB	220	**230**	**675**
12	6th St & Callow Ave	EB	220	**270**	20*
		WB	200	**550**	85*
13	6th St & Montgomery Ave	EB	200	100	**220**
		WB	1,380	220	475
14	6th St & Naval Ave	EB	1,380	245	190
		WB	1,880	~430	~430
16	6th St & Veneta Ave	EB	1,880	80	140
		WB	1,270	155	315
17	6th St & Warren Ave	EB	1,270	355	~415
		WB	600	425	~710
18	6th St & Park Ave	EB	600	145	130
		WB	750	145	140
11th St Corridor					
22	11th St & Warren Ave	EB	1,900	~650	~665
		WB	580	~565	~600
30	11th St & Callow Ave	EB	765	85	100
		WB	1,650	295	305
31	11th St & Naval Ave	EB	1,650	120	35
		WB	1,255	325	380
32	11th St & High Ave	EB	1,255	140	190
		WB	1,900	330	360
33	11th St & Park Ave	EB	580	80	80
		WB	730	180	190

Table 21. 2040 PM Peak Hour 6th St Road Diet Queueing

ID	Intersection	Approach	Storage[1] (ft)	2040 No Action Queue[2] (ft)	2040 6th St Diet Queue[2] (ft)

[1]Distance to nearest signalized intersection, rounded to the nearest multiple of 5 feet.
[2]Average queue, rounded to the nearest multiple of 5 feet; "**Bold**" indicates average queue exceeds available storage
~ Volume exceeds capacity; average queue is based on estimated queue length after two signal cycles
*Queue metered by upstream coordinated signal

At Kitsap Way and Wycoff Ave, the average westbound queue on Kitsap Way/6th St is forecast to exceed the available storage by 455 feet and would extend past Callow Ave and into Montgomery Ave.

At 6th St and Callow Ave, the average eastbound and westbound queues are noted as being metered by upstream signals. The westbound queue is forecast to be impacted by vehicle queues spilling back from Wycoff Ave. Similarly, the eastbound queue is forecast to be impacted by vehicle queues spilling back from Montgomery Ave.

At 6th St and Montgomery Ave, the average eastbound queue on 6th St is forecast to exceed the available storage by 20 feet and would extend into Callow Ave.

At 6th St and Naval Ave, westbound peak hour demand exceeds the available capacity; therefore, actual average queues may be longer than reported queues. The potential for queues extending from Naval Ave to High Ave is not anticipated to be significant, and the available westbound storage is 75% greater than the calculated average westbound queue.

At 6th St and Warren Ave, the eastbound and westbound peak hour demand exceed the available capacity; therefore, actual average queues may be longer than reported. The potential for eastbound queues extending from Warren Ave to High Ave are not anticipated to be significant, and the available eastbound storage is 65% greater than the average westbound queue. Westbound queues are forecast to extend from Warren Ave to Park Ave.

At 11th St and Warren Ave, eastbound and westbound demand exceed the available capacity; therefore, average queues may be longer than reported. The potential for eastbound queues extending from Warren Ave to High Ave are not anticipated to be significant, and the available eastbound storage is 65% greater than the average westbound queue. Westbound queues are forecast to extend from Warren Ave to Park Ave.

Access

By providing a two-way left-turn lane, the 6th St road diet will improve access for vehicles entering and exiting properties and stop-controlled local streets along the study corridor.

Nonmotorized Facilities

Table 22 summarizes the pedestrian and bicycle LOS with the 6th St road diet. With the road diet the pedestrian LOS will improve from LOS E for most of the study corridor to LOS B for the full corridor. Bicycle LOS will similarly improve from LOS C-F to LOS B.

Bike lanes provide physical separation between pedestrians and vehicle traffic, increasing the comfort level of pedestrians along the corridor. Bike lanes also remove bicycles from the vehicle traffic stream, increasing bicycle safety and comfort.

Table 22. 2040 PM Peak Hour 6th St Road Diet Nonmotorized LOS

Segment	Limits	Pedestrian LOS				Bicycle LOS			
		No Action		w/ Road Diet		No Action		w/ Road Diet	
		EB	WB	EB	WB	EB	WB	EB	WB
Kitsap Way	11th St to Callow Ave	C	E	B	B	C-F	C-F	B	B
6th St	Callow Ave to Naval Ave	E	E	B	B	C-F	C-F	B	B
	Naval Ave to Warren Ave	E	E	B	B	C-F	C-F	B	B
	Warren Ave to Park Ave	C	E	B	B	C-F	C-F	B	B
	Park Ave to Pacific Ave	B-C	B-C	B	B	C	C	B	B

Transit Service

In the three-lane corridor, buses will have the option to stop in the lane of traffic or to pull into the bike lane to provide an opportunity for vehicles to overtake on the left. The road diet eliminates the possibility for unsafe overtaking maneuvers as vehicles will either wait behind stopped buses or overtake in the center turn lane. The road diet may increase transit ridership by providing safer and more comfortable nonmotorized access to transit stops, as indicated in the nonmotorized LOS analysis.

On-Street Parking

On-street parking will not be affected by the 6th St road diet.

2040 with 11th St Road Diet

Safety

Rear-end crashes represent 49 percent of all collisions along 11th St. A road diet is anticipated to reduce the rear-end crash rate by removing left-turning vehicles from the inside through lanes, thereby eliminating unexpected stops in the travel lanes. The reduced conflict points of a three-lane section will also reduce entering and turning crashes, which represent 34 percent of crashes along the corridor.

Overall, the Highway Safety Manual indicates an anticipated 29 percent reduction in total crashes when converting from a four-lane undivided street to a three-lane street.

Operations

The 11th St road diet will result in approximately 150 vph diverting to 13th St during the PM peak hour. The increased demand on 13th St does not significantly impact delay along the route; however, the location of 13th St adjacent to Olympic College and Bremerton High School creates a potential safety concern related to diverted through traffic. Traffic calming measures should be considered to improve safety and reduce the likelihood for high-speed cut-through traffic near Bremerton High School and Olympic College.

In addition to 13th St diverted demand, approximately 150 vph will divert away from 11th St in favor of 6th St to the south.

Table 23 summarizes the traffic operations analysis with the 11th St road diet alternative. Detailed LOS reports are provided in **Appendix B**.

In general, 2040 PM peak hour traffic volumes along 11th St will approach the practical limit of a three-lane urban arterial section. A road diet will require careful consideration to maintain intersection operations and manage queuing during peak hour operations.

Table 23. 2040 PM Peak Hour 11th St Road Diet Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave[3]	Signal	WB	E (48.8)	D (36.1)
11	Kitsap Way & Wycoff Ave	Signal	NB	D (54.5)	B (11.8)
12	6th St & Callow Ave	Signal	NB	D (43.5)	B (13.8)
13	6th St & Montgomery Ave	Signal	NB	D (50.7)	A (8.9)
14	6th St & Naval Ave	Signal	SB	D (52.6)	D (41.0)
16	6th St & Veneta Ave	Signal	NB	D (45.2)	B (14.6)
17	6th St & Warren Ave	Signal	EB	F (82.9)	E (58.6)
18	6th St & Park Ave	Signal	NB	C (32.6)	C (25.7)
15	**6th St & High Ave**	**HAWK**	**NB**	**F (125)**	**F (125)**
19	6th St & Pacific Ave	AWSC	NB	E (36.4)	D (28.5)
327	Kitsap Way & Cambrian Ave	TWSC	NB	C (15.6)	C (15.6)
11th St Corridor					
22	**11th St & Warren Ave**	**Signal**	**NB**	**F (125)**	**F (103)**
30	11th St & Callow Ave	Signal	SB	E (75.2)	C (29.5)
31	11th St & Naval Ave	Signal	SB	E (60.4)	D (44.7)
32	11th St & High Ave	Signal	SB	F (82.4)	D (39.0)
33	11th St & Park Ave	Signal	NB	C (21.7)	B (17.5)
87	11th St & Veneta Ave	TWSC	NB	C (23.6)	C (23.6)
88	11th St & Pacific Ave	AWSC	NB	D (32.4)	D (26.3)
Nearby High-Interest Locations					
21	Burwell St & Warren Ave	Signal	NB	F (96.7)	D (37.0)
23	Warren Ave & 13th St	Signal	EB	F (108)	C (20.9)
37	Burwell St & Naval Ave	Signal	SB	E (64.5)	D (52.4)
135	**Burwell St & Chester Ave**	**HAWK**	**NB**	**F (137)**	**F (137)**
137	Wheaton Way & Broad St	Signal	EB	F (104)	A (4.9)
307	15th St & Naval Ave	Signal	NB	A (6.7)	A (5.9)

[1]Signal = signalized intersection; AWSC = all-way stop; TWSC = minor-approach stop; HAWK=pedestrian hybrid beacon (evaluated as a TWSC)
[2]Overall delay for TWSC intersections represents worst movement. For all other intersections, overall delay represents intersection average.
[3]Intersection analyzed using HCM 2000 methodology due to HCM2010 limitations.

On 6th St/Kitsap Way, the study intersections satisfy the City of Bremerton LOS E standard and the WSDOT LOS D (HSS intersections) and LOS E/Mitigated (non-HSS intersections) standards except 6th St and High Ave. The 6th St and High Ave intersection currently operates at LOS F and is forecast to continue to operate at LOS F under future No Action conditions.

On 11th St the study intersections satisfy the local standards except 11th St and Warren Ave. The 11th St and Warren Ave intersection currently operates at LOS F and is forecast to continue to operate at LOS F under future No Action and 11th St Road Diet alternatives. Relative to the No Action scenario, the 11th St Road Diet increases overall delay by 8.9 seconds and eastbound approach delay by 27.8 seconds. Westbound approach delay improves by 29.5 seconds relative to the No Action scenario.

To maintain minimum intersection LOS standards at signalized intersections along 11th St, signal timing will need to be modified to allocate additional green time to the 11th St approaches. This will allow all intersections to continue to operate at LOS E or better. However, some approaches will degrade to LOS

E or F. This operational tradeoff is consistent with 11th St's classification as a minor arterial and is permitted under City of Bremerton and WSDOT LOS policy.

Nearby intersections satisfy the local standards except Burwell St and Chester Ave. The Burwell St and Chester Ave intersection will continue to operate at LOS F through 2040.

Average 2040 PM vehicle queues with the 11th St Road Diet for signalized intersections along the study corridors are summarized in **Table 24**.

Table 24. 2040 PM Peak Hour 11th St Road Diet Queueing

ID	Intersection	Approach	Storage[1] (ft)	2040 No Action Queue[2] (ft)	2040 11th St Diet Queue[2] (ft)
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave	EB	1,920	380	325
		WB	1,080	360	345
		SB	770	360	300
11	Kitsap Way & Wycoff Ave	EB	1,080	70	70
		WB	220	**230**	**230**
12	6th St & Callow Ave	EB	220	**270**	**290**
		WB	200	**550**	**555**
13	6th St & Montgomery Ave	EB	200	100	120
		WB	1,380	220	220
14	6th St & Naval Ave	EB	1,380	245	240
		WB	1,880	~430	400
16	6th St & Veneta Ave	EB	1,880	80	100
		WB	1,270	155	160
17	6th St & Warren Ave	EB	1,270	355	365
		WB	600	425	455
18	6th St & Park Ave	EB	600	145	155
		WB	750	145	160
11th St Corridor					
22	11th St & Warren Ave	EB	1,900	~650	~665
		WB	580	~565	**~715**
30	11th St & Callow Ave	EB	765	85	525
		WB	1,650	295	930
31	11th St & Naval Ave	EB	1,650	120	310
		WB	1,255	325	1,020
32	11th St & High Ave	EB	1,255	140	535
		WB	1,900	330	655
33	11th St & Park Ave	EB	580	80	100
		WB	730	180	160

[1]Distance to nearest signalized intersection, rounded to the nearest multiple of 5 feet.
[2]Average queue, rounded to the nearest multiple of 5 feet; "**Bold**" indicates average queue exceeds available storage
~ Volume exceeds capacity; average queue is based on estimated queue length after two signal cycles
*Queue metered by upstream coordinated signal

At Kitsap Way and Wycoff Ave, the average westbound queue on Kitsap Way/6th St is forecast to exceed the available storage by 10 feet and would extend past Callow Ave and into Montgomery Ave.

At 6th St and Callow Ave, the average eastbound queue on 6th St is forecast to exceed the available storage by 70 feet and would extend into the Wycoff Ave intersection. Like existing conditions, the

average westbound queue on 6th St continues to extend from Callow Ave to and Montgomery Ave. The No Action westbound queue exceeds the storage length by about 355 feet and extends into the Montgomery Ave intersection.

At 11th St and Warren Ave, eastbound and westbound peak hour demand exceed the available capacity; therefore, actual queues may be longer than the reported queues. The potential for eastbound queues extending from Warren Ave to High Ave are not anticipated to be significant, and the available eastbound storage is 65% greater than the average eastbound queue. Westbound queues are forecast to extend from Warren Ave to Park Ave.

Access

By providing a two-way left-turn lane, the 11th St road diet will improve access for vehicles entering and exiting properties and stop-controlled local streets along the study corridor.

Nonmotorized Facilities

Table 25 summarizes the pedestrian and bicycle LOS with the 11th St road diet.

Table 25. 2040 PM Peak Hour 11th St Road Diet Nonmotorized LOS

Segment	Limits	Pedestrian LOS				Bicycle LOS			
		No Action		w/ Road Diet		No Action		w/ Road Diet	
		EB	WB	EB	WB	EB	WB	EB	WB
11th St	Kitsap Way to Naval Ave	E	E	B	B	C	C-F	B	B
	Naval Ave to Warren Ave	E	E	B	B	C-F	C-F	B	B
	Warren Ave to Park Ave	B-C	E	B	B	C-F	C-F	B	B
	Park Ave to Pacific Ave	B-C	C	B	B	C	C	B	B

With the road diet the pedestrian LOS will improve from LOS E for the majority of the study corridor to LOS B for the full corridor. Bicycle LOS will similarly improve from LOS C-F to LOS B. Bike lanes provide physical separation between pedestrians and vehicle traffic, increasing the comfort level of pedestrians along the corridor. Bike lanes also remove bicycles from the vehicle traffic stream, increasing bicycle safety and comfort.

11th St includes a grade of over 15 percent between Warren Ave and Veneta Ave. This vertical alignment is not favorable for bicycle and pedestrian travel on the 1,300-foot segment.

Transit Service

In the three-lane corridor, buses will have the option to stop in the lane of traffic or to pull into the bike lane to provide an opportunity for vehicles to overtake on the left. The road diet eliminates the possibility for unsafe overtaking maneuvers as vehicles will either wait behind stopped buses or overtake in the center turn lane.

The road diet may increase transit ridership by providing safer and more comfortable nonmotorized access to transit stops, as indicated in the nonmotorized LOS analysis.

On-Street Parking

The addition of bike lanes on both sides of 11th St between Warren Ave and Park Ave will require the removal of nine parking spaces along the south side of the street. On-street parking between Park Ave and Pacific Ave may be retained without bike lanes or removed and replaced with bike lanes on both sides.

2040 with 6th St/11th St Couplet

Safety

Limited published safety data exists for two-way to one-way conversions. However, one-way roadways simplify turning and entering decisions for drivers and pedestrians, reducing the number of conflict points by removing one direction of flow from each corridor. The 6th St/11th St couplet scenario is anticipated to improve safety for both vehicles and pedestrians.

Bicycle safety will be improved with the provision of a two-way cycle track and buffer. However, contraflow bicycle operations will require design elements which ensure the visibility of cyclists at both signalized and unsignalized access points along the corridors.

Operations

The 2040 PM travel demand model was used to calculate travel demand forecasts for the 6th St/11th St Couplet scenario. The 6th St corridor is anticipated to serve up to approximately 1,900 vph east of Naval Ave. The 11th St corridor is anticipated to serve up to approximately 2,300 vph west of Naval Ave.

Table 26 summarizes the traffic operations analysis with the 6th St/11th St Couplet alternative. Detailed LOS reports are provided in **Appendix B**.

Table 26. 2040 PM Peak Hour 6th St/11th St Couplet Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave[3]	Signal	EB	C (33.9)	B (14.4)
11	Kitsap Way & Wycoff Ave	Signal	NB	D (48)	B (19.6)
12	6th St & Callow Ave	Signal	SB	D (45.5)	C (34.6)
13	6th St & Montgomery Ave	Signal	NB	D (54.2)	C (23.8)
14	6th St & Naval Ave	Signal	SB	E (67.1)	D (49.1)
16	6th St & Veneta Ave	Signal	NB	B (19.7)	B (12.2)
17	6th St & Warren Ave	Signal	EB	D (52.0)	D (42.0)
18	6th St & Park Ave	Signal	NB	F (137)	E (74.7)
15	**6th St & High Ave**	**HAWK**	**NB**	**F (220)**	**F (220)**
19	6th St & Pacific Ave	AWSC	NB	F (80.3)	E (48.8)
327	Kitsap Way & Cambrian Ave	TWSC	NB	D (31.7)	D (31.7)
11th St Corridor					
22	11th St & Warren Ave	Signal	WB	E (79.4)	E (57.2)
30	11th St & Callow Ave	Signal	NB	D (39.1)	B (13.1)
31	11th St & Naval Ave	Signal	NB	E (57.1)	C (31.2)
32	11th St & High Ave	Signal	NB	D (37.3)	C (27.4)
33	11th St & Park Ave	Signal	WB	E (57.2)	D (43.9)
87	11th St & Veneta Ave	TWSC	WB	A (8.2)	A (8.2)
88	**11th St & Pacific Ave**	**AWSC**	**NB**	**F (95.5)**	**F (58.7)**
Nearby High-Interest Locations					
21	Burwell St & Warren Ave	Signal	WB	F (116)	E (59.4)
23	Warren Ave & 13th St	Signal	NB	F (88.1)	E (56.1)
37	Burwell St & Naval Ave	Signal	SB	E (67.9)	D (52.7)
135	**Burwell St & Chester Ave**	**HAWK**	**SB**	**F (708)**	**F (708)**
137	Wheaton Way & Broad St	Signal	EB	F (104)	A (4.9)
307	15th St & Naval Ave	Signal	NB	A (8.1)	A (6.4)

Table 26. 2040 PM Peak Hour 6th St/11th St Couplet Intersection LOS

ID	Intersection	Control Type[1]	Worst Approach	Worst App. LOS (Delay)	Overall LOS (Delay)[2]

[1]Signal = signalized intersection; AWSC = all-way stop; TWSC = minor-approach stop; HAWK=pedestrian hybrid beacon (evaluated as a TWSC)
[2]Overall delay for TWSC intersections represents worst movement. For all other intersections, overall delay represents intersection average.
[3]Intersection analyzed using HCM 2000 methodology due to HCM2010 limitations.

On 6th St/Kitsap Way, study intersections satisfy the City of Bremerton LOS E standard and the WSDOT LOS D (HSS intersections) and LOS E/Mitigated (non-HSS intersections) standards except 6th St and High Ave. Both northbound and southbound controlled approaches are forecast to operate at LOS F with the northbound approach delay forecast at over 2 minutes and the southbound approach delay forecast at just under 2 minutes. Drivers seeking to cross 6th St during PM peak hour will likely reroute to signalized intersections due to the high delays.

On 11th St the study intersections satisfy the local standards except 11th St and Pacific Ave. The all-way stop controlled intersection of 11th St and Pacific Ave is forecast to operate at LOS F as a result of travel demand redistribution in the couplet scenario. The intersection will not meet volume-based Manual on Uniform Traffic Control Devices (MUTCD) signal warrants but could be evaluated for future roundabout control. The all-way stop controlled intersection of 6th St and Pacific Ave will similarly operate at LOS F due to traffic redistribution and could be considered for roundabout control.

The 11th St and Warren Ave intersection is forecast to improve from LOS F, under existing conditions, to LOS E with the couplet. The intersection will satisfy the WSDOT LOS E/Mitigated standard for SR 303.

Some drivers will seek to avoid out-of-direction travel required by the 0.25-mile couplet spacing. This will result in additional PM peak hour demand of up to 300 vph on 13th St. As the eastern limit of the couplet, Warren Ave will operate with an additional 450 vph in the northbound direction. The increased delay on northbound Warren Ave will in turn result in traffic diversion onto Pacific Ave and Park Ave to the east, which will cause increased delay and LOS degradation at nearby stop-controlled intersections.

This LOS evaluation did not consider the impacts of exclusive bicycle signal phasing which would be required in the presence of a contraflow cycle track. The exclusive bicycle phasing would result in slightly higher vehicle delays than are reported in this analysis.

Nearby intersections satisfy the local standards except Burwell St and Chester Ave. The Burwell St and Chester Ave intersection is forecast to continue to operate at LOS F in the 2040 No Action and Couplet scenarios.

Average 2040 PM vehicle queues with the 6th St/11th St Couplet for signalized intersections along the study corridors are summarized in **Table 27**.

Table 27. 2040 PM Peak Hour 6th St/11th St Couplet Queueing

ID	Intersection	Approach	Storage[1] (ft)	2040 No Action Queue[2] (ft)	2040 Couplet Queue[2] (ft)
6th St/Kitsap Way Corridor					
10	Kitsap Way & 11th Ave	EB	1,920	380	275
		WB	1,080	360	-
		SB	770	360	60
11	Kitsap Way & Wycoff Ave	EB	1,080	70	175
		WB	220	**230**	-
12	6th St & Callow Ave	EB	220	**270**	**320**
		WB	200	**550**	-
13	6th St & Montgomery Ave	EB	200	100	70
		WB	1,380	220	-
14	6th St & Naval Ave	EB	1,380	245	~420
		WB	1,880	~430	-
16	6th St & Veneta Ave	EB	1,880	80	150
		WB	1,270	155	-
17	6th St & Warren Ave	EB	1,270	355	635
		WB	600	425	-
18	6th St & Park Ave	EB	600	145	~295
		WB	750	145	130
11th St Corridor					
22	11th St & Warren Ave	EB	1,900	~650	-
		WB	580	~565	460
30	11th St & Callow Ave	EB	765	85	-
		WB	1,650	295	260
31	11th St & Naval Ave	EB	1,650	120	-
		WB	1,255	325	300
32	11th St & High Ave	EB	1,255	140	-
		WB	1,900	330	255
33	11th St & Park Ave	EB	580	80	25
		WB	730	180	635

[1]Distance to nearest signalized intersection, rounded to the nearest multiple of 5 feet.
[2]Average queue, rounded to the nearest multiple of 5 feet; "**Bold**" indicates average queue exceeds available storage
~ Volume exceeds capacity; average queue is based on estimated queue length after two signal cycles
*Queue metered by upstream coordinated signal

At 6th St and Callow Ave, the average eastbound queue on 6th St is forecast to exceed the available storage by 100 feet and would extend into the Wycoff Ave intersection.

At 6th St and Naval Ave, eastbound peak hour demand will exceed the available capacity; therefore, actual average queues may be longer than the reported queues. The potential for queues extending from Naval Ave to Montgomery Ave is not anticipated to be significant, and the available westbound storage is 70% greater than the average westbound queue.

At 6th St and Park Ave, eastbound peak hour demand will exceed the available capacity; therefore, actual average queues may be longer than the reported queues. Average queues may extend from Park Ave to Warren Ave. The available eastbound storage is about 50% greater than the average westbound queue and the 95th-percentile queue exceeds the storage capacity.

Access

The 6th St and 11th St corridors are located 0.25 miles apart, the maximum FHWA-recommended spacing for one-way couplets. The corridor spacing will require out-of-direction travel to access local homes and businesses, resulting in an overall increase of approximately 95 vehicle-miles traveled per weekday PM peak hour. Corridor spacing may also result in confusion to non-local drivers who are not familiar with the configuration. Advisory signage would be an important component of the conversion project.

Nonmotorized Facilities

Table 28 summarizes the pedestrian and bicycle LOS with the 6th St/11th St Couplet.

Table 28. 2040 PM Peak Hour 6th St/11th St Couplet Nonmotorized LOS

Segment	Limits	Pedestrian LOS				Bicycle LOS			
		No Action		w/ Road Diet		No Action		w/ Road Diet	
		EB	WB	EB	WB	EB	WB	EB	WB
Kitsap Way	11th St to Callow Ave	C	E	E	E	C-F	C-F	B-C	B-C
6th St	Callow Ave to Naval Ave	E	E	E	E	C-F	C-F	B-C	B-C
	Naval Ave to Warren Ave	E	E	E	E	C-F	C-F	B-C	B-C
	Warren Ave to Park Ave	C	E	C	E	C-F	C-F	C-F	C-F
	Park Ave to Pacific Ave	B-C	B-C	B-C	B-C	C	C	C	C
11th St	Kitsap Way to Naval Ave	E	E	E	E	C	C-F	B	B-C
	Naval Ave to Warren Ave	E	E	E	E	C-F	C-F	B-C	B-C
	Warren Ave to Park Ave	B-C	E	B-C	E	C-F	C-F	C-F	C-F
	Park Ave to Pacific Ave	C	E	B-C	C	C-F	C-F	C	C

The couplet will include widened sidewalks and a cycle track buffer on one side of the street. However, based on the modified HCM2010 methodology, the high-volume three-lane one-way sections on 6th St and 11th St will result in no improvement to pedestrian LOS.

Bicycle LOS on 6th St/Kitsap Way from 11th St to Warren Ave will improve from LOS C-F to LOS B-C with the addition of a two-way cycle track and buffer. On 11th St from Naval Ave to Warren Ave, bicycle LOS will improve from LOS C-F to LOS B-C.

Signalized intersections along the study corridors will require bicycle phasing to provide safe crossing for contraflow bicycle movement. Unsignalized access points will require design elements which alert drivers to two-way cycle traffic.

Transit Service

Buses will stop in the outside lane of traffic, similar to the No Action condition. Vehicles are likely to overtake stopped buses, creating potential for rear-end and sideswipe collisions. By encouraging through traffic and higher travel speeds, the couplet may increase the severity of the resulting crashes.

The road diet may increase transit ridership by providing safer and more comfortable nonmotorized access to transit stops, as indicated in the nonmotorized LOS analysis.

On-Street Parking

The couplet would begin to the west of Warren Ave and will not impact on-street parking on 6th St or 11th St.

FINDINGS

Findings are summarized below for each of the baseline and contextual needs identified for this analysis. A short summary of findings is provided in **Table 29.**

Safety

The existing study corridors operate with crash rates which are approximately 2.5 times the the Kitsap County average. The No Action scenario provides no safety benefits as travel demand continues to increase through the study area.

Road diets on 6th St and 11th St will provide safety benefits by reducing the number of conflict points for vehicle traffic. This is anticipated to reduce the rate of rear-end, entering, and turning crashes which comprise the majority of all crashes on the study corridors. Road diets also provide pedestrian and bicycle safety benefits by reducing nonmotorized users' exposure to vehicle traffic. The Highway Safety Manual estimates a 29 percent reduction in total crashes after converting an urban arterial from a four-lane undivided section to a three-lane section.

The 11th St road diet will result in approximately 150 vehicles diverting to 13th St adjacent to major nonmotorized trip generators Olympic College and Bremerton High School during the weekday PM peak hour. Traffic calming measures may be evaluated to mitigate the potential safety hazards of increased demand along 13th St. The 6th St road diet will not result in significant demand redistribution to 13th St.

Implementation of the 6th St/11th St couplet will improve safety by reducing the number of conflict points for vehicle traffic. The elimination of one direction of traffic simplifies crossing decisions for drivers and pedestrians and is likely to improve pedestrian and vehicle safety. However, to accommodate bicycle demand, the couplets will require a two-way cycle track which can pose safety hazards to contraflow bicycle demand. Design consideration will be required to increase driver awareness of two-way bicycle flow at both signalized and unsignalized access points along the corridors.

Operations

Intersection Level of Service

Under 2019 existing and 2040 No Action conditions, the LOS at study intersections on the 6th St/Kitsap Way and 11th St corridors and at key intersections near the corridors satisfy the local LOS standards, with the exception of 11th St at Warren Ave and Burwell St at Chester Ave. The 11th St and Warren Ave intersection is operates at LOS F in the 2019 and 2040 No Action scenarios. The Burwell St and Chester Ave intersection currently operates at LOS E and will degrade to LOS F in the 2040 No Action scenario.

Under 2040 conditions with the 6th St road diet alternative, study intersections on the 6th St/Kitsap Way and 11th St corridors and at key intersection near the corridors satisfy LOS standards, with the exception of 11th St at Warren Ave and Burwell St at Chester Ave. Both intersections will operate at LOS F with the road diet and would require additional mitigation measures to satisfy minimum LOS standards.

Under 2040 conditions with the 11th St road diet alternative, the LOS at study intersections on the 6th St/Kitsap Way and 11th St corridors and at key intersections near the corridors satisfy the local LOS standards, with the exception of 6th St at High Ave, 11th St at Warren Ave, and Burwell St at Chester Ave. These intersections are forecast to operate at LOS F with the road diet and would require additional mitigation measures to satisfy minimum LOS standards.

Under 2040 conditions with 6th/11th St couplet alternative, the LOS at study intersections on the 6th St/Kitsap Way and 11th St corridors and at key intersection near the corridors satisfy the local LOS standards, with the exception of 6th St at High Ave, 11th St at Pacific Ave, and Burwell St at Chester Ave. These intersections are forecast to operate at LOS F with the couplet alternative and would require additional mitigation measures to satisfy minimum LOS standards.

Vehicle Queues

In the 2019 PM peak hour, signalized queue stacking (spillback) occurs on westbound 6th Street from Callow Ave through Montgomery Ave.

In the 2040 No Action scenario, at Kitsap Way/6th St and Wycoff Ave, average westbound queue is anticipated to extend into Callow Ave. At 6th St and Callow Ave, average westbound queue will extend into Montgomery Ave and eastbound queue will extend into Wycoff Ave. At 11th St and Warren Ave, the eastbound queue is likely to impact the nearby Park Ave signalized intersection.

In the 2040 6th St Road Diet scenario, at Kitsap Way/6th St and Wycoff Ave, average westbound queue will extend through Callow Ave and into Montgomery Ave. At 6th St and Montgomery Ave, the eastbound queue is forecast to extend into Callow Ave. At 6th St and Warren Ave, the eastbound queue is forecast to extend into Park Ave. At 11th St and Warren Ave, the eastbound queue is forecast to extend into Park Ave.

In the 2040 11th St Road Diet scenario, at Kitsap Way/6th St and Wycoff Ave, average westbound queue will extend into Callow Ave. At 6th St and Callow Ave, the eastbound and westbound queues extend into the adjacent signalized intersections at Wycoff Ave and Montgomery Ave. At 6th St and Montgomery Ave, the eastbound queue is forecast to extend into Callow Ave. At 11th St and Warren Ave, the eastbound queue is forecast to extend into Park Ave.

In the 2040 6th/11th St Couplet scenario, at 6th St and Callow Ave, the eastbound queue extends into Wycoff Ave. At 6th St and Park Ave, the westbound queue may extend into Warren Ave.

Access

In the No Action scenario, ingress and egress at unsignalized access points (including driveways and local streets) along the corridors will become more difficult with increasing travel demand.

Road diets will improve property and neighborhood access by reducing the number of crossing conflict points and by allowing two-stage left-turn movements with a center turn lane.

The 6th St and 11th St corridors are located at the upper limit of recommended spacing for one-way couplets. A couplet will therefore result in out-of-direction flow, increased VMT, and possible confusion for non-local drivers.

Nonmotorized Facilities

The No Action scenario will include pedestrian LOS E through the majority of the study area. Bicycle LOS will range from LOS C to LOS F based on cyclist perception and confidence. Road diets will provide ADA-compliant sidewalks and bike lanes on both sides, improving multimodal LOS to LOS B for both pedestrians and bicyclists. The 6th St/11th St couplet will provide a two-way cycle track with buffer,

improving bicycle LOS from LOS E to LOS B-C. Pedestrian LOS will remain LOS E due to the high vehicle volumes and presence of three through lanes along each corridor.

Transit Service

Road diets will improve safety at transit stops along both corridors, reducing the likelihood of unsafe overtaking maneuvers which can occur on four-lane undivided sections.

On-Street Parking

Bike lanes on 11th St will require the removal of nine on-street parking spaces between Warren Ave and Park Ave. On-street parking between Park Ave and Pacific Ave may be retained without bike lanes or removed and replaced with bike lanes.

The 6th St road diet and couplet alternatives will not impact on-street parking supply.

Table 29. Alternatives Comparison

Category & Location		2040 No Action	2040 6th St Road Diet	2040 11th St Road Diet	2040 6th St/11th St Couplet
Baseline-Safety	Areawide	Crash rates >2.5x Kitsap County average	Improves safety for all modes; anticipated 29% crash reduction	Improves safety for all modes; 29% crash reduction; traffic calming may be required on 13th St	Improved safety for all modes; design must address cycle track safety
Baseline - Operations	6th St and Warren Ave	LOS E	LOS E	LOS E	LOS D
	6th St and High Ave	LOS E	LOS C	LOS F	LOS F
	11th St and Warren Ave	LOS F; WB queues may impact Park Ave	LOS F; WB queues stack to Park Ave	LOS F; may require 2ln WB; WB queues stack to Park Ave	LOS E; WB queues may impact Park Ave
	Burwell St and Warren Ave	LOS D	LOS D	LOS D	LOS F
	Burwell St and Naval Ave	LOS D	LOS E	LOS D	LOS D
	Burwell St and Chester Ave	LOS F	LOS F	LOS F	LOS F
	Kitsap Way and Wycoff Ave queuing	WB queues stack to Callow Ave	WB queues stack past Callow Ave to Montgomery Ave	WB queues stack to Callow Ave	No significant queuing
	6th St and Callow Ave queuing	EB and WB queues stack to Wycoff and Montgomery	EB and WB queues metered by queues at Wycoff and Montgomery	EB and WB queues stack to Wycoff Ave and Montgomery Ave	EB queues stack to Wycoff Ave
	6th St and Montgomery Ave queuing	No significant queuing	EB queues stack to Callow Ave	No significant queuing	No significant queuing
	Other Locations	6th & High: LOS F 11th & Veneta: LOS C	6th & High: LOS D; Allows two-stage left-turns; Increased delay on signalized minor street approaches	11th & Veneta: LOS C; Allows two-stage left-turns; Increased delay on minor signalized approaches	Diversion will cause LOS degradation in surrounding area; Signals require bike phasing
Contextual Needs	Access	Property access increasingly difficult during PM peak hour	Two-way left-turn lane improves property ingress & egress	Two-way left-turn lane improves property ingress & egress	Out-of-direction flow results in increased VMT; confusion for non-local drivers
	Non-motorized	Ped LOS E Bike LOS C-F	Ped LOS B Bike LOS B	Ped LOS B Bike LOS B; Steep grade will discourage bike/ped travel	Ped LOS E Bike LOS B-C

RECOMMENDATIONS

Safety

The 6th St and 11th St corridors currently experience crash rates which are 2.5 times the Kitsap County average. Crash rates on both corridors exceed the threshold at which safety improvements should be considered. This is not uncommon for four-lane roadways serving high through volumes and local access (side streets and driveways). The crash trends indicate a need for near-term safety improvements.

There are two primary tactics for resolving high crash rates on four-lane roadways: (1) remove turning traffic from the through lanes to reduce rear-end and weaving crashes, or (2) eliminate turning traffic through access management including median barriers and other turn restrictions. A road diet is typically the preferred tactic for minor and collector arterials, while access management is typically the preferred tactic for principal arterials. Following this logic, 6th Street is a logical candidate for a road diet and 11th Street would typically have access management (turn restrictions) applied to improve safety. While access management would improve vehicle safety, it would not allow for improvements to nonmotorized safety or mobility. The Couplet option reduces total vehicle conflicts which improves safety; however, it may increase speeds in the corridor increasing other accident types or severity.

A road diet on 11th St will result in an additional 150 vehicles on 13th St during the weekday PM peak hour. Traffic calming measures should be considered to improve safety by reducing vehicle speeds near Bremerton High School and Olympic College along 13th St. Diverted demand could be further mitigated by a future widening of Burwell St to provide a five-lane section to reduce diversions.

> *Given the high crash rates on the four-lane undivided 6th St and 11th St corridors, road diets are recommended for both corridors.*

Operations

Both 6th St and 11th St will approach their ultimate capacity in future years, given long-range local and regional population and employment forecasts. The inefficiency of the four-lane sections will become more significant as volumes increase, with side street and driveway LOS degrading significantly. The intersections of 6th St & Warren Ave and 11th St & Warren Ave are critical and will highly influence the operation of any of the future alternatives. Improvement opportunities are limited at both intersections. While signalized intersection operations may operate slightly worse with the road diet options, the operation of side streets and driveways between intersections will improve. Nonmotorized operations will significantly improve with the road diet options. Vehicle operations will improve with the couplet option, but nonmotorized operations are similar to the No Action alternative.

Burwell St (SR 304) should be considered for future widening to include a five-lane section. This would provide additional capacity to support local and regional travel demand growth, providing a preferred corridor for through travel and reducing the likelihood of cut-through demand on local streets. This emphasis on through movement would be consistent with Burwell St's principal arterial functional classification and HSS designation.

The existing four-lane sections are highly inefficient and provide poor operations to cross-street traffic. Road diets provide a balance of motorized and nonmotorized operations for local and regional demand, achieve a mix of accessibility and mobility, and are recommended for the 6th St and 11th St corridors. 6th St should be prioritized as the top candidate for a road diet in the near-term.

Access (to Adjacent Properties)

Access to adjacent properties is a key function of each corridor. The road diets improve access to adjacent properties for all modes. The couplet option decreases access and requires significant out of direction travel compared to the road diet options.

Road diets are recommended for both 6th St and 11th St given the high level of demand for local access in each corridor combined with the inefficiency associated with the four-lane section and lack of nonmotorized facilities.

Multimodal Facilities (Nonmotorized Mobility)

Pedestrian LOS is poor for the No Action scenario, marginally improved for the couplet and significantly improved for the road diet options. The location and topography of 6th St provides the most opportunity for nonmotorized travel, with less grade change and lower vehicle volume than Burwell St or 11th St.

Although less favorable as a nonmotorized corridor, 11th St should also be considered for a road diet to improve nonmotorized safety and reduce the corridor's high crash rate.

6th St is a high priority candidate for a road diet, given the opportunity and stated policy goals for nonmotorized travel on the corridor. 11th St is less favorable for nonmotorized travel but should also be considered for a road diet to improve nonmotorized safety.

Implementation

The high crash rates, high demand for property access, and lack of nonmotorized facilities indicate that road diets on both corridors would provide safety and mobility benefits for all users:

- 6th Street carries lower vehicle demand and includes topography more suited to nonmotorized demand; it should therefore be considered the highest priority near-term road diet candidate.
- 11th Street includes high crash rates and a highly inefficient four-lane undivided section and should also be considered for a road diet.

Long-term (2040) traffic forecasts suggest that the east-west capacity of the corridors will be exceeded in the future. From a systematic functional classification perspective, Burwell St (SR 304), a principal arterial and WSDOT HSS, should be widened to five lanes to accommodate long term demand.

Recommendation

Road diets are recommended for both 6th St and 11th St corridors in the near-term, with 6th St representing the highest-priority road diet corridor.

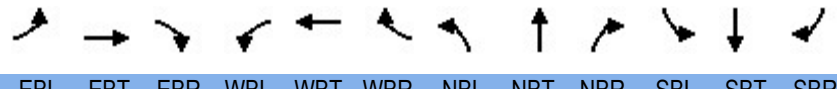
If it is determined that Burwell St (SR 304) will function as the primary east-west through corridor through the study area, it is recommended that Burwell St be widened to a five-lane section to support long-range east-west travel demand growth through the Bremerton core.

Appendix A. 2019 Level of Service Reports

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	476	20	166	1066	18	10	20	73	7	11	19
Future Volume (veh/h)	33	476	20	166	1066	18	10	20	73	7	11	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		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	1782	1782	1782	1800	1800	1800	1800	1765	1800	1800	1800	1800
Adj Flow Rate, veh/h	35	512	22	178	1146	19	11	22	78	8	12	20
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	0	0	0
Cap, veh/h	485	2563	1119	776	2658	44	41	35	101	51	62	77
Arrive On Green	0.03	0.76	0.76	0.10	1.00	1.00	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1697	3386	1479	1714	3441	57	83	377	1086	163	665	828
Grp Volume(v), veh/h	35	512	22	178	569	596	111	0	0	40	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1479	1714	1710	1788	1545	0	0	1656	0	0
Q Serve(g_s), s	0.5	5.2	0.4	2.9	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	5.2	0.4	2.9	0.0	0.0	8.4	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.10		0.70	0.20		0.50
Lane Grp Cap(c), veh/h	485	2563	1119	776	1321	1381	177	0	0	190	0	0
V/C Ratio(X)	0.07	0.20	0.02	0.23	0.43	0.43	0.63	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	554	2563	1119	1062	1321	1381	467	0	0	484	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.75	0.75	0.75	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.7	4.2	3.6	2.5	0.0	0.0	53.1	0.0	0.0	50.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.1	0.8	0.7	3.6	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	0.2	1.3	0.3	0.3	3.8	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	2.7	4.4	3.6	2.6	0.8	0.7	56.7	0.0	0.0	51.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E			D		
Approach Vol, veh/h		569			1343			111			40	
Approach Delay, s/veh		4.2			1.0			56.7			51.1	
Approach LOS		A			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		15.2	10.0	94.8		15.2	8.1	96.7
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0	26.0	48.0		34.0	9.0	65.0
Max Q Clear Time (g_c+I1), s		10.4	4.9	7.2		4.7	2.5	2.0
Green Ext Time (p_c), s		0.9	0.5	17.6		1.0	0.0	20.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	434	90	132	1071	81	133	185	30	38	132	44
Future Volume (veh/h)	35	434	90	132	1071	81	133	185	30	38	132	44
Number	7	4	14	3	8	18	5	2	12	1	6	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	0.99		0.97	0.99		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	1782	1782	1800	1782	1782	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	37	462	96	140	1139	86	141	197	32	40	140	47
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	408	1750	361	619	2049	155	178	243	39	146	198	66
Arrive On Green	0.04	0.63	0.63	0.10	1.00	1.00	0.03	0.16	0.16	0.03	0.15	0.15
Sat Flow, veh/h	1697	2783	574	1697	3185	240	1714	1503	244	1714	1277	429
Grp Volume(v), veh/h	37	280	278	140	605	620	141	0	229	40	0	187
Grp Sat Flow(s),veh/h/ln	1697	1693	1664	1697	1693	1733	1714	0	1747	1714	0	1706
Q Serve(g_s), s	0.9	8.8	8.9	3.6	0.0	0.0	4.0	0.0	15.2	2.3	0.0	12.5
Cycle Q Clear(g_c), s	0.9	8.8	8.9	3.6	0.0	0.0	4.0	0.0	15.2	2.3	0.0	12.5
Prop In Lane	1.00		0.35	1.00		0.14	1.00		0.14	1.00		0.25
Lane Grp Cap(c), veh/h	408	1065	1046	619	1089	1114	178	0	282	146	0	264
V/C Ratio(X)	0.09	0.26	0.27	0.23	0.56	0.56	0.79	0.00	0.81	0.27	0.00	0.71
Avail Cap(c_a), veh/h	461	1065	1046	831	1089	1114	178	0	597	158	0	583
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.87	0.87	0.87	0.52	0.00	0.52	0.87	0.00	0.87
Uniform Delay (d), s/veh	6.9	9.9	9.9	6.8	0.0	0.0	50.3	0.0	48.6	42.1	0.0	48.1
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.1	1.8	1.8	11.1	0.0	2.3	0.3	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.3	4.3	1.7	0.5	0.5	4.5	0.0	7.5	1.1	0.0	6.0
LnGrp Delay(d),s/veh	7.0	10.5	10.5	6.9	1.8	1.8	61.5	0.0	50.8	42.4	0.0	50.4
LnGrp LOS	A	B	B	A	A	A	E		D	D		D
Approach Vol, veh/h		595			1365			370			227	
Approach Delay, s/veh		10.3			2.3			54.9			49.0	
Approach LOS		B			A			D			D	

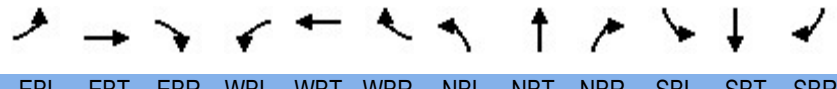
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	23.4	9.9	79.5	8.0	22.6	8.3	81.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.6	41.0	21.0	38.0	4.0	41.0	8.0	51.0
Max Q Clear Time (g_c+I1), s	4.3	17.2	5.6	10.9	6.0	14.5	2.9	2.0
Green Ext Time (p_c), s	0.0	2.2	0.2	12.8	0.0	2.2	0.0	15.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	484	27	43	1116	28	90	14	32	6	3	6
Future Volume (veh/h)	10	484	27	43	1116	28	90	14	32	6	3	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	0.98		0.97	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1800	1800	1800	1800	1748	1800	1800	1800	1800
Adj Flow Rate, veh/h	11	509	28	45	1175	29	95	15	34	6	3	6
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	3	3	3	0	0	0
Cap, veh/h	383	2407	132	774	2597	64	161	23	41	102	55	77
Arrive On Green	0.03	1.00	1.00	0.04	0.76	0.76	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1697	3262	179	1714	3410	84	904	186	337	489	443	622
Grp Volume(v), veh/h	11	264	273	45	589	615	144	0	0	15	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1748	1714	1710	1784	1427	0	0	1554	0	0
Q Serve(g_s), s	0.2	0.0	0.0	0.7	15.0	15.1	10.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.7	15.0	15.1	11.8	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.05	0.66		0.24	0.40		0.40
Lane Grp Cap(c), veh/h	383	1250	1290	774	1302	1358	225	0	0	233	0	0
V/C Ratio(X)	0.03	0.21	0.21	0.06	0.45	0.45	0.64	0.00	0.00	0.06	0.00	0.00
Avail Cap(c_a), veh/h	484	1250	1290	836	1302	1358	440	0	0	460	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.62	0.62	0.62	0.81	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.2	0.0	0.0	2.9	5.2	5.2	51.2	0.0	0.0	46.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.0	0.7	0.7	1.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.3	7.3	7.6	4.8	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	4.3	0.4	0.4	2.9	5.9	5.9	53.0	0.0	0.0	46.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D			D		
Approach Vol, veh/h		548			1249			144			15	
Approach Delay, s/veh		0.4			5.8			53.0			46.6	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		18.8	8.7	92.6		18.8	5.8	95.4
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		33.0	9.0	66.0		33.0	9.0	66.0
Max Q Clear Time (g_c+I1), s		13.8	2.7	2.0		3.0	2.2	17.1
Green Ext Time (p_c), s		0.7	0.0	15.5		0.8	0.0	14.8

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	356	102	155	915	28	269	410	160	27	99	32
Future Volume (veh/h)	55	356	102	155	915	28	269	410	160	27	99	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.94		0.96	0.98		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	61	396	113	172	1017	31	299	456	178	30	110	36
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	264	997	281	482	1424	43	483	646	250	143	194	60
Arrive On Green	0.05	0.38	0.38	0.09	0.42	0.42	0.22	0.27	0.27	0.03	0.08	0.08
Sat Flow, veh/h	1697	2602	734	1697	3354	102	1714	2384	921	1697	2491	766
Grp Volume(v), veh/h	61	256	253	172	513	535	299	326	308	30	73	73
Grp Sat Flow(s),veh/h/ln	1697	1693	1643	1697	1693	1763	1714	1710	1595	1697	1693	1564
Q Serve(g_s), s	1.7	8.7	8.9	4.6	19.8	19.8	7.4	13.6	13.8	0.0	3.3	3.6
Cycle Q Clear(g_c), s	1.7	8.7	8.9	4.6	19.8	19.8	7.4	13.6	13.8	0.0	3.3	3.6
Prop In Lane	1.00		0.45	1.00		0.06	1.00		0.58	1.00		0.49
Lane Grp Cap(c), veh/h	264	649	630	482	719	748	483	463	432	143	132	122
V/C Ratio(X)	0.23	0.39	0.40	0.36	0.71	0.71	0.62	0.70	0.71	0.21	0.55	0.60
Avail Cap(c_a), veh/h	517	759	737	772	866	902	652	551	514	423	332	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	15.3	17.7	17.8	12.6	18.8	18.8	25.5	26.0	26.1	37.2	35.1	35.3
Incr Delay (d2), s/veh	0.5	0.5	0.5	0.5	2.4	2.3	1.6	3.6	4.1	0.9	4.2	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.1	4.1	2.2	9.8	10.1	5.9	6.9	6.6	0.7	1.7	1.7
LnGrp Delay(d),s/veh	15.8	18.2	18.3	13.1	21.3	21.2	27.1	29.5	30.2	38.1	39.4	40.9
LnGrp LOS	B	B	B	B	C	C	C	C	C	D	D	D
Approach Vol, veh/h		570			1220			933			176	
Approach Delay, s/veh		18.0			20.1			29.0			39.8	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	25.9	11.5	34.8	22.2	10.7	8.2	38.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	15.5	25.5	20.5	35.5	25.5	15.5	15.5	40.5
Max Q Clear Time (g_c+I1), s	2.0	15.8	6.6	10.9	9.4	5.6	3.7	21.8
Green Ext Time (p_c), s	1.1	3.4	0.5	14.1	1.2	0.6	0.1	11.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	512	6	2	1084	20	0	2	8	6	2	26
Future Vol, veh/h	14	512	6	2	1084	20	0	2	8	6	2	26
Conflicting Peds, #/hr	31	0	11	11	0	31	1	0	12	12	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	15	557	7	2	1178	22	0	2	9	7	2	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1231	0	0	575	0	0	1197	1837	305	1546	1829	632
Stage 1	-	-	-	-	-	-	602	602	-	1224	1224	-
Stage 2	-	-	-	-	-	-	595	1235	-	322	605	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	567	-	-	1001	-	-	144	77	697	79	77	428
Stage 1	-	-	-	-	-	-	458	492	-	193	254	-
Stage 2	-	-	-	-	-	-	463	251	-	670	491	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	554	-	-	993	-	-	126	71	685	71	71	418
Mov Cap-2 Maneuver	-	-	-	-	-	-	126	71	-	71	71	-
Stage 1	-	-	-	-	-	-	436	469	-	181	246	-
Stage 2	-	-	-	-	-	-	425	243	-	627	468	-

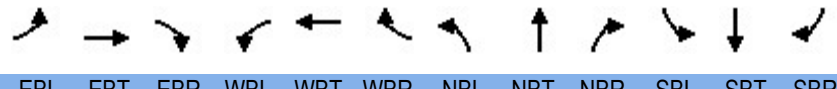
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	20	27.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	251	554	-	-	993	-	-	194
HCM Lane V/C Ratio	0.043	0.027	-	-	0.002	-	-	0.19
HCM Control Delay (s)	20	11.7	0.2	-	8.6	0	-	27.9
HCM Lane LOS	C	B	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	476	27	5	999	10	49	28	42	7	8	30
Future Volume (veh/h)	13	476	27	5	999	10	49	28	42	7	8	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.95		0.93	0.96		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	1800	1782	1800	1800	1782	1800	1800	1800	1800	1800	1765	1800
Adj Flow Rate, veh/h	14	529	30	6	1110	11	54	31	47	8	9	33
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	2	2	2
Cap, veh/h	74	2073	116	53	2255	22	167	97	107	81	80	199
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	32	3086	173	4	3356	33	477	480	529	111	394	980
Grp Volume(v), veh/h	297	0	276	591	0	536	132	0	0	50	0	0
Grp Sat Flow(s),veh/h/ln	1702	0	1589	1778	0	1615	1485	0	0	1485	0	0
Q Serve(g_s), s	0.0	0.0	4.9	0.0	0.0	11.7	2.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	0.0	4.9	11.7	0.0	11.7	5.3	0.0	0.0	1.9	0.0	0.0
Prop In Lane	0.05		0.11	0.01		0.02	0.41		0.36	0.16		0.66
Lane Grp Cap(c), veh/h	1196	0	1067	1245	0	1085	372	0	0	359	0	0
V/C Ratio(X)	0.25	0.00	0.26	0.47	0.00	0.49	0.36	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	1360	0	1231	1426	0	1251	493	0	0	480	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.6	0.0	4.7	5.8	0.0	5.8	24.8	0.0	0.0	23.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.5	1.0	0.0	1.3	2.1	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.3	5.9	0.0	5.4	2.5	0.0	0.0	0.9	0.0	0.0
LnGrp Delay(d),s/veh	5.0	0.0	5.1	6.8	0.0	7.0	26.9	0.0	0.0	24.2	0.0	0.0
LnGrp LOS	A		A	A		A	C			C		
Approach Vol, veh/h		573			1127			132			50	
Approach Delay, s/veh		5.1			6.9			26.9			24.2	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		52.6		19.0		52.6		19.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		55.5		20.5		55.5		20.5
Max Q Clear Time (g_c+I1), s		6.9		3.9		13.7		7.3
Green Ext Time (p_c), s		39.0		2.1		34.4		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	8.2
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	262	25	68	559	69	257	479	19	61	354	132
Future Volume (veh/h)	311	262	25	68	559	69	257	479	19	61	354	132
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.96	0.99		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1782	1782	1800	1765	1765	1800
Adj Flow Rate, veh/h	210	440	26	72	588	73	271	504	20	64	373	139
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	278	545	32	302	550	68	588	1711	68	435	1090	399
Arrive On Green	0.16	0.16	0.16	0.18	0.18	0.18	0.03	0.17	0.17	0.07	0.91	0.91
Sat Flow, veh/h	1697	3325	196	1697	3097	383	1697	3317	131	1681	2384	874
Grp Volume(v), veh/h	210	235	231	72	338	323	271	257	267	64	260	252
Grp Sat Flow(s),veh/h/ln	1697	1782	1738	1697	1782	1698	1697	1693	1755	1681	1676	1581
Q Serve(g_s), s	19.6	21.1	21.3	6.0	29.5	29.5	13.1	22.0	22.1	3.4	3.2	3.3
Cycle Q Clear(g_c), s	19.6	21.1	21.3	6.0	29.5	29.5	13.1	22.0	22.1	3.4	3.2	3.3
Prop In Lane	1.00		0.11	1.00		0.23	1.00		0.07	1.00		0.55
Lane Grp Cap(c), veh/h	278	292	285	302	317	302	588	873	905	435	766	723
V/C Ratio(X)	0.76	0.81	0.81	0.24	1.07	1.07	0.46	0.29	0.30	0.15	0.34	0.35
Avail Cap(c_a), veh/h	404	424	414	302	317	302	620	873	905	564	766	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.98	0.98	0.66	0.66	0.66	1.00	1.00	1.00	0.43	0.43	0.43
Uniform Delay (d), s/veh	66.2	66.9	66.9	58.6	68.3	68.3	20.2	42.5	42.5	22.0	4.0	4.0
Incr Delay (d2), s/veh	5.4	7.8	8.4	0.3	59.9	62.6	0.7	0.9	0.8	0.1	0.5	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	9.6	11.0	10.9	2.9	19.8	19.1	6.3	10.5	11.0	1.5	1.4	1.5
LnGrp Delay(d),s/veh	71.6	74.7	75.3	58.9	128.2	130.8	20.9	43.3	43.3	22.1	4.5	4.6
LnGrp LOS	E	E	E	E	F	F	C	D	D	C	A	A
Approach Vol, veh/h		676			733			795			576	
Approach Delay, s/veh		73.9			122.5			35.7			6.5	
Approach LOS		E			F			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	90.1		31.7	19.9	80.4		34.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	18.5	60.5		39.5	18.5	60.5		29.5
Max Q Clear Time (g_c+I1), s	5.4	24.1		23.3	15.1	5.3		31.5
Green Ext Time (p_c), s	0.1	9.4		3.9	0.3	10.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.8
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	201	105	3	333	33	256	177	18	20	50	82
Future Volume (veh/h)	31	201	105	3	333	33	256	177	18	20	50	82
Number	7	4	14	3	8	18	5	2	12	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		0.95	0.97		0.93	0.95		0.87	0.97		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1782	1800	1782	1800	1800	1782	1800	1800	1782	1800
Adj Flow Rate, veh/h	36	231	121	3	383	38	294	203	21	23	57	94
Adj No. of Lanes	0	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	119	606	552	67	608	60	454	264	26	127	272	382
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	115	1575	1434	3	1580	156	777	585	58	116	603	845
Grp Volume(v), veh/h	267	0	121	424	0	0	518	0	0	174	0	0
Grp Sat Flow(s),veh/h/ln	1690	0	1434	1738	0	0	1420	0	0	1564	0	0
Q Serve(g_s), s	0.0	0.0	3.1	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.0	0.0	3.1	10.9	0.0	0.0	16.9	0.0	0.0	3.8	0.0	0.0
Prop In Lane	0.13		1.00	0.01		0.09	0.57		0.04	0.13		0.54
Lane Grp Cap(c), veh/h	725	0	552	735	0	0	744	0	0	781	0	0
V/C Ratio(X)	0.37	0.00	0.22	0.58	0.00	0.00	0.70	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	994	0	794	1027	0	0	883	0	0	930	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.3	0.0	11.4	13.8	0.0	0.0	12.6	0.0	0.0	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.4	1.5	0.0	0.0	3.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.3	5.5	0.0	0.0	7.2	0.0	0.0	1.7	0.0	0.0
LnGrp Delay(d),s/veh	12.9	0.0	11.8	15.3	0.0	0.0	15.6	0.0	0.0	9.6	0.0	0.0
LnGrp LOS	B		B	B			B			A		
Approach Vol, veh/h		388			424			518			174	
Approach Delay, s/veh		12.6			15.3			15.6			9.6	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		29.4		25.7		29.4		25.7
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		30.5		30.5		30.5		30.5
Max Q Clear Time (g_c+I1), s		18.9		8.0		5.8		12.9
Green Ext Time (p_c), s		6.0		9.5		9.7		8.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	17.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	140	67	15	192	52	92	156	88	19	47	15
Future Vol, veh/h	47	140	67	15	192	52	92	156	88	19	47	15
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	1	1	1
Mvmt Flow	62	184	88	20	253	68	121	205	116	25	62	20
Number of Lanes	1	1	0	1	1	0	0	1	1	0	1	0

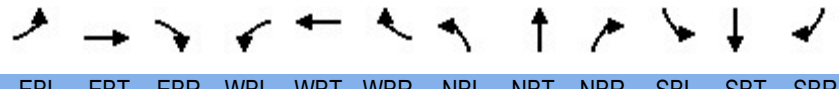
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	15.8	19.6	19	13.1
HCM LOS	C	C	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	37%	0%	100%	0%	100%	0%	23%
Vol Thru, %	63%	0%	0%	68%	0%	79%	58%
Vol Right, %	0%	100%	0%	32%	0%	21%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	248	88	47	207	15	244	81
LT Vol	92	0	47	0	15	0	19
Through Vol	156	0	0	140	0	192	47
RT Vol	0	88	0	67	0	52	15
Lane Flow Rate	326	116	62	272	20	321	107
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.646	0.2	0.13	0.518	0.042	0.617	0.229
Departure Headway (Hd)	7.13	6.228	7.592	6.847	7.585	6.92	7.747
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	506	575	472	526	472	523	463
Service Time	4.875	3.972	5.339	4.593	5.33	4.664	5.81
HCM Lane V/C Ratio	0.644	0.202	0.131	0.517	0.042	0.614	0.231
HCM Control Delay	22	10.5	11.5	16.8	10.7	20.2	13.1
HCM Lane LOS	C	B	B	C	B	C	B
HCM 95th-tile Q	4.5	0.7	0.4	2.9	0.1	4.1	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	227	0	2	290	73	4	4	1	59	1	436
Future Volume (veh/h)	471	227	0	2	290	73	4	4	1	59	1	436
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.90	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	1800	1765	1800	1800	1748	1748	1800	1800	1800	1800	1782	1782
Adj Flow Rate, veh/h	535	258	0	2	330	83	5	5	1	67	1	495
Adj No. of Lanes	0	2	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	0	0	0	1	1	1
Cap, veh/h	882	880	0	2	372	294	11	11	2	212	3	977
Arrive On Green	0.88	0.88	0.00	0.21	0.21	0.21	0.01	0.01	0.01	0.13	0.13	0.13
Sat Flow, veh/h	1681	1765	0	11	1737	1375	779	779	156	1674	25	1443
Grp Volume(v), veh/h	535	258	0	332	0	83	11	0	0	68	0	495
Grp Sat Flow(s),veh/h/ln	1681	1676	0	1747	0	1375	1713	0	0	1699	0	1443
Q Serve(g_s), s	14.0	4.3	0.0	30.6	0.0	8.4	1.1	0.0	0.0	6.0	0.0	21.0
Cycle Q Clear(g_c), s	14.0	4.3	0.0	30.6	0.0	8.4	1.1	0.0	0.0	6.0	0.0	21.0
Prop In Lane	1.00		0.00	0.01		1.00	0.45		0.09	0.99		1.00
Lane Grp Cap(c), veh/h	882	880	0	374	0	294	25	0	0	215	0	977
V/C Ratio(X)	0.61	0.29	0.00	0.89	0.00	0.28	0.45	0.00	0.00	0.32	0.00	0.51
Avail Cap(c_a), veh/h	882	880	0	579	0	456	258	0	0	215	0	977
HCM Platoon Ratio	1.67	1.67	1.67	1.00	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	0.90	0.00	0.90	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.8	5.2	0.0	63.3	0.0	54.6	81.2	0.0	0.0	66.0	0.0	13.8
Incr Delay (d2), s/veh	1.8	0.4	0.0	23.5	0.0	2.2	17.0	0.0	0.0	2.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	1.9	0.0	17.2	0.0	3.4	0.6	0.0	0.0	3.0	0.0	23.0
LnGrp Delay(d),s/veh	7.6	5.5	0.0	86.8	0.0	56.7	98.1	0.0	0.0	68.3	0.0	14.9
LnGrp LOS	A	A		F		E	F			E		B
Approach Vol, veh/h		793			415			11			563	
Approach Delay, s/veh		6.9			80.8			98.1			21.3	
Approach LOS		A			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		7.4		92.1		26.0		40.5
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		25.0		45.0		21.0		55.0
Max Q Clear Time (g_c+I1), s		3.1		16.0		23.0		32.6
Green Ext Time (p_c), s		0.0		11.4		0.0		2.9

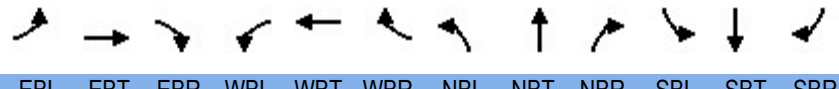
Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	871	273	26	0	488	193	59	785	16	68	521	612
Future Volume (veh/h)	871	273	26	0	488	193	59	785	16	68	521	612
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	0	1765	1800	1782	1782	1800	1765	1765	1765
Adj Flow Rate, veh/h	927	290	28	0	519	205	63	835	17	72	554	651
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	2	2	1	1	1	2	2	2
Cap, veh/h	959	890	86	0	542	213	277	828	17	202	705	745
Arrive On Green	0.29	0.56	0.56	0.00	0.23	0.23	0.04	0.08	0.08	0.03	0.07	0.07
Sat Flow, veh/h	3293	1600	154	0	2427	919	1697	3392	69	1681	3353	1468
Grp Volume(v), veh/h	927	0	318	0	371	353	63	417	435	72	554	651
Grp Sat Flow(s),veh/h/ln	1646	0	1754	0	1676	1581	1697	1693	1768	1681	1676	1468
Q Serve(g_s), s	46.1	0.0	16.3	0.0	36.3	36.6	0.0	40.5	40.5	2.6	27.0	22.4
Cycle Q Clear(g_c), s	46.1	0.0	16.3	0.0	36.3	36.6	0.0	40.5	40.5	2.6	27.0	22.4
Prop In Lane	1.00		0.09	0.00		0.58	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	959	0	976	0	389	367	277	413	431	202	705	745
V/C Ratio(X)	0.97	0.00	0.33	0.00	0.96	0.96	0.23	1.01	1.01	0.36	0.79	0.87
Avail Cap(c_a), veh/h	962	0	976	0	389	367	277	413	431	202	818	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	0.81	0.81	0.81	0.69	0.69	0.69
Uniform Delay (d), s/veh	58.0	0.0	20.0	0.0	62.9	63.0	68.5	76.3	76.3	73.3	73.6	47.7
Incr Delay (d2), s/veh	21.5	0.0	0.2	0.0	34.1	36.9	0.4	41.9	41.1	0.9	6.1	9.8
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	23.8	0.0	7.9	0.0	20.5	19.7	2.8	23.8	24.8	3.3	13.2	39.6
LnGrp Delay(d),s/veh	79.5	0.0	20.2	0.0	97.0	99.9	68.9	118.3	117.5	74.2	79.7	57.5
LnGrp LOS	E		C		F	F	E	F	F	E	E	E
Approach Vol, veh/h		1245			724			915			1277	
Approach Delay, s/veh		64.3			98.4			114.5			68.1	
Approach LOS		E			F			F			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	21.2	46.0		98.8	26.8	40.4	54.8	44.0
Change Period (Y+Rc), s	5.5	5.5		6.5	5.5	5.5	6.5	5.5
Max Green Setting (Gmax), s	15.5	40.5		87.5	15.5	40.5	48.5	38.5
Max Q Clear Time (g_c+I1), s	14.6	42.5		18.3	2.0	29.0	48.1	38.6
Green Ext Time (p_c), s	0.3	0.0		12.5	0.3	5.9	0.2	0.0

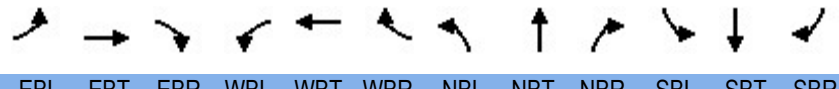
Intersection Summary	
HCM 2010 Ctrl Delay	82.4
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	21	25	1	18	14	0	1764	0	0	1191	175
Future Volume (veh/h)	195	21	25	1	18	14	0	1764	0	0	1191	175
Number	7	4	14	3	8	18	5	2	12	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		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1800	1800	1800	0	1782	1800	0	1765	1800
Adj Flow Rate, veh/h	217	23	28	1	20	16	0	1960	0	0	1323	194
Adj No. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	1	1	0	0	0	0	1	1	0	2	2
Cap, veh/h	275	25	30	24	191	147	0	2512	0	0	2178	317
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.00	0.74	0.00	0.00	1.00	1.00
Sat Flow, veh/h	1154	122	149	10	938	722	0	3564	0	0	3023	427
Grp Volume(v), veh/h	268	0	0	37	0	0	0	1960	0	0	751	766
Grp Sat Flow(s),veh/h/ln	1425	0	0	1671	0	0	0	1693	0	0	1676	1686
Q Serve(g_s), s	27.5	0.0	0.0	0.0	0.0	0.0	0.0	58.9	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	30.5	0.0	0.0	3.0	0.0	0.0	0.0	58.9	0.0	0.0	0.0	0.0
Prop In Lane	0.81		0.10	0.03		0.43	0.00		0.00	0.00		0.25
Lane Grp Cap(c), veh/h	330	0	0	363	0	0	0	2512	0	0	1244	1251
V/C Ratio(X)	0.81	0.00	0.00	0.10	0.00	0.00	0.00	0.78	0.00	0.00	0.60	0.61
Avail Cap(c_a), veh/h	386	0	0	429	0	0	0	2512	0	0	1244	1251
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh	64.5	0.0	0.0	53.8	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	11.4	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	1.8	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	3.1	0.0	0.0	1.4	0.0	0.0	0.0	27.3	0.0	0.0	0.6	0.6
LnGrp Delay(d),s/veh	75.9	0.0	0.0	54.0	0.0	0.0	0.0	13.4	0.0	0.0	1.8	1.8
LnGrp LOS	E			D				B			A	A
Approach Vol, veh/h		268			37			1960			1517	
Approach Delay, s/veh		75.9			54.0			13.4			1.8	
Approach LOS		E			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		127.7		38.3		127.7		38.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		116.5		40.5		116.5		40.5
Max Q Clear Time (g_c+I1), s		60.9		32.5		2.0		5.0
Green Ext Time (p_c), s		54.9		1.3		111.7		2.6

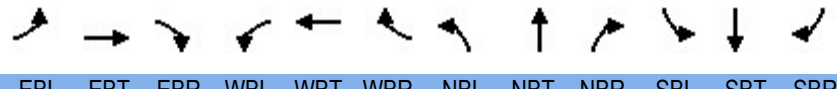
Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	706	43	154	1008	38	76	124	142	32	72	34
Future Volume (veh/h)	37	706	43	154	1008	38	76	124	142	32	72	34
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		0.99	1.00		0.97	1.00		0.95	0.96		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1765	1765	1800	1782	1782	1782	1748	1748	1800
Adj Flow Rate, veh/h	41	776	47	169	1108	42	84	136	156	35	79	37
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	3	3	3
Cap, veh/h	88	1533	91	416	2118	80	106	482	389	238	182	85
Arrive On Green	0.54	0.54	0.54	0.13	1.00	1.00	0.06	0.27	0.27	0.17	0.17	0.17
Sat Flow, veh/h	94	2860	170	1681	3290	125	1697	1782	1438	1027	1100	515
Grp Volume(v), veh/h	426	0	438	169	564	586	84	136	156	35	0	116
Grp Sat Flow(s),veh/h/ln	1535	0	1589	1681	1676	1738	1697	1782	1438	1027	0	1616
Q Serve(g_s), s	0.0	0.0	18.6	4.7	0.0	0.0	5.1	6.3	9.3	3.1	0.0	6.8
Cycle Q Clear(g_c), s	15.3	0.0	18.6	4.7	0.0	0.0	5.1	6.3	9.3	3.1	0.0	6.8
Prop In Lane	0.10		0.11	1.00		0.07	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	860	0	852	416	1079	1119	106	482	389	238	0	267
V/C Ratio(X)	0.49	0.00	0.51	0.41	0.52	0.52	0.79	0.28	0.40	0.15	0.00	0.43
Avail Cap(c_a), veh/h	860	0	852	491	1079	1119	154	603	486	289	0	346
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.74	0.74	0.74	0.77	0.77	0.77	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	15.6	10.3	0.0	0.0	48.6	30.2	31.3	37.9	0.0	39.4
Incr Delay (d2), s/veh	2.0	0.0	2.2	0.5	1.4	1.3	12.9	0.2	0.5	0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	8.7	2.1	0.4	0.4	2.8	3.1	3.7	0.9	0.0	3.1
LnGrp Delay(d),s/veh	16.9	0.0	17.8	10.8	1.4	1.3	61.4	30.5	31.9	38.1	0.0	40.5
LnGrp LOS	B		B	B	A	A	E	C	C	D		D
Approach Vol, veh/h		864			1319			376			151	
Approach Delay, s/veh		17.4			2.5			38.0			40.0	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		32.9		72.1	11.0	21.9	11.3	60.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s		35.5		59.5	9.5	22.5	11.5	43.5
Max Q Clear Time (g_c+I1), s		11.3		2.0	7.1	8.8	6.7	20.6
Green Ext Time (p_c), s		2.3		24.6	0.0	1.9	0.2	15.1

Intersection Summary		
HCM 2010 Ctrl Delay		14.3
HCM 2010 LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	820	23	57	1120	20	80	124	249	22	55	34
Future Volume (veh/h)	23	820	23	57	1120	20	80	124	249	22	55	34
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1782	1782	1782	1800	1765	1800
Adj Flow Rate, veh/h	25	901	25	63	1231	22	88	136	274	24	60	37
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	50	1955	54	82	2039	36	110	432	358	66	118	63
Arrive On Green	0.01	0.19	0.19	0.10	1.00	1.00	0.06	0.24	0.24	0.13	0.13	0.13
Sat Flow, veh/h	1697	3365	93	1697	3402	61	1697	1782	1477	182	873	465
Grp Volume(v), veh/h	25	453	473	63	613	640	88	136	274	121	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1765	1697	1693	1769	1697	1782	1477	1519	0	0
Q Serve(g_s), s	1.5	24.9	24.9	3.8	0.0	0.0	5.4	6.6	18.1	2.4	0.0	0.0
Cycle Q Clear(g_c), s	1.5	24.9	24.9	3.8	0.0	0.0	5.4	6.6	18.1	7.5	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.03	1.00		1.00	0.20		0.31
Lane Grp Cap(c), veh/h	50	983	1025	82	1015	1060	110	432	358	246	0	0
V/C Ratio(X)	0.50	0.46	0.46	0.77	0.60	0.60	0.80	0.31	0.76	0.49	0.00	0.00
Avail Cap(c_a), veh/h	186	983	1025	121	1015	1060	121	620	514	374	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.78	0.78	0.78	0.71	0.71	0.71	1.00	0.00	0.00
Uniform Delay (d), s/veh	51.2	27.9	27.9	46.9	0.0	0.0	48.4	32.6	37.0	42.4	0.0	0.0
Incr Delay (d2), s/veh	6.2	1.3	1.2	12.9	2.1	2.0	21.3	0.3	3.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	12.1	12.6	2.1	0.6	0.6	3.2	3.3	7.6	3.4	0.0	0.0
LnGrp Delay(d),s/veh	57.4	29.1	29.1	59.8	2.1	2.0	69.7	32.9	40.0	43.9	0.0	0.0
LnGrp LOS	E	C	C	E	A	A	E	C	D	D		
Approach Vol, veh/h		951			1316			498			121	
Approach Delay, s/veh		29.9			4.8			43.3			43.9	
Approach LOS		C			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.5	11.3	18.7	7.6	67.4		30.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	47.5	7.5	23.5	11.5	43.5		36.5
Max Q Clear Time (g_c+I1), s	5.8	26.9	7.4	9.5	3.5	2.0		20.1
Green Ext Time (p_c), s	0.0	14.7	0.0	2.3	0.0	23.1		2.4

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)	42	1118	14	17	1124	26	22	23	18	28	15	80
Future Volume (veh/h)	42	1118	14	17	1124	26	22	23	18	28	15	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	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	1782	1782	1800	1765	1765	1800	1800	1800	1800	1765	1765	1800
Adj Flow Rate, veh/h	46	1215	15	18	1222	28	24	25	20	30	16	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	2	2	2
Cap, veh/h	295	2069	26	372	1960	45	49	117	94	56	31	169
Arrive On Green	0.08	1.00	1.00	0.02	0.59	0.59	0.03	0.13	0.13	0.03	0.13	0.13
Sat Flow, veh/h	1697	3425	42	1681	3348	77	1714	905	724	1681	232	1259
Grp Volume(v), veh/h	46	600	630	18	612	638	24	0	45	30	0	103
Grp Sat Flow(s),veh/h/ln	1697	1693	1774	1681	1676	1749	1714	0	1628	1681	0	1491
Q Serve(g_s), s	1.1	0.0	0.0	0.4	25.0	25.0	1.4	0.0	2.6	1.8	0.0	6.7
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.4	25.0	25.0	1.4	0.0	2.6	1.8	0.0	6.7
Prop In Lane	1.00		0.02	1.00		0.04	1.00		0.44	1.00		0.84
Lane Grp Cap(c), veh/h	295	1023	1072	372	981	1023	49	0	211	56	0	200
V/C Ratio(X)	0.16	0.59	0.59	0.05	0.62	0.62	0.49	0.00	0.21	0.54	0.00	0.51
Avail Cap(c_a), veh/h	329	1023	1072	436	981	1023	106	0	349	104	0	320
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	0.0	0.0	8.1	14.2	14.2	50.2	0.0	40.9	50.0	0.0	42.3
Incr Delay (d2), s/veh	0.2	2.1	2.0	0.1	3.0	2.9	7.2	0.0	0.5	7.7	0.0	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	0.5	0.6	0.6	0.2	12.4	12.9	0.8	0.0	1.2	1.0	0.0	2.9
LnGrp Delay(d),s/veh	10.5	2.1	2.0	8.2	17.2	17.1	57.5	0.0	41.4	57.7	0.0	44.3
LnGrp LOS	B	A	A	A	B	B	E		D	E		D
Approach Vol, veh/h		1276			1268			69			133	
Approach Delay, s/veh		2.3			17.0			47.0			47.3	
Approach LOS		A			B			D			D	

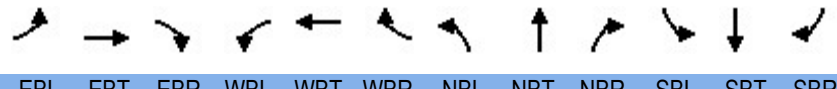
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	19.1	8.0	68.9	8.5	19.6	9.9	67.0
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	6.5	22.5	6.5	47.5	6.5	22.5	6.5	47.5
Max Q Clear Time (g_c+I1), s	3.8	4.6	2.4	2.0	3.4	8.7	3.1	27.0
Green Ext Time (p_c), s	0.0	0.8	0.0	29.2	0.0	0.7	0.0	16.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	277	63	8	479	29	173	113	34	19	26	32
Future Volume (veh/h)	23	277	63	8	479	29	173	113	34	19	26	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.94	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1782	1748	1748	1800	1800	1800	1800	1800	1731	1731
Adj Flow Rate, veh/h	27	322	73	9	557	34	201	131	40	22	30	37
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	4	4	4
Cap, veh/h	60	824	698	23	717	44	281	131	455	79	72	455
Arrive On Green	0.04	0.46	0.46	0.01	0.44	0.44	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1697	1782	1510	1664	1628	99	607	416	1441	0	229	1439
Grp Volume(v), veh/h	27	322	73	9	0	591	332	0	40	52	0	37
Grp Sat Flow(s),veh/h/ln	1697	1782	1510	1664	0	1727	1023	0	1441	229	0	1439
Q Serve(g_s), s	1.0	7.7	1.8	0.3	0.0	18.9	0.0	0.0	1.3	0.0	0.0	1.2
Cycle Q Clear(g_c), s	1.0	7.7	1.8	0.3	0.0	18.9	20.5	0.0	1.3	20.5	0.0	1.2
Prop In Lane	1.00		1.00	1.00		0.06	0.61		1.00	0.42		1.00
Lane Grp Cap(c), veh/h	60	824	698	23	0	761	412	0	455	151	0	455
V/C Ratio(X)	0.45	0.39	0.10	0.39	0.00	0.78	0.81	0.00	0.09	0.34	0.00	0.08
Avail Cap(c_a), veh/h	536	1799	1524	526	0	1743	412	0	455	151	0	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.7	11.5	9.9	31.7	0.0	15.4	22.4	0.0	15.6	18.1	0.0	15.6
Incr Delay (d2), s/veh	5.1	0.3	0.1	10.4	0.0	1.8	11.2	0.0	0.1	1.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.8	0.7	0.2	0.0	9.2	7.1	0.0	0.5	0.7	0.0	0.5
LnGrp Delay(d),s/veh	35.7	11.8	9.9	42.1	0.0	17.2	33.6	0.0	15.7	19.4	0.0	15.7
LnGrp LOS	D	B	A	D		B	C		B	B		B
Approach Vol, veh/h		422			600			372			89	
Approach Delay, s/veh		13.0			17.6			31.6			17.9	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.0	5.4	34.5		25.0	6.8	33.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		20.5	20.5	65.5		20.5	20.5	65.5
Max Q Clear Time (g_c+I1), s		22.5	2.3	9.7		22.5	3.0	20.9
Green Ext Time (p_c), s		0.0	0.0	7.8		0.0	0.0	7.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	564	21	37	775	45	141	404	87	45	105	228
Future Volume (veh/h)	211	564	21	37	775	45	141	404	87	45	105	228
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	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	1748	1748	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	229	613	23	40	842	49	153	439	95	49	114	248
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	259	1605	60	59	1207	70	183	829	178	64	389	335
Arrive On Green	0.16	0.49	0.49	0.03	0.37	0.37	0.11	0.30	0.30	0.04	0.23	0.23
Sat Flow, veh/h	1664	3263	122	1697	3251	189	1714	2778	595	1697	1693	1456
Grp Volume(v), veh/h	229	312	324	40	438	453	153	269	265	49	114	248
Grp Sat Flow(s),veh/h/ln	1664	1660	1725	1697	1693	1747	1714	1710	1663	1697	1693	1456
Q Serve(g_s), s	17.8	15.5	15.5	3.1	29.0	29.0	11.5	17.2	17.6	3.8	7.3	20.9
Cycle Q Clear(g_c), s	17.8	15.5	15.5	3.1	29.0	29.0	11.5	17.2	17.6	3.8	7.3	20.9
Prop In Lane	1.00		0.07	1.00		0.11	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	259	817	849	59	629	649	183	511	497	64	389	335
V/C Ratio(X)	0.88	0.38	0.38	0.67	0.70	0.70	0.84	0.53	0.53	0.76	0.29	0.74
Avail Cap(c_a), veh/h	448	950	988	586	969	1000	591	590	574	328	584	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	54.5	21.0	21.0	62.9	35.2	35.2	57.8	38.5	38.6	62.8	41.9	47.1
Incr Delay (d2), s/veh	12.0	0.4	0.3	14.8	1.7	1.6	11.4	1.0	1.1	19.6	0.5	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	7.2	7.5	1.7	13.8	14.2	6.1	8.3	8.2	2.1	3.5	8.8
LnGrp Delay(d),s/veh	66.5	21.3	21.3	77.7	36.9	36.8	69.1	39.5	39.7	82.5	42.4	51.0
LnGrp LOS	E	C	C	E	D	D	E	D	D	F	D	D
Approach Vol, veh/h		865			931			687			411	
Approach Delay, s/veh		33.3			38.6			46.2			52.4	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	43.9	9.1	69.4	18.6	34.8	25.0	53.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	25.5	45.5	45.5	75.5	45.5	45.5	35.5	75.5
Max Q Clear Time (g_c+I1), s	5.8	19.6	5.1	17.5	13.5	22.9	19.8	31.0
Green Ext Time (p_c), s	0.1	7.9	0.1	19.5	0.6	7.5	0.8	18.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.8
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1080	15	19	1136	7	33
Future Vol, veh/h	1080	15	19	1136	7	33
Conflicting Peds, #/hr	0	5	5	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	1187	16	21	1248	8	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1208	0	1866	609
Stage 1	-	-	-	-	1200	-
Stage 2	-	-	-	-	666	-
Critical Hdwy	-	-	4.12	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.21	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	579	-	66	443
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	577	-	58	441
Mov Cap-2 Maneuver	-	-	-	-	58	-
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	421	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	27.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	205	-	-	577	-
HCM Lane V/C Ratio	0.214	-	-	0.036	-
HCM Control Delay (s)	27.3	-	-	11.5	0.7
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	16.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	220	58	20	310	12	152	38	48	6	10	11
Future Vol, veh/h	10	220	58	20	310	12	152	38	48	6	10	11
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	4	4	4
Mvmt Flow	12	265	70	24	373	14	183	46	58	7	12	13
Number of Lanes	1	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	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	16.1	19.2	14.9	10.2
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	64%	100%	0%	100%	0%	22%
Vol Thru, %	16%	0%	79%	0%	96%	37%
Vol Right, %	20%	0%	21%	0%	4%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	238	10	278	20	322	27
LT Vol	152	10	0	20	0	6
Through Vol	38	0	220	0	310	10
RT Vol	48	0	58	0	12	11
Lane Flow Rate	287	12	335	24	388	33
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.487	0.022	0.56	0.044	0.656	0.061
Departure Headway (Hd)	6.114	6.678	6.02	6.626	6.091	6.764
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	585	534	596	538	590	533
Service Time	4.187	4.447	3.788	4.391	3.856	4.764
HCM Lane V/C Ratio	0.491	0.022	0.562	0.045	0.658	0.062
HCM Control Delay	14.9	9.6	16.3	9.7	19.8	10.2
HCM Lane LOS	B	A	C	A	C	B
HCM 95th-tile Q	2.7	0.1	3.5	0.1	4.8	0.2

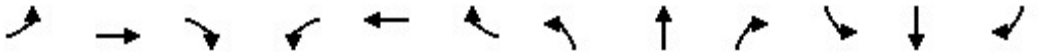
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	644	5	12	690	8	12	3	25	1	0	26
Future Vol, veh/h	9	644	5	12	690	8	12	3	25	1	0	26
Conflicting Peds, #/hr	44	0	20	20	0	44	39	0	105	105	0	39
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	10	700	5	13	750	9	13	3	27	1	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	803	0	0	725	0	0	1577	1572	478	1302	1570	838
Stage 1	-	-	-	-	-	-	743	743	-	825	825	-
Stage 2	-	-	-	-	-	-	834	829	-	477	745	-
Critical Hdwy	4.13	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.219	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	819	-	-	881	-	-	82	111	539	129	112	369
Stage 1	-	-	-	-	-	-	378	425	-	370	390	-
Stage 2	-	-	-	-	-	-	365	388	-	543	424	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	791	-	-	868	-	-	69	101	488	102	102	346
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	101	-	102	102	-
Stage 1	-	-	-	-	-	-	364	410	-	350	367	-
Stage 2	-	-	-	-	-	-	317	365	-	458	409	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	36.5	17.5
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	157	791	-	-	868	-	-	318
HCM Lane V/C Ratio	0.277	0.012	-	-	0.015	-	-	0.092
HCM Control Delay (s)	36.5	9.6	0.1	-	9.2	0	-	17.5
HCM Lane LOS	E	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	0	31	6	0	24	30	1652	28	16	1161	33
Future Volume (veh/h)	15	0	31	6	0	24	30	1652	28	16	1161	33
Number	7	4	14	3	8	18	5	2	12	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		0.99	0.99		0.99	1.00		0.97	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	1731	1731	1800	1800	1800	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	0	32	6	0	25	31	1703	29	16	1197	34
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	2	2	2
Cap, veh/h	73	0	65	67	0	68	433	2978	51	271	2922	83
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.02	0.88	0.88	0.01	0.88	0.88
Sat Flow, veh/h	1339	0	1451	1385	0	1510	1681	3372	57	1681	3329	95
Grp Volume(v), veh/h	15	0	32	6	0	25	31	845	887	16	603	628
Grp Sat Flow(s),veh/h/ln	1339	0	1451	1385	0	1510	1681	1676	1752	1681	1676	1747
Q Serve(g_s), s	2.3	0.0	4.5	0.9	0.0	3.4	0.4	24.8	25.0	0.2	14.3	14.4
Cycle Q Clear(g_c), s	5.7	0.0	4.5	5.4	0.0	3.4	0.4	24.8	25.0	0.2	14.3	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	73	0	65	67	0	68	433	1481	1548	271	1472	1533
V/C Ratio(X)	0.21	0.00	0.49	0.09	0.00	0.37	0.07	0.57	0.57	0.06	0.41	0.41
Avail Cap(c_a), veh/h	635	0	674	648	0	701	439	1481	1548	287	1472	1533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.69	0.69	0.69	0.80	0.80	0.80
Uniform Delay (d), s/veh	99.7	0.0	97.5	100.1	0.0	96.9	1.6	2.9	2.9	2.7	2.4	2.4
Incr Delay (d2), s/veh	1.4	0.0	5.6	0.6	0.0	3.3	0.0	1.1	1.1	0.1	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	0.9	0.0	1.9	0.4	0.0	1.5	0.2	11.7	12.3	0.1	6.8	7.1
LnGrp Delay(d),s/veh	101.1	0.0	103.1	100.7	0.0	100.3	1.7	4.0	4.0	2.7	3.1	3.1
LnGrp LOS	F		F	F		F	A	A	A	A	A	A
Approach Vol, veh/h		47			31			1763			1247	
Approach Delay, s/veh		102.5			100.3			3.9			3.1	
Approach LOS		F			F			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	188.6		13.4	8.2	187.4		13.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	95.0		97.0	5.0	95.0		97.0
Max Q Clear Time (g_c+I1), s	2.2	27.0		7.7	2.4	16.4		7.4
Green Ext Time (p_c), s	0.0	49.6		0.5	0.0	54.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	116	49	5	154	20	109	39	13	10	31	7
Future Volume (veh/h)	8	116	49	5	154	20	109	39	13	10	31	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.99		0.97	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1800	1800	1748	1800	1800	1782	1800	1800	1731	1800
Adj Flow Rate, veh/h	9	123	52	5	164	21	116	41	14	11	33	7
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	4	4	4
Cap, veh/h	192	355	144	183	463	58	548	162	37	257	385	69
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	34	1144	464	18	1491	187	844	531	123	155	1259	225
Grp Volume(v), veh/h	184	0	0	190	0	0	171	0	0	51	0	0
Grp Sat Flow(s),veh/h/ln	1643	0	0	1696	0	0	1498	0	0	1639	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0	0.5	0.0	0.0
Prop In Lane	0.05		0.28	0.03		0.11	0.68		0.08	0.22		0.14
Lane Grp Cap(c), veh/h	691	0	0	704	0	0	748	0	0	711	0	0
V/C Ratio(X)	0.27	0.00	0.00	0.27	0.00	0.00	0.23	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	2598	0	0	2683	0	0	2465	0	0	2576	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.6	0.0	0.0	5.6	0.0	0.0	5.6	0.0	0.0	5.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	5.8	0.0	0.0	5.8	0.0	0.0	5.7	0.0	0.0	5.2	0.0	0.0
LnGrp LOS	A			A			A			A		
Approach Vol, veh/h		184			190			171			51	
Approach Delay, s/veh		5.8			5.8			5.7			5.2	
Approach LOS		A			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		10.4		10.5		10.4		10.5
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		31.0		31.0		31.0		31.0
Max Q Clear Time (g_c+I1), s		3.7		3.8		2.5		3.8
Green Ext Time (p_c), s		1.4		2.5		1.4		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

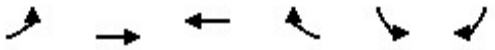
Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	486	11	135	902	8	30
Future Vol, veh/h	486	11	135	902	8	30
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	534	12	148	991	9	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	549	0	1335	276
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	792	-
Critical Hdwy	-	-	4.12	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.21	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1024	-	148	727
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	412	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1022	-	126	725
Mov Cap-2 Maneuver	-	-	-	-	126	-
Stage 1	-	-	-	-	551	-
Stage 2	-	-	-	-	352	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	362	-	-	1022	-
HCM Lane V/C Ratio	0.115	-	-	0.145	-
HCM Control Delay (s)	16.2	-	-	9.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.5	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	777	502	844	11	0	1130
Future Volume (vph)	777	502	844	11	0	1130
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.5	6.5	5.5			6.5
Lane Util. Factor	0.97	0.95	0.95			0.88
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3144	3241	3299			2603
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3144	3241	3299			2603
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	809	523	879	11	0	1177
RTOR Reduction (vph)	0	0	1	0	0	18
Lane Group Flow (vph)	809	523	889	0	0	1159
Confl. Peds. (#/hr)	8			8	10	
Heavy Vehicles (%)	2%	2%	0%	0%	0%	0%
Turn Type	Prot	NA	NA			pt+ov
Protected Phases	1	6	2			1 4
Permitted Phases						
Actuated Green, G (s)	28.6	66.7	32.6			60.4
Effective Green, g (s)	28.6	66.7	32.6			60.4
Actuated g/C Ratio	0.27	0.64	0.31			0.58
Clearance Time (s)	6.5	6.5	5.5			
Vehicle Extension (s)	3.5	6.0	3.5			
Lane Grp Cap (vph)	856	2058	1024			1497
v/s Ratio Prot	c0.26	0.16	c0.27			c0.45
v/s Ratio Perm						
v/c Ratio	0.95	0.25	0.87			0.77
Uniform Delay, d1	37.4	8.3	34.2			17.1
Progression Factor	1.00	1.00	1.00			0.64
Incremental Delay, d2	20.0	0.3	8.1			2.3
Delay (s)	57.4	8.6	42.3			13.2
Level of Service	E	A	D			B
Approach Delay (s)		38.3	42.3		13.2	
Approach LOS		D	D		B	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix B. 2040 Level of Service Reports

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	556	20	195	1134	18	10	9	269	8	45	12
Future Volume (veh/h)	43	556	20	195	1134	18	10	9	269	8	45	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1782	1800	1800	1800	1800	1765	1800	1800	1800	1800
Adj Flow Rate, veh/h	45	585	21	205	1194	19	11	9	283	8	47	13
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	0	0	0
Cap, veh/h	393	2059	899	587	2191	35	36	17	316	55	271	69
Arrive On Green	0.04	0.61	0.61	0.13	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1697	3386	1478	1714	3444	55	24	75	1406	96	1203	307
Grp Volume(v), veh/h	45	585	21	205	593	620	303	0	0	68	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1478	1714	1710	1789	1505	0	0	1606	0	0
Q Serve(g_s), s	1.2	9.8	0.7	5.5	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	9.8	0.7	5.5	0.0	0.0	23.4	0.0	0.0	3.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.04		0.93	0.12		0.19
Lane Grp Cap(c), veh/h	393	2059	899	587	1088	1138	370	0	0	395	0	0
V/C Ratio(X)	0.11	0.28	0.02	0.35	0.54	0.55	0.82	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	454	2059	899	844	1088	1138	457	0	0	489	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.62	0.62	0.62	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	11.1	9.3	6.9	0.0	0.0	45.1	0.0	0.0	37.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.2	1.2	1.2	9.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.6	0.3	2.6	0.4	0.4	10.7	0.0	0.0	1.8	0.0	0.0
LnGrp Delay(d),s/veh	7.8	11.5	9.4	7.1	1.2	1.2	54.4	0.0	0.0	37.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D			D		
Approach Vol, veh/h		651			1418			303			68	
Approach Delay, s/veh		11.2			2.1			54.4			37.7	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		31.0	12.0	77.0		31.0	8.7	80.3
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0	26.0	48.0		34.0	9.0	65.0
Max Q Clear Time (g_c+I1), s		25.4	7.5	11.8		5.8	3.2	2.0
Green Ext Time (p_c), s		1.6	0.5	18.4		2.7	0.0	22.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	699	90	146	1222	77	79	228	93	40	148	44
Future Volume (veh/h)	47	699	90	146	1222	77	79	228	93	40	148	44
Number	7	4	14	3	8	18	5	2	12	1	6	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		0.98
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	1782	1782	1800	1782	1782	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	49	736	95	154	1286	81	83	240	98	42	156	46
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	337	1657	214	445	1840	116	253	278	113	145	297	88
Arrive On Green	0.05	0.73	0.73	0.12	1.00	1.00	0.03	0.23	0.23	0.03	0.22	0.22
Sat Flow, veh/h	1697	3007	388	1697	3230	203	1714	1206	493	1714	1328	392
Grp Volume(v), veh/h	49	414	417	154	673	694	83	0	338	42	0	202
Grp Sat Flow(s),veh/h/ln	1697	1693	1702	1697	1693	1740	1714	0	1699	1714	0	1719
Q Serve(g_s), s	1.5	11.6	11.6	4.8	0.0	0.0	4.0	0.0	22.9	2.3	0.0	12.4
Cycle Q Clear(g_c), s	1.5	11.6	11.6	4.8	0.0	0.0	4.0	0.0	22.9	2.3	0.0	12.4
Prop In Lane	1.00		0.23	1.00		0.12	1.00		0.29	1.00		0.23
Lane Grp Cap(c), veh/h	337	933	938	445	964	991	253	0	391	145	0	384
V/C Ratio(X)	0.15	0.44	0.44	0.35	0.70	0.70	0.33	0.00	0.86	0.29	0.00	0.53
Avail Cap(c_a), veh/h	382	933	938	643	964	991	253	0	581	156	0	587
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.79	0.79	0.79	0.09	0.00	0.09	0.83	0.00	0.83
Uniform Delay (d), s/veh	10.2	8.7	8.7	10.1	0.0	0.0	36.7	0.0	44.4	36.7	0.0	41.0
Incr Delay (d2), s/veh	0.1	1.5	1.5	0.3	3.3	3.3	0.0	0.0	0.8	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.8	5.8	2.2	0.9	0.9	2.1	0.0	10.9	1.1	0.0	6.0
LnGrp Delay(d),s/veh	10.3	10.2	10.2	10.3	3.3	3.3	36.7	0.0	45.2	37.0	0.0	41.7
LnGrp LOS	B	B	B	B	A	A	D		D	D		D
Approach Vol, veh/h		880			1521			421			244	
Approach Delay, s/veh		10.2			4.0			43.5			40.9	
Approach LOS		B			A			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	7.2	31.6	11.0	70.1	8.0	30.8	8.8	72.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	41.0	21.0	38.0	4.0	41.0	8.0	51.0
Max Q Clear Time (g_c+I1), s	3.5	24.9	6.8	13.6	6.0	14.4	3.5	2.0
Green Ext Time (p_c), s	0.0	2.7	0.2	15.4	0.0	3.1	0.0	22.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	796	45	72	1267	28	86	14	98	6	15	20
Future Volume (veh/h)	10	796	45	72	1267	28	86	14	98	6	15	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.97	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	1782	1782	1800	1800	1800	1800	1800	1748	1800	1800	1800	1800
Adj Flow Rate, veh/h	11	838	47	76	1334	29	91	15	103	6	16	21
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	3	3	3	0	0	0
Cap, veh/h	289	2230	125	551	2447	53	138	26	118	54	122	135
Arrive On Green	0.03	1.00	1.00	0.05	0.72	0.72	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1697	3257	183	1714	3421	74	559	156	695	119	718	799
Grp Volume(v), veh/h	11	436	449	76	666	697	209	0	0	43	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1747	1714	1710	1786	1410	0	0	1636	0	0
Q Serve(g_s), s	0.2	0.0	0.0	1.4	21.8	21.9	14.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	1.4	21.8	21.9	17.3	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.04	0.44		0.49	0.14		0.49
Lane Grp Cap(c), veh/h	289	1159	1196	551	1223	1277	282	0	0	311	0	0
V/C Ratio(X)	0.04	0.38	0.38	0.14	0.54	0.55	0.74	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	390	1159	1196	601	1223	1277	427	0	0	475	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.50	0.50	0.50	0.51	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	4.1	8.0	8.0	48.4	0.0	0.0	42.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	0.9	0.8	1.5	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.3	0.7	10.5	10.9	6.8	0.0	0.0	1.2	0.0	0.0
LnGrp Delay(d),s/veh	6.8	0.8	0.8	4.2	8.8	8.8	49.8	0.0	0.0	42.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D			D		
Approach Vol, veh/h		896			1439			209			43	
Approach Delay, s/veh		0.9			8.6			49.8			42.6	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		24.3	9.5	86.1		24.3	5.8	89.8
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		33.0	9.0	66.0		33.0	9.0	66.0
Max Q Clear Time (g_c+I1), s		19.3	3.4	2.0		4.7	2.2	23.9
Green Ext Time (p_c), s		1.1	0.0	25.0		1.4	0.0	21.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	598	85	146	999	28	298	355	214	35	112	35
Future Volume (veh/h)	88	598	85	146	999	28	298	355	214	35	112	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.97		0.97	0.99		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	93	629	89	154	1052	29	314	374	225	37	118	37
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	182	937	132	300	1159	32	605	412	248	120	154	48
Arrive On Green	0.05	0.32	0.32	0.08	0.34	0.34	0.30	0.40	0.40	0.03	0.12	0.12
Sat Flow, veh/h	1697	2970	420	1697	3364	93	1714	1041	626	1697	1282	402
Grp Volume(v), veh/h	93	358	360	154	529	552	314	0	599	37	0	155
Grp Sat Flow(s),veh/h/ln	1697	1693	1697	1697	1693	1764	1714	0	1667	1697	0	1684
Q Serve(g_s), s	3.7	18.3	18.4	6.0	29.7	29.7	9.5	0.0	33.8	0.0	0.0	8.9
Cycle Q Clear(g_c), s	3.7	18.3	18.4	6.0	29.7	29.7	9.5	0.0	33.8	0.0	0.0	8.9
Prop In Lane	1.00		0.25	1.00		0.05	1.00		0.38	1.00		0.24
Lane Grp Cap(c), veh/h	182	534	536	300	583	608	605	0	659	120	0	202
V/C Ratio(X)	0.51	0.67	0.67	0.51	0.91	0.91	0.52	0.00	0.91	0.31	0.00	0.77
Avail Cap(c_a), veh/h	182	534	536	346	607	632	605	0	771	159	0	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	29.6	29.6	22.0	31.1	31.1	26.2	0.0	28.4	47.0	0.0	42.5
Incr Delay (d2), s/veh	2.8	3.4	3.5	1.6	17.4	16.8	0.9	0.0	13.6	1.7	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.1	9.1	2.9	16.6	17.2	7.0	0.0	18.0	1.0	0.0	4.5
LnGrp Delay(d),s/veh	28.3	33.0	33.1	23.7	48.5	48.0	27.1	0.0	42.1	48.8	0.0	49.7
LnGrp LOS	C	C	C	C	D	D	C		D	D		D
Approach Vol, veh/h		811			1235			913			192	
Approach Delay, s/veh		32.5			45.2			36.9			49.5	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	43.9	12.5	35.9	34.8	16.4	9.6	38.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	46.1	10.7	30.1	16.5	34.7	5.1	35.7
Max Q Clear Time (g_c+I1), s	2.0	35.8	8.0	20.4	11.5	10.9	5.7	31.7
Green Ext Time (p_c), s	0.0	3.6	0.1	7.8	0.6	1.0	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	134	652	6	2	1148	23	0	4	19	8	2	53
Future Vol, veh/h	134	652	6	2	1148	23	0	4	19	8	2	53
Conflicting Peds, #/hr	31	0	11	11	0	31	1	0	12	12	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	141	686	6	2	1208	24	0	4	20	8	2	56

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1263	0	0	703	0	0	1592	2249	369	1894	2240	648
Stage 1	-	-	-	-	-	-	982	982	-	1255	1255	-
Stage 2	-	-	-	-	-	-	610	1267	-	639	985	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	552	-	-	897	-	-	73	42	634	44	43	418
Stage 1	-	-	-	-	-	-	271	330	-	185	245	-
Stage 2	-	-	-	-	-	-	453	242	-	436	329	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	539	-	-	889	-	-	39	23	623	24	24	408
Mov Cap-2 Maneuver	-	-	-	-	-	-	39	23	-	24	24	-
Stage 1	-	-	-	-	-	-	154	188	-	104	237	-
Stage 2	-	-	-	-	-	-	385	234	-	235	187	-

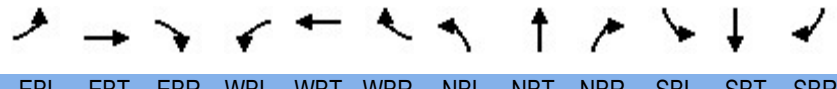
Approach	EB	WB	NB	SB
HCM Control Delay, s	4.1	0	45.3	72.2
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	113	539	-	-	889	-	-	115
HCM Lane V/C Ratio	0.214	0.262	-	-	0.002	-	-	0.577
HCM Control Delay (s)	45.3	14	2.1	-	9.1	0	-	72.2
HCM Lane LOS	E	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.8	1	-	-	0	-	-	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	629	27	5	1071	10	49	50	181	7	12	25
Future Volume (veh/h)	13	629	27	5	1071	10	49	50	181	7	12	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.96		0.94	0.98		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	1800	1782	1800	1800	1782	1800	1800	1800	1800	1800	1765	1800
Adj Flow Rate, veh/h	14	662	28	5	1127	11	52	53	191	7	13	26
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	2	2	2
Cap, veh/h	62	2028	85	48	2155	21	98	84	232	83	133	213
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	23	3159	132	3	3358	33	181	343	954	126	548	876
Grp Volume(v), veh/h	365	0	339	599	0	544	296	0	0	46	0	0
Grp Sat Flow(s),veh/h/ln	1717	0	1597	1778	0	1616	1479	0	0	1551	0	0
Q Serve(g_s), s	0.0	0.0	7.6	0.0	0.0	14.3	9.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.3	0.0	7.6	14.2	0.0	14.3	14.8	0.0	0.0	1.8	0.0	0.0
Prop In Lane	0.04		0.08	0.01		0.02	0.18		0.65	0.15		0.57
Lane Grp Cap(c), veh/h	1150	0	1025	1187	0	1037	414	0	0	430	0	0
V/C Ratio(X)	0.32	0.00	0.33	0.50	0.00	0.52	0.71	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	1253	0	1127	1300	0	1141	439	0	0	455	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	0.0	6.4	7.6	0.0	7.6	28.0	0.0	0.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.7	1.2	0.0	1.5	8.8	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	3.5	7.2	0.0	6.8	7.1	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	6.9	0.0	7.1	8.8	0.0	9.1	36.8	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	A		A	A		A	D			C		
Approach Vol, veh/h		704			1143			296			46	
Approach Delay, s/veh		7.0			8.9			36.8			23.6	
Approach LOS		A			A			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.0		23.6		55.0		23.6
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		55.5		20.5		55.5		20.5
Max Q Clear Time (g_c+I1), s		9.6		3.8		16.3		16.8
Green Ext Time (p_c), s		39.2		4.4		34.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	434	28	96	606	71	285	553	19	57	508	129
Future Volume (veh/h)	390	434	28	96	606	71	285	553	19	57	508	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	0.99		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	1782	1782	1800	1782	1782	1800	1782	1782	1800	1765	1765	1800
Adj Flow Rate, veh/h	299	614	29	101	638	75	300	582	20	60	535	136
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	348	691	33	385	709	83	417	1420	49	318	872	221
Arrive On Green	0.21	0.21	0.21	0.23	0.23	0.23	0.09	0.29	0.29	0.07	0.66	0.66
Sat Flow, veh/h	1697	3371	159	1697	3121	366	1697	3336	115	1681	2628	665
Grp Volume(v), veh/h	299	324	319	101	364	349	300	295	307	60	340	331
Grp Sat Flow(s),veh/h/ln	1697	1782	1748	1697	1782	1705	1697	1693	1758	1681	1676	1616
Q Serve(g_s), s	28.2	29.3	29.4	8.1	32.9	33.0	18.4	23.4	23.5	3.9	19.1	19.3
Cycle Q Clear(g_c), s	28.2	29.3	29.4	8.1	32.9	33.0	18.4	23.4	23.5	3.9	19.1	19.3
Prop In Lane	1.00		0.09	1.00		0.21	1.00		0.07	1.00		0.41
Lane Grp Cap(c), veh/h	348	365	358	385	405	387	417	721	748	318	557	536
V/C Ratio(X)	0.86	0.89	0.89	0.26	0.90	0.90	0.72	0.41	0.41	0.19	0.61	0.62
Avail Cap(c_a), veh/h	373	392	384	424	446	426	492	721	748	326	557	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	0.94	0.94	0.94	0.57	0.57	0.57	1.00	1.00	1.00	0.44	0.44	0.44
Uniform Delay (d), s/veh	63.7	64.1	64.2	52.7	62.3	62.4	31.9	42.4	42.5	33.6	21.8	21.9
Incr Delay (d2), s/veh	16.6	19.6	20.2	0.2	12.6	13.4	4.5	1.7	1.7	0.2	2.2	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	16.5	16.3	3.8	17.7	17.1	9.1	11.3	11.8	1.8	9.0	8.8
LnGrp Delay(d),s/veh	80.3	83.7	84.3	52.9	74.9	75.8	36.4	44.2	44.1	33.8	24.1	24.2
LnGrp LOS	F	F	F	D	E	E	D	D	D	C	C	C
Approach Vol, veh/h		942			814			902			731	
Approach Delay, s/veh		82.8			72.6			41.6			24.9	
Approach LOS		F			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.1	75.2		38.5	25.7	59.6		42.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	63.5		36.5	28.5	41.5		41.5
Max Q Clear Time (g_c+I1), s	5.9	25.5		31.4	20.4	21.3		35.0
Green Ext Time (p_c), s	0.0	12.6		2.6	0.7	9.6		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	56.9
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	320	113	15	377	34	264	292	37	20	164	107
Future Volume (veh/h)	73	320	113	15	377	34	264	292	37	20	164	107
Number	7	4	14	3	8	18	5	2	12	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		0.94	0.99		0.92	0.97		0.88	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1782	1800	1782	1800	1800	1782	1800	1800	1782	1800
Adj Flow Rate, veh/h	77	337	119	16	397	36	278	307	39	21	173	113
Adj No. of Lanes	0	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	137	463	520	66	512	45	362	335	41	85	488	299
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	190	1273	1429	18	1408	124	565	679	83	49	988	604
Grp Volume(v), veh/h	414	0	119	449	0	0	624	0	0	307	0	0
Grp Sat Flow(s),veh/h/ln	1463	0	1429	1551	0	0	1327	0	0	1641	0	0
Q Serve(g_s), s	0.0	0.0	3.7	1.2	0.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	15.9	0.0	3.7	17.1	0.0	0.0	28.3	0.0	0.0	7.4	0.0	0.0
Prop In Lane	0.19		1.00	0.04		0.08	0.45		0.06	0.07		0.37
Lane Grp Cap(c), veh/h	600	0	520	623	0	0	738	0	0	872	0	0
V/C Ratio(X)	0.69	0.00	0.23	0.72	0.00	0.00	0.85	0.00	0.00	0.35	0.00	0.00
Avail Cap(c_a), veh/h	635	0	554	663	0	0	743	0	0	878	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.3	0.0	14.0	17.4	0.0	0.0	15.1	0.0	0.0	10.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.5	4.7	0.0	0.0	9.7	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	1.5	7.9	0.0	0.0	12.2	0.0	0.0	3.5	0.0	0.0
LnGrp Delay(d),s/veh	21.4	0.0	14.5	22.1	0.0	0.0	24.8	0.0	0.0	10.5	0.0	0.0
LnGrp LOS	C		B	C			C			B		
Approach Vol, veh/h		533			449			624			307	
Approach Delay, s/veh		19.8			22.1			24.8			10.5	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		35.8		27.5		35.8		27.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		31.5		24.5		31.5		24.5
Max Q Clear Time (g_c+I1), s		30.3		17.9		9.4		19.1
Green Ext Time (p_c), s		0.9		4.6		12.4		3.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	26.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	119	205	68	50	225	65	97	266	136	82	82	35
Future Vol, veh/h	119	205	68	50	225	65	97	266	136	82	82	35
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	1	1	1
Mvmt Flow	125	216	72	53	237	68	102	280	143	86	86	37
Number of Lanes	1	1	0	1	1	0	0	1	1	0	1	0

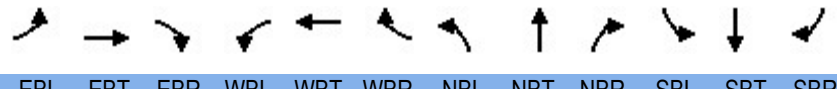
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	21.5	25.3	34.8	20.7
HCM LOS	C	D	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	27%	0%	100%	0%	100%	0%	41%
Vol Thru, %	73%	0%	0%	75%	0%	78%	41%
Vol Right, %	0%	100%	0%	25%	0%	22%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	363	136	119	273	50	290	199
LT Vol	97	0	119	0	50	0	82
Through Vol	266	0	0	205	0	225	82
RT Vol	0	136	0	68	0	65	35
Lane Flow Rate	382	143	125	287	53	305	209
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.856	0.287	0.304	0.642	0.129	0.692	0.511
Departure Headway (Hd)	8.067	7.209	8.747	8.048	8.846	8.164	8.781
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	451	498	411	448	405	443	411
Service Time	5.812	4.953	6.497	5.796	6.596	5.914	6.838
HCM Lane V/C Ratio	0.847	0.287	0.304	0.641	0.131	0.688	0.509
HCM Control Delay	43	12.8	15.3	24.2	12.9	27.4	20.7
HCM Lane LOS	E	B	C	C	B	D	C
HCM 95th-tile Q	8.6	1.2	1.3	4.4	0.4	5.2	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	570	349	0	4	408	1	9	10	2	88	5	410
Future Volume (veh/h)	570	349	0	4	408	1	9	10	2	88	5	410
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		0.90	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	1800	1765	1800	1800	1748	1748	1800	1800	1800	1800	1782	1782
Adj Flow Rate, veh/h	600	367	0	4	429	1	9	11	2	93	5	432
Adj No. of Lanes	0	2	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	0	0	0	1	1	1
Cap, veh/h	774	772	0	4	466	375	16	20	4	204	11	880
Arrive On Green	0.77	0.77	0.00	0.27	0.27	0.27	0.02	0.02	0.02	0.13	0.13	0.13
Sat Flow, veh/h	1681	1765	0	16	1731	1392	702	859	156	1615	87	1443
Grp Volume(v), veh/h	600	367	0	433	0	1	22	0	0	98	0	432
Grp Sat Flow(s),veh/h/ln	1681	1676	0	1747	0	1392	1717	0	0	1701	0	1443
Q Serve(g_s), s	33.8	13.2	0.0	40.0	0.0	0.1	2.1	0.0	0.0	8.9	0.0	21.0
Cycle Q Clear(g_c), s	33.8	13.2	0.0	40.0	0.0	0.1	2.1	0.0	0.0	8.9	0.0	21.0
Prop In Lane	1.00		0.00	0.01		1.00	0.41		0.09	0.95		1.00
Lane Grp Cap(c), veh/h	774	772	0	470	0	375	40	0	0	215	0	880
V/C Ratio(X)	0.77	0.48	0.00	0.92	0.00	0.00	0.56	0.00	0.00	0.46	0.00	0.49
Avail Cap(c_a), veh/h	774	772	0	579	0	461	259	0	0	215	0	880
HCM Platoon Ratio	1.67	1.67	1.67	1.00	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	0.92	0.00	0.92	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	11.8	0.0	58.9	0.0	44.4	80.2	0.0	0.0	67.2	0.0	18.5
Incr Delay (d2), s/veh	5.7	1.0	0.0	24.4	0.0	0.0	16.2	0.0	0.0	4.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	6.2	0.0	22.5	0.0	0.0	1.2	0.0	0.0	4.4	0.0	20.1
LnGrp Delay(d),s/veh	20.0	12.8	0.0	83.3	0.0	44.4	96.5	0.0	0.0	71.3	0.0	19.6
LnGrp LOS	B	B		F		D	F			E		B
Approach Vol, veh/h		967			434			22			530	
Approach Delay, s/veh		17.2			83.2			96.5			29.2	
Approach LOS		B			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		8.8		81.5		26.0		49.7
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		25.0		45.0		21.0		55.0
Max Q Clear Time (g_c+I1), s		4.1		35.8		23.0		42.0
Green Ext Time (p_c), s		0.1		6.3		0.0		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.0
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	952	430	102	0	614	207	84	957	19	111	668	627
Future Volume (veh/h)	952	430	102	0	614	207	84	957	19	111	668	627
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	0	1765	1800	1782	1782	1800	1765	1765	1765
Adj Flow Rate, veh/h	1002	453	107	0	646	218	88	1007	20	117	703	660
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	2	2	1	1	1	2	2	2
Cap, veh/h	922	768	181	0	583	197	196	1012	20	119	884	809
Arrive On Green	0.28	0.55	0.55	0.00	0.24	0.24	0.03	0.10	0.10	0.01	0.09	0.09
Sat Flow, veh/h	3293	1394	329	0	2538	826	1697	3395	67	1681	3353	1474
Grp Volume(v), veh/h	1002	0	560	0	442	422	88	502	525	117	703	660
Grp Sat Flow(s),veh/h/ln	1646	0	1723	0	1676	1600	1697	1693	1769	1681	1676	1474
Q Serve(g_s), s	46.5	0.0	35.9	0.0	39.5	39.5	2.5	49.2	49.2	7.3	34.1	24.1
Cycle Q Clear(g_c), s	46.5	0.0	35.9	0.0	39.5	39.5	2.5	49.2	49.2	7.3	34.1	24.1
Prop In Lane	1.00		0.19	0.00		0.52	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	922	0	950	0	399	381	196	505	528	119	884	809
V/C Ratio(X)	1.09	0.00	0.59	0.00	1.11	1.11	0.45	0.99	0.99	0.98	0.80	0.82
Avail Cap(c_a), veh/h	922	0	950	0	399	381	196	505	528	119	1012	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	0.76	0.76	0.76	0.60	0.60	0.60
Uniform Delay (d), s/veh	59.7	0.0	24.8	0.0	63.3	63.3	74.0	74.7	74.7	80.3	71.4	44.3
Incr Delay (d2), s/veh	55.9	0.0	1.0	0.0	77.4	78.9	1.5	33.8	33.0	57.9	4.5	5.5
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	28.3	0.0	17.2	0.0	26.9	25.8	4.1	27.8	29.0	7.3	16.4	39.9
LnGrp Delay(d),s/veh	115.7	0.0	25.7	0.0	140.7	142.1	75.4	108.5	107.7	138.2	75.9	49.9
LnGrp LOS	F		C		F	F	E	F	F	F	E	D
Approach Vol, veh/h		1562			864			1115			1480	
Approach Delay, s/veh		83.4			141.4			105.5			69.2	
Approach LOS		F			F			F			E	

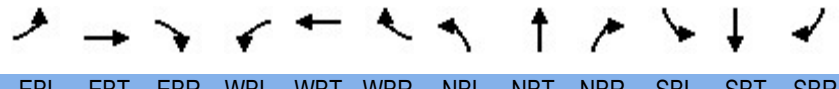
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	55.0		98.0	18.7	49.3	53.0	45.0
Change Period (Y+Rc), s	5.5	5.5		6.5	5.5	5.5	6.5	5.5
Max Green Setting (Gmax), s	7.5	49.5		91.5	6.9	50.1	46.5	39.5
Max Q Clear Time (g_c+I1), s	9.3	51.2		37.9	4.5	36.1	48.5	41.5
Green Ext Time (p_c), s	0.0	0.0		17.5	0.2	7.6	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay	94.1	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	51	28	1	30	67	0	1977	1	0	1367	187
Future Volume (veh/h)	262	51	28	1	30	67	0	1977	1	0	1367	187
Number	7	4	14	3	8	18	5	2	12	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		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1800	1800	1800	0	1782	1800	0	1765	1800
Adj Flow Rate, veh/h	276	54	29	1	32	71	0	2081	1	0	1439	197
Adj No. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	1	1	0	2	2
Cap, veh/h	264	44	24	23	125	270	0	2438	1	0	2081	282
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.00	0.70	0.70	0.00	1.00	1.00
Sat Flow, veh/h	925	181	97	3	512	1107	0	3562	2	0	3053	401
Grp Volume(v), veh/h	359	0	0	104	0	0	0	1014	1068	0	807	829
Grp Sat Flow(s),veh/h/ln	1204	0	0	1621	0	0	0	1693	1782	0	1676	1690
Q Serve(g_s), s	31.7	0.0	0.0	0.0	0.0	0.0	0.0	74.0	74.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	40.5	0.0	0.0	8.8	0.0	0.0	0.0	74.0	74.0	0.0	0.0	0.0
Prop In Lane	0.77		0.08	0.01		0.68	0.00		0.00	0.00		0.24
Lane Grp Cap(c), veh/h	332	0	0	417	0	0	0	1188	1251	0	1177	1186
V/C Ratio(X)	1.08	0.00	0.00	0.25	0.00	0.00	0.00	0.85	0.85	0.00	0.69	0.70
Avail Cap(c_a), veh/h	332	0	0	417	0	0	0	1188	1251	0	1177	1186
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.09	0.00	0.63	0.63
Uniform Delay (d), s/veh	66.3	0.0	0.0	50.8	0.0	0.0	0.0	18.4	18.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	72.8	0.0	0.0	0.4	0.0	0.0	0.0	0.8	0.7	0.0	2.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.9	0.0	0.0	3.9	0.0	0.0	0.0	34.4	36.4	0.0	0.7	0.7
LnGrp Delay(d),s/veh	139.1	0.0	0.0	51.1	0.0	0.0	0.0	19.2	19.2	0.0	2.1	2.2
LnGrp LOS	F			D				B	B		A	A
Approach Vol, veh/h		359			104			2082			1636	
Approach Delay, s/veh		139.1			51.1			19.2			2.1	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		121.0		45.0		121.0		45.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		116.5		40.5		116.5		40.5
Max Q Clear Time (g_c+I1), s		76.0		42.5		2.0		10.8
Green Ext Time (p_c), s		40.3		0.0		113.1		4.1

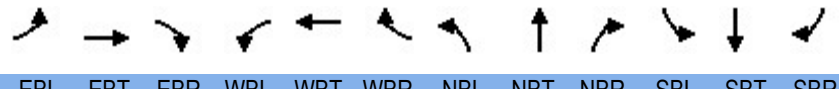
Intersection Summary		
HCM 2010 Ctrl Delay		23.6
HCM 2010 LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	888	39	165	1090	38	81	126	165	32	82	33
Future Volume (veh/h)	40	888	39	165	1090	38	81	126	165	32	82	33
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		0.99	1.00		0.97	1.00		0.95	0.96		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1765	1765	1800	1782	1782	1782	1748	1748	1800
Adj Flow Rate, veh/h	42	935	41	174	1147	40	85	133	174	34	86	35
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	3	3	3
Cap, veh/h	80	1561	67	349	2120	74	107	485	392	228	192	78
Arrive On Green	0.53	0.53	0.53	0.13	1.00	1.00	0.06	0.27	0.27	0.17	0.17	0.17
Sat Flow, veh/h	81	2932	127	1681	3301	115	1697	1782	1438	961	1157	471
Grp Volume(v), veh/h	501	0	517	174	582	605	85	133	174	34	0	121
Grp Sat Flow(s),veh/h/ln	1542	0	1597	1681	1676	1740	1697	1782	1438	961	0	1627
Q Serve(g_s), s	1.4	0.0	23.5	4.9	0.0	0.0	5.2	6.2	10.5	3.2	0.0	7.0
Cycle Q Clear(g_c), s	19.6	0.0	23.5	4.9	0.0	0.0	5.2	6.2	10.5	3.2	0.0	7.0
Prop In Lane	0.08		0.08	1.00		0.07	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	858	0	851	349	1076	1117	107	485	392	228	0	271
V/C Ratio(X)	0.58	0.00	0.61	0.50	0.54	0.54	0.79	0.27	0.44	0.15	0.00	0.45
Avail Cap(c_a), veh/h	858	0	851	421	1076	1117	154	620	500	274	0	349
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.68	0.68	0.68	0.57	0.57	0.57	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	17.0	12.1	0.0	0.0	48.5	30.0	31.6	37.8	0.0	39.4
Incr Delay (d2), s/veh	2.9	0.0	3.2	0.8	1.3	1.3	10.0	0.2	0.5	0.3	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	11.1	2.2	0.4	0.4	2.7	3.1	4.2	0.9	0.0	3.2
LnGrp Delay(d),s/veh	18.9	0.0	20.2	12.8	1.3	1.3	58.5	30.2	32.1	38.1	0.0	40.6
LnGrp LOS	B		C	B	A	A	E	C	C	D		D
Approach Vol, veh/h		1018			1361			392			155	
Approach Delay, s/veh		19.5			2.8			37.2			40.0	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		33.1		71.9	11.1	22.0	11.5	60.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s		36.5		59.5	9.5	22.5	11.5	43.5
Max Q Clear Time (g_c+I1), s		12.5		2.0	7.2	9.0	6.9	25.5
Green Ext Time (p_c), s		2.4		28.7	0.0	2.0	0.2	13.6

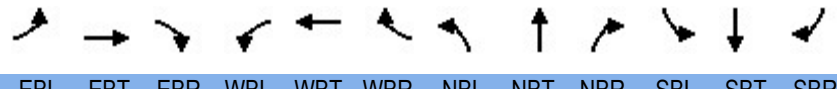
Intersection Summary		
HCM 2010 Ctrl Delay		15.2
HCM 2010 LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	988	27	44	1221	20	81	127	228	29	86	34
Future Volume (veh/h)	23	988	27	44	1221	20	81	127	228	29	86	34
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1782	1782	1800	1800	1765	1800
Adj Flow Rate, veh/h	24	1040	28	46	1285	21	85	134	240	31	91	36
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	49	1806	49	72	1873	31	107	165	296	62	145	49
Arrive On Green	0.01	0.18	0.18	0.08	1.00	1.00	0.06	0.29	0.29	0.19	0.19	0.19
Sat Flow, veh/h	1697	3368	91	1697	3408	56	1697	565	1012	111	776	262
Grp Volume(v), veh/h	24	523	545	46	638	668	85	0	374	158	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1765	1697	1693	1770	1697	0	1576	1149	0	0
Q Serve(g_s), s	1.5	29.7	29.7	2.8	0.0	0.0	5.2	0.0	23.1	3.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	29.7	29.7	2.8	0.0	0.0	5.2	0.0	23.1	15.0	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.03	1.00		0.64	0.20		0.23
Lane Grp Cap(c), veh/h	49	908	947	72	931	973	107	0	462	256	0	0
V/C Ratio(X)	0.49	0.58	0.58	0.64	0.69	0.69	0.80	0.00	0.81	0.62	0.00	0.00
Avail Cap(c_a), veh/h	186	908	947	121	931	973	121	0	548	309	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.73	0.73	0.73	0.41	0.00	0.41	1.00	0.00	0.00
Uniform Delay (d), s/veh	51.2	32.3	32.3	47.3	0.0	0.0	48.5	0.0	34.4	39.5	0.0	0.0
Incr Delay (d2), s/veh	5.6	2.0	1.9	6.8	3.0	2.9	12.8	0.0	3.3	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.5	15.1	1.4	0.8	0.8	2.8	0.0	10.5	4.6	0.0	0.0
LnGrp Delay(d),s/veh	56.8	34.2	34.2	54.1	3.0	2.9	61.4	0.0	37.7	42.1	0.0	0.0
LnGrp LOS	E	C	C	D	A	A	E		D	D		
Approach Vol, veh/h		1092			1352			459			158	
Approach Delay, s/veh		34.7			4.7			42.1			42.1	
Approach LOS		C			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	60.8	11.1	24.2	7.5	62.2		35.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	47.5	7.5	23.5	11.5	43.5		36.5
Max Q Clear Time (g_c+I1), s	4.8	31.7	7.2	17.0	3.5	2.0		25.1
Green Ext Time (p_c), s	0.0	12.7	0.0	1.9	0.0	26.0		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1275	18	26	1207	66	36	51	95	37	39	80
Future Volume (veh/h)	42	1275	18	26	1207	66	36	51	95	37	39	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	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	1782	1782	1800	1765	1765	1800	1800	1800	1800	1765	1765	1800
Adj Flow Rate, veh/h	44	1342	19	27	1271	69	38	54	100	39	41	84
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	2	2	2
Cap, veh/h	241	1930	27	330	1790	97	66	86	159	65	79	162
Arrive On Green	0.08	1.00	1.00	0.03	0.55	0.55	0.04	0.16	0.16	0.04	0.16	0.16
Sat Flow, veh/h	1697	3418	48	1681	3229	175	1714	549	1017	1681	507	1038
Grp Volume(v), veh/h	44	664	697	27	659	681	38	0	154	39	0	125
Grp Sat Flow(s),veh/h/ln	1697	1693	1773	1681	1676	1728	1714	0	1567	1681	0	1545
Q Serve(g_s), s	1.1	0.0	0.0	0.7	30.3	30.4	2.3	0.0	9.7	2.4	0.0	7.8
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.7	30.3	30.4	2.3	0.0	9.7	2.4	0.0	7.8
Prop In Lane	1.00		0.03	1.00		0.10	1.00		0.65	1.00		0.67
Lane Grp Cap(c), veh/h	241	956	1001	330	929	958	66	0	244	65	0	242
V/C Ratio(X)	0.18	0.70	0.70	0.08	0.71	0.71	0.58	0.00	0.63	0.60	0.00	0.52
Avail Cap(c_a), veh/h	276	956	1001	382	929	958	106	0	336	104	0	331
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	0.0	9.2	17.2	17.2	49.7	0.0	41.5	49.7	0.0	40.6
Incr Delay (d2), s/veh	0.3	3.3	3.2	0.1	4.6	4.5	7.8	0.0	2.7	8.5	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.9	0.3	15.1	15.6	1.2	0.0	4.4	1.3	0.0	3.4
LnGrp Delay(d),s/veh	13.4	3.3	3.2	9.3	21.7	21.7	57.5	0.0	44.2	58.1	0.0	42.4
LnGrp LOS	B	A	A	A	C	C	E		D	E		D
Approach Vol, veh/h		1405			1367			192			164	
Approach Delay, s/veh		3.6			21.5			46.8			46.1	
Approach LOS		A			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	21.9	8.8	64.8	9.5	21.9	9.8	63.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	6.5	22.5	6.5	47.5	6.5	22.5	6.5	47.5
Max Q Clear Time (g_c+I1), s	4.1	11.7	2.7	2.0	4.3	9.8	3.1	32.4
Green Ext Time (p_c), s	0.0	1.3	0.0	32.6	0.0	1.4	0.0	13.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	355	101	17	594	37	195	191	60	19	117	0
Future Volume (veh/h)	27	355	101	17	594	37	195	191	60	19	117	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.94	0.99		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	1782	1782	1782	1748	1748	1800	1800	1800	1800	1800	1731	1731
Adj Flow Rate, veh/h	28	374	106	18	625	39	205	201	63	20	123	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	4	4	4
Cap, veh/h	61	880	746	42	785	49	178	100	416	58	237	427
Arrive On Green	0.04	0.49	0.49	0.03	0.48	0.48	0.29	0.29	0.29	0.29	0.29	0.00
Sat Flow, veh/h	1697	1782	1510	1664	1625	101	350	343	1436	0	817	1471
Grp Volume(v), veh/h	28	374	106	18	0	664	406	0	63	143	0	0
Grp Sat Flow(s),veh/h/ln	1697	1782	1510	1664	0	1727	694	0	1436	817	0	1471
Q Serve(g_s), s	1.1	9.5	2.7	0.8	0.0	22.8	0.0	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	9.5	2.7	0.8	0.0	22.8	20.5	0.0	2.3	20.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.06	0.50		1.00	0.14		1.00
Lane Grp Cap(c), veh/h	61	880	746	42	0	834	278	0	416	295	0	427
V/C Ratio(X)	0.46	0.42	0.14	0.43	0.00	0.80	1.46	0.00	0.15	0.48	0.00	0.00
Avail Cap(c_a), veh/h	492	1651	1399	483	0	1600	278	0	416	295	0	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.4	11.5	9.7	34.0	0.0	15.3	27.9	0.0	18.6	20.3	0.0	0.0
Incr Delay (d2), s/veh	5.3	0.3	0.1	6.7	0.0	1.8	226.7	0.0	0.2	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	1.1	0.4	0.0	11.1	22.8	0.0	0.9	2.2	0.0	0.0
LnGrp Delay(d),s/veh	38.7	11.8	9.8	40.7	0.0	17.1	254.6	0.0	18.8	21.5	0.0	0.0
LnGrp LOS	D	B	A	D		B	F		B	C		
Approach Vol, veh/h		508			682			469			143	
Approach Delay, s/veh		12.9			17.7			222.9			21.5	
Approach LOS		B			B			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.0	6.3	39.4		25.0	7.0	38.7
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		20.5	20.5	65.5		20.5	20.5	65.5
Max Q Clear Time (g_c+I1), s		22.5	2.8	11.5		22.5	3.1	24.8
Green Ext Time (p_c), s		0.0	0.0	9.7		0.0	0.0	9.3

Intersection Summary	
HCM 2010 Ctrl Delay	70.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	853	50	37	820	45	131	392	136	55	130	292
Future Volume (veh/h)	173	853	50	37	820	45	131	392	136	55	130	292
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.96	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	1748	1748	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	182	898	53	39	863	47	138	413	143	58	137	307
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	210	1219	72	66	963	52	255	456	158	188	162	363
Arrive On Green	0.13	0.38	0.38	0.04	0.30	0.30	0.07	0.36	0.36	0.05	0.34	0.34
Sat Flow, veh/h	1664	3184	188	1697	3263	178	1714	1264	438	1697	481	1077
Grp Volume(v), veh/h	182	468	483	39	448	462	138	0	556	58	0	444
Grp Sat Flow(s),veh/h/ln	1664	1660	1711	1697	1693	1747	1714	0	1702	1697	0	1557
Q Serve(g_s), s	11.3	25.5	25.5	2.4	26.6	26.6	5.5	0.0	32.6	2.3	0.0	27.8
Cycle Q Clear(g_c), s	11.3	25.5	25.5	2.4	26.6	26.6	5.5	0.0	32.6	2.3	0.0	27.8
Prop In Lane	1.00		0.11	1.00		0.10	1.00		0.26	1.00		0.69
Lane Grp Cap(c), veh/h	210	636	655	66	500	516	255	0	613	188	0	525
V/C Ratio(X)	0.87	0.74	0.74	0.59	0.90	0.90	0.54	0.00	0.91	0.31	0.00	0.85
Avail Cap(c_a), veh/h	230	636	655	99	509	525	265	0	645	208	0	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.0	27.9	27.9	49.7	35.5	35.5	24.4	0.0	31.9	25.3	0.0	32.3
Incr Delay (d2), s/veh	26.5	4.7	4.5	9.8	18.3	17.9	2.4	0.0	16.3	1.1	0.0	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	12.5	12.9	1.3	15.0	15.4	2.7	0.0	18.1	1.1	0.0	13.6
LnGrp Delay(d),s/veh	71.5	32.5	32.4	59.5	53.8	53.3	26.8	0.0	48.2	26.4	0.0	43.5
LnGrp LOS	E	C	C	E	D	D	C		D	C		D
Approach Vol, veh/h		1133			949			694			502	
Approach Delay, s/veh		38.7			53.8			44.0			41.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	42.4	8.6	44.7	11.8	39.9	17.8	35.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.1	39.8	6.1	40.0	8.0	37.9	14.5	31.6
Max Q Clear Time (g_c+I1), s	4.3	34.6	4.4	27.5	7.5	29.8	13.3	28.6
Green Ext Time (p_c), s	0.0	3.3	0.0	9.8	0.0	4.7	0.1	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1330	6	28	1286	0	69
Future Vol, veh/h	1330	6	28	1286	0	69
Conflicting Peds, #/hr	0	5	5	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	1400	6	29	1354	0	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1411	0	2143	710
Stage 1	-	-	-	-	1408	-
Stage 2	-	-	-	-	735	-
Critical Hdwy	-	-	4.12	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.21	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	484	-	43	381
Stage 1	-	-	-	-	195	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	482	-	32	379
Mov Cap-2 Maneuver	-	-	-	-	32	-
Stage 1	-	-	-	-	194	-
Stage 2	-	-	-	-	333	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	379	-	-	482	-
HCM Lane V/C Ratio	0.192	-	-	0.061	-
HCM Control Delay (s)	16.7	-	-	13	1.5
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.7	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	31.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	286	58	61	331	31	163	131	146	8	54	11
Future Vol, veh/h	10	286	58	61	331	31	163	131	146	8	54	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	4	4	4
Mvmt Flow	11	301	61	64	348	33	172	138	154	8	57	12
Number of Lanes	1	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	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	28.9	30	38.9	13.2
HCM LOS	D	D	E	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	37%	100%	0%	100%	0%	11%
Vol Thru, %	30%	0%	83%	0%	91%	74%
Vol Right, %	33%	0%	17%	0%	9%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	440	10	344	61	362	73
LT Vol	163	10	0	61	0	8
Through Vol	131	0	286	0	331	54
RT Vol	146	0	58	0	31	11
Lane Flow Rate	463	11	362	64	381	77
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.862	0.024	0.751	0.143	0.791	0.178
Departure Headway (Hd)	6.825	8.106	7.468	8.041	7.469	8.336
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	533	443	485	448	488	430
Service Time	4.825	5.821	5.182	5.76	5.182	6.387
HCM Lane V/C Ratio	0.869	0.025	0.746	0.143	0.781	0.179
HCM Control Delay	38.9	11	29.4	12.1	33	13.2
HCM Lane LOS	E	B	D	B	D	B
HCM 95th-tile Q	9.3	0.1	6.4	0.5	7.2	0.6

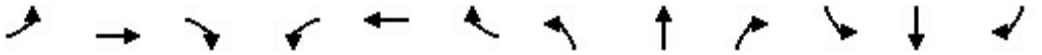
Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	860	6	27	705	75	12	6	31	1	5	54
Future Vol, veh/h	42	860	6	27	705	75	12	6	31	1	5	54
Conflicting Peds, #/hr	44	0	20	20	0	44	39	0	105	105	0	39
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	44	905	6	28	742	79	13	6	33	1	5	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	865	0	0	931	0	0	1924	1937	581	1531	1901	865
Stage 1	-	-	-	-	-	-	1016	1016	-	882	882	-
Stage 2	-	-	-	-	-	-	908	921	-	649	1019	-
Critical Hdwy	4.13	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.219	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	776	-	-	738	-	-	46	66	462	89	70	356
Stage 1	-	-	-	-	-	-	259	318	-	344	367	-
Stage 2	-	-	-	-	-	-	332	352	-	430	317	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	750	-	-	727	-	-	29	51	418	57	54	334
Mov Cap-2 Maneuver	-	-	-	-	-	-	29	51	-	57	54	-
Stage 1	-	-	-	-	-	-	225	276	-	293	329	-
Stage 2	-	-	-	-	-	-	244	315	-	314	275	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.3	107.1	27.7
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	750	-	-	727	-	-	221
HCM Lane V/C Ratio	0.637	0.059	-	-	0.039	-	-	0.286
HCM Control Delay (s)	107.1	10.1	0.5	-	10.2	0	-	27.7
HCM Lane LOS	F	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	2.9	0.2	-	-	0.1	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	42	0	0	0	33	2052	0	0	1389	44
Future Volume (veh/h)	27	0	42	0	0	0	33	2052	0	0	1389	44
Number	7	4	14	3	8	18	5	2	12	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		0.99	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	1731	1731	1800	1800	1800	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	28	0	44	0	0	0	35	2160	0	0	1462	46
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	2	2	2
Cap, veh/h	110	0	68	34	84	0	324	3068	0	167	2903	91
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.02	0.92	0.00	0.00	0.88	0.88
Sat Flow, veh/h	1627	0	1452	1311	1800	0	1681	3441	0	1681	3317	104
Grp Volume(v), veh/h	28	0	44	0	0	0	35	2160	0	0	738	770
Grp Sat Flow(s),veh/h/ln	1627	0	1452	1311	1800	0	1681	1676	0	1681	1676	1745
Q Serve(g_s), s	3.5	0.0	6.2	0.0	0.0	0.0	0.4	32.2	0.0	0.0	20.5	20.6
Cycle Q Clear(g_c), s	3.5	0.0	6.2	0.0	0.0	0.0	0.4	32.2	0.0	0.0	20.5	20.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	110	0	68	34	84	0	324	3068	0	167	1467	1527
V/C Ratio(X)	0.25	0.00	0.65	0.00	0.00	0.00	0.11	0.70	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	790	0	674	582	835	0	329	3068	0	207	1467	1527
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	0.00	0.00	0.28	0.28	0.00	0.00	0.69	0.69
Uniform Delay (d), s/veh	96.6	0.0	97.9	0.0	0.0	0.0	2.3	2.1	0.0	0.0	2.9	2.9
Incr Delay (d2), s/veh	1.2	0.0	10.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	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	1.6	0.0	2.7	0.0	0.0	0.0	0.2	14.6	0.0	0.0	9.8	10.2
LnGrp Delay(d),s/veh	97.8	0.0	107.9	0.0	0.0	0.0	2.4	2.5	0.0	0.0	3.8	3.7
LnGrp LOS	F		F				A	A			A	A
Approach Vol, veh/h		72			0			2195			1508	
Approach Delay, s/veh		104.0			0.0			2.5			3.8	
Approach LOS		F						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	195.2		13.8	8.3	186.9		13.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	95.0		97.0	5.0	95.0		97.0
Max Q Clear Time (g_c+I1), s	0.0	34.2		8.2	2.4	22.6		0.0
Green Ext Time (p_c), s	0.0	55.8		0.4	0.0	65.4		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		4.9
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	131	51	7	231	0	109	60	13	11	41	0
Future Volume (veh/h)	8	131	51	7	231	0	109	60	13	11	41	0
Number	7	4	14	3	8	18	5	2	12	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	0.99		1.00	0.99		0.97	0.99		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	1800	1765	1800	1800	1748	1800	1800	1782	1800	1800	1731	1800
Adj Flow Rate, veh/h	8	138	54	7	243	0	115	63	14	12	43	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	4	4	4
Cap, veh/h	177	415	157	173	605	0	460	198	31	244	432	0
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.00	0.29	0.29	0.29	0.29	0.29	0.00
Sat Flow, veh/h	25	1180	445	18	1719	0	697	687	109	161	1501	0
Grp Volume(v), veh/h	200	0	0	250	0	0	192	0	0	55	0	0
Grp Sat Flow(s),veh/h/ln	1649	0	0	1737	0	0	1492	0	0	1662	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	2.4	0.0	0.0	2.1	0.0	0.0	0.5	0.0	0.0
Prop In Lane	0.04		0.27	0.03		0.00	0.60		0.07	0.22		0.00
Lane Grp Cap(c), veh/h	749	0	0	778	0	0	689	0	0	676	0	0
V/C Ratio(X)	0.27	0.00	0.00	0.32	0.00	0.00	0.28	0.00	0.00	0.08	0.00	0.00
Avail Cap(c_a), veh/h	2442	0	0	2570	0	0	2273	0	0	2429	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	0.0	0.0	5.4	0.0	0.0	6.4	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	1.2	0.0	0.0	0.9	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	5.5	0.0	0.0	5.7	0.0	0.0	6.6	0.0	0.0	5.9	0.0	0.0
LnGrp LOS	A			A			A			A		
Approach Vol, veh/h		200			250			192			55	
Approach Delay, s/veh		5.5			5.7			6.6			5.9	
Approach LOS		A			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		10.4		11.8		10.4		11.8
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		31.0		31.0		31.0		31.0
Max Q Clear Time (g_c+I1), s		4.1		4.0		2.5		4.4
Green Ext Time (p_c), s		1.5		3.0		1.6		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A

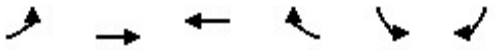
Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	556	11	188	910	10	51
Future Vol, veh/h	556	11	188	910	10	51
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	585	12	198	958	11	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	600	0	1469	302
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	875	-
Critical Hdwy	-	-	4.12	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.21	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	980	-	121	700
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	373	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	978	-	96	698
Mov Cap-2 Maneuver	-	-	-	-	96	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	298	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	17.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	344	-	-	978	-
HCM Lane V/C Ratio	0.187	-	-	0.202	-
HCM Control Delay (s)	17.9	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0.8	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	957	572	852	13	0	1216
Future Volume (vph)	957	572	852	13	0	1216
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.5	6.5	5.5			6.5
Lane Util. Factor	0.97	0.95	0.95			0.88
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3144	3241	3297			2603
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3144	3241	3297			2603
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1007	602	897	14	0	1280
RTOR Reduction (vph)	0	0	1	0	0	6
Lane Group Flow (vph)	1007	602	910	0	0	1274
Confl. Peds. (#/hr)	8			8	10	
Heavy Vehicles (%)	2%	2%	0%	0%	0%	0%
Turn Type	Prot	NA	NA			pt+ov
Protected Phases	1	6	2			1 4
Permitted Phases						
Actuated Green, G (s)	32.4	67.9	30.0			63.0
Effective Green, g (s)	32.4	67.9	30.0			63.0
Actuated g/C Ratio	0.31	0.65	0.29			0.60
Clearance Time (s)	6.5	6.5	5.5			
Vehicle Extension (s)	3.5	6.0	3.5			
Lane Grp Cap (vph)	970	2095	942			1561
v/s Ratio Prot	c0.32	0.19	c0.28			c0.49
v/s Ratio Perm						
v/c Ratio	1.04	0.29	0.97			0.82
Uniform Delay, d1	36.3	8.1	37.0			16.5
Progression Factor	1.00	1.00	1.00			0.63
Incremental Delay, d2	39.3	0.3	21.4			3.0
Delay (s)	75.6	8.4	58.4			13.4
Level of Service	E	A	E			B
Approach Delay (s)		50.4	58.4		13.4	
Approach LOS		D	E		B	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	534	20	78	1091	18	10	33	204	7	109	30
Future Volume (veh/h)	44	534	20	78	1091	18	10	33	204	7	109	30
Number	7	4	14	3	8	18	5	2	12	1	6	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		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1800	1800	1800	1800	1765	1800	1800	1800	1800
Adj Flow Rate, veh/h	46	562	21	82	1148	19	11	35	215	7	115	32
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	0	0	0
Cap, veh/h	158	635	24	601	1085	18	39	28	148	39	153	41
Arrive On Green	0.05	0.37	0.37	0.58	1.00	1.00	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1697	1705	64	1714	1765	29	35	245	1310	35	1349	363
Grp Volume(v), veh/h	46	0	583	82	0	1167	261	0	0	154	0	0
Grp Sat Flow(s),veh/h/ln	1697	0	1769	1714	0	1794	1590	0	0	1747	0	0
Q Serve(g_s), s	0.0	0.0	32.7	0.0	0.0	63.5	2.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	32.7	0.0	0.0	63.5	12.0	0.0	0.0	9.1	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	0.04		0.82	0.05		0.21
Lane Grp Cap(c), veh/h	158	0	658	601	0	1103	215	0	0	233	0	0
V/C Ratio(X)	0.29	0.00	0.89	0.14	0.00	1.06	1.21	0.00	0.00	0.66	0.00	0.00
Avail Cap(c_a), veh/h	160	0	1201	601	0	1303	215	0	0	233	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.09	0.00	0.09	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.9	0.0	31.2	14.8	0.0	0.0	48.0	0.0	0.0	45.7	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	4.2	0.0	0.0	28.4	130.1	0.0	0.0	6.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	0.0	23.3	1.5	0.0	15.7	25.3	0.0	0.0	8.4	0.0	0.0
LnGrp Delay(d),s/veh	48.9	0.0	35.4	14.8	0.0	28.4	178.2	0.0	0.0	52.4	0.0	0.0
LnGrp LOS	D		D	B		F	F			D		
Approach Vol, veh/h		629			1249			261			154	
Approach Delay, s/veh		36.4			27.5			178.2			52.4	
Approach LOS		D			C			F			D	

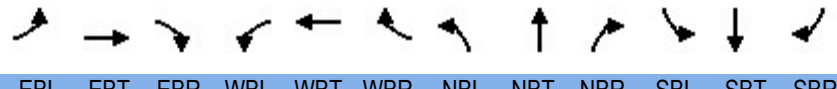
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		16.0	37.9	43.5		16.0	8.3	73.1
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		12.0	10.0	72.0		12.0	5.0	77.0
Max Q Clear Time (g_c+I1), s		14.0	2.0	34.7		11.1	2.0	65.5
Green Ext Time (p_c), s		0.0	0.2	4.7		0.3	0.0	7.6

Intersection Summary	
HCM 2010 Ctrl Delay	48.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	610	90	37	1003	78	138	176	88	41	223	44
Future Volume (veh/h)	48	610	90	37	1003	78	138	176	88	41	223	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	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	1782	1782	1800	1782	1782	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	51	642	95	39	1056	82	145	185	93	43	235	46
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	200	1039	154	356	1120	87	78	188	95	72	246	48
Arrive On Green	0.69	0.69	0.69	1.00	1.00	1.00	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	497	1512	224	725	1630	127	1116	1108	557	1119	1448	283
Grp Volume(v), veh/h	51	0	737	39	0	1138	145	0	278	43	0	281
Grp Sat Flow(s),veh/h/ln	497	0	1736	725	0	1756	1116	0	1665	1119	0	1731
Q Serve(g_s), s	8.9	0.0	24.4	2.6	0.0	0.0	1.0	0.0	17.6	0.4	0.0	17.0
Cycle Q Clear(g_c), s	53.5	0.0	24.4	33.3	0.0	0.0	18.0	0.0	17.6	18.0	0.0	17.0
Prop In Lane	1.00		0.13	1.00		0.07	1.00		0.33	1.00		0.16
Lane Grp Cap(c), veh/h	200	0	1193	356	0	1207	78	0	283	72	0	294
V/C Ratio(X)	0.25	0.00	0.62	0.11	0.00	0.94	1.86	0.00	0.98	0.60	0.00	0.96
Avail Cap(c_a), veh/h	234	0	1310	405	0	1325	78	0	283	72	0	294
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.00	0.77	0.40	0.00	0.40	0.09	0.00	0.09	0.73	0.00	0.73
Uniform Delay (d), s/veh	31.8	0.0	9.0	7.0	0.0	0.0	52.9	0.0	43.8	53.0	0.0	43.6
Incr Delay (d2), s/veh	0.4	0.0	0.5	0.2	0.0	7.5	391.8	0.0	12.4	8.5	0.0	33.3
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(95%),veh/ln	2.2	0.0	16.5	1.0	0.0	4.2	19.3	0.0	10.6	2.6	0.0	15.4
LnGrp Delay(d),s/veh	32.2	0.0	9.5	7.3	0.0	7.5	444.7	0.0	56.2	61.5	0.0	76.9
LnGrp LOS	C		A	A		A	F		E	E		E
Approach Vol, veh/h		788			1177			423			324	
Approach Delay, s/veh		11.0			7.5			189.4			74.9	
Approach LOS		B			A			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		22.0		76.5		22.0		76.5
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0		80.0		18.0		80.0
Max Q Clear Time (g_c+I1), s		20.0		55.5		20.0		35.3
Green Ext Time (p_c), s		0.0		16.5		0.0		23.9

Intersection Summary	
HCM 2010 Ctrl Delay	44.9
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	703	44	42	936	28	108	65	28	6	15	2
Future Volume (veh/h)	10	703	44	42	936	28	108	65	28	6	15	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.95	0.99		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	1782	1782	1800	1800	1800	1800	1800	1748	1800	1800	1800	1800
Adj Flow Rate, veh/h	11	740	46	44	985	29	114	68	29	6	16	2
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	3	3	3	0	0	0
Cap, veh/h	128	955	59	265	1045	31	168	77	31	81	187	21
Arrive On Green	0.02	0.58	0.58	0.04	0.60	0.60	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1697	1659	103	1714	1739	51	768	507	203	258	1236	136
Grp Volume(v), veh/h	11	0	786	44	0	1014	211	0	0	24	0	0
Grp Sat Flow(s),veh/h/ln	1697	0	1762	1714	0	1790	1478	0	0	1630	0	0
Q Serve(g_s), s	0.0	0.0	36.2	1.2	0.0	55.3	13.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	36.2	1.2	0.0	55.3	15.0	0.0	0.0	1.2	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.03	0.54		0.14	0.25		0.08
Lane Grp Cap(c), veh/h	128	0	1014	265	0	1076	275	0	0	288	0	0
V/C Ratio(X)	0.09	0.00	0.78	0.17	0.00	0.94	0.77	0.00	0.00	0.08	0.00	0.00
Avail Cap(c_a), veh/h	198	0	1197	291	0	1216	275	0	0	288	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.00	0.79	0.62	0.00	0.62	0.53	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	46.1	0.0	17.2	16.9	0.0	19.5	44.5	0.0	0.0	38.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	2.0	0.1	0.0	11.8	6.5	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	24.2	1.0	0.0	37.7	9.7	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	46.3	0.0	19.2	17.0	0.0	31.2	51.0	0.0	0.0	38.8	0.0	0.0
LnGrp LOS	D		B	B		C	D			D		
Approach Vol, veh/h		797			1058			211			24	
Approach Delay, s/veh		19.6			30.6			51.0			38.8	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.0	8.4	65.0		20.0	5.7	67.7
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	6.0	72.0		16.0	6.0	72.0
Max Q Clear Time (g_c+I1), s		17.0	3.2	38.2		3.2	2.0	57.3
Green Ext Time (p_c), s		0.0	0.0	5.9		0.9	1.8	6.4

Intersection Summary		
HCM 2010 Ctrl Delay		28.6
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	324	85	196	661	33	198	241	291	30	68	13
Future Volume (veh/h)	165	324	85	196	661	33	198	241	291	30	68	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.90		0.95	0.97		0.85
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	174	341	89	206	696	35	208	254	306	32	72	14
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	187	693	181	400	857	43	579	246	296	113	104	20
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.29	0.34	0.34	0.03	0.07	0.07
Sat Flow, veh/h	729	1359	355	961	1681	85	1714	721	868	1697	1405	273
Grp Volume(v), veh/h	174	0	430	206	0	731	208	0	560	32	0	86
Grp Sat Flow(s),veh/h/ln	729	0	1714	961	0	1766	1714	0	1589	1697	0	1678
Q Serve(g_s), s	17.5	0.0	17.5	19.1	0.0	37.0	5.2	0.0	36.5	0.0	0.0	5.3
Cycle Q Clear(g_c), s	54.5	0.0	17.5	36.6	0.0	37.0	5.2	0.0	36.5	0.0	0.0	5.3
Prop In Lane	1.00		0.21	1.00		0.05	1.00		0.55	1.00		0.16
Lane Grp Cap(c), veh/h	187	0	874	400	0	900	579	0	543	113	0	124
V/C Ratio(X)	0.93	0.00	0.49	0.52	0.00	0.81	0.36	0.00	1.03	0.28	0.00	0.69
Avail Cap(c_a), veh/h	187	0	874	400	0	900	579	0	543	147	0	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	17.1	29.1	0.0	21.9	27.5	0.0	35.2	50.6	0.0	48.3
Incr Delay (d2), s/veh	46.9	0.0	0.5	1.4	0.0	5.8	0.4	0.0	47.1	1.3	0.0	8.1
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(95%),veh/ln	12.0	0.0	13.1	8.9	0.0	26.5	8.2	0.0	41.3	1.7	0.0	5.0
LnGrp Delay(d),s/veh	94.4	0.0	17.7	30.5	0.0	27.7	27.9	0.0	82.3	51.9	0.0	56.4
LnGrp LOS	F		B	C		C	C		F	D		E
Approach Vol, veh/h		604			937			768			118	
Approach Delay, s/veh		39.8			28.3			67.6			55.2	
Approach LOS		D			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	6.9	41.0		59.0	35.5	12.4		59.0
Change Period (Y+Rc), s	4.0	4.5		4.5	4.0	4.5		4.5
Max Green Setting (Gmax), s	5.0	36.5		54.5	5.0	36.5		54.5
Max Q Clear Time (g_c+I1), s	2.0	38.5		56.5	7.2	7.3		39.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.5		10.5

Intersection Summary	
HCM 2010 Ctrl Delay	44.9
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	529	6	2	929	23	0	4	29	6	3	29
Future Vol, veh/h	110	529	6	2	929	23	0	4	29	6	3	29
Conflicting Peds, #/hr	31	0	11	11	0	31	1	0	12	12	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	116	557	6	2	978	24	0	4	31	6	3	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1033	0	0	574	0	0	1815	1840	583	1847	1831	1022
Stage 1	-	-	-	-	-	-	803	803	-	1025	1025	-
Stage 2	-	-	-	-	-	-	1012	1037	-	822	806	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	677	-	-	1004	-	-	61	76	516	58	77	289
Stage 1	-	-	-	-	-	-	380	399	-	286	315	-
Stage 2	-	-	-	-	-	-	291	311	-	371	398	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	661	-	-	996	-	-	46	61	507	44	61	282
Mov Cap-2 Maneuver	-	-	-	-	-	-	105	134	-	135	172	-
Stage 1	-	-	-	-	-	-	311	326	-	230	307	-
Stage 2	-	-	-	-	-	-	256	303	-	281	326	-

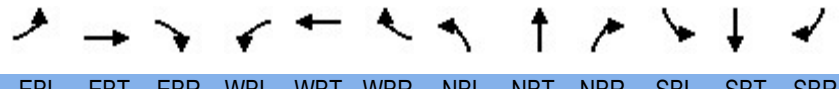
Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0	15.5	23.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	379	661	-	-	996	-	-	231
HCM Lane V/C Ratio	0.092	0.175	-	-	0.002	-	-	0.173
HCM Control Delay (s)	15.5	11.6	-	-	8.6	-	-	23.8
HCM Lane LOS	C	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.6	-	-	0	-	-	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	514	27	5	853	10	49	58	167	7	12	24
Future Volume (veh/h)	13	514	27	5	853	10	49	58	167	7	12	24
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.93		0.89	0.97		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1800	1800	1800	1800	1765	1800
Adj Flow Rate, veh/h	14	541	28	5	898	11	52	61	176	7	13	25
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	2	2	2
Cap, veh/h	279	1117	58	513	1169	14	92	87	202	78	125	193
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	617	1679	87	846	1757	22	186	378	879	129	544	841
Grp Volume(v), veh/h	14	0	569	5	0	909	289	0	0	45	0	0
Grp Sat Flow(s),veh/h/ln	617	0	1766	846	0	1778	1443	0	0	1513	0	0
Q Serve(g_s), s	1.4	0.0	13.6	0.3	0.0	30.0	11.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	31.3	0.0	13.6	13.9	0.0	30.0	16.5	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.01	0.18		0.61	0.16		0.56
Lane Grp Cap(c), veh/h	279	0	1175	513	0	1183	381	0	0	396	0	0
V/C Ratio(X)	0.05	0.00	0.48	0.01	0.00	0.77	0.76	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	306	0	1252	550	0	1261	392	0	0	407	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	7.1	10.5	0.0	9.8	31.7	0.0	0.0	26.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	1.1	0.0	0.0	4.3	11.9	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	11.1	0.1	0.0	22.3	12.4	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	20.8	0.0	8.2	10.5	0.0	14.1	43.6	0.0	0.0	26.6	0.0	0.0
LnGrp LOS	C		A	B		B	D			C		
Approach Vol, veh/h		583			914			289			45	
Approach Delay, s/veh		8.5			14.0			43.6			26.6	
Approach LOS		A			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		61.5		24.1		61.5		24.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		60.7		20.3		60.7		20.3
Max Q Clear Time (g_c+I1), s		33.3		4.0		32.0		18.5
Green Ext Time (p_c), s		23.6		4.3		24.7		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	365	415	19	93	585	71	266	582	20	58	644	0
Future Volume (veh/h)	365	415	19	93	585	71	266	582	20	58	644	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98	1.00		0.93	0.98		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	1782	1782	1800	1782	1782	1782	1782	1782	1800	1765	1765	1800
Adj Flow Rate, veh/h	384	437	20	98	616	75	280	613	21	61	678	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	378	850	39	420	624	521	291	1042	36	213	709	0
Arrive On Green	0.19	0.50	0.50	0.04	0.35	0.35	0.05	0.10	0.10	0.08	0.42	0.00
Sat Flow, veh/h	1697	1690	77	1697	1782	1488	1697	3331	114	1681	3441	0
Grp Volume(v), veh/h	384	0	457	98	616	75	280	311	323	61	678	0
Grp Sat Flow(s),veh/h/ln	1697	0	1767	1697	1782	1488	1697	1693	1752	1681	1676	0
Q Serve(g_s), s	32.2	0.0	28.8	6.2	57.0	5.7	21.9	29.1	29.2	4.7	32.5	0.0
Cycle Q Clear(g_c), s	32.2	0.0	28.8	6.2	57.0	5.7	21.9	29.1	29.2	4.7	32.5	0.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	378	0	889	420	624	521	291	529	548	213	709	0
V/C Ratio(X)	1.02	0.00	0.51	0.23	0.99	0.14	0.96	0.59	0.59	0.29	0.96	0.00
Avail Cap(c_a), veh/h	378	0	889	420	624	521	291	529	548	219	709	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	0.85	0.00	0.85	0.63	0.63	0.63	1.00	1.00	1.00	0.46	0.46	0.00
Uniform Delay (d), s/veh	55.4	0.0	27.7	32.7	53.6	36.9	55.5	64.2	64.2	47.1	47.2	0.0
Incr Delay (d2), s/veh	47.0	0.0	0.5	0.2	25.5	0.1	42.1	4.7	4.6	0.4	14.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	40.0	0.0	19.8	5.1	39.9	4.3	22.9	20.6	21.2	3.8	20.8	0.0
LnGrp Delay(d),s/veh	102.4	0.0	28.2	32.9	79.1	37.0	97.6	68.9	68.8	47.5	61.8	0.0
LnGrp LOS	F		C	C	E	D	F	E	E	D	E	
Approach Vol, veh/h		841			789			914			739	
Approach Delay, s/veh		62.1			69.4			77.7			60.6	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	56.4	10.8	88.0	27.6	39.6	36.2	62.6
Change Period (Y+Rc), s	4.5	4.5	4.0	4.5	4.5	4.5	4.0	4.5
Max Green Setting (Gmax), s	6.3	51.4	6.8	83.5	23.1	35.1	32.2	58.1
Max Q Clear Time (g_c+I1), s	16.7	31.2	8.2	30.8	23.9	34.5	34.2	59.0
Green Ext Time (p_c), s	0.0	10.3	0.0	11.4	0.0	0.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	312	106	15	359	44	260	295	44	20	170	106
Future Volume (veh/h)	70	312	106	15	359	44	260	295	44	20	170	106
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.99		0.93	0.95		0.87	1.00		0.89
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1800	1782	1800	1800	1782	1800	1800	1782	1800
Adj Flow Rate, veh/h	74	328	112	16	378	46	274	311	46	21	179	112
Adj No. of Lanes	1	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	383	482	165	68	581	69	342	321	46	83	473	278
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	953	1251	427	25	1508	179	551	676	97	49	996	585
Grp Volume(v), veh/h	74	0	440	440	0	0	631	0	0	312	0	0
Grp Sat Flow(s),veh/h/ln	953	0	1679	1712	0	0	1324	0	0	1630	0	0
Q Serve(g_s), s	0.0	0.0	14.0	0.0	0.0	0.0	22.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	14.0	13.4	0.0	0.0	30.5	0.0	0.0	8.2	0.0	0.0
Prop In Lane	1.00		0.25	0.04		0.10	0.43		0.07	0.07		0.36
Lane Grp Cap(c), veh/h	383	0	647	718	0	0	709	0	0	833	0	0
V/C Ratio(X)	0.19	0.00	0.68	0.61	0.00	0.00	0.89	0.00	0.00	0.37	0.00	0.00
Avail Cap(c_a), veh/h	468	0	797	868	0	0	709	0	0	833	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.3	0.0	16.5	16.3	0.0	0.0	17.0	0.0	0.0	11.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	3.0	1.8	0.0	0.0	14.1	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	11.4	11.0	0.0	0.0	19.9	0.0	0.0	6.6	0.0	0.0
LnGrp Delay(d),s/veh	14.8	0.0	19.5	18.1	0.0	0.0	31.1	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	B		B	B			C			B		
Approach Vol, veh/h		514			440			631			312	
Approach Delay, s/veh		18.8			18.1			31.1			11.6	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		35.0		29.3		35.0		29.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		30.5		30.5		30.5		30.5
Max Q Clear Time (g_c+I1), s		32.5		16.0		10.2		15.4
Green Ext Time (p_c), s		0.0		8.7		12.0		9.0

Intersection Summary		
HCM 2010 Ctrl Delay		21.6
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	25.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	122	200	69	53	212	65	103	259	135	83	81	34
Future Vol, veh/h	122	200	69	53	212	65	103	259	135	83	81	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	1	1	1
Mvmt Flow	128	211	73	56	223	68	108	273	142	87	85	36
Number of Lanes	1	1	0	1	1	0	0	1	1	0	1	0

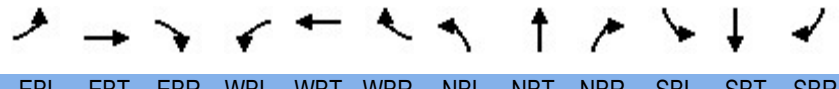
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	20.8	23.2	34	20.3
HCM LOS	C	C	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	28%	0%	100%	0%	100%	0%	42%
Vol Thru, %	72%	0%	0%	74%	0%	77%	41%
Vol Right, %	0%	100%	0%	26%	0%	23%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	362	135	122	269	53	277	198
LT Vol	103	0	122	0	53	0	83
Through Vol	259	0	0	200	0	212	81
RT Vol	0	135	0	69	0	65	34
Lane Flow Rate	381	142	128	283	56	292	208
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.851	0.283	0.309	0.627	0.136	0.657	0.503
Departure Headway (Hd)	8.04	7.172	8.67	7.966	8.8	8.111	8.68
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	453	504	415	453	407	446	415
Service Time	5.74	4.872	6.426	5.721	6.556	5.866	6.742
HCM Lane V/C Ratio	0.841	0.282	0.308	0.625	0.138	0.655	0.501
HCM Control Delay	42	12.7	15.3	23.3	12.9	25.2	20.3
HCM Lane LOS	E	B	C	C	B	D	C
HCM 95th-tile Q	8.5	1.2	1.3	4.2	0.5	4.6	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	578	354	0	4	404	4	8	11	2	84	7	431
Future Volume (veh/h)	578	354	0	4	404	4	8	11	2	84	7	431
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		0.90	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	1800	1765	1800	1800	1748	1748	1800	1800	1800	1800	1782	1782
Adj Flow Rate, veh/h	608	373	0	4	425	4	8	12	2	88	7	454
Adj No. of Lanes	0	2	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	0	0	0	1	1	1
Cap, veh/h	778	776	0	4	462	372	14	22	4	200	16	884
Arrive On Green	0.77	0.77	0.00	0.27	0.27	0.27	0.02	0.02	0.02	0.13	0.13	0.13
Sat Flow, veh/h	1681	1765	0	16	1730	1391	626	939	156	1578	126	1443
Grp Volume(v), veh/h	608	373	0	429	0	4	22	0	0	95	0	454
Grp Sat Flow(s),veh/h/ln	1681	1676	0	1747	0	1391	1721	0	0	1703	0	1443
Q Serve(g_s), s	34.4	13.3	0.0	39.6	0.0	0.4	2.1	0.0	0.0	8.6	0.0	21.0
Cycle Q Clear(g_c), s	34.4	13.3	0.0	39.6	0.0	0.4	2.1	0.0	0.0	8.6	0.0	21.0
Prop In Lane	1.00		0.00	0.01		1.00	0.36		0.09	0.93		1.00
Lane Grp Cap(c), veh/h	778	776	0	467	0	372	40	0	0	215	0	884
V/C Ratio(X)	0.78	0.48	0.00	0.92	0.00	0.01	0.55	0.00	0.00	0.44	0.00	0.51
Avail Cap(c_a), veh/h	778	776	0	579	0	461	259	0	0	215	0	884
HCM Platoon Ratio	1.67	1.67	1.67	1.00	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	0.92	0.00	0.92	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	11.6	0.0	59.1	0.0	44.7	80.2	0.0	0.0	67.1	0.0	18.3
Incr Delay (d2), s/veh	6.0	1.0	0.0	24.3	0.0	0.0	16.1	0.0	0.0	3.9	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	23.7	10.2	0.0	29.6	0.0	0.3	2.1	0.0	0.0	7.7	0.0	28.7
LnGrp Delay(d),s/veh	20.0	12.6	0.0	83.4	0.0	44.8	96.4	0.0	0.0	70.9	0.0	19.6
LnGrp LOS	C	B		F		D	F			E		B
Approach Vol, veh/h		981			433			22			549	
Approach Delay, s/veh		17.2			83.0			96.4			28.5	
Approach LOS		B			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		8.8		81.8		26.0		49.3
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		25.0		45.0		21.0		55.0
Max Q Clear Time (g_c+I1), s		4.1		36.4		23.0		41.6
Green Ext Time (p_c), s		0.1		6.0		0.0		2.7

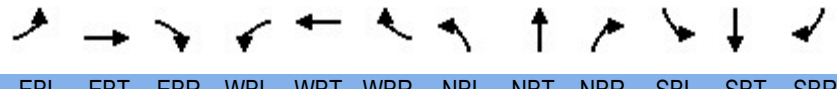
Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	959	431	115	0	631	223	104	947	18	116	626	635
Future Volume (veh/h)	959	431	115	0	631	223	104	947	18	116	626	635
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	0	1765	1800	1782	1782	1800	1765	1765	1765
Adj Flow Rate, veh/h	1009	454	121	0	664	235	109	997	19	122	659	668
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	2	2	1	1	1	2	2	2
Cap, veh/h	903	747	199	0	589	209	219	1013	19	119	841	781
Arrive On Green	0.27	0.55	0.55	0.00	0.24	0.24	0.03	0.10	0.10	0.01	0.08	0.08
Sat Flow, veh/h	3293	1356	361	0	2504	855	1697	3398	65	1681	3353	1473
Grp Volume(v), veh/h	1009	0	575	0	461	438	109	497	519	122	659	668
Grp Sat Flow(s),veh/h/ln	1646	0	1717	0	1676	1594	1697	1693	1770	1681	1676	1473
Q Serve(g_s), s	45.5	0.0	37.5	0.0	40.5	40.5	4.3	48.6	48.6	7.5	32.0	26.7
Cycle Q Clear(g_c), s	45.5	0.0	37.5	0.0	40.5	40.5	4.3	48.6	48.6	7.5	32.0	26.7
Prop In Lane	1.00		0.21	0.00		0.54	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	903	0	946	0	409	389	219	505	528	119	841	781
V/C Ratio(X)	1.12	0.00	0.61	0.00	1.13	1.13	0.50	0.98	0.98	1.02	0.78	0.86
Avail Cap(c_a), veh/h	903	0	946	0	409	389	219	505	528	119	984	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	0.60	0.60	0.60	0.60	0.60	0.60
Uniform Delay (d), s/veh	60.3	0.0	25.1	0.0	62.8	62.8	73.2	74.4	74.4	80.4	71.7	47.1
Incr Delay (d2), s/veh	67.9	0.0	1.1	0.0	83.5	84.8	1.3	27.4	26.8	69.7	4.4	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(95%),veh/ln	52.5	0.0	25.0	0.0	50.8	48.6	7.8	33.3	34.5	14.0	20.4	49.6
LnGrp Delay(d),s/veh	128.1	0.0	26.3	0.0	146.3	147.5	74.5	101.9	101.2	150.4	76.1	54.4
LnGrp LOS	F		C		F	F	E	F	F	F	E	D
Approach Vol, veh/h		1584			899			1125			1449	
Approach Delay, s/veh		91.1			146.9			98.9			72.4	
Approach LOS		F			F			F			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	13.0	55.0		98.0	20.8	47.2	52.0	46.0
Change Period (Y+Rc), s	5.5	5.5		6.5	5.5	5.5	6.5	5.5
Max Green Setting (Gmax), s	7.5	49.5		91.5	8.3	48.7	45.5	40.5
Max Q Clear Time (g_c+I1), s	9.5	50.6		39.5	6.3	34.0	47.5	42.5
Green Ext Time (p_c), s	0.0	0.0		17.8	0.2	7.7	0.0	0.0

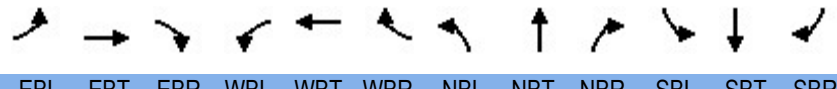
Intersection Summary		
HCM 2010 Ctrl Delay	97.4	
HCM 2010 LOS	F	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	60	28	1	28	32	0	2003	1	0	1337	211
Future Volume (veh/h)	256	60	28	1	28	32	0	2003	1	0	1337	211
Number	7	4	14	3	8	18	5	2	12	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		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1800	1800	1800	0	1782	1800	0	1765	1800
Adj Flow Rate, veh/h	269	63	29	1	29	34	0	2108	1	0	1407	222
Adj No. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	1	1	0	2	2
Cap, veh/h	292	60	27	23	188	215	0	2438	1	0	2038	318
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.00	0.70	0.70	0.00	1.00	1.00
Sat Flow, veh/h	1042	244	112	5	772	880	0	3562	2	0	2993	453
Grp Volume(v), veh/h	361	0	0	64	0	0	0	1027	1082	0	805	824
Grp Sat Flow(s),veh/h/ln	1399	0	0	1657	0	0	0	1693	1782	0	1676	1681
Q Serve(g_s), s	35.4	0.0	0.0	0.0	0.0	0.0	0.0	76.4	76.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	40.5	0.0	0.0	5.1	0.0	0.0	0.0	76.4	76.4	0.0	0.0	0.0
Prop In Lane	0.75		0.08	0.02		0.53	0.00		0.00	0.00		0.27
Lane Grp Cap(c), veh/h	379	0	0	426	0	0	0	1188	1251	0	1177	1179
V/C Ratio(X)	0.95	0.00	0.00	0.15	0.00	0.00	0.00	0.86	0.86	0.00	0.68	0.70
Avail Cap(c_a), veh/h	379	0	0	426	0	0	0	1188	1251	0	1177	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.09	0.00	0.63	0.63
Uniform Delay (d), s/veh	63.9	0.0	0.0	49.4	0.0	0.0	0.0	18.8	18.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	34.0	0.0	0.0	0.2	0.0	0.0	0.0	0.9	0.8	0.0	2.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	27.5	0.0	0.0	4.2	0.0	0.0	0.0	38.6	40.6	0.0	1.2	1.3
LnGrp Delay(d),s/veh	98.0	0.0	0.0	49.6	0.0	0.0	0.0	19.6	19.6	0.0	2.1	2.2
LnGrp LOS	F			D				B	B		A	A
Approach Vol, veh/h		361			64			2109			1629	
Approach Delay, s/veh		98.0			49.6			19.6			2.1	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		121.0		45.0		121.0		45.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		116.5		40.5		116.5		40.5
Max Q Clear Time (g_c+I1), s		78.4		42.5		2.0		7.1
Green Ext Time (p_c), s		37.9		0.0		113.1		3.8

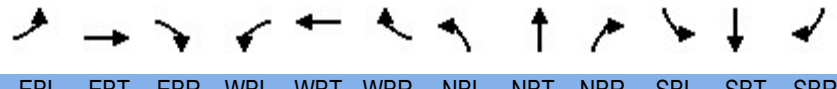
Intersection Summary		
HCM 2010 Ctrl Delay		20.0
HCM 2010 LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	899	38	240	1097	38	81	108	187	32	86	33
Future Volume (veh/h)	49	899	38	240	1097	38	81	108	187	32	86	33
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		0.99	1.00		0.97	1.00		0.95	0.96		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1765	1765	1800	1782	1782	1782	1748	1748	1800
Adj Flow Rate, veh/h	52	946	40	253	1155	40	85	114	197	34	91	35
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	3	3	3
Cap, veh/h	91	1443	60	371	2117	73	107	487	393	238	197	76
Arrive On Green	0.50	0.50	0.50	0.19	1.00	1.00	0.06	0.27	0.27	0.17	0.17	0.17
Sat Flow, veh/h	105	2863	119	1681	3302	114	1697	1782	1438	1011	1179	453
Grp Volume(v), veh/h	502	0	536	253	586	609	85	114	197	34	0	126
Grp Sat Flow(s),veh/h/ln	1489	0	1599	1681	1676	1740	1697	1782	1438	1011	0	1632
Q Serve(g_s), s	9.2	0.0	26.3	7.8	0.0	0.0	5.2	5.2	12.1	3.0	0.0	7.3
Cycle Q Clear(g_c), s	23.3	0.0	26.3	7.8	0.0	0.0	5.2	5.2	12.1	3.0	0.0	7.3
Prop In Lane	0.10		0.07	1.00		0.07	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	788	0	806	371	1075	1116	107	487	393	238	0	273
V/C Ratio(X)	0.64	0.00	0.67	0.68	0.55	0.55	0.79	0.23	0.50	0.14	0.00	0.46
Avail Cap(c_a), veh/h	788	0	806	397	1075	1116	154	620	500	285	0	350
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.58	0.58	0.58	0.41	0.41	0.41	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	19.4	13.9	0.0	0.0	48.5	29.6	32.1	37.7	0.0	39.4
Incr Delay (d2), s/veh	3.9	0.0	4.3	2.5	1.1	1.1	7.4	0.1	0.4	0.3	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	0.0	18.2	6.1	0.6	0.6	4.4	4.3	7.2	1.6	0.0	6.1
LnGrp Delay(d),s/veh	22.1	0.0	23.7	16.4	1.1	1.1	55.9	29.7	32.5	37.9	0.0	40.7
LnGrp LOS	C		C	B	A	A	E	C	C	D		D
Approach Vol, veh/h		1038			1448			396			160	
Approach Delay, s/veh		22.9			3.8			36.8			40.1	
Approach LOS		C			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		33.2		71.8	11.1	22.1	14.4	57.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s		36.5		59.5	9.5	22.5	11.5	43.5
Max Q Clear Time (g_c+I1), s		14.1		2.0	7.2	9.3	9.8	28.3
Green Ext Time (p_c), s		2.4		29.6	0.0	2.0	0.1	12.1

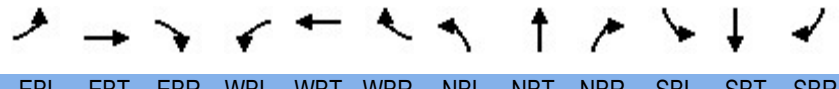
Intersection Summary		
HCM 2010 Ctrl Delay		16.5
HCM 2010 LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	982	44	0	1332	38	86	138	237	30	90	34
Future Volume (veh/h)	23	982	44	0	1332	38	86	138	237	30	90	34
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1782	1782	1800	1800	1765	1800
Adj Flow Rate, veh/h	24	1034	46	0	1402	40	91	145	249	32	95	36
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	49	2017	90	2	1812	52	113	176	303	62	148	48
Arrive On Green	0.01	0.20	0.20	0.00	0.72	0.72	0.07	0.30	0.30	0.19	0.19	0.19
Sat Flow, veh/h	1697	3301	147	1697	3359	96	1697	581	998	107	766	248
Grp Volume(v), veh/h	24	530	550	0	706	736	91	0	394	163	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1755	1697	1693	1762	1697	0	1579	1121	0	0
Q Serve(g_s), s	1.5	29.3	29.3	0.0	27.7	27.9	5.6	0.0	24.3	3.2	0.0	0.0
Cycle Q Clear(g_c), s	1.5	29.3	29.3	0.0	27.7	27.9	5.6	0.0	24.3	16.0	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.05	1.00		0.63	0.20		0.22
Lane Grp Cap(c), veh/h	49	1035	1073	2	913	951	113	0	479	258	0	0
V/C Ratio(X)	0.49	0.51	0.51	0.00	0.77	0.77	0.80	0.00	0.82	0.63	0.00	0.00
Avail Cap(c_a), veh/h	186	1035	1073	121	913	951	121	0	549	302	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.00	0.70	0.70	0.09	0.00	0.09	1.00	0.00	0.00
Uniform Delay (d), s/veh	51.2	28.0	28.0	0.0	10.8	10.8	48.3	0.0	34.0	39.3	0.0	0.0
Incr Delay (d2), s/veh	4.7	1.1	1.1	0.0	4.5	4.4	3.4	0.0	0.9	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	19.0	19.6	0.0	18.7	19.7	3.5	0.0	12.3	8.3	0.0	0.0
LnGrp Delay(d),s/veh	55.9	29.1	29.1	0.0	15.2	15.1	51.7	0.0	34.8	42.5	0.0	0.0
LnGrp LOS	E	C	C		B	B	D		C	D		
Approach Vol, veh/h		1104			1442			485			163	
Approach Delay, s/veh		29.7			15.2			38.0			42.5	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	68.7	11.5	24.8	7.5	61.1		36.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	47.5	7.5	23.5	11.5	43.5		36.5
Max Q Clear Time (g_c+I1), s	10.0	31.3	7.6	18.0	3.5	29.9		26.3
Green Ext Time (p_c), s	0.0	13.6	0.0	1.8	0.0	11.6		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1299	19	32	1243	77	35	60	74	39	7	80
Future Volume (veh/h)	42	1299	19	32	1243	77	35	60	74	39	7	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	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	1782	1782	1800	1765	1765	1800	1800	1800	1800	1765	1765	1800
Adj Flow Rate, veh/h	44	1367	20	34	1308	81	37	63	78	41	7	84
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	2	2	2
Cap, veh/h	239	1934	28	347	1795	111	65	106	131	67	17	205
Arrive On Green	0.08	1.00	1.00	0.04	0.56	0.56	0.04	0.15	0.15	0.04	0.15	0.15
Sat Flow, veh/h	1697	3416	50	1681	3202	198	1714	713	883	1681	113	1362
Grp Volume(v), veh/h	44	677	710	34	683	706	37	0	141	41	0	91
Grp Sat Flow(s),veh/h/ln	1697	1693	1773	1681	1676	1723	1714	0	1596	1681	0	1475
Q Serve(g_s), s	1.1	0.0	0.0	0.9	31.8	32.0	2.2	0.0	8.7	2.5	0.0	5.9
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.9	31.8	32.0	2.2	0.0	8.7	2.5	0.0	5.9
Prop In Lane	1.00		0.03	1.00		0.11	1.00		0.55	1.00		0.92
Lane Grp Cap(c), veh/h	239	958	1004	347	940	966	65	0	237	67	0	222
V/C Ratio(X)	0.18	0.71	0.71	0.10	0.73	0.73	0.57	0.00	0.59	0.61	0.00	0.41
Avail Cap(c_a), veh/h	274	958	1004	390	940	966	106	0	342	104	0	316
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	0.0	8.7	17.1	17.2	49.7	0.0	41.7	49.6	0.0	40.3
Incr Delay (d2), s/veh	0.3	3.7	3.6	0.1	4.9	4.9	7.7	0.0	2.4	8.7	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	1.8	1.8	0.8	22.4	23.0	2.2	0.0	7.1	2.4	0.0	4.4
LnGrp Delay(d),s/veh	13.7	3.7	3.6	8.8	22.0	22.0	57.4	0.0	44.1	58.3	0.0	41.6
LnGrp LOS	B	A	A	A	C	C	E		D	E		D
Approach Vol, veh/h		1431			1423			178			132	
Approach Delay, s/veh		3.9			21.7			46.9			46.8	
Approach LOS		A			C			D			D	

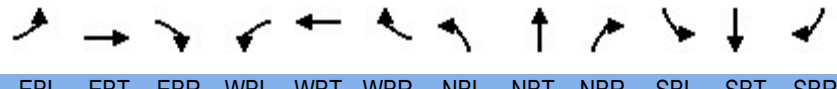
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	21.1	9.3	64.9	9.5	21.3	9.8	64.4
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	6.5	22.5	6.5	47.5	6.5	22.5	6.5	47.5
Max Q Clear Time (g_c+I1), s	4.2	10.7	2.9	2.0	4.2	7.9	3.1	34.0
Green Ext Time (p_c), s	0.0	1.1	0.0	33.7	0.0	1.2	0.0	12.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	362	103	11	619	36	200	192	60	19	117	0
Future Volume (veh/h)	23	362	103	11	619	36	200	192	60	19	117	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.94	0.99		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	1782	1782	1782	1748	1748	1800	1800	1800	1800	1800	1731	1731
Adj Flow Rate, veh/h	24	381	108	12	652	38	211	202	63	20	123	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	4	4	4
Cap, veh/h	54	911	772	30	812	47	175	96	408	57	232	418
Arrive On Green	0.03	0.51	0.51	0.02	0.50	0.50	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	1697	1782	1510	1664	1633	95	352	337	1435	0	817	1471
Grp Volume(v), veh/h	24	381	108	12	0	690	413	0	63	143	0	0
Grp Sat Flow(s),veh/h/ln	1697	1782	1510	1664	0	1728	688	0	1435	817	0	1471
Q Serve(g_s), s	1.0	9.6	2.7	0.5	0.0	24.1	0.0	0.0	2.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	9.6	2.7	0.5	0.0	24.1	20.5	0.0	2.4	20.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.06	0.51		1.00	0.14		1.00
Lane Grp Cap(c), veh/h	54	911	772	30	0	859	271	0	408	289	0	418
V/C Ratio(X)	0.45	0.42	0.14	0.41	0.00	0.80	1.52	0.00	0.15	0.50	0.00	0.00
Avail Cap(c_a), veh/h	482	1617	1371	473	0	1568	271	0	408	289	0	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.3	11.0	9.3	35.1	0.0	15.2	28.7	0.0	19.3	21.0	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.3	0.1	8.7	0.0	1.8	254.0	0.0	0.2	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	8.3	2.0	0.6	0.0	17.4	44.0	0.0	1.7	4.2	0.0	0.0
LnGrp Delay(d),s/veh	40.0	11.3	9.4	43.8	0.0	17.0	282.7	0.0	19.5	22.3	0.0	0.0
LnGrp LOS	D	B	A	D		B	F		B	C		
Approach Vol, veh/h		513			702			476			143	
Approach Delay, s/veh		12.2			17.5			247.9			22.3	
Approach LOS		B			B			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.0	5.8	41.4		25.0	6.8	40.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		20.5	20.5	65.5		20.5	20.5	65.5
Max Q Clear Time (g_c+I1), s		22.5	2.5	11.6		22.5	3.0	26.1
Green Ext Time (p_c), s		0.0	0.0	10.2		0.0	0.0	9.8

Intersection Summary	
HCM 2010 Ctrl Delay	76.2
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	929	50	37	832	45	137	348	129	46	111	408
Future Volume (veh/h)	180	929	50	37	832	45	137	348	129	46	111	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.96	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	1748	1748	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	189	978	53	39	876	47	144	366	136	48	117	429
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	218	1179	64	65	901	48	172	473	176	72	106	390
Arrive On Green	0.13	0.37	0.37	0.04	0.28	0.28	0.10	0.38	0.38	0.04	0.32	0.32
Sat Flow, veh/h	1664	3201	173	1697	3265	175	1714	1238	460	1697	328	1202
Grp Volume(v), veh/h	189	507	524	39	454	469	144	0	502	48	0	546
Grp Sat Flow(s),veh/h/ln	1664	1660	1714	1697	1693	1747	1714	0	1698	1697	0	1530
Q Serve(g_s), s	11.9	29.7	29.7	2.4	28.4	28.4	8.8	0.0	27.7	3.0	0.0	34.7
Cycle Q Clear(g_c), s	11.9	29.7	29.7	2.4	28.4	28.4	8.8	0.0	27.7	3.0	0.0	34.7
Prop In Lane	1.00		0.10	1.00		0.10	1.00		0.27	1.00		0.79
Lane Grp Cap(c), veh/h	218	612	631	65	467	482	172	0	649	72	0	497
V/C Ratio(X)	0.87	0.83	0.83	0.60	0.97	0.97	0.84	0.00	0.77	0.66	0.00	1.10
Avail Cap(c_a), veh/h	251	613	633	97	467	482	188	0	649	100	0	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.5	30.7	30.7	50.6	38.3	38.3	47.2	0.0	29.0	50.4	0.0	36.1
Incr Delay (d2), s/veh	24.4	9.5	9.2	10.1	34.4	33.8	26.2	0.0	6.0	11.9	0.0	70.3
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(95%),veh/ln	11.3	21.5	22.1	2.4	24.6	25.2	9.2	0.0	20.2	2.9	0.0	43.5
LnGrp Delay(d),s/veh	70.0	40.2	39.9	60.7	72.7	72.1	73.5	0.0	34.9	62.3	0.0	106.4
LnGrp LOS	E	D	D	E	E	E	E		C	E		F
Approach Vol, veh/h		1220			962			646			594	
Approach Delay, s/veh		44.7			71.9			43.5			102.8	
Approach LOS		D			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	45.4	8.6	43.9	15.2	39.2	18.5	34.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.3	40.1	6.1	39.5	11.7	34.7	16.1	29.5
Max Q Clear Time (g_c+I1), s	5.0	29.7	4.4	31.7	10.8	36.7	13.9	30.4
Green Ext Time (p_c), s	0.0	6.0	0.0	6.7	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.2
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1338	3	28	1343	0	64
Future Vol, veh/h	1338	3	28	1343	0	64
Conflicting Peds, #/hr	0	5	5	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	1408	3	29	1414	0	67

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1416	0	2180	713
Stage 1	-	-	-	-	1415	-
Stage 2	-	-	-	-	765	-
Critical Hdwy	-	-	4.12	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.21	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	482	-	40	379
Stage 1	-	-	-	-	194	-
Stage 2	-	-	-	-	425	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	480	-	29	377
Mov Cap-2 Maneuver	-	-	-	-	29	-
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	305	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	377	-	-	480	-
HCM Lane V/C Ratio	0.179	-	-	0.061	-
HCM Control Delay (s)	16.6	-	-	13	1.8
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	30.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	292	58	61	338	30	164	123	135	10	52	11
Future Vol, veh/h	10	292	58	61	338	30	164	123	135	10	52	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	4	4	4
Mvmt Flow	11	307	61	64	356	32	173	129	142	11	55	12
Number of Lanes	1	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	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	29.2	30.2	35.1	13.1
HCM LOS	D	D	E	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	39%	100%	0%	100%	0%	14%
Vol Thru, %	29%	0%	83%	0%	92%	71%
Vol Right, %	32%	0%	17%	0%	8%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	422	10	350	61	368	73
LT Vol	164	10	0	61	0	10
Through Vol	123	0	292	0	338	52
RT Vol	135	0	58	0	30	11
Lane Flow Rate	444	11	368	64	387	77
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.831	0.023	0.757	0.142	0.796	0.177
Departure Headway (Hd)	6.85	8.035	7.399	7.976	7.402	8.302
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	533	447	490	451	492	433
Service Time	4.85	5.749	5.113	5.689	5.115	6.35
HCM Lane V/C Ratio	0.833	0.025	0.751	0.142	0.787	0.178
HCM Control Delay	35.1	10.9	29.7	12	33.2	13.1
HCM Lane LOS	E	B	D	B	D	B
HCM 95th-tile Q	8.4	0.1	6.5	0.5	7.3	0.6

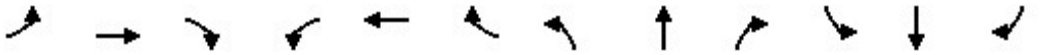
Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	873	6	48	711	64	12	7	29	1	5	54
Future Vol, veh/h	92	873	6	48	711	64	12	7	29	1	5	54
Conflicting Peds, #/hr	44	0	20	20	0	44	39	0	105	105	0	39
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	97	919	6	51	748	67	13	7	31	1	5	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	859	0	0	945	0	0	2090	2097	588	1690	2067	865
Stage 1	-	-	-	-	-	-	1136	1136	-	928	928	-
Stage 2	-	-	-	-	-	-	954	961	-	762	1139	-
Critical Hdwy	4.13	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.219	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	780	-	-	729	-	-	35	53	457	68	55	356
Stage 1	-	-	-	-	-	-	218	279	-	324	349	-
Stage 2	-	-	-	-	-	-	313	337	-	368	278	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	754	-	-	718	-	-	18	32	414	34	33	334
Mov Cap-2 Maneuver	-	-	-	-	-	-	18	32	-	34	33	-
Stage 1	-	-	-	-	-	-	158	202	-	230	292	-
Stage 2	-	-	-	-	-	-	215	282	-	222	201	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.6	260.3	36.8
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	50	754	-	-	718	-	-	175
HCM Lane V/C Ratio	1.011	0.128	-	-	0.07	-	-	0.361
HCM Control Delay (s)	260.3	10.5	1.1	-	10.4	0	-	36.8
HCM Lane LOS	F	B	A	-	B	A	-	E
HCM 95th %tile Q(veh)	4.4	0.4	-	-	0.2	-	-	1.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	42	0	0	0	33	2050	0	0	1389	44
Future Volume (veh/h)	27	0	42	0	0	0	33	2050	0	0	1389	44
Number	7	4	14	3	8	18	5	2	12	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		0.99	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	1731	1731	1800	1800	1800	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	28	0	44	0	0	0	35	2158	0	0	1462	46
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	2	2	2
Cap, veh/h	110	0	68	34	84	0	338	3068	0	175	2903	91
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.02	0.91	0.00	0.00	0.88	0.88
Sat Flow, veh/h	1627	0	1452	1384	1800	0	1681	3441	0	1681	3317	104
Grp Volume(v), veh/h	28	0	44	0	0	0	35	2158	0	0	738	770
Grp Sat Flow(s),veh/h/ln	1627	0	1452	1384	1800	0	1681	1676	0	1681	1676	1745
Q Serve(g_s), s	3.5	0.0	6.2	0.0	0.0	0.0	0.4	32.1	0.0	0.0	20.5	20.6
Cycle Q Clear(g_c), s	3.5	0.0	6.2	0.0	0.0	0.0	0.4	32.1	0.0	0.0	20.5	20.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	110	0	68	34	84	0	338	3068	0	175	1467	1527
V/C Ratio(X)	0.25	0.00	0.65	0.00	0.00	0.00	0.10	0.70	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	790	0	674	612	835	0	343	3068	0	214	1467	1527
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	0.00	0.00	0.27	0.27	0.00	0.00	0.69	0.69
Uniform Delay (d), s/veh	96.6	0.0	97.9	0.0	0.0	0.0	2.3	2.1	0.0	0.0	2.9	2.9
Incr Delay (d2), s/veh	1.2	0.0	9.9	0.0	0.0	0.0	0.0	0.4	0.0	0.0	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(95%),veh/ln	2.9	0.0	4.8	0.0	0.0	0.0	0.4	17.8	0.0	0.0	14.0	14.6
LnGrp Delay(d),s/veh	97.8	0.0	107.9	0.0	0.0	0.0	2.4	2.5	0.0	0.0	3.8	3.7
LnGrp LOS	F		F				A	A			A	A
Approach Vol, veh/h		72			0			2193			1508	
Approach Delay, s/veh		104.0			0.0			2.5			3.8	
Approach LOS		F						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	195.2		13.8	8.3	186.9		13.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	95.0		97.0	5.0	95.0		97.0
Max Q Clear Time (g_c+I1), s	0.0	34.1		8.2	2.4	22.6		0.0
Green Ext Time (p_c), s	0.0	55.9		0.4	0.0	65.4		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		4.9
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	134	47	7	252	0	103	50	13	10	41	0
Future Volume (veh/h)	8	134	47	7	252	0	103	50	13	10	41	0
Number	7	4	14	3	8	18	5	2	12	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	0.99		1.00	0.99		0.97	0.99		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	1800	1765	1800	1800	1748	1800	1800	1782	1800	1800	1731	1800
Adj Flow Rate, veh/h	8	141	49	7	265	0	108	53	14	11	43	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	4	4	4
Cap, veh/h	174	446	150	169	628	0	467	187	35	234	432	0
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.00	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	24	1224	411	16	1724	0	742	662	122	152	1528	0
Grp Volume(v), veh/h	198	0	0	272	0	0	175	0	0	54	0	0
Grp Sat Flow(s),veh/h/ln	1659	0	0	1740	0	0	1526	0	0	1680	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0	2.7	0.0	0.0	1.9	0.0	0.0	0.5	0.0	0.0
Prop In Lane	0.04		0.25	0.03		0.00	0.62		0.08	0.20		0.00
Lane Grp Cap(c), veh/h	770	0	0	797	0	0	688	0	0	666	0	0
V/C Ratio(X)	0.26	0.00	0.00	0.34	0.00	0.00	0.25	0.00	0.00	0.08	0.00	0.00
Avail Cap(c_a), veh/h	2409	0	0	2527	0	0	2287	0	0	2422	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	0.0	5.4	0.0	0.0	6.5	0.0	0.0	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	2.3	0.0	0.0	1.6	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	5.4	0.0	0.0	5.7	0.0	0.0	6.7	0.0	0.0	6.1	0.0	0.0
LnGrp LOS	A			A			A			A		
Approach Vol, veh/h		198			272			175			54	
Approach Delay, s/veh		5.4			5.7			6.7			6.1	
Approach LOS		A			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		10.4		12.3		10.4		12.3
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		31.0		31.0		31.0		31.0
Max Q Clear Time (g_c+I1), s		3.9		3.9		2.5		4.7
Green Ext Time (p_c), s		1.4		3.2		1.4		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A

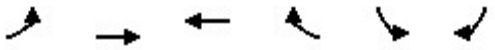
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	533	11	170	902	13	52
Future Vol, veh/h	533	11	170	902	13	52
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	561	12	179	949	14	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	576	0	1877	570
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	1307	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1002	-	80	525
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	256	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1000	-	66	524
Mov Cap-2 Maneuver	-	-	-	-	191	-
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	210	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	389	-	-	1000	-
HCM Lane V/C Ratio	0.176	-	-	0.179	-
HCM Control Delay (s)	16.2	-	-	9.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.7	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	972	549	844	16	0	1223
Future Volume (vph)	972	549	844	16	0	1223
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.5	6.5	5.5			6.5
Lane Util. Factor	0.97	1.00	0.95			0.88
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3144	1706	3295			2603
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3144	1706	3295			2603
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1023	578	888	17	0	1287
RTOR Reduction (vph)	0	0	1	0	0	6
Lane Group Flow (vph)	1023	578	904	0	0	1281
Confl. Peds. (#/hr)	8			8	10	
Heavy Vehicles (%)	2%	2%	0%	0%	0%	0%
Turn Type	Prot	NA	NA			pt+ov
Protected Phases	1	6	2			1 4
Permitted Phases						
Actuated Green, G (s)	32.5	67.8	29.8			63.2
Effective Green, g (s)	32.5	67.8	29.8			63.2
Actuated g/C Ratio	0.31	0.65	0.28			0.60
Clearance Time (s)	6.5	6.5	5.5			
Vehicle Extension (s)	3.5	6.0	3.5			
Lane Grp Cap (vph)	973	1101	935			1566
v/s Ratio Prot	c0.33	0.34	c0.27			c0.49
v/s Ratio Perm						
v/c Ratio	1.05	0.52	0.97			0.82
Uniform Delay, d1	36.2	10.0	37.1			16.4
Progression Factor	1.00	1.00	1.00			0.49
Incremental Delay, d2	43.3	1.8	21.5			3.1
Delay (s)	79.6	11.8	58.7			11.1
Level of Service	E	B	E			B
Approach Delay (s)		55.1	58.7		11.1	
Approach LOS		E	E		B	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	577	20	198	1171	18	10	9	268	7	34	15
Future Volume (veh/h)	44	577	20	198	1171	18	10	9	268	7	34	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1782	1800	1800	1800	1800	1765	1800	1800	1800	1800
Adj Flow Rate, veh/h	46	607	21	208	1233	19	11	9	282	7	36	16
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	0	0	0
Cap, veh/h	384	2060	899	577	2194	34	36	17	315	55	238	97
Arrive On Green	0.04	0.61	0.61	0.14	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1697	3386	1478	1714	3446	53	24	76	1406	97	1063	431
Grp Volume(v), veh/h	46	607	21	208	612	640	302	0	0	59	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1478	1714	1710	1789	1505	0	0	1591	0	0
Q Serve(g_s), s	1.2	10.3	0.7	5.6	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	10.3	0.7	5.6	0.0	0.0	23.3	0.0	0.0	3.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.04		0.93	0.12		0.27
Lane Grp Cap(c), veh/h	384	2060	899	577	1089	1139	368	0	0	390	0	0
V/C Ratio(X)	0.12	0.29	0.02	0.36	0.56	0.56	0.82	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	444	2060	899	833	1089	1139	457	0	0	484	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.63	0.63	0.63	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	11.2	9.3	6.9	0.0	0.0	45.1	0.0	0.0	37.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.2	1.3	1.3	9.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	8.5	0.5	4.7	0.7	0.7	16.0	0.0	0.0	2.9	0.0	0.0
LnGrp Delay(d),s/veh	7.8	11.6	9.4	7.2	1.3	1.3	54.5	0.0	0.0	37.6	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D			D		
Approach Vol, veh/h		674			1460			302			59	
Approach Delay, s/veh		11.3			2.1			54.5			37.6	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		30.9	12.1	77.0		30.9	8.7	80.4
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0	26.0	48.0		34.0	9.0	65.0
Max Q Clear Time (g_c+I1), s		25.3	7.6	12.3		5.3	3.2	2.0
Green Ext Time (p_c), s		1.5	0.5	19.1		2.7	0.0	24.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	729	90	170	1261	77	80	188	129	41	108	44
Future Volume (veh/h)	36	729	90	170	1261	77	80	188	129	41	108	44
Number	7	4	14	3	8	18	5	2	12	1	6	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	0.99		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	1782	1782	1800	1782	1782	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	38	767	95	179	1327	81	84	198	136	43	114	46
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	319	1641	203	439	1855	113	286	227	156	144	272	110
Arrive On Green	0.05	0.72	0.72	0.13	1.00	1.00	0.03	0.23	0.23	0.03	0.22	0.22
Sat Flow, veh/h	1697	3023	374	1697	3237	197	1714	985	677	1714	1211	489
Grp Volume(v), veh/h	38	429	433	179	692	716	84	0	334	43	0	160
Grp Sat Flow(s),veh/h/ln	1697	1693	1704	1697	1693	1741	1714	0	1662	1714	0	1700
Q Serve(g_s), s	1.2	12.8	12.8	5.6	0.0	0.0	4.0	0.0	23.2	2.3	0.0	9.7
Cycle Q Clear(g_c), s	1.2	12.8	12.8	5.6	0.0	0.0	4.0	0.0	23.2	2.3	0.0	9.7
Prop In Lane	1.00		0.22	1.00		0.11	1.00		0.41	1.00		0.29
Lane Grp Cap(c), veh/h	319	919	925	439	970	998	286	0	383	144	0	382
V/C Ratio(X)	0.12	0.47	0.47	0.41	0.71	0.72	0.29	0.00	0.87	0.30	0.00	0.42
Avail Cap(c_a), veh/h	371	919	925	624	970	998	286	0	568	154	0	581
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.78	0.78	0.78	0.09	0.00	0.09	0.82	0.00	0.82
Uniform Delay (d), s/veh	10.8	9.4	9.4	10.1	0.0	0.0	36.2	0.0	44.5	36.6	0.0	39.8
Incr Delay (d2), s/veh	0.1	1.7	1.7	0.4	3.5	3.5	0.0	0.0	0.9	0.3	0.0	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(95%),veh/ln	1.0	10.4	10.5	4.7	1.7	1.7	2.8	0.0	12.4	2.0	0.0	7.8
LnGrp Delay(d),s/veh	10.9	11.1	11.1	10.4	3.5	3.5	36.2	0.0	45.3	37.0	0.0	40.3
LnGrp LOS	B	B	B	B	A	A	D		D	D		D
Approach Vol, veh/h		900			1587			418			203	
Approach Delay, s/veh		11.1			4.3			43.5			39.6	
Approach LOS		B			A			D			D	

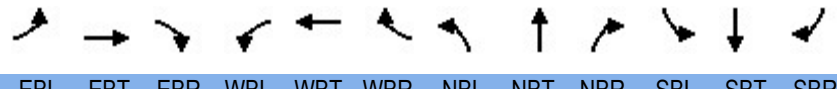
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	31.7	11.9	69.1	8.0	30.9	8.3	72.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	41.0	21.0	38.0	4.0	41.0	8.0	51.0
Max Q Clear Time (g_c+I1), s	14.3	25.2	7.6	14.8	6.0	11.7	3.2	2.0
Green Ext Time (p_c), s	0.0	2.4	0.3	15.4	0.0	2.9	0.0	23.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	850	57	55	1316	28	102	14	58	6	15	18
Future Volume (veh/h)	10	850	57	55	1316	28	102	14	58	6	15	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1800	1800	1800	1800	1748	1800	1800	1800	1800
Adj Flow Rate, veh/h	11	895	60	58	1385	29	107	15	61	6	16	19
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	3	3	3	0	0	0
Cap, veh/h	286	2270	152	531	2510	53	166	23	71	53	116	117
Arrive On Green	0.03	1.00	1.00	0.04	0.73	0.73	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1697	3218	216	1714	3425	72	780	150	465	125	765	768
Grp Volume(v), veh/h	11	471	484	58	691	723	183	0	0	41	0	0
Grp Sat Flow(s),veh/h/ln	1697	1693	1741	1714	1710	1786	1396	0	0	1658	0	0
Q Serve(g_s), s	0.2	0.0	0.0	1.0	21.7	21.8	12.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	1.0	21.7	21.8	15.2	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.12	1.00		0.04	0.58		0.33	0.15		0.46
Lane Grp Cap(c), veh/h	286	1194	1228	531	1253	1309	259	0	0	286	0	0
V/C Ratio(X)	0.04	0.39	0.39	0.11	0.55	0.55	0.71	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	387	1194	1228	586	1253	1309	426	0	0	479	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.51	0.51	0.51	0.51	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.1	0.0	0.0	3.6	7.2	7.2	49.4	0.0	0.0	44.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	0.9	0.9	1.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.5	0.5	0.8	14.3	14.8	8.9	0.0	0.0	2.2	0.0	0.0
LnGrp Delay(d),s/veh	6.1	0.8	0.8	3.6	8.1	8.1	50.7	0.0	0.0	44.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D			D		
Approach Vol, veh/h		966			1472			183			41	
Approach Delay, s/veh		0.9			7.9			50.7			44.4	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		22.2	9.1	88.7		22.2	5.8	91.9
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		33.0	9.0	66.0		33.0	9.0	66.0
Max Q Clear Time (g_c+I1), s		17.2	3.0	2.0		4.6	2.2	23.8
Green Ext Time (p_c), s		1.0	0.0	27.7		1.2	0.0	23.1

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	605	85	146	1007	31	291	259	311	37	89	37
Future Volume (veh/h)	77	605	85	146	1007	31	291	259	311	37	89	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.97		0.97	0.99		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	81	637	89	154	1060	33	306	273	327	39	94	39
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	175	961	134	298	1190	37	627	291	349	118	123	51
Arrive On Green	0.05	0.32	0.32	0.08	0.36	0.36	0.32	0.40	0.40	0.03	0.11	0.11
Sat Flow, veh/h	1697	2976	415	1697	3350	104	1714	734	879	1697	1172	486
Grp Volume(v), veh/h	81	362	364	154	536	557	306	0	600	39	0	133
Grp Sat Flow(s),veh/h/ln	1697	1693	1698	1697	1693	1761	1714	0	1613	1697	0	1658
Q Serve(g_s), s	3.3	19.1	19.2	6.1	30.9	30.9	9.5	0.0	37.0	0.0	0.0	8.1
Cycle Q Clear(g_c), s	3.3	19.1	19.2	6.1	30.9	30.9	9.5	0.0	37.0	0.0	0.0	8.1
Prop In Lane	1.00		0.24	1.00		0.06	1.00		0.55	1.00		0.29
Lane Grp Cap(c), veh/h	175	547	548	298	601	626	627	0	640	118	0	175
V/C Ratio(X)	0.46	0.66	0.66	0.52	0.89	0.89	0.49	0.00	0.94	0.33	0.00	0.76
Avail Cap(c_a), veh/h	184	547	548	330	617	642	627	0	682	153	0	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	30.2	30.2	22.4	31.5	31.5	26.0	0.0	30.1	48.9	0.0	45.1
Incr Delay (d2), s/veh	2.3	3.2	3.2	1.7	15.0	14.6	0.7	0.0	20.3	1.9	0.0	8.0
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(95%),veh/ln	3.0	14.5	14.5	5.3	23.7	24.4	11.1	0.0	27.5	2.1	0.0	7.3
LnGrp Delay(d),s/veh	28.4	33.4	33.4	24.0	46.6	46.1	26.7	0.0	50.4	50.8	0.0	53.1
LnGrp LOS	C	C	C	C	D	D	C		D	D		D
Approach Vol, veh/h		807			1247			906			172	
Approach Delay, s/veh		32.9			43.6			42.4			52.6	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	45.6	12.6	38.0	37.7	15.4	9.3	41.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	43.8	10.1	33.0	18.0	30.9	5.3	37.8
Max Q Clear Time (g_c+I1), s	2.0	39.0	8.1	21.2	11.5	10.1	5.3	32.9
Green Ext Time (p_c), s	0.0	2.0	0.1	9.3	0.8	0.8	0.0	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	794	6	2	1173	23	0	7	13	8	2	72
Future Vol, veh/h	116	794	6	2	1173	23	0	7	13	8	2	72
Conflicting Peds, #/hr	31	0	11	11	0	31	1	0	12	12	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	122	836	6	2	1235	24	0	7	14	8	2	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1290	0	0	853	0	0	1718	2388	444	1960	2379	662
Stage 1	-	-	-	-	-	-	1094	1094	-	1282	1282	-
Stage 2	-	-	-	-	-	-	624	1294	-	678	1097	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	539	-	-	788	-	-	59	34	567	39	35	409
Stage 1	-	-	-	-	-	-	232	292	-	178	238	-
Stage 2	-	-	-	-	-	-	445	235	-	413	291	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	526	-	-	781	-	-	29	18	557	17	19	399
Mov Cap-2 Maneuver	-	-	-	-	-	-	29	18	-	17	19	-
Stage 1	-	-	-	-	-	-	130	163	-	98	230	-
Stage 2	-	-	-	-	-	-	354	227	-	215	163	-

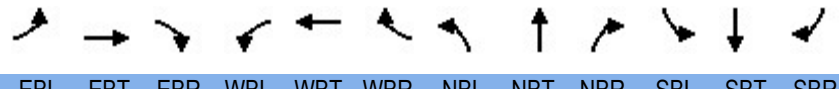
Approach	EB	WB	NB	SB
HCM Control Delay, s	3.8	0	125.3	111.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	49	526	-	-	781	-	-	108
HCM Lane V/C Ratio	0.43	0.232	-	-	0.003	-	-	0.799
HCM Control Delay (s)	125.3	13.9	2.3	-	9.6	0	-	111.6
HCM Lane LOS	F	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1.6	0.9	-	-	0	-	-	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	765	27	5	1075	10	49	93	197	8	11	46
Future Volume (veh/h)	13	765	27	5	1075	10	49	93	197	8	11	46
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.96		0.94	0.99		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	1800	1782	1800	1800	1782	1800	1800	1800	1800	1800	1765	1800
Adj Flow Rate, veh/h	14	805	28	5	1132	11	52	98	207	8	12	48
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	2	2	2
Cap, veh/h	58	2041	70	47	2140	21	89	121	221	71	92	272
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	19	3202	110	3	3357	33	154	480	875	86	365	1081
Grp Volume(v), veh/h	440	0	407	601	0	547	357	0	0	68	0	0
Grp Sat Flow(s),veh/h/ln	1730	0	1601	1777	0	1616	1509	0	0	1532	0	0
Q Serve(g_s), s	0.0	0.0	10.0	0.0	0.0	15.1	12.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.7	0.0	10.0	15.0	0.0	15.1	18.8	0.0	0.0	2.8	0.0	0.0
Prop In Lane	0.03		0.07	0.01		0.02	0.15		0.58	0.12		0.71
Lane Grp Cap(c), veh/h	1148	0	1020	1177	0	1030	431	0	0	435	0	0
V/C Ratio(X)	0.38	0.00	0.40	0.51	0.00	0.53	0.83	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	1222	0	1092	1256	0	1102	431	0	0	435	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.1	0.0	7.2	8.1	0.0	8.1	29.7	0.0	0.0	23.8	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.9	1.2	0.0	1.5	15.5	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.5	0.0	8.2	12.3	0.0	11.5	14.8	0.0	0.0	2.3	0.0	0.0
LnGrp Delay(d),s/veh	7.9	0.0	8.1	9.3	0.0	9.6	45.2	0.0	0.0	24.4	0.0	0.0
LnGrp LOS	A		A	A		A	D			C		
Approach Vol, veh/h		847			1148			357			68	
Approach Delay, s/veh		8.0			9.5			45.2			24.4	
Approach LOS		A			A			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.4		25.0		56.4		25.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		55.5		20.5		55.5		20.5
Max Q Clear Time (g_c+I1), s		12.0		4.8		17.1		20.8
Green Ext Time (p_c), s		38.9		5.3		34.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	397	445	26	115	637	71	298	550	18	57	573	89
Future Volume (veh/h)	397	445	26	115	637	71	298	550	18	57	573	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	0.99		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	1782	1782	1800	1782	1782	1800	1782	1782	1800	1765	1765	1800
Adj Flow Rate, veh/h	304	627	27	121	671	75	314	579	19	60	603	94
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	351	701	30	397	735	82	403	1392	46	311	909	141
Arrive On Green	0.21	0.21	0.21	0.23	0.23	0.23	0.09	0.28	0.28	0.07	0.63	0.63
Sat Flow, veh/h	1697	3388	146	1697	3141	351	1697	3342	110	1681	2890	449
Grp Volume(v), veh/h	304	330	324	121	380	366	314	293	305	60	349	348
Grp Sat Flow(s),veh/h/ln	1697	1782	1751	1697	1782	1709	1697	1693	1759	1681	1676	1663
Q Serve(g_s), s	28.7	29.9	29.9	9.8	34.5	34.6	19.8	23.4	23.5	4.0	22.0	22.2
Cycle Q Clear(g_c), s	28.7	29.9	29.9	9.8	34.5	34.6	19.8	23.4	23.5	4.0	22.0	22.2
Prop In Lane	1.00		0.08	1.00		0.21	1.00		0.06	1.00		0.27
Lane Grp Cap(c), veh/h	351	369	362	397	417	400	403	705	732	311	527	523
V/C Ratio(X)	0.87	0.89	0.90	0.30	0.91	0.91	0.78	0.42	0.42	0.19	0.66	0.67
Avail Cap(c_a), veh/h	373	392	385	424	446	427	474	705	732	320	527	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	0.89	0.89	0.89	0.53	0.53	0.53	1.00	1.00	1.00	0.56	0.56	0.56
Uniform Delay (d), s/veh	63.6	64.0	64.1	52.4	61.9	61.9	34.3	43.4	43.4	35.4	25.2	25.2
Incr Delay (d2), s/veh	16.7	19.8	20.3	0.2	13.5	14.3	7.3	1.8	1.7	0.2	3.7	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.2	23.1	22.9	7.2	23.7	23.0	15.3	16.9	17.4	3.4	14.6	14.6
LnGrp Delay(d),s/veh	80.3	83.8	84.4	52.6	75.4	76.2	41.6	45.2	45.1	35.6	28.9	29.0
LnGrp LOS	F	F	F	D	E	E	D	D	D	D	C	C
Approach Vol, veh/h		958			867			912			757	
Approach Delay, s/veh		82.9			72.6			43.9			29.5	
Approach LOS		F			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.1	73.6		38.9	27.1	56.7		43.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	63.5		36.5	29.5	40.5		41.5
Max Q Clear Time (g_c+I1), s	6.0	25.5		31.9	21.8	24.2		36.6
Green Ext Time (p_c), s	0.0	12.8		2.4	0.8	8.6		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	58.6
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	344	100	15	400	36	263	306	30	20	168	134
Future Volume (veh/h)	72	344	100	15	400	36	263	306	30	20	168	134
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.92	0.97		0.88	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1782	1800	1782	1800	1800	1782	1800	1800	1782	1800
Adj Flow Rate, veh/h	76	362	105	16	421	38	277	322	32	21	177	141
Adj No. of Lanes	0	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	123	443	540	61	467	41	341	328	31	81	442	330
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	153	1174	1432	11	1239	109	539	677	65	45	912	682
Grp Volume(v), veh/h	438	0	105	475	0	0	631	0	0	339	0	0
Grp Sat Flow(s),veh/h/ln	1327	0	1432	1359	0	0	1281	0	0	1639	0	0
Q Serve(g_s), s	0.0	0.0	3.2	2.7	0.0	0.0	22.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.8	0.0	3.2	22.5	0.0	0.0	31.5	0.0	0.0	8.9	0.0	0.0
Prop In Lane	0.17		1.00	0.03		0.08	0.44		0.05	0.06		0.42
Lane Grp Cap(c), veh/h	565	0	540	569	0	0	700	0	0	853	0	0
V/C Ratio(X)	0.77	0.00	0.19	0.83	0.00	0.00	0.90	0.00	0.00	0.40	0.00	0.00
Avail Cap(c_a), veh/h	565	0	540	569	0	0	700	0	0	853	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	0.0	13.6	17.8	0.0	0.0	17.1	0.0	0.0	10.9	0.0	0.0
Incr Delay (d2), s/veh	7.7	0.0	0.4	11.3	0.0	0.0	15.5	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	0.0	2.4	15.2	0.0	0.0	20.4	0.0	0.0	7.4	0.0	0.0
LnGrp Delay(d),s/veh	25.6	0.0	14.0	29.2	0.0	0.0	32.6	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	C		B	C			C			B		
Approach Vol, veh/h		543			475			631			339	
Approach Delay, s/veh		23.3			29.2			32.6			11.6	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		36.0		29.0		36.0		29.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		31.5		24.5		31.5		24.5
Max Q Clear Time (g_c+I1), s		33.5		21.8		10.9		24.5
Green Ext Time (p_c), s		0.0		2.1		12.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	28.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	132	209	68	52	234	65	99	262	144	82	77	48
Future Vol, veh/h	132	209	68	52	234	65	99	262	144	82	77	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	1	1	1
Mvmt Flow	139	220	72	55	246	68	104	276	152	86	81	51
Number of Lanes	1	1	0	1	1	0	0	1	1	0	1	0

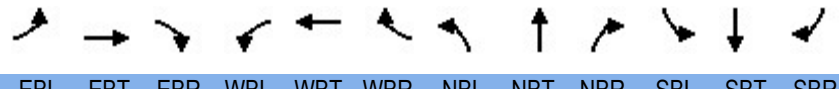
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	22.6	27.7	36.4	22
HCM LOS	C	D	E	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	27%	0%	100%	0%	100%	0%	40%
Vol Thru, %	73%	0%	0%	75%	0%	78%	37%
Vol Right, %	0%	100%	0%	25%	0%	22%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	361	144	132	277	52	299	207
LT Vol	99	0	132	0	52	0	82
Through Vol	262	0	0	209	0	234	77
RT Vol	0	144	0	68	0	65	48
Lane Flow Rate	380	152	139	292	55	315	218
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.869	0.31	0.343	0.663	0.137	0.726	0.539
Departure Headway (Hd)	8.236	7.372	8.886	8.187	8.986	8.308	8.912
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	488	404	440	399	434	405
Service Time	5.985	5.121	6.638	5.939	6.738	6.059	6.975
HCM Lane V/C Ratio	0.862	0.311	0.344	0.664	0.138	0.726	0.538
HCM Control Delay	45.6	13.4	16.2	25.7	13.2	30.2	22
HCM Lane LOS	E	B	C	D	B	D	C
HCM 95th-tile Q	8.9	1.3	1.5	4.7	0.5	5.7	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	588	368	0	4	418	0	10	9	2	87	5	409
Future Volume (veh/h)	588	368	0	4	418	0	10	9	2	87	5	409
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.90	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	1800	1765	1800	1800	1748	1748	1800	1800	1800	1800	1782	1782
Adj Flow Rate, veh/h	619	387	0	4	440	0	11	9	2	92	5	431
Adj No. of Lanes	0	2	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	0	0	0	1	1	1
Cap, veh/h	764	763	0	4	476	409	20	16	4	204	11	872
Arrive On Green	0.76	0.76	0.00	0.28	0.28	0.00	0.02	0.02	0.02	0.13	0.13	0.13
Sat Flow, veh/h	1681	1765	0	16	1731	1485	855	699	155	1614	88	1443
Grp Volume(v), veh/h	619	387	0	444	0	0	22	0	0	97	0	431
Grp Sat Flow(s),veh/h/ln	1681	1676	0	1747	0	1485	1710	0	0	1701	0	1443
Q Serve(g_s), s	38.2	15.0	0.0	41.0	0.0	0.0	2.1	0.0	0.0	8.8	0.0	21.0
Cycle Q Clear(g_c), s	38.2	15.0	0.0	41.0	0.0	0.0	2.1	0.0	0.0	8.8	0.0	21.0
Prop In Lane	1.00		0.00	0.01		1.00	0.50		0.09	0.95		1.00
Lane Grp Cap(c), veh/h	764	763	0	481	0	409	39	0	0	215	0	872
V/C Ratio(X)	0.81	0.51	0.00	0.92	0.00	0.00	0.56	0.00	0.00	0.45	0.00	0.49
Avail Cap(c_a), veh/h	764	763	0	579	0	492	257	0	0	215	0	872
HCM Platoon Ratio	1.67	1.67	1.67	1.00	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	0.92	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.5	12.7	0.0	58.5	0.0	0.0	80.3	0.0	0.0	67.2	0.0	18.9
Incr Delay (d2), s/veh	7.3	1.1	0.0	24.5	0.0	0.0	16.4	0.0	0.0	4.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	26.0	11.3	0.0	30.7	0.0	0.0	2.1	0.0	0.0	7.8	0.0	27.4
LnGrp Delay(d),s/veh	22.8	13.8	0.0	82.9	0.0	0.0	96.7	0.0	0.0	71.2	0.0	20.1
LnGrp LOS	C	B		F			F			E		C
Approach Vol, veh/h		1006			444			22			528	
Approach Delay, s/veh		19.4			82.9			96.7			29.5	
Approach LOS		B			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		8.8		80.5		26.0		50.7
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		25.0		45.0		21.0		55.0
Max Q Clear Time (g_c+I1), s		4.1		40.2		23.0		43.0
Green Ext Time (p_c), s		0.1		3.6		0.0		2.7

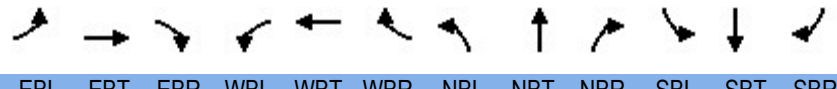
Intersection Summary		
HCM 2010 Ctrl Delay		37.0
HCM 2010 LOS		D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	920	372	69	0	527	245	62	980	19	118	685	606
Future Volume (veh/h)	920	372	69	0	527	245	62	980	19	118	685	606
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	0	1765	1765	1782	1782	1800	1765	1765	1765
Adj Flow Rate, veh/h	968	392	73	0	555	258	65	1032	20	124	721	638
Adj No. of Lanes	2	1	0	0	1	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	2	2	1	1	1	2	2	2
Cap, veh/h	823	823	153	0	494	413	177	972	19	119	887	760
Arrive On Green	0.25	0.56	0.56	0.00	0.28	0.28	0.02	0.09	0.09	0.01	0.09	0.09
Sat Flow, veh/h	3293	1461	272	0	1765	1473	1697	3396	66	1681	3353	1457
Grp Volume(v), veh/h	968	0	465	0	555	258	65	515	537	124	721	638
Grp Sat Flow(s),veh/h/ln	1646	0	1733	0	1765	1473	1697	1693	1768	1681	1676	1457
Q Serve(g_s), s	41.5	0.0	26.6	0.0	46.5	25.4	0.0	47.5	47.5	7.5	35.1	27.6
Cycle Q Clear(g_c), s	41.5	0.0	26.6	0.0	46.5	25.4	0.0	47.5	47.5	7.5	35.1	27.6
Prop In Lane	1.00		0.16	0.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	823	0	976	0	494	413	177	484	506	119	887	760
V/C Ratio(X)	1.18	0.00	0.48	0.00	1.12	0.63	0.37	1.06	1.06	1.04	0.81	0.84
Avail Cap(c_a), veh/h	823	0	976	0	494	413	177	484	506	119	988	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	0.75	0.75	0.75	0.60	0.60	0.60
Uniform Delay (d), s/veh	62.3	0.0	21.6	0.0	59.7	52.1	74.4	75.2	75.2	80.4	71.7	48.0
Incr Delay (d2), s/veh	91.8	0.0	0.4	0.0	78.6	3.0	1.2	53.1	52.4	74.7	5.0	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile BackOfQ(95%),veh/ln	52.8	0.0	18.6	0.0	60.2	28.2	5.4	53.0	55.2	14.3	22.2	48.2
LnGrp Delay(d),s/veh	154.0	0.0	22.0	0.0	138.4	55.1	75.5	128.2	127.5	155.6	76.7	54.8
LnGrp LOS	F		C		F	E	E	F	F	F	E	D
Approach Vol, veh/h		1433			813			1117			1483	
Approach Delay, s/veh		111.2			111.9			124.8			73.9	
Approach LOS		F			F			F			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	13.0	53.0		100.0	16.6	49.4	48.0	52.0
Change Period (Y+Rc), s	5.5	5.5		6.5	5.5	5.5	6.5	5.5
Max Green Setting (Gmax), s	7.5	47.5		93.5	6.1	48.9	41.5	46.5
Max Q Clear Time (g_c+I1), s	9.5	49.5		28.6	2.0	37.1	43.5	48.5
Green Ext Time (p_c), s	0.0	0.0		15.6	0.2	6.8	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay	103.0	
HCM 2010 LOS	F	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	54	29	1	33	14	0	2000	1	0	1368	180
Future Volume (veh/h)	269	54	29	1	33	14	0	2000	1	0	1368	180
Number	7	4	14	3	8	18	5	2	12	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		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1800	1800	1800	0	1782	1800	0	1765	1800
Adj Flow Rate, veh/h	283	57	31	1	35	15	0	2105	1	0	1440	189
Adj No. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	1	1	0	2	2
Cap, veh/h	295	52	28	24	294	123	0	2438	1	0	2093	272
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.00	0.70	0.70	0.00	1.00	1.00
Sat Flow, veh/h	1054	212	115	6	1206	505	0	3562	2	0	3070	387
Grp Volume(v), veh/h	371	0	0	51	0	0	0	1026	1080	0	803	826
Grp Sat Flow(s),veh/h/ln	1381	0	0	1718	0	0	0	1693	1782	0	1676	1693
Q Serve(g_s), s	36.6	0.0	0.0	0.0	0.0	0.0	0.0	76.1	76.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	40.5	0.0	0.0	3.9	0.0	0.0	0.0	76.1	76.2	0.0	0.0	0.0
Prop In Lane	0.76		0.08	0.02		0.29	0.00		0.00	0.00		0.23
Lane Grp Cap(c), veh/h	375	0	0	441	0	0	0	1188	1251	0	1177	1188
V/C Ratio(X)	0.99	0.00	0.00	0.12	0.00	0.00	0.00	0.86	0.86	0.00	0.68	0.70
Avail Cap(c_a), veh/h	375	0	0	441	0	0	0	1188	1251	0	1177	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.09	0.00	0.62	0.62
Uniform Delay (d), s/veh	64.2	0.0	0.0	48.9	0.0	0.0	0.0	18.7	18.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	43.3	0.0	0.0	0.1	0.0	0.0	0.0	0.9	0.8	0.0	2.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	29.1	0.0	0.0	3.3	0.0	0.0	0.0	38.6	40.5	0.0	1.2	1.3
LnGrp Delay(d),s/veh	107.6	0.0	0.0	49.0	0.0	0.0	0.0	19.6	19.5	0.0	2.0	2.1
LnGrp LOS	F			D				B	B		A	A
Approach Vol, veh/h		371			51			2106			1629	
Approach Delay, s/veh		107.6			49.0			19.6			2.1	
Approach LOS		F			D			B			A	

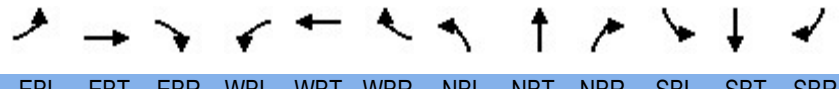
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		121.0		45.0		121.0		45.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		116.5		40.5		116.5		40.5
Max Q Clear Time (g_c+I1), s		78.2		42.5		2.0		5.9
Green Ext Time (p_c), s		38.2		0.0		113.1		3.8

Intersection Summary		
HCM 2010 Ctrl Delay		20.9
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	760	51	123	1007	38	82	100	139	32	83	36
Future Volume (veh/h)	89	760	51	123	1007	38	82	100	139	32	83	36
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		0.99	1.00		0.97	0.91		0.93	0.95		0.86
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1765	1765	1800	1782	1782	1782	1748	1748	1800
Adj Flow Rate, veh/h	94	800	54	129	1060	40	86	105	146	34	87	38
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	3	3	3
Cap, veh/h	196	1148	77	355	1190	45	142	330	262	115	133	58
Arrive On Green	0.03	0.70	0.70	0.04	0.71	0.71	0.04	0.19	0.19	0.12	0.12	0.12
Sat Flow, veh/h	1697	1650	111	1681	1687	64	1697	1782	1411	1004	1092	477
Grp Volume(v), veh/h	94	0	854	129	0	1100	86	105	146	34	0	125
Grp Sat Flow(s),veh/h/ln	1697	0	1761	1681	0	1751	1697	1782	1411	1004	0	1569
Q Serve(g_s), s	2.6	0.0	47.0	3.7	0.0	81.7	0.2	8.4	15.4	5.3	0.0	12.5
Cycle Q Clear(g_c), s	2.6	0.0	47.0	3.7	0.0	81.7	0.2	8.4	15.4	13.7	0.0	12.5
Prop In Lane	1.00		0.06	1.00		0.04	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	196	0	1225	355	0	1235	142	330	262	115	0	192
V/C Ratio(X)	0.48	0.00	0.70	0.36	0.00	0.89	0.61	0.32	0.56	0.29	0.00	0.65
Avail Cap(c_a), veh/h	197	0	1225	442	0	1235	149	351	278	123	0	204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.30	0.00	0.30	0.55	0.55	0.55	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	14.7	14.9	0.0	19.2	75.0	57.8	60.7	73.2	0.0	68.7
Incr Delay (d2), s/veh	1.8	0.0	3.3	0.2	0.0	3.3	3.6	0.3	1.2	1.4	0.0	6.6
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(95%),veh/ln	4.8	0.0	31.6	3.4	0.0	45.9	6.3	6.6	9.1	2.7	0.0	9.7
LnGrp Delay(d),s/veh	32.6	0.0	18.0	15.1	0.0	22.5	78.6	58.1	61.9	74.6	0.0	75.3
LnGrp LOS	C		B	B		C	E	E	E	E		E
Approach Vol, veh/h		948			1229			337			159	
Approach Delay, s/veh		19.5			21.7			65.0			75.2	
Approach LOS		B			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		34.9	8.9	120.2	10.4	24.5	10.5	118.6
Change Period (Y+Rc), s		4.5	4.0	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s		32.3	5.0	113.7	6.5	21.3	14.5	103.7
Max Q Clear Time (g_c+I1), s		17.4	4.6	83.7	2.2	15.7	5.7	49.0
Green Ext Time (p_c), s		1.2	0.0	20.6	0.6	0.4	0.2	29.8

Intersection Summary		
HCM 2010 Ctrl Delay		29.5
HCM 2010 LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	709	23	12	1050	24	81	163	91	23	96	39
Future Volume (veh/h)	23	709	23	12	1050	24	81	163	91	23	96	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	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	1782	1782	1800	1782	1782	1800	1782	1782	1800	1800	1765	1800
Adj Flow Rate, veh/h	24	746	24	13	1105	25	85	172	96	24	101	41
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	43	801	26	391	1166	26	156	225	125	41	147	53
Arrive On Green	0.03	0.47	0.47	0.23	0.67	0.67	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1697	1717	55	1697	1735	39	1188	1056	590	62	692	247
Grp Volume(v), veh/h	24	0	770	13	0	1130	85	0	268	166	0	0
Grp Sat Flow(s),veh/h/ln	1697	0	1772	1697	0	1774	1188	0	1646	1002	0	0
Q Serve(g_s), s	2.1	0.0	61.5	0.9	0.0	86.3	2.1	0.0	23.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	61.5	0.9	0.0	86.3	28.8	0.0	23.0	26.7	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.36	0.14		0.25
Lane Grp Cap(c), veh/h	43	0	827	391	0	1192	156	0	350	241	0	0
V/C Ratio(X)	0.56	0.00	0.93	0.03	0.00	0.95	0.55	0.00	0.77	0.69	0.00	0.00
Avail Cap(c_a), veh/h	68	0	1128	391	0	1192	176	0	379	267	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.00	0.69	0.53	0.00	0.53	0.39	0.00	0.39	1.00	0.00	0.00
Uniform Delay (d), s/veh	72.3	0.0	37.7	44.8	0.0	22.2	59.6	0.0	55.5	53.9	0.0	0.0
Incr Delay (d2), s/veh	7.6	0.0	13.9	0.0	0.0	10.1	1.2	0.0	3.4	6.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	41.0	0.8	0.0	53.1	5.4	0.0	14.1	11.4	0.0	0.0
LnGrp Delay(d),s/veh	79.9	0.0	51.6	44.8	0.0	32.4	60.7	0.0	58.9	60.4	0.0	0.0
LnGrp LOS	E		D	D		C	E		E	E		
Approach Vol, veh/h		794			1143			353			166	
Approach Delay, s/veh		52.5			32.5			59.4			60.4	
Approach LOS		D			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	39.1	74.5		36.4	8.3	105.3		36.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	95.5		34.5	6.0	96.0		34.5
Max Q Clear Time (g_c+I1), s	2.9	63.5		28.7	4.1	88.3		30.8
Green Ext Time (p_c), s	2.6	6.6		1.6	0.0	5.1		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	44.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	871	15	16	898	61	37	62	58	32	78	80
Future Volume (veh/h)	49	871	15	16	898	61	37	62	58	32	78	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.97		0.92	0.97		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	1782	1782	1800	1765	1765	1800	1800	1800	1800	1765	1765	1800
Adj Flow Rate, veh/h	52	917	16	17	945	64	39	65	61	34	82	84
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	2	2	2
Cap, veh/h	334	1296	23	231	996	67	84	112	105	116	106	109
Arrive On Green	0.15	0.74	0.74	0.02	0.61	0.61	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1697	1746	30	1681	1631	110	1142	819	768	1153	776	795
Grp Volume(v), veh/h	52	0	933	17	0	1009	39	0	126	34	0	166
Grp Sat Flow(s),veh/h/ln	1697	0	1777	1681	0	1742	1142	0	1587	1153	0	1570
Q Serve(g_s), s	0.0	0.0	46.7	0.7	0.0	88.0	5.6	0.0	12.2	4.7	0.0	16.7
Cycle Q Clear(g_c), s	0.0	0.0	46.7	0.7	0.0	88.0	22.3	0.0	12.2	16.9	0.0	16.7
Prop In Lane	1.00		0.02	1.00		0.06	1.00		0.48	1.00		0.51
Lane Grp Cap(c), veh/h	334	0	1319	231	0	1063	84	0	218	116	0	215
V/C Ratio(X)	0.16	0.00	0.71	0.07	0.00	0.95	0.46	0.00	0.58	0.29	0.00	0.77
Avail Cap(c_a), veh/h	334	0	1319	261	0	1261	84	0	218	116	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.00	0.76	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.8	0.0	11.5	21.4	0.0	29.6	79.0	0.0	66.3	74.2	0.0	68.3
Incr Delay (d2), s/veh	0.2	0.0	2.5	0.1	0.0	17.8	3.9	0.0	3.8	1.4	0.0	15.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	0.0	30.4	0.6	0.0	58.6	3.3	0.0	9.5	2.8	0.0	12.9
LnGrp Delay(d),s/veh	56.0	0.0	13.9	21.6	0.0	47.3	83.0	0.0	70.1	75.6	0.0	83.9
LnGrp LOS	E		B	C		D	F		E	E		F
Approach Vol, veh/h		985			1026			165			200	
Approach Delay, s/veh		16.1			46.9			73.1			82.4	
Approach LOS		B			D			E			F	

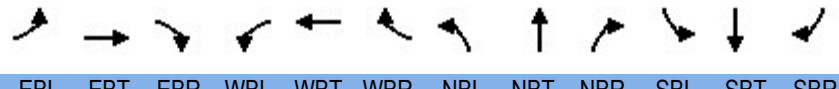
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		28.0	8.7	127.3		28.0	30.4	105.6
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5	5.5	5.5
Max Green Setting (Gmax), s		22.5	6.1	118.9		22.5	6.3	118.7
Max Q Clear Time (g_c+I1), s		24.3	2.7	48.7		18.9	2.0	90.0
Green Ext Time (p_c), s		0.0	0.0	10.4		0.7	2.6	10.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	320	108	21	546	32	203	175	60	19	120	0
Future Volume (veh/h)	27	320	108	21	546	32	203	175	60	19	120	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.97		0.94	0.98		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	1782	1782	1800	1748	1748	1800	1800	1800	1800	1731	1731	1800
Adj Flow Rate, veh/h	28	337	114	22	575	34	214	184	63	20	126	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	4	4	4
Cap, veh/h	62	595	201	51	752	44	391	367	126	287	504	0
Arrive On Green	0.04	0.47	0.47	0.03	0.46	0.46	0.29	0.29	0.29	0.29	0.29	0.00
Sat Flow, veh/h	1697	1274	431	1664	1631	96	1181	1260	431	1025	1731	0
Grp Volume(v), veh/h	28	0	451	22	0	609	214	0	247	20	126	0
Grp Sat Flow(s),veh/h/ln	1697	0	1705	1664	0	1728	1181	0	1691	1025	1731	0
Q Serve(g_s), s	1.0	0.0	12.3	0.8	0.0	18.8	10.8	0.0	7.8	1.1	3.6	0.0
Cycle Q Clear(g_c), s	1.0	0.0	12.3	0.8	0.0	18.8	14.4	0.0	7.8	8.8	3.6	0.0
Prop In Lane	1.00		0.25	1.00		0.06	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	62	0	797	51	0	796	391	0	493	287	504	0
V/C Ratio(X)	0.45	0.00	0.57	0.44	0.00	0.76	0.55	0.00	0.50	0.07	0.25	0.00
Avail Cap(c_a), veh/h	835	0	1478	793	0	1471	425	0	542	317	554	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.2	0.0	12.3	30.5	0.0	14.4	22.8	0.0	18.8	22.5	17.3	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.6	5.8	0.0	1.6	1.2	0.0	0.8	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	9.9	0.8	0.0	14.1	6.6	0.0	6.6	0.6	3.1	0.0
LnGrp Delay(d),s/veh	35.2	0.0	13.0	36.3	0.0	15.9	24.1	0.0	19.6	22.6	17.6	0.0
LnGrp LOS	D		B	D		B	C		B	C	B	
Approach Vol, veh/h		479			631			461			146	
Approach Delay, s/veh		14.3			16.6			21.7			18.3	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.1	6.4	34.4		23.1	6.9	34.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		20.5	30.5	55.5		20.5	31.5	54.5
Max Q Clear Time (g_c+I1), s		16.4	2.8	14.3		10.8	3.0	20.8
Green Ext Time (p_c), s		1.3	0.0	9.1		2.4	0.0	8.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	872	50	37	804	45	122	351	161	56	112	333
Future Volume (veh/h)	197	872	50	37	804	45	122	351	161	56	112	333
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.96	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	1748	1748	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	207	918	53	39	846	47	128	369	169	59	118	351
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	235	1222	71	65	915	51	154	421	193	78	124	370
Arrive On Green	0.14	0.38	0.38	0.04	0.28	0.28	0.09	0.36	0.36	0.05	0.32	0.32
Sat Flow, veh/h	1664	3188	184	1697	3258	181	1714	1154	528	1697	387	1152
Grp Volume(v), veh/h	207	478	493	39	440	453	128	0	538	59	0	469
Grp Sat Flow(s),veh/h/ln	1664	1660	1712	1697	1693	1746	1714	0	1682	1697	0	1540
Q Serve(g_s), s	13.1	26.8	26.8	2.4	27.1	27.1	7.9	0.0	32.1	3.7	0.0	32.0
Cycle Q Clear(g_c), s	13.1	26.8	26.8	2.4	27.1	27.1	7.9	0.0	32.1	3.7	0.0	32.0
Prop In Lane	1.00		0.11	1.00		0.10	1.00		0.31	1.00		0.75
Lane Grp Cap(c), veh/h	235	636	656	65	475	490	154	0	613	78	0	494
V/C Ratio(X)	0.88	0.75	0.75	0.60	0.92	0.92	0.83	0.00	0.88	0.75	0.00	0.95
Avail Cap(c_a), veh/h	246	636	656	96	487	502	159	0	613	99	0	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	28.7	28.7	50.9	37.6	37.6	48.1	0.0	31.9	50.7	0.0	35.7
Incr Delay (d2), s/veh	28.6	5.2	5.0	10.2	23.5	23.0	29.1	0.0	13.7	23.0	0.0	27.7
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(95%),veh/ln	12.5	19.1	19.5	2.4	22.3	22.8	8.6	0.0	23.9	4.0	0.0	24.2
LnGrp Delay(d),s/veh	73.9	33.9	33.7	61.0	61.1	60.6	77.2	0.0	45.6	73.6	0.0	63.3
LnGrp LOS	E	C	C	E	E	E	E		D	E		E
Approach Vol, veh/h		1178			932			666			528	
Approach Delay, s/veh		40.9			60.8			51.7			64.5	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	43.7	8.6	45.7	14.2	39.0	19.6	34.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.3	38.9	6.1	40.7	10.0	35.2	15.9	30.9
Max Q Clear Time (g_c+I1), s	15.7	34.1	4.4	28.8	9.9	34.0	15.1	29.1
Green Ext Time (p_c), s	0.0	3.1	0.0	9.4	0.0	0.5	0.1	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	52.4
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	893	6	46	937	0	118
Future Vol, veh/h	893	6	46	937	0	118
Conflicting Peds, #/hr	0	5	5	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	940	6	48	986	0	124

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	951	0	2030	950
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	1082	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	726	-	64	318
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	328	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	723	-	60	316
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	306	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	23.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	316	-	-	723	-
HCM Lane V/C Ratio	0.393	-	-	0.067	-
HCM Control Delay (s)	23.6	-	-	10.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.8	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	26.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	260	58	62	319	30	154	122	153	8	55	11
Future Vol, veh/h	10	260	58	62	319	30	154	122	153	8	55	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	4	4	4
Mvmt Flow	11	274	61	65	336	32	162	128	161	8	58	12
Number of Lanes	1	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	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	23.1	24.9	32.4	12.6
HCM LOS	C	C	D	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	36%	100%	0%	100%	0%	11%
Vol Thru, %	28%	0%	82%	0%	91%	74%
Vol Right, %	36%	0%	18%	0%	9%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	429	10	318	62	349	74
LT Vol	154	10	0	62	0	8
Through Vol	122	0	260	0	319	55
RT Vol	153	0	58	0	30	11
Lane Flow Rate	452	11	335	65	367	78
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.816	0.023	0.669	0.14	0.731	0.172
Departure Headway (Hd)	6.505	7.838	7.191	7.743	7.167	7.97
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	454	499	461	503	453
Service Time	4.576	5.625	4.978	5.529	4.952	5.97
HCM Lane V/C Ratio	0.814	0.024	0.671	0.141	0.73	0.172
HCM Control Delay	32.4	10.8	23.5	11.8	27.2	12.6
HCM Lane LOS	D	B	C	B	D	B
HCM 95th-tile Q	8.1	0.1	4.9	0.5	6	0.6

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	898	6	31	708	77	12	6	30	1	5	54
Future Vol, veh/h	47	898	6	31	708	77	12	6	30	1	5	54
Conflicting Peds, #/hr	44	0	20	20	0	44	39	0	105	105	0	39
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	49	945	6	33	745	81	13	6	32	1	5	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	870	0	0	971	0	0	1988	2002	601	1575	1965	869
Stage 1	-	-	-	-	-	-	1066	1066	-	896	896	-
Stage 2	-	-	-	-	-	-	922	936	-	679	1069	-
Critical Hdwy	4.13	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.219	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	773	-	-	713	-	-	41	60	448	82	64	354
Stage 1	-	-	-	-	-	-	241	301	-	338	362	-
Stage 2	-	-	-	-	-	-	327	346	-	412	300	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	747	-	-	702	-	-	25	45	406	50	48	332
Mov Cap-2 Maneuver	-	-	-	-	-	-	25	45	-	50	48	-
Stage 1	-	-	-	-	-	-	204	255	-	281	319	-
Stage 2	-	-	-	-	-	-	236	305	-	293	254	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.4	137.4	29.5
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	70	747	-	-	702	-	-	209
HCM Lane V/C Ratio	0.722	0.066	-	-	0.046	-	-	0.302
HCM Control Delay (s)	137.4	10.2	0.6	-	10.4	0	-	29.5
HCM Lane LOS	F	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	3.3	0.2	-	-	0.1	-	-	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	42	0	0	0	33	2052	0	0	1389	44
Future Volume (veh/h)	27	0	42	0	0	0	33	2052	0	0	1389	44
Number	7	4	14	3	8	18	5	2	12	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		0.99	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	1731	1731	1800	1800	1800	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	28	0	44	0	0	0	35	2160	0	0	1462	46
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	2	2	2
Cap, veh/h	110	0	68	34	84	0	324	3068	0	167	2903	91
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.02	0.92	0.00	0.00	0.88	0.88
Sat Flow, veh/h	1627	0	1452	1311	1800	0	1681	3441	0	1681	3317	104
Grp Volume(v), veh/h	28	0	44	0	0	0	35	2160	0	0	738	770
Grp Sat Flow(s),veh/h/ln	1627	0	1452	1311	1800	0	1681	1676	0	1681	1676	1745
Q Serve(g_s), s	3.5	0.0	6.2	0.0	0.0	0.0	0.4	32.2	0.0	0.0	20.5	20.6
Cycle Q Clear(g_c), s	3.5	0.0	6.2	0.0	0.0	0.0	0.4	32.2	0.0	0.0	20.5	20.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	110	0	68	34	84	0	324	3068	0	167	1467	1527
V/C Ratio(X)	0.25	0.00	0.65	0.00	0.00	0.00	0.11	0.70	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	790	0	674	582	835	0	329	3068	0	207	1467	1527
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	0.00	0.00	0.28	0.28	0.00	0.00	0.69	0.69
Uniform Delay (d), s/veh	96.6	0.0	97.9	0.0	0.0	0.0	2.3	2.1	0.0	0.0	2.9	2.9
Incr Delay (d2), s/veh	1.2	0.0	10.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	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(95%),veh/ln	2.9	0.0	4.8	0.0	0.0	0.0	0.4	17.9	0.0	0.0	14.0	14.6
LnGrp Delay(d),s/veh	97.8	0.0	107.9	0.0	0.0	0.0	2.4	2.5	0.0	0.0	3.8	3.7
LnGrp LOS	F		F				A	A			A	A
Approach Vol, veh/h		72			0			2195			1508	
Approach Delay, s/veh		104.0			0.0			2.5			3.8	
Approach LOS		F						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	195.2		13.8	8.3	186.9		13.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	95.0		97.0	5.0	95.0		97.0
Max Q Clear Time (g_c+I1), s	0.0	34.2		8.2	2.4	22.6		0.0
Green Ext Time (p_c), s	0.0	55.8		0.4	0.0	65.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	4.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	8	131	52	6	246	0	110	49	13	11	39	0
Future Volume (veh/h)	8	131	52	6	246	0	110	49	13	11	39	0
Number	7	4	14	3	8	18	5	2	12	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	0.99		1.00	0.99		0.97	0.99		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	1800	1765	1800	1800	1748	1800	1800	1782	1800	1800	1731	1800
Adj Flow Rate, veh/h	8	138	55	6	259	0	116	52	14	12	41	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	4	4	4
Cap, veh/h	175	424	163	168	623	0	474	174	32	243	425	0
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.00	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	24	1173	451	14	1726	0	748	612	113	168	1494	0
Grp Volume(v), veh/h	201	0	0	265	0	0	182	0	0	53	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	0	1740	0	0	1473	0	0	1662	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	2.6	0.0	0.0	2.1	0.0	0.0	0.5	0.0	0.0
Prop In Lane	0.04		0.27	0.02		0.00	0.64		0.08	0.23		0.00
Lane Grp Cap(c), veh/h	761	0	0	792	0	0	680	0	0	668	0	0
V/C Ratio(X)	0.26	0.00	0.00	0.33	0.00	0.00	0.27	0.00	0.00	0.08	0.00	0.00
Avail Cap(c_a), veh/h	2404	0	0	2539	0	0	2223	0	0	2394	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	0.0	5.4	0.0	0.0	6.5	0.0	0.0	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	2.2	0.0	0.0	1.7	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	5.4	0.0	0.0	5.7	0.0	0.0	6.7	0.0	0.0	6.0	0.0	0.0
LnGrp LOS	A			A			A			A		
Approach Vol, veh/h		201			265			182			53	
Approach Delay, s/veh		5.4			5.7			6.7			6.0	
Approach LOS		A			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		10.4		12.1		10.4		12.1
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		31.0		31.0		31.0		31.0
Max Q Clear Time (g_c+I1), s		4.1		4.0		2.5		4.6
Green Ext Time (p_c), s		1.5		3.1		1.5		3.1

Intersection Summary		
HCM 2010 Ctrl Delay		5.9
HCM 2010 LOS		A

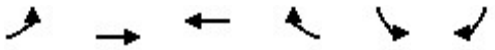
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	576	11	199	938	6	52
Future Vol, veh/h	576	11	199	938	6	52
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	606	12	209	987	6	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	621	0	1527	312
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	912	-
Critical Hdwy	-	-	4.12	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.21	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	963	-	110	690
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	357	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	961	-	86	688
Mov Cap-2 Maneuver	-	-	-	-	86	-
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	280	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	399	-	-	961	-
HCM Lane V/C Ratio	0.153	-	-	0.218	-
HCM Control Delay (s)	15.6	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.8	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	893	592	880	9	0	1136
Future Volume (vph)	893	592	880	9	0	1136
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.5	6.5	5.5			6.5
Lane Util. Factor	0.97	0.95	0.95			0.88
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3144	3241	3301			2603
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3144	3241	3301			2603
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	940	623	926	9	0	1196
RTOR Reduction (vph)	0	0	1	0	0	6
Lane Group Flow (vph)	940	623	934	0	0	1190
Confl. Peds. (#/hr)	8			8	10	
Heavy Vehicles (%)	2%	2%	0%	0%	0%	0%
Turn Type	Prot	NA	NA			pt+ov
Protected Phases	1	6	2			1 4
Permitted Phases						
Actuated Green, G (s)	31.8	69.5	32.2			60.8
Effective Green, g (s)	31.8	69.5	32.2			60.8
Actuated g/C Ratio	0.30	0.66	0.31			0.58
Clearance Time (s)	6.5	6.5	5.5			
Vehicle Extension (s)	3.5	6.0	3.5			
Lane Grp Cap (vph)	952	2145	1012			1507
v/s Ratio Prot	c0.30	0.19	c0.28			c0.46
v/s Ratio Perm						
v/c Ratio	0.99	0.29	0.92			0.79
Uniform Delay, d1	36.4	7.4	35.2			17.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	26.3	0.3	13.6			2.9
Delay (s)	62.7	7.8	48.8			20.1
Level of Service	E	A	D			C
Approach Delay (s)		40.8	48.8		20.1	
Approach LOS		D	D		C	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1201	61	0	0	0	0	42	293	7	123	0
Future Volume (veh/h)	25	1201	61	0	0	0	0	42	293	7	123	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800				0	1765	1800	1800	1800	0
Adj Flow Rate, veh/h	26	1264	64				0	44	308	7	129	0
Adj No. of Lanes	0	3	0				0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	0				0	2	2	0	0	0
Cap, veh/h	61	3143	165				0	51	359	36	394	0
Arrive On Green	0.66	0.66	0.66				0.00	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	93	4786	251				0	191	1338	16	1467	0
Grp Volume(v), veh/h	498	414	442				0	0	352	136	0	0
Grp Sat Flow(s),veh/h/ln	1778	1622	1731				0	0	1529	1484	0	0
Q Serve(g_s), s	16.1	14.1	14.1				0.0	0.0	26.3	0.5	0.0	0.0
Cycle Q Clear(g_c), s	16.1	14.1	14.1				0.0	0.0	26.3	26.7	0.0	0.0
Prop In Lane	0.05		0.14				0.00		0.87	0.05		0.00
Lane Grp Cap(c), veh/h	1167	1065	1136				0	0	410	430	0	0
V/C Ratio(X)	0.43	0.39	0.39				0.00	0.00	0.86	0.32	0.00	0.00
Avail Cap(c_a), veh/h	1167	1065	1136				0	0	669	723	0	0
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	1.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	9.5	9.5				0.0	0.0	41.7	34.9	0.0	0.0
Incr Delay (d2), s/veh	1.1	1.1	1.0				0.0	0.0	6.2	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	6.5	6.9				0.0	0.0	11.8	3.6	0.0	0.0
LnGrp Delay(d),s/veh	11.0	10.6	10.5				0.0	0.0	48.0	35.3	0.0	0.0
LnGrp LOS	B	B	B						D	D		
Approach Vol, veh/h		1354						352			136	
Approach Delay, s/veh		10.7						48.0			35.3	
Approach LOS		B						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		36.7		83.3		36.7		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		52.5		58.5		52.5		
Max Q Clear Time (g_c+I1), s		28.3		18.1		28.7		
Green Ext Time (p_c), s		3.5		12.5		3.5		

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1318	90	0	0	0	0	203	190	37	413	0
Future Volume (veh/h)	95	1318	90	0	0	0	0	203	190	37	413	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800				0	1800	1800	1800	1800	0
Adj Flow Rate, veh/h	100	1387	95				0	214	200	39	435	0
Adj No. of Lanes	0	3	0				0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	0				0	0	0	0	0	0
Cap, veh/h	196	2887	204				0	506	425	242	506	0
Arrive On Green	0.21	0.21	0.21				0.00	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	304	4485	317				0	1800	1512	986	1800	0
Grp Volume(v), veh/h	582	486	514				0	214	200	39	435	0
Grp Sat Flow(s),veh/h/ln	1767	1622	1717				0	1800	1512	986	1800	0
Q Serve(g_s), s	34.9	31.4	31.4				0.0	11.6	13.1	4.0	27.5	0.0
Cycle Q Clear(g_c), s	34.9	31.4	31.4				0.0	11.6	13.1	15.7	27.5	0.0
Prop In Lane	0.17		0.18				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1137	1044	1105				0	506	425	242	506	0
V/C Ratio(X)	0.51	0.47	0.47				0.00	0.42	0.47	0.16	0.86	0.00
Avail Cap(c_a), veh/h	1137	1044	1105				0	773	649	387	773	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90				0.00	0.09	0.09	0.92	0.92	0.00
Uniform Delay (d), s/veh	30.6	29.2	29.2				0.0	35.2	35.7	41.6	40.9	0.0
Incr Delay (d2), s/veh	1.5	1.3	1.3				0.0	0.0	0.1	0.2	4.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	14.5	15.4				0.0	5.8	5.5	1.1	14.3	0.0
LnGrp Delay(d),s/veh	32.1	30.6	30.5				0.0	35.2	35.8	41.8	45.8	0.0
LnGrp LOS	C	C	C					D	D	D	D	
Approach Vol, veh/h		1582						414			474	
Approach Delay, s/veh		31.1						35.5			45.5	
Approach LOS		C						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		38.3		81.7		38.3		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		51.5		59.5		51.5		
Max Q Clear Time (g_c+I1), s		15.1		36.9		29.5		
Green Ext Time (p_c), s		4.6		10.2		4.3		

Intersection Summary	
HCM 2010 Ctrl Delay	34.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1556	0	0	0	0	0	28	95	17	53	0
Future Volume (veh/h)	10	1556	0	0	0	0	0	28	95	17	53	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	0.99		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	1800	1782	1800				0	1748	1800	1800	1800	0
Adj Flow Rate, veh/h	11	1638	0				0	29	100	18	56	0
Adj No. of Lanes	0	3	0				0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	0				0	3	3	0	0	0
Cap, veh/h	26	4091	0				0	38	133	49	117	0
Arrive On Green	0.27	0.27	0.00				0.00	0.11	0.11	0.11	0.11	0.00
Sat Flow, veh/h	32	5153	0				0	338	1164	107	1030	0
Grp Volume(v), veh/h	620	1029	0				0	0	129	74	0	0
Grp Sat Flow(s),veh/h/ln	1781	1622	0				0	0	1502	1137	0	0
Q Serve(g_s), s	34.5	31.0	0.0				0.0	0.0	10.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	34.5	31.0	0.0				0.0	0.0	10.0	10.2	0.0	0.0
Prop In Lane	0.02		0.00				0.00		0.78	0.24		0.00
Lane Grp Cap(c), veh/h	1459	2658	0				0	0	171	167	0	0
V/C Ratio(X)	0.43	0.39	0.00				0.00	0.00	0.75	0.44	0.00	0.00
Avail Cap(c_a), veh/h	1459	2658	0				0	0	450	471	0	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.00				0.00	0.00	0.52	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	19.2	0.0				0.0	0.0	51.5	49.2	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.4	0.0				0.0	0.0	2.6	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	14.1	0.0				0.0	0.0	4.3	2.3	0.0	0.0
LnGrp Delay(d),s/veh	21.2	19.6	0.0				0.0	0.0	54.2	50.6	0.0	0.0
LnGrp LOS	C	B							D	D		
Approach Vol, veh/h		1649						129			74	
Approach Delay, s/veh		20.2						54.2			50.6	
Approach LOS		C						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		17.7		102.3		17.7		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		36.0		76.0		36.0		
Max Q Clear Time (g_c+I1), s		12.0		36.5		12.2		
Green Ext Time (p_c), s		1.0		14.5		1.0		

Intersection Summary		
HCM 2010 Ctrl Delay		23.8
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1447	141	0	0	0	0	422	339	110	89	0
Future Volume (veh/h)	164	1447	141	0	0	0	0	422	339	110	89	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				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	1800	1782	1800				0	1800	1800	1782	1782	0
Adj Flow Rate, veh/h	173	1523	148				0	444	357	116	94	0
Adj No. of Lanes	0	3	0				0	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	0				0	0	0	1	1	0
Cap, veh/h	172	1614	161				0	472	380	121	921	0
Arrive On Green	0.38	0.38	0.38				0.00	0.52	0.52	0.52	0.52	0.00
Sat Flow, veh/h	449	4210	421				0	914	735	683	1782	0
Grp Volume(v), veh/h	678	568	597				0	0	801	116	94	0
Grp Sat Flow(s),veh/h/ln	1760	1622	1699				0	0	1649	683	1782	0
Q Serve(g_s), s	34.5	29.9	30.1				0.0	0.0	41.1	5.4	2.4	0.0
Cycle Q Clear(g_c), s	34.5	29.9	30.1				0.0	0.0	41.1	46.5	2.4	0.0
Prop In Lane	0.26		0.25				0.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	675	622	651				0	0	852	121	921	0
V/C Ratio(X)	1.01	0.91	0.92				0.00	0.00	0.94	0.96	0.10	0.00
Avail Cap(c_a), veh/h	675	622	651				0	0	852	121	921	0
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	1.00				0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.8	26.3	26.4				0.0	0.0	20.4	44.0	11.1	0.0
Incr Delay (d2), s/veh	36.0	18.3	18.1				0.0	0.0	18.1	68.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.4	16.4	17.4				0.0	0.0	22.7	5.2	1.2	0.0
LnGrp Delay(d),s/veh	63.8	44.6	44.5				0.0	0.0	38.5	112.4	11.2	0.0
LnGrp LOS	F	D	D						D	F	B	
Approach Vol, veh/h		1844						801			210	
Approach Delay, s/veh		51.6						38.5			67.1	
Approach LOS		D						D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		51.0		39.0		51.0		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		46.5		34.5		46.5		
Max Q Clear Time (g_c+I1), s		43.1		36.5		48.5		
Green Ext Time (p_c), s		2.4		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	49.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	1826	6	0	0	0	0	50	8	6	4	0
Future Vol, veh/h	31	1826	6	0	0	0	0	50	8	6	4	0
Conflicting Peds, #/hr	31	0	11	11	0	31	1	0	12	12	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	33	1922	6	0	0	0	0	53	8	6	4	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	31	0	0	-	2033	987	904	2036	-
Stage 1	-	-	-	-	2002	-	31	31	-
Stage 2	-	-	-	-	31	-	873	2005	-
Critical Hdwy	5.32	-	-	-	6.5	7.1	6.4	6.5	-
Critical Hdwy Stg 1	-	-	-	-	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.5	-
Follow-up Hdwy	3.11	-	-	-	4	3.9	3.8	4	-
Pot Cap-1 Maneuver	1121	-	-	0	58	215	295	58	0
Stage 1	-	-	-	0	105	-	-	-	0
Stage 2	-	-	-	0	-	-	286	105	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1094	-	-	-	56	213	46	56	-
Mov Cap-2 Maneuver	-	-	-	-	56	-	46	56	-
Stage 1	-	-	-	-	104	-	-	-	-
Stage 2	-	-	-	-	-	-	136	104	-

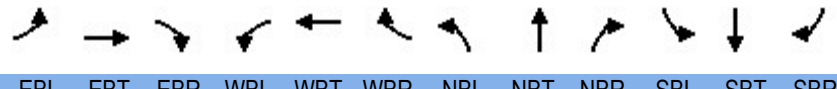
Approach	EB	NB	SB
HCM Control Delay, s	0.1	220.1	95.3
HCM LOS		F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	62	1094	-	-	50
HCM Lane V/C Ratio	0.985	0.03	-	-	0.211
HCM Control Delay (s)	220.1	8.4	0	-	95.3
HCM Lane LOS	F	A	A	-	F
HCM 95th %tile Q(veh)	4.7	0.1	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	1756	27	0	0	0	0	43	145	32	28	0
Future Volume (veh/h)	47	1756	27	0	0	0	0	43	145	32	28	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99				1.00		0.94	0.98		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	1800	1782	1800				0	1800	1800	1800	1765	0
Adj Flow Rate, veh/h	49	1848	28				0	45	153	34	29	0
Adj No. of Lanes	0	3	0				0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	0				0	0	0	2	2	0
Cap, veh/h	70	2793	44				0	92	314	221	156	0
Arrive On Green	0.56	0.56	0.56				0.00	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	124	4964	78				0	343	1166	437	580	0
Grp Volume(v), veh/h	703	584	637				0	0	198	63	0	0
Grp Sat Flow(s),veh/h/ln	1776	1622	1767				0	0	1509	1017	0	0
Q Serve(g_s), s	15.4	13.2	13.2				0.0	0.0	5.9	0.2	0.0	0.0
Cycle Q Clear(g_c), s	15.4	13.2	13.2				0.0	0.0	5.9	6.1	0.0	0.0
Prop In Lane	0.07		0.04				0.00		0.77	0.54		0.00
Lane Grp Cap(c), veh/h	999	913	994				0	0	406	377	0	0
V/C Ratio(X)	0.70	0.64	0.64				0.00	0.00	0.49	0.17	0.00	0.00
Avail Cap(c_a), veh/h	1018	930	1013				0	0	572	528	0	0
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	1.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.5	8.0	8.0				0.0	0.0	16.5	15.0	0.0	0.0
Incr Delay (d2), s/veh	3.6	2.9	2.7				0.0	0.0	3.3	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	6.6	7.1				0.0	0.0	2.8	0.8	0.0	0.0
LnGrp Delay(d),s/veh	12.1	10.9	10.7				0.0	0.0	19.7	15.8	0.0	0.0
LnGrp LOS	B	B	B						B	B		
Approach Vol, veh/h		1925						198			63	
Approach Delay, s/veh		11.3						19.7			15.8	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.6		18.9				18.9
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		30.7		20.3				20.3
Max Q Clear Time (g_c+I1), s		17.4		8.1				7.9
Green Ext Time (p_c), s		12.8		2.6				2.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	671	938	58	244	0	271	0	520	18	58	449	0
Future Volume (veh/h)	671	938	58	244	0	271	0	520	18	58	449	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		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	1782	1782	1800	1782	0	1782	0	1782	1800	1765	1765	0
Adj Flow Rate, veh/h	585	1157	61	257	0	285	0	547	19	61	473	0
Adj No. of Lanes	1	2	0	1	0	1	0	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	0	1	0	1	1	2	2	0
Cap, veh/h	680	1343	71	0	0	0	0	1616	56	385	1828	0
Arrive On Green	0.40	0.40	0.40	0.00	0.00	0.00	0.00	0.16	0.16	0.07	1.00	0.00
Sat Flow, veh/h	1697	3353	177		0		0	3427	116	1681	3441	0
Grp Volume(v), veh/h	585	615	603		0.0		0	277	289	61	473	0
Grp Sat Flow(s),veh/h/ln	1697	1782	1748				0	1693	1761	1681	1676	0
Q Serve(g_s), s	52.3	52.4	52.5				0.0	24.1	24.2	2.9	0.0	0.0
Cycle Q Clear(g_c), s	52.3	52.4	52.5				0.0	24.1	24.2	2.9	0.0	0.0
Prop In Lane	1.00		0.10				0.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	680	714	700				0	820	852	385	1828	0
V/C Ratio(X)	0.86	0.86	0.86				0.00	0.34	0.34	0.16	0.26	0.00
Avail Cap(c_a), veh/h	741	778	763				0	820	852	392	1828	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	2.00	2.00	1.00
Upstream Filter(I)	0.65	0.65	0.65				0.00	1.00	1.00	0.99	0.99	0.00
Uniform Delay (d), s/veh	45.5	45.5	45.6				0.0	46.1	46.1	20.5	0.0	0.0
Incr Delay (d2), s/veh	6.6	6.3	6.5				0.0	1.1	1.1	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.8	27.0	26.6				0.0	11.6	12.1	1.4	0.1	0.0
LnGrp Delay(d),s/veh	52.1	51.8	52.0				0.0	47.2	47.2	20.7	0.3	0.0
LnGrp LOS	D	D	D					D	D	C	A	
Approach Vol, veh/h		1803						566			534	
Approach Delay, s/veh		52.0						47.2			2.7	
Approach LOS		D						D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.1	84.9		71.0		95.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	6.3	35.7		72.5		46.5		
Max Q Clear Time (g_c+I1), s	4.9	26.2		54.5		2.0		
Green Ext Time (p_c), s	0.0	5.0		12.0		10.2		

Intersection Summary	
HCM 2010 Ctrl Delay	42.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	540	204	17	289	41	327	383	17	20	102	89
Future Volume (veh/h)	266	540	204	17	289	41	327	383	17	20	102	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.99		0.92	0.93		0.85	1.00		0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1800	1800	1782	1800	1800	1782	1800	1800	1782	1800
Adj Flow Rate, veh/h	280	568	215	18	304	43	344	403	18	21	107	94
Adj No. of Lanes	1	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	354	561	212	58	275	37	324	286	13	90	339	270
Arrive On Green	0.08	0.46	0.46	0.32	0.32	0.32	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1697	1216	460	0	851	114	610	715	32	72	847	675
Grp Volume(v), veh/h	280	0	783	365	0	0	765	0	0	222	0	0
Grp Sat Flow(s),veh/h/ln	1697	0	1676	964	0	0	1358	0	0	1594	0	0
Q Serve(g_s), s	5.0	0.0	30.0	0.0	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	30.0	21.0	0.0	0.0	26.0	0.0	0.0	6.5	0.0	0.0
Prop In Lane	1.00		0.27	0.05		0.12	0.45		0.02	0.09		0.42
Lane Grp Cap(c), veh/h	354	0	773	370	0	0	623	0	0	698	0	0
V/C Ratio(X)	0.79	0.00	1.01	0.99	0.00	0.00	1.23	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	354	0	773	370	0	0	623	0	0	698	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.0	0.0	17.5	19.6	0.0	0.0	21.3	0.0	0.0	13.6	0.0	0.0
Incr Delay (d2), s/veh	11.5	0.0	35.5	43.5	0.0	0.0	116.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	21.4	10.0	0.0	0.0	31.2	0.0	0.0	2.9	0.0	0.0
LnGrp Delay(d),s/veh	27.5	0.0	53.0	63.1	0.0	0.0	137.4	0.0	0.0	14.2	0.0	0.0
LnGrp LOS	C		F	E			F			B		
Approach Vol, veh/h		1063			365			765			222	
Approach Delay, s/veh		46.3			63.1			137.4			14.2	
Approach LOS		D			E			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		30.5		34.5		30.5	9.0	25.5
Change Period (Y+Rc), s		4.5		4.5		4.5	4.0	4.5
Max Green Setting (Gmax), s		26.0		30.0		26.0	5.0	21.0
Max Q Clear Time (g_c+I1), s		28.0		32.0		8.5	7.0	23.0
Green Ext Time (p_c), s		0.0		0.0		11.5	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		74.7
HCM 2010 LOS		E

Intersection	
Intersection Delay, s/veh	48.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	223	300	69	51	137	114	120	332	165	80	84	20
Future Vol, veh/h	223	300	69	51	137	114	120	332	165	80	84	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	1	1	1
Mvmt Flow	235	316	73	54	144	120	126	349	174	84	88	21
Number of Lanes	1	1	0	1	1	0	0	1	1	0	1	0

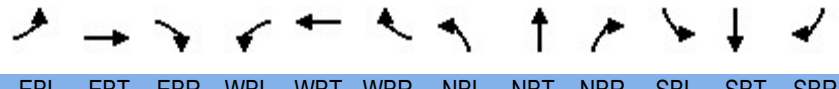
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	37.5	23	80.3	21.6
HCM LOS	E	C	F	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	27%	0%	100%	0%	100%	0%	43%
Vol Thru, %	73%	0%	0%	81%	0%	55%	46%
Vol Right, %	0%	100%	0%	19%	0%	45%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	452	165	223	369	51	251	184
LT Vol	120	0	223	0	51	0	80
Through Vol	332	0	0	300	0	137	84
RT Vol	0	165	0	69	0	114	20
Lane Flow Rate	476	174	235	388	54	264	194
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	1.107	0.363	0.566	0.869	0.138	0.62	0.495
Departure Headway (Hd)	8.379	7.52	9.085	8.429	9.701	8.845	9.589
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	433	478	399	431	372	412	378
Service Time	6.128	5.267	6.785	6.129	7.401	6.545	7.589
HCM Lane V/C Ratio	1.099	0.364	0.589	0.9	0.145	0.641	0.513
HCM Control Delay	104.3	14.5	23	46.2	13.9	24.9	21.6
HCM Lane LOS	F	B	C	E	B	C	C
HCM 95th-tile Q	16.5	1.6	3.4	8.8	0.5	4	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	589	408	0	4	594	0	7	7	2	91	8	314
Future Volume (veh/h)	589	408	0	4	594	0	7	7	2	91	8	314
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.90	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	1800	1765	1800	1800	1748	1748	1800	1800	1800	1800	1782	1782
Adj Flow Rate, veh/h	620	429	0	4	625	0	7	7	2	96	8	331
Adj No. of Lanes	0	2	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	0	0	0	1	1	1
Cap, veh/h	677	675	0	4	575	492	14	14	4	199	17	793
Arrive On Green	0.67	0.67	0.00	0.33	0.33	0.00	0.02	0.02	0.02	0.13	0.13	0.13
Sat Flow, veh/h	1681	1765	0	11	1736	1485	743	743	212	1573	131	1443
Grp Volume(v), veh/h	620	429	0	629	0	0	16	0	0	104	0	331
Grp Sat Flow(s),veh/h/ln	1681	1676	0	1747	0	1485	1698	0	0	1704	0	1443
Q Serve(g_s), s	52.2	24.3	0.0	55.0	0.0	0.0	1.5	0.0	0.0	9.4	0.0	21.0
Cycle Q Clear(g_c), s	52.2	24.3	0.0	55.0	0.0	0.0	1.5	0.0	0.0	9.4	0.0	21.0
Prop In Lane	1.00		0.00	0.01		1.00	0.44		0.12	0.92		1.00
Lane Grp Cap(c), veh/h	677	675	0	579	0	492	32	0	0	216	0	793
V/C Ratio(X)	0.92	0.64	0.00	1.09	0.00	0.00	0.50	0.00	0.00	0.48	0.00	0.42
Avail Cap(c_a), veh/h	677	675	0	579	0	492	61	0	0	216	0	793
HCM Platoon Ratio	1.67	1.67	1.67	1.00	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	0.87	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	20.2	0.0	55.5	0.0	0.0	80.7	0.0	0.0	67.4	0.0	23.3
Incr Delay (d2), s/veh	17.9	2.8	0.0	60.8	0.0	0.0	16.1	0.0	0.0	4.6	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.0	11.5	0.0	36.3	0.0	0.0	0.9	0.0	0.0	4.7	0.0	15.4
LnGrp Delay(d),s/veh	42.6	23.0	0.0	116.3	0.0	0.0	96.8	0.0	0.0	72.0	0.0	24.3
LnGrp LOS	D	C		F			F			E		C
Approach Vol, veh/h		1049			629			16			435	
Approach Delay, s/veh		34.6			116.3			96.8			35.7	
Approach LOS		C			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		8.1		71.9		26.0		60.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		6.0		64.0		21.0		55.0
Max Q Clear Time (g_c+I1), s		3.5		54.2		23.0		57.0
Green Ext Time (p_c), s		0.0		7.0		0.0		0.0

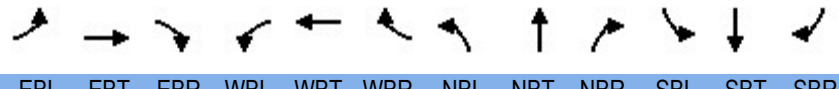
Intersection Summary	
HCM 2010 Ctrl Delay	59.4
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	32	805	317	293	1182	44	231	271	733
Future Volume (veh/h)	0	0	0	32	805	317	293	1182	44	231	271	733
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	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
Adj Sat Flow, veh/h/ln				1800	1765	1800	1782	1782	1800	1765	1765	1765
Adj Flow Rate, veh/h				34	847	334	308	1244	46	243	285	772
Adj No. of Lanes				0	3	0	1	2	0	1	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	2	0	1	1	1	2	2	2
Cap, veh/h				36	931	383	344	1321	49	456	1839	816
Arrive On Green				0.28	0.28	0.28	0.15	0.79	0.79	0.07	0.18	0.18
Sat Flow, veh/h				128	3348	1378	1697	3328	123	1681	3353	1488
Grp Volume(v), veh/h				466	388	361	308	632	658	243	285	772
Grp Sat Flow(s),veh/h/ln				1758	1606	1490	1697	1693	1758	1681	1676	1488
Q Serve(g_s), s				43.3	38.1	38.3	6.8	50.5	50.8	15.3	11.9	85.1
Cycle Q Clear(g_c), s				43.3	38.1	38.3	6.8	50.5	50.8	15.3	11.9	85.1
Prop In Lane				0.07		0.92	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h				489	446	414	344	672	698	456	1839	816
V/C Ratio(X)				0.95	0.87	0.87	0.90	0.94	0.94	0.53	0.15	0.95
Avail Cap(c_a), veh/h				493	450	417	344	841	874	456	1921	852
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)				1.00	1.00	1.00	0.51	0.51	0.51	0.17	0.17	0.17
Uniform Delay (d), s/veh				58.9	57.0	57.1	50.6	15.5	15.5	63.2	35.6	65.5
Incr Delay (d2), s/veh				29.1	16.3	17.8	14.9	14.2	14.0	0.2	0.0	5.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				24.9	18.9	17.8	14.4	25.1	26.1	10.7	5.5	36.3
LnGrp Delay(d),s/veh				88.0	73.3	74.9	65.6	29.7	29.6	63.5	35.6	70.9
LnGrp LOS				F	E	E	E	C	C	E	D	E
Approach Vol, veh/h					1215			1598			1300	
Approach Delay, s/veh					79.4			36.6			61.8	
Approach LOS					E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	12.9	71.4			17.8	96.6		51.6
Change Period (Y+Rc), s	5.5	5.5			5.5	5.5		5.5
Max Green Setting (Gmax), s	20.5	82.5			7.9	95.1		46.5
Max Q Clear Time (g_c+I1), s	17.3	52.8			8.8	87.1		45.3
Green Ext Time (p_c), s	0.8	13.1			0.0	3.9		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	57.2
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	232	19	1	24	91	0	1778	0	0	1193	296
Future Volume (veh/h)	333	232	19	1	24	91	0	1778	0	0	1193	296
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1782	1800	1800	1800	1800	0	1782	1800	0	1765	1800
Adj Flow Rate, veh/h	351	244	20	1	25	96	0	1872	0	0	1256	312
Adj No. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	1	1	0	2	2
Cap, veh/h	373	236	19	23	144	535	0	1764	0	0	1389	339
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.00	0.35	0.00	0.00	1.00	1.00
Sat Flow, veh/h	798	555	45	2	339	1259	0	3564	0	0	2755	652
Grp Volume(v), veh/h	615	0	0	122	0	0	0	1872	0	0	782	786
Grp Sat Flow(s),veh/h/ln	1398	0	0	1600	0	0	0	1693	0	0	1676	1642
Q Serve(g_s), s	62.4	0.0	0.0	0.0	0.0	0.0	0.0	86.5	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	70.5	0.0	0.0	8.1	0.0	0.0	0.0	86.5	0.0	0.0	0.0	0.0
Prop In Lane	0.57		0.03	0.01		0.79	0.00		0.00	0.00		0.40
Lane Grp Cap(c), veh/h	628	0	0	701	0	0	0	1764	0	0	874	855
V/C Ratio(X)	0.98	0.00	0.00	0.17	0.00	0.00	0.00	1.06	0.00	0.00	0.90	0.92
Avail Cap(c_a), veh/h	628	0	0	701	0	0	0	1764	0	0	874	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.46	0.00	0.00	0.64	0.64
Uniform Delay (d), s/veh	49.9	0.0	0.0	29.8	0.0	0.0	0.0	54.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	30.7	0.0	0.0	0.1	0.0	0.0	0.0	34.0	0.0	0.0	9.3	11.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	3.5	0.0	0.0	0.0	48.9	0.0	0.0	2.3	2.7
LnGrp Delay(d),s/veh	80.6	0.0	0.0	29.9	0.0	0.0	0.0	88.1	0.0	0.0	9.3	11.5
LnGrp LOS	F			C				F			A	B
Approach Vol, veh/h		615			122			1872			1568	
Approach Delay, s/veh		80.6			29.9			88.1			10.4	
Approach LOS		F			C			F			B	

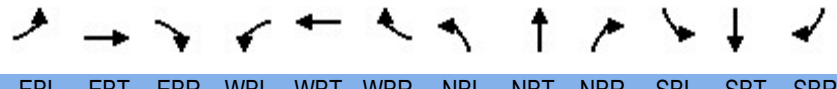
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		91.0		75.0		91.0		75.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		86.5		70.5		86.5		70.5
Max Q Clear Time (g_c+I1), s		88.5		72.5		2.0		10.1
Green Ext Time (p_c), s		0.0		0.0		82.9		8.5

Intersection Summary	
HCM 2010 Ctrl Delay	56.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	427	1819	73	119	124	0	0	68	36
Future Volume (veh/h)	0	0	0	427	1819	73	119	124	0	0	68	36
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	0.97		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1800	1765	1800	1782	1782	0	0	1748	1800
Adj Flow Rate, veh/h				449	1915	77	125	131	0	0	72	38
Adj No. of Lanes				0	3	0	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	2	0	1	1	0	0	3	3
Cap, veh/h				622	2873	118	244	349	0	0	208	110
Arrive On Green				0.71	0.71	0.71	0.20	0.20	0.00	0.00	0.20	0.20
Sat Flow, veh/h				871	4021	165	1255	1782	0	0	1062	560
Grp Volume(v), veh/h				887	745	809	125	131	0	0	0	110
Grp Sat Flow(s),veh/h/ln				1721	1606	1730	1255	1782	0	0	0	1622
Q Serve(g_s), s				30.4	24.7	25.1	9.5	6.4	0.0	0.0	0.0	5.9
Cycle Q Clear(g_c), s				30.4	24.7	25.1	15.4	6.4	0.0	0.0	0.0	5.9
Prop In Lane				0.51		0.10	1.00		0.00	0.00		0.35
Lane Grp Cap(c), veh/h				1230	1147	1236	244	349	0	0	0	317
V/C Ratio(X)				0.72	0.65	0.65	0.51	0.38	0.00	0.00	0.00	0.35
Avail Cap(c_a), veh/h				1230	1147	1236	283	405	0	0	0	368
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.47	0.47	0.47	0.92	0.92	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				8.4	7.6	7.7	41.4	34.9	0.0	0.0	0.0	34.7
Incr Delay (d2), s/veh				1.7	1.3	1.3	1.5	0.6	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				14.6	11.2	12.1	3.4	3.2	0.0	0.0	0.0	2.7
LnGrp Delay(d),s/veh				10.2	8.9	8.9	42.9	35.5	0.0	0.0	0.0	35.4
LnGrp LOS				B	A	A	D	D				D
Approach Vol, veh/h					2441			256			110	
Approach Delay, s/veh					9.4			39.1			35.4	
Approach LOS					A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		24.1		75.9		24.1		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		22.7		68.3		22.7		
Max Q Clear Time (g_c+I1), s		17.4		32.4		7.9		
Green Ext Time (p_c), s		0.9		26.5		1.6		

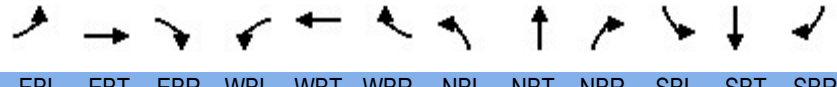
Intersection Summary		
HCM 2010 Ctrl Delay		13.1
HCM 2010 LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	31	2119	28	305	252	0	0	98	35
Future Volume (veh/h)	0	0	0	31	2119	28	305	252	0	0	98	35
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	0.99		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
Adj Sat Flow, veh/h/ln				1800	1782	1800	1782	1782	0	0	1765	1800
Adj Flow Rate, veh/h				33	2231	29	321	265	0	0	103	37
Adj No. of Lanes				0	3	0	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	1	0	1	1	0	0	2	2
Cap, veh/h				37	2632	35	299	481	0	0	182	65
Arrive On Green				0.52	0.52	0.52	0.08	0.27	0.00	0.00	0.15	0.15
Sat Flow, veh/h				70	5031	67	1697	1782	0	0	1234	443
Grp Volume(v), veh/h				838	695	760	321	265	0	0	0	140
Grp Sat Flow(s),veh/h/ln				1779	1622	1768	1697	1782	0	0	0	1677
Q Serve(g_s), s				38.2	32.2	32.3	7.0	11.5	0.0	0.0	0.0	7.0
Cycle Q Clear(g_c), s				38.2	32.2	32.3	7.0	11.5	0.0	0.0	0.0	7.0
Prop In Lane				0.04		0.04	1.00		0.00	0.00		0.26
Lane Grp Cap(c), veh/h				931	849	925	299	481	0	0	0	247
V/C Ratio(X)				0.90	0.82	0.82	1.07	0.55	0.00	0.00	0.00	0.57
Avail Cap(c_a), veh/h				949	865	943	299	653	0	0	0	410
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.69	0.69	0.69	0.18	0.18	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				19.3	17.9	17.9	35.8	28.2	0.0	0.0	0.0	35.7
Incr Delay (d2), s/veh				8.3	4.3	4.1	45.1	0.2	0.0	0.0	0.0	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
%ile BackOfQ(50%),veh/ln				20.8	15.3	16.7	7.9	5.7	0.0	0.0	0.0	3.4
LnGrp Delay(d),s/veh				27.6	22.2	22.0	80.9	28.4	0.0	0.0	0.0	37.7
LnGrp LOS				C	C	C	F	C				D
Approach Vol, veh/h					2293			586			140	
Approach Delay, s/veh					24.1			57.1			37.7	
Approach LOS					C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			11.0	17.8		51.6		28.8
Change Period (Y+Rc), s			4.0	4.5		4.5		4.5
Max Green Setting (Gmax), s			7.0	22.0		48.0		33.0
Max Q Clear Time (g_c+I1), s			9.0	9.0		40.2		13.5
Green Ext Time (p_c), s			0.0	2.0		6.8		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	14	1944	17	180	147	0	0	18	102
Future Volume (veh/h)	0	0	0	14	1944	17	180	147	0	0	18	102
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	0.99		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
Adj Sat Flow, veh/h/ln				1800	1765	1800	1800	1800	0	0	1765	1800
Adj Flow Rate, veh/h				15	2046	18	189	155	0	0	19	107
Adj No. of Lanes				0	3	0	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	2	0	0	0	0	0	2	2
Cap, veh/h				18	2653	24	298	444	0	0	56	316
Arrive On Green				0.53	0.53	0.53	0.25	0.25	0.00	0.00	0.25	0.25
Sat Flow, veh/h				35	5043	46	1269	1800	0	0	228	1283
Grp Volume(v), veh/h				760	630	689	189	155	0	0	0	126
Grp Sat Flow(s),veh/h/ln				1763	1606	1755	1269	1800	0	0	0	1510
Q Serve(g_s), s				35.9	30.6	30.6	14.4	7.1	0.0	0.0	0.0	6.9
Cycle Q Clear(g_c), s				35.9	30.6	30.6	21.2	7.1	0.0	0.0	0.0	6.9
Prop In Lane				0.02		0.03	1.00		0.00	0.00		0.85
Lane Grp Cap(c), veh/h				928	845	923	298	444	0	0	0	373
V/C Ratio(X)				0.82	0.75	0.75	0.63	0.35	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h				1031	939	1027	372	549	0	0	0	461
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	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				19.7	18.5	18.5	39.7	31.0	0.0	0.0	0.0	31.0
Incr Delay (d2), s/veh				8.0	5.9	5.5	2.4	0.5	0.0	0.0	0.0	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.4	14.9	16.1	5.2	3.6	0.0	0.0	0.0	2.9
LnGrp Delay(d),s/veh				27.8	24.4	24.0	42.0	31.5	0.0	0.0	0.0	31.5
LnGrp LOS				C	C	C	D	C				C
Approach Vol, veh/h					2079			344			126	
Approach Delay, s/veh					25.5			37.3			31.5	
Approach LOS					C			D			C	

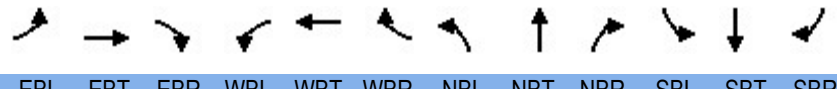
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		30.2				30.2		58.1
Change Period (Y+Rc), s		5.5				5.5		5.5
Max Green Setting (Gmax), s		30.5				30.5		58.5
Max Q Clear Time (g_c+I1), s		23.2				8.9		37.9
Green Ext Time (p_c), s		1.4				2.4		14.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	69	108	9	755	21	366	205	91	19	76	59
Future Volume (veh/h)	23	69	108	9	755	21	366	205	91	19	76	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.95	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1782	1748	1748	1800	1800	1800	1800	1731	1731	1800
Adj Flow Rate, veh/h	24	73	114	9	795	22	385	216	96	20	80	62
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	4	4	4
Cap, veh/h	49	872	739	22	802	22	455	431	191	303	333	258
Arrive On Green	0.03	0.49	0.49	0.01	0.47	0.47	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1697	1782	1510	1664	1691	47	1253	1160	516	1037	897	695
Grp Volume(v), veh/h	24	73	114	9	0	817	385	0	312	20	0	142
Grp Sat Flow(s),veh/h/ln	1697	1782	1510	1664	0	1738	1253	0	1676	1037	0	1593
Q Serve(g_s), s	1.5	2.3	4.5	0.6	0.0	49.9	32.8	0.0	15.4	1.6	0.0	6.6
Cycle Q Clear(g_c), s	1.5	2.3	4.5	0.6	0.0	49.9	39.3	0.0	15.4	17.0	0.0	6.6
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.31	1.00		0.44
Lane Grp Cap(c), veh/h	49	872	739	22	0	824	455	0	622	303	0	591
V/C Ratio(X)	0.49	0.08	0.15	0.41	0.00	0.99	0.85	0.00	0.50	0.07	0.00	0.24
Avail Cap(c_a), veh/h	97	872	739	95	0	824	455	0	622	303	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	14.5	15.1	52.4	0.0	27.9	36.8	0.0	26.0	32.6	0.0	23.2
Incr Delay (d2), s/veh	7.6	0.0	0.1	11.9	0.0	29.2	13.7	0.0	0.6	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.1	1.9	0.3	0.0	30.5	13.1	0.0	7.2	0.5	0.0	2.9
LnGrp Delay(d),s/veh	58.8	14.6	15.2	64.2	0.0	57.2	50.5	0.0	26.6	32.7	0.0	23.4
LnGrp LOS	E	B	B	E		E	D		C	C		C
Approach Vol, veh/h		211			826			697			162	
Approach Delay, s/veh		19.9			57.2			39.8			24.6	
Approach LOS		B			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		44.2	5.9	56.9		44.2	7.6	55.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		39.7	6.1	50.7		39.7	6.1	50.7
Max Q Clear Time (g_c+I1), s		41.3	2.6	6.5		19.0	3.5	51.9
Green Ext Time (p_c), s		0.0	0.0	8.8		4.6	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		43.9
HCM 2010 LOS		D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	753	50	37	842	45	123	339	190	45	104	406
Future Volume (veh/h)	172	753	50	37	842	45	123	339	190	45	104	406
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.96	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	1748	1748	1800	1782	1782	1800	1800	1800	1800	1782	1782	1800
Adj Flow Rate, veh/h	181	793	53	39	886	47	129	357	200	47	109	427
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	203	1159	77	67	931	49	180	394	221	191	109	426
Arrive On Green	0.12	0.37	0.37	0.04	0.28	0.28	0.06	0.37	0.37	0.04	0.35	0.35
Sat Flow, veh/h	1664	3156	211	1697	3268	173	1714	1068	599	1697	311	1218
Grp Volume(v), veh/h	181	417	429	39	459	474	129	0	557	47	0	536
Grp Sat Flow(s),veh/h/ln	1664	1660	1707	1697	1693	1748	1714	0	1667	1697	0	1529
Q Serve(g_s), s	10.7	21.2	21.2	2.3	26.6	26.6	4.8	0.0	31.7	1.7	0.0	35.0
Cycle Q Clear(g_c), s	10.7	21.2	21.2	2.3	26.6	26.6	4.8	0.0	31.7	1.7	0.0	35.0
Prop In Lane	1.00		0.12	1.00		0.10	1.00		0.36	1.00		0.80
Lane Grp Cap(c), veh/h	203	610	627	67	483	498	180	0	616	191	0	535
V/C Ratio(X)	0.89	0.68	0.68	0.58	0.95	0.95	0.72	0.00	0.90	0.25	0.00	1.00
Avail Cap(c_a), veh/h	203	610	627	104	483	498	180	0	616	219	0	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	26.7	26.7	47.2	35.1	35.1	24.8	0.0	29.9	23.6	0.0	32.5
Incr Delay (d2), s/veh	35.4	3.3	3.2	9.1	29.1	28.5	13.3	0.0	17.1	0.8	0.0	39.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	10.3	10.6	1.2	16.3	16.7	2.9	0.0	17.5	0.8	0.0	20.6
LnGrp Delay(d),s/veh	78.7	30.1	30.0	56.3	64.1	63.6	38.1	0.0	47.0	24.4	0.0	71.7
LnGrp LOS	E	C	C	E	E	E	D		D	C		F
Approach Vol, veh/h		1027			972			686			583	
Approach Delay, s/veh		38.6			63.6			45.3			67.9	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	41.4	8.5	41.2	10.8	39.5	16.7	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.3	35.3	6.1	34.6	6.3	35.0	12.2	28.5
Max Q Clear Time (g_c+I1), s	13.7	33.7	4.3	23.2	6.8	37.0	12.7	28.6
Green Ext Time (p_c), s	0.0	1.2	0.0	8.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	35	1971	0	0
Future Vol, veh/h	0	0	35	1971	0	0
Conflicting Peds, #/hr	0	5	5	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	0	0	37	2075	0	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	5	0	909	-
Stage 1	-	-	5	-
Stage 2	-	-	904	-
Critical Hdwy	5.32	-	5.7	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6	-
Follow-up Hdwy	3.11	-	3.8	-
Pot Cap-1 Maneuver	1152	-	349	0
Stage 1	-	-	-	0
Stage 2	-	-	326	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	1148	-	348	-
Mov Cap-2 Maneuver	-	-	348	-
Stage 1	-	-	-	-
Stage 2	-	-	326	-

Approach	WB	NB
HCM Control Delay, s	0.1	0
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT
Capacity (veh/h)	-	1148	-
HCM Lane V/C Ratio	-	0.032	-
HCM Control Delay (s)	0	8.2	0
HCM Lane LOS	A	A	A
HCM 95th %tile Q(veh)	-	0.1	-

Intersection	
Intersection Delay, s/veh	58.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	84	58	61	338	14	273	171	205	0	49	11
Future Vol, veh/h	10	84	58	61	338	14	273	171	205	0	49	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	4	4	4
Mvmt Flow	11	88	61	64	356	15	287	180	216	0	52	12
Number of Lanes	1	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	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	13.5	24.5	95.5	11.6
HCM LOS	B	C	F	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	42%	100%	0%	100%	0%	0%
Vol Thru, %	26%	0%	59%	0%	96%	82%
Vol Right, %	32%	0%	41%	0%	4%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	649	10	142	61	352	60
LT Vol	273	10	0	61	0	0
Through Vol	171	0	84	0	338	49
RT Vol	205	0	58	0	14	11
Lane Flow Rate	683	11	149	64	371	63
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	1.116	0.024	0.301	0.134	0.718	0.125
Departure Headway (Hd)	5.881	8.534	7.718	7.925	7.381	7.501
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	615	422	469	455	493	481
Service Time	3.927	6.234	5.418	5.625	5.081	5.501
HCM Lane V/C Ratio	1.111	0.026	0.318	0.141	0.753	0.131
HCM Control Delay	95.5	11.4	13.7	11.8	26.7	11.6
HCM Lane LOS	F	B	B	B	D	B
HCM 95th-tile Q	20.9	0.1	1.3	0.5	5.7	0.4

Intersection	
Int Delay, s/veh	50.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	936	7	0	802	160	12	6	30	1	120	30
Future Vol, veh/h	0	936	7	0	802	160	12	6	30	1	120	30
Conflicting Peds, #/hr	44	0	20	20	0	44	39	0	105	105	0	39
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	0	985	7	0	844	168	13	6	32	1	126	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1056	0	0	1012	0	0	2055	2065	621	1573	1984	1011
Stage 1	-	-	-	-	-	-	1009	1009	-	972	972	-
Stage 2	-	-	-	-	-	-	1046	1056	-	601	1012	-
Critical Hdwy	4.13	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.219	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	657	-	-	688	-	-	37	55	435	83	~ 62	293
Stage 1	-	-	-	-	-	-	261	320	-	306	333	-
Stage 2	-	-	-	-	-	-	278	305	-	459	319	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	635	-	-	677	-	-	-	52	394	62	~ 59	275
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	52	-	62	~ 59	-
Stage 1	-	-	-	-	-	-	257	315	-	296	322	-
Stage 2	-	-	-	-	-	-	145	295	-	381	314	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0		$ 708.8
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	635	-	-	677	-	-	70
HCM Lane V/C Ratio	-	-	-	-	-	-	-	2.271
HCM Control Delay (s)	-	0	-	-	0	-	-	$ 708.8
HCM Lane LOS	-	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	15.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	0	42	0	0	0	35	2062	0	0	1390	43
Future Volume (veh/h)	26	0	42	0	0	0	35	2062	0	0	1390	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	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	1731	1731	1800	1800	1800	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	27	0	44	0	0	0	37	2171	0	0	1463	45
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	2	2	2
Cap, veh/h	110	0	68	34	84	0	338	3068	0	173	2904	89
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.02	0.92	0.00	0.00	0.87	0.87
Sat Flow, veh/h	1627	0	1452	1384	1800	0	1681	3441	0	1681	3320	102
Grp Volume(v), veh/h	27	0	44	0	0	0	37	2171	0	0	738	770
Grp Sat Flow(s),veh/h/ln	1627	0	1452	1384	1800	0	1681	1676	0	1681	1676	1745
Q Serve(g_s), s	3.4	0.0	6.2	0.0	0.0	0.0	0.4	32.6	0.0	0.0	20.6	20.7
Cycle Q Clear(g_c), s	3.4	0.0	6.2	0.0	0.0	0.0	0.4	32.6	0.0	0.0	20.6	20.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	110	0	68	34	84	0	338	3068	0	173	1467	1527
V/C Ratio(X)	0.24	0.00	0.65	0.00	0.00	0.00	0.11	0.71	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	790	0	674	612	835	0	343	3068	0	212	1467	1527
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	0.00	0.00	0.26	0.26	0.00	0.00	0.69	0.69
Uniform Delay (d), s/veh	96.6	0.0	97.9	0.0	0.0	0.0	2.3	2.1	0.0	0.0	2.9	2.9
Incr Delay (d2), s/veh	1.1	0.0	10.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	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	1.5	0.0	2.7	0.0	0.0	0.0	0.3	14.6	0.0	0.0	9.6	10.2
LnGrp Delay(d),s/veh	97.7	0.0	107.9	0.0	0.0	0.0	2.4	2.5	0.0	0.0	3.8	3.8
LnGrp LOS	F		F				A	A			A	A
Approach Vol, veh/h		71			0			2208			1508	
Approach Delay, s/veh		104.0			0.0			2.5			3.8	
Approach LOS		F						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	195.2		13.8	8.4	186.8		13.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	95.0		97.0	5.0	95.0		97.0
Max Q Clear Time (g_c+I1), s	0.0	34.6		8.2	2.4	22.7		0.0
Green Ext Time (p_c), s	0.0	55.5		0.4	0.0	65.5		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		4.9
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	288	56	4	173	0	127	63	12	12	47	0
Future Volume (veh/h)	8	288	56	4	173	0	127	63	12	12	47	0
Number	7	4	14	3	8	18	5	2	12	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	0.99		1.00	0.99		0.97	0.99		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	1800	1765	1800	1800	1748	1800	1800	1782	1800	1800	1731	1800
Adj Flow Rate, veh/h	8	303	59	4	182	0	134	66	13	13	49	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	4	4	4
Cap, veh/h	148	587	112	147	717	0	444	174	25	212	417	0
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.00	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	12	1417	271	10	1730	0	786	634	92	155	1521	0
Grp Volume(v), veh/h	370	0	0	186	0	0	213	0	0	62	0	0
Grp Sat Flow(s),veh/h/ln	1700	0	0	1740	0	0	1513	0	0	1676	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.0	1.8	0.0	0.0	2.9	0.0	0.0	0.7	0.0	0.0
Prop In Lane	0.02		0.16	0.02		0.00	0.63		0.06	0.21		0.00
Lane Grp Cap(c), veh/h	848	0	0	864	0	0	643	0	0	629	0	0
V/C Ratio(X)	0.44	0.00	0.00	0.22	0.00	0.00	0.33	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	2381	0	0	2427	0	0	1841	0	0	1944	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.6	0.0	0.0	4.9	0.0	0.0	7.8	0.0	0.0	7.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.9	0.0	0.0	1.3	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	6.0	0.0	0.0	5.1	0.0	0.0	8.1	0.0	0.0	7.1	0.0	0.0
LnGrp LOS	A			A			A			A		
Approach Vol, veh/h		370			186			213			62	
Approach Delay, s/veh		6.0			5.1			8.1			7.1	
Approach LOS		A			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		11.0		14.7		11.0		14.7
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		28.0		34.0		28.0		34.0
Max Q Clear Time (g_c+I1), s		4.9		6.2		2.7		3.8
Green Ext Time (p_c), s		1.7		3.9		1.7		4.0

Intersection Summary		
HCM 2010 Ctrl Delay		6.4
HCM 2010 LOS		A

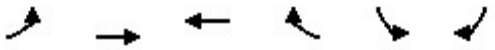
Intersection	
Int Delay, s/veh	5.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1041	134	0	0	0	233
Future Vol, veh/h	1041	134	0	0	0	233
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	1096	141	0	0	0	245

Major/Minor	Major1			Minor1	
Conflicting Flow All	0	0		-	622
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	-		-	7.1
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	-		-	3.9
Pot Cap-1 Maneuver	-	-		0	372
Stage 1	-	-		0	-
Stage 2	-	-		0	-
Platoon blocked, %	-	-			
Mov Cap-1 Maneuver	-	-		-	371
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	NB
HCM Control Delay, s	0	31.7
HCM LOS		D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	371	-	-
HCM Lane V/C Ratio	0.661	-	-
HCM Control Delay (s)	31.7	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	4.5	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1016	0	0	163	1823
Future Volume (vph)	0	1016	0	0	163	1823
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.5			6.5	6.5
Lane Util. Factor		0.95			1.00	0.88
Frpb, ped/bikes		1.00			1.00	1.00
Flpb, ped/bikes		1.00			1.00	1.00
Frt		1.00			1.00	0.85
Flt Protected		1.00			0.95	1.00
Satd. Flow (prot)		3241			1653	2603
Flt Permitted		1.00			0.95	1.00
Satd. Flow (perm)		3241			1653	2603
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1069	0	0	172	1919
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	0	1069	0	0	151	1919
Confl. Peds. (#/hr)	8			8	10	
Heavy Vehicles (%)	2%	2%	0%	0%	0%	0%
Turn Type		NA			Prot	custom
Protected Phases		6			4	4
Permitted Phases						6
Actuated Green, G (s)		42.3			49.7	92.0
Effective Green, g (s)		42.3			49.7	92.0
Actuated g/C Ratio		0.40			0.47	0.88
Clearance Time (s)		6.5			6.5	6.5
Vehicle Extension (s)		6.0			3.5	3.5
Lane Grp Cap (vph)		1305			782	2603
v/s Ratio Prot		0.33			0.09	c0.35
v/s Ratio Perm						0.39
v/c Ratio		0.82			0.19	0.74
Uniform Delay, d1		27.9			16.0	2.3
Progression Factor		1.00			1.00	1.00
Incremental Delay, d2		5.8			0.1	1.2
Delay (s)		33.8			16.2	3.4
Level of Service		C			B	A
Approach Delay (s)		33.8	0.0		4.5	
Approach LOS		C	A		A	

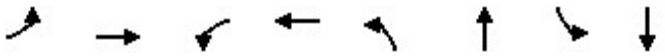
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	45	585	21	205	1213	303	68
v/c Ratio	0.13	0.25	0.02	0.31	0.48	0.77	0.48
Control Delay	3.4	6.5	0.1	5.5	10.2	21.1	53.7
Queue Delay	0.0	0.1	0.0	0.6	3.5	0.4	0.0
Total Delay	3.4	6.7	0.1	6.1	13.7	21.5	53.7
Queue Length 50th (ft)	4	67	0	49	226	15	44
Queue Length 95th (ft)	15	126	0	m82	244	103	85
Internal Link Dist (ft)		423			199	260	508
Turn Bay Length (ft)	200		100	75			
Base Capacity (vph)	388	2378	1063	791	2545	621	412
Starvation Cap Reductn	0	0	0	321	1209	0	0
Spillback Cap Reductn	0	855	0	0	0	73	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.38	0.02	0.44	0.91	0.55	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	831	154	1367	83	338	42	202
v/c Ratio	0.25	0.49	0.42	0.74	0.35	0.83	0.29	0.50
Control Delay	15.2	26.4	12.5	27.7	33.9	57.7	32.1	39.9
Queue Delay	0.0	1.6	0.0	4.9	2.1	0.0	0.0	0.4
Total Delay	15.2	28.0	12.5	32.6	36.0	57.7	32.1	40.2
Queue Length 50th (ft)	19	267	67	547	47	237	23	127
Queue Length 95th (ft)	m42	370	27	#681	78	317	45	182
Internal Link Dist (ft)		199		198		592		1248
Turn Bay Length (ft)	100		100		100		100	
Base Capacity (vph)	211	1680	482	1843	239	575	145	576
Starvation Cap Reductn	0	632	10	405	0	0	0	0
Spillback Cap Reductn	0	0	0	358	75	0	0	105
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.79	0.33	0.95	0.51	0.59	0.29	0.43

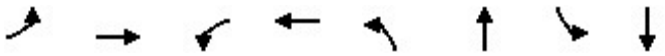
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	11	885	76	1363	209	43
v/c Ratio	0.04	0.41	0.19	0.58	0.79	0.13
Control Delay	4.5	7.0	6.7	11.1	65.9	22.5
Queue Delay	0.0	0.7	0.0	11.4	0.0	0.0
Total Delay	4.5	7.6	6.7	22.5	65.9	22.5
Queue Length 50th (ft)	2	97	14	220	155	14
Queue Length 95th (ft)	m3	91	37	464	223	42
Internal Link Dist (ft)		198		1365	596	195
Turn Bay Length (ft)	100		200			
Base Capacity (vph)	298	2142	426	2361	364	438
Starvation Cap Reductn	0	837	0	0	0	0
Spillback Cap Reductn	0	0	0	988	0	5
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.68	0.18	0.99	0.57	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

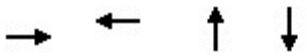


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	718	154	1081	314	599	37	155
v/c Ratio	0.60	0.74	0.57	0.89	0.52	0.89	0.24	0.60
Control Delay	39.7	37.8	28.1	42.1	24.9	43.1	23.4	47.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	37.8	28.1	42.1	24.9	43.1	23.4	47.1
Queue Length 50th (ft)	40	245	69	~427	130	358	13	95
Queue Length 95th (ft)	#97	318	117	#561	197	#571	30	154
Internal Link Dist (ft)		1365		1250		752		1241
Turn Bay Length (ft)	75		125		200		100	
Base Capacity (vph)	154	1026	286	1221	619	800	157	609
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.70	0.54	0.89	0.51	0.75	0.24	0.25

Intersection Summary

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

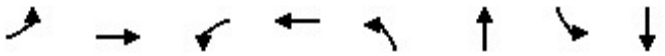
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	704	1143	296	46
v/c Ratio	0.37	0.58	0.72	0.13
Control Delay	7.0	9.2	29.2	15.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.0	9.2	29.2	15.6
Queue Length 50th (ft)	77	154	87	8
Queue Length 95th (ft)	106	206	#205	35
Internal Link Dist (ft)	548	1262	181	1265
Turn Bay Length (ft)				
Base Capacity (vph)	2329	2405	486	444
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	0.48	0.61	0.10

Intersection Summary

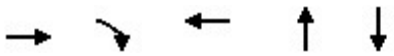
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	292	605	91	723	300	602	60	671
v/c Ratio	0.90	0.90	0.25	0.95	0.88	0.46	0.24	0.81
Control Delay	92.4	79.7	52.1	82.6	63.1	38.2	20.5	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.4	79.7	52.1	82.6	63.1	38.2	20.5	33.9
Queue Length 50th (ft)	342	353	87	423	229	261	14	87
Queue Length 95th (ft)	#537	#462	148	#554	#391	318	m34	#172
Internal Link Dist (ft)		1262		576		207		1278
Turn Bay Length (ft)	200		100		50		200	
Base Capacity (vph)	331	687	372	770	356	1311	254	834
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.88	0.24	0.94	0.84	0.46	0.24	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	414	119	449	624	307
v/c Ratio	0.84	0.21	0.75	1.05	0.39
Control Delay	35.9	4.2	26.9	71.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	4.2	26.9	71.7	10.0
Queue Length 50th (ft)	141	0	145	~285	56
Queue Length 95th (ft)	#284	28	#250	#471	110
Internal Link Dist (ft)	576		741	199	1282
Turn Bay Length (ft)					
Base Capacity (vph)	541	615	650	594	779
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.77	0.19	0.69	1.05	0.39

Intersection Summary

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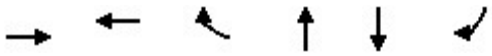
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	967	433	1	22	98	432
v/c Ratio	0.70	0.82	0.00	0.25	0.57	0.44
Control Delay	43.8	66.0	0.0	76.5	82.6	3.2
Queue Delay	0.0	1.1	0.0	0.0	0.0	0.0
Total Delay	43.8	67.1	0.0	76.5	82.6	3.2
Queue Length 50th (ft)	465	449	0	21	103	0
Queue Length 95th (ft)	#640	568	0	53	165	56
Internal Link Dist (ft)	574	572		161	200	
Turn Bay Length (ft)						
Base Capacity (vph)	1372	559	492	254	212	987
Starvation Cap Reductn	0	29	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.82	0.00	0.09	0.46	0.44

Intersection Summary

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

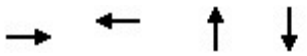
Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	1002	560	864	88	1027	117	703	660
v/c Ratio	1.13	0.61	1.14	0.40	1.06	1.03	0.83	0.83
Control Delay	124.3	28.1	132.1	44.7	92.7	126.9	44.6	15.1
Queue Delay	0.0	0.0	0.0	0.0	12.3	0.0	0.0	0.2
Total Delay	124.3	28.1	132.1	44.7	105.0	126.9	44.6	15.3
Queue Length 50th (ft)	~646	393	~564	54	~614	~94	382	94
Queue Length 95th (ft)	#783	520	#703	m77	m#759	m#167	m371	m55
Internal Link Dist (ft)		1278	186		1278		558	
Turn Bay Length (ft)	200			75		200		250
Base Capacity (vph)	889	922	757	221	973	114	978	793
Starvation Cap Reductn	0	0	0	0	0	0	0	7
Spillback Cap Reductn	0	0	0	0	28	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.61	1.14	0.40	1.09	1.03	0.72	0.84

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	359	104	2082	1636
v/c Ratio	1.36	0.26	0.91	0.74
Control Delay	229.6	43.3	13.6	6.0
Queue Delay	0.0	0.0	13.6	0.0
Total Delay	229.6	43.3	27.3	6.0
Queue Length 50th (ft)	~510	75	372	75
Queue Length 95th (ft)	#727	134	m330	81
Internal Link Dist (ft)	1907	265	558	1004
Turn Bay Length (ft)				
Base Capacity (vph)	264	395	2297	2216
Starvation Cap Reductn	0	0	252	0
Spillback Cap Reductn	0	0	44	4
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.36	0.26	1.02	0.74

Intersection Summary

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

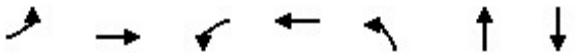
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1018	174	1187	85	133	174	34	121
v/c Ratio	0.68	0.50	0.53	0.61	0.34	0.39	0.27	0.59
Control Delay	20.0	11.1	3.6	65.4	34.4	7.1	45.8	48.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	11.1	3.6	65.4	34.4	7.1	45.8	48.4
Queue Length 50th (ft)	83	34	291	55	73	0	21	66
Queue Length 95th (ft)	m66	m48	12	#116	118	49	50	120
Internal Link Dist (ft)	191		1643		1248			604
Turn Bay Length (ft)		100		200		100	125	
Base Capacity (vph)	1502	372	2219	149	598	591	233	357
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.47	0.53	0.57	0.22	0.29	0.15	0.34

Intersection Summary

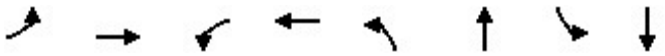
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	24	1068	46	1306	85	374	158
v/c Ratio	0.21	0.58	0.38	0.68	0.70	0.77	0.71
Control Delay	64.7	8.8	42.6	27.4	76.7	36.6	54.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	8.8	42.6	27.4	76.7	36.6	54.6
Queue Length 50th (ft)	16	117	30	324	57	178	94
Queue Length 95th (ft)	m27	263	m52	#556	#138	260	150
Internal Link Dist (ft)		1643		1220		1241	596
Turn Bay Length (ft)	100		100		150		
Base Capacity (vph)	179	1848	126	1932	123	593	331
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.58	0.37	0.68	0.69	0.63	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	1361	27	1340	38	154	39	125
v/c Ratio	0.18	0.64	0.11	0.64	0.38	0.66	0.39	0.54
Control Delay	6.8	10.1	7.8	16.8	58.4	35.3	59.4	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	10.1	7.8	16.8	58.4	35.3	59.4	25.3
Queue Length 50th (ft)	5	140	5	330	25	47	26	26
Queue Length 95th (ft)	m15	228	17	501	59	108	61	79
Internal Link Dist (ft)		1220		547		1248		600
Turn Bay Length (ft)	150		150		100		200	
Base Capacity (vph)	253	2133	244	2089	102	394	101	387
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.64	0.11	0.64	0.37	0.39	0.39	0.32

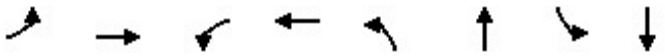
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	28	374	106	18	664	406	63	143
v/c Ratio	0.16	0.44	0.14	0.11	0.81	0.99	0.14	0.31
Control Delay	38.5	13.0	2.7	39.2	23.7	73.7	11.3	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	13.0	2.7	39.2	23.7	73.7	11.3	27.9
Queue Length 50th (ft)	10	78	0	7	179	159	2	43
Queue Length 95th (ft)	44	184	22	33	427	#541	39	142
Internal Link Dist (ft)		313			739	1282		254
Turn Bay Length (ft)	150		100	200			100	
Base Capacity (vph)	512	1528	1310	502	1482	411	461	456
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.24	0.08	0.04	0.45	0.99	0.14	0.31

Intersection Summary

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



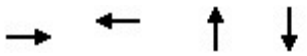
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	182	951	39	910	138	556	58	444
v/c Ratio	0.85	0.71	0.41	0.93	0.57	0.93	0.34	0.81
Control Delay	79.2	31.2	63.6	53.5	27.9	55.0	22.5	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.2	31.2	63.6	53.5	27.9	55.0	22.5	36.8
Queue Length 50th (ft)	128	315	27	333	56	361	22	210
Queue Length 95th (ft)	#254	401	63	#471	97	#578	47	342
Internal Link Dist (ft)		610		2115		235		752
Turn Bay Length (ft)	150		150		200		200	
Base Capacity (vph)	223	1338	95	987	242	640	173	615
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.71	0.41	0.92	0.57	0.87	0.34	0.72

Intersection Summary

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

Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	28	44	35	2160	1508
v/c Ratio	0.47	0.34	0.13	0.72	0.53
Control Delay	119.1	12.1	1.9	4.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	2.2
Total Delay	119.1	12.1	1.9	4.1	6.4
Queue Length 50th (ft)	38	0	3	287	227
Queue Length 95th (ft)	79	19	8	439	315
Internal Link Dist (ft)		580		2015	365
Turn Bay Length (ft)			150		
Base Capacity (vph)	584	695	279	3002	2855
Starvation Cap Reductn	0	0	0	0	1160
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.13	0.72	0.89

Intersection Summary



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	200	250	192	55
v/c Ratio	0.33	0.40	0.29	0.07
Control Delay	7.5	9.2	8.5	7.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.5	9.2	8.5	7.0
Queue Length 50th (ft)	14	23	17	5
Queue Length 95th (ft)	49	68	55	19
Internal Link Dist (ft)	1238	449	594	960
Turn Bay Length (ft)				
Base Capacity (vph)	1554	1621	1328	1514
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.15	0.14	0.04

Intersection Summary

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	1007	602	911	1280
v/c Ratio	1.04	0.29	0.97	0.82
Control Delay	75.6	9.0	61.2	14.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	75.6	9.0	61.2	14.4
Queue Length 50th (ft)	~377	91	~357	356
Queue Length 95th (ft)	#504	122	#487	59
Internal Link Dist (ft)		620	557	
Turn Bay Length (ft)	200			
Base Capacity (vph)	970	2095	942	1639
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.04	0.29	0.97	0.78

Intersection Summary

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

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

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	1023	578	905	1287
v/c Ratio	1.05	0.52	0.97	0.82
Control Delay	79.4	12.8	61.4	12.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	79.4	12.8	61.4	12.2
Queue Length 50th (ft)	~388	206	~354	368
Queue Length 95th (ft)	#514	301	#484	57
Internal Link Dist (ft)		620	557	
Turn Bay Length (ft)	200			
Base Capacity (vph)	973	1101	935	1641
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.05	0.52	0.97	0.78

Intersection Summary

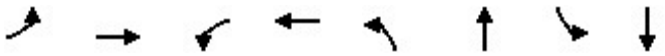
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	46	583	82	1167	261	154
v/c Ratio	0.31	0.60	0.12	0.91	0.81	0.82
Control Delay	15.2	20.5	2.0	11.6	35.5	75.8
Queue Delay	0.0	0.0	0.0	16.7	0.0	0.0
Total Delay	15.2	20.5	2.0	28.3	35.5	75.8
Queue Length 50th (ft)	9	310	7	673	53	97
Queue Length 95th (ft)	12	309	m7	m525	#185	#211
Internal Link Dist (ft)		423		199	260	508
Turn Bay Length (ft)	200		75			
Base Capacity (vph)	148	1215	703	1296	327	192
Starvation Cap Reductn	0	0	0	153	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.48	0.12	1.02	0.80	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	737	39	1138	145	278	43	281
v/c Ratio	0.30	0.58	0.09	0.89	2.27	0.95	0.67	0.97
Control Delay	4.7	3.2	1.5	13.7	639.5	83.3	89.1	88.4
Queue Delay	0.0	0.4	0.0	37.1	0.0	0.6	0.0	0.0
Total Delay	4.7	3.6	1.5	50.8	639.5	83.9	89.1	88.4
Queue Length 50th (ft)	2	20	3	83	~160	176	28	187
Queue Length 95th (ft)	m4	33	m2	#133	#286	#341	#89	#356
Internal Link Dist (ft)		199		198		592		1248
Turn Bay Length (ft)	100		100		100		100	
Base Capacity (vph)	169	1274	412	1285	64	292	64	291
Starvation Cap Reductn	0	174	0	57	0	0	0	0
Spillback Cap Reductn	0	170	0	227	0	1	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.67	0.09	1.08	2.27	0.96	0.67	0.97

Intersection Summary

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

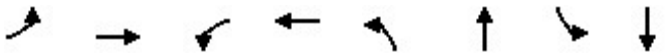
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	11	786	44	1014	211	24
v/c Ratio	0.05	0.71	0.14	0.86	0.72	0.07
Control Delay	4.3	11.2	6.6	22.3	54.2	33.3
Queue Delay	0.0	0.5	0.0	2.1	0.0	0.0
Total Delay	4.3	11.8	6.6	24.4	54.2	33.3
Queue Length 50th (ft)	1	217	9	471	130	12
Queue Length 95th (ft)	m3	m313	20	#763	#304	38
Internal Link Dist (ft)		198		1365	596	195
Turn Bay Length (ft)	100		200			
Base Capacity (vph)	240	1165	309	1182	295	357
Starvation Cap Reductn	0	112	0	0	0	0
Spillback Cap Reductn	0	0	0	75	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.75	0.14	0.92	0.72	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	174	430	206	731	208	560	32	86
v/c Ratio	1.18	0.50	0.59	0.83	0.35	0.98	0.22	0.48
Control Delay	161.1	18.9	27.0	31.9	25.0	64.1	26.4	48.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	161.1	18.9	27.0	31.9	25.0	64.1	26.4	48.6
Queue Length 50th (ft)	~150	187	100	429	94	~363	13	51
Queue Length 95th (ft)	#289	278	190	#672	151	#598	32	98
Internal Link Dist (ft)		1365		1250		752		1241
Turn Bay Length (ft)	75		125		200		100	
Base Capacity (vph)	147	864	352	885	599	574	145	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.50	0.59	0.83	0.35	0.98	0.22	0.15

Intersection Summary

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	14	569	5	909	289	45
v/c Ratio	0.07	0.51	0.01	0.81	0.76	0.13
Control Delay	6.1	9.0	5.0	17.4	36.9	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	9.0	5.0	17.4	36.9	17.2
Queue Length 50th (ft)	2	137	1	312	106	8
Queue Length 95th (ft)	9	207	4	495	#241	37
Internal Link Dist (ft)		548		1262	181	1265
Turn Bay Length (ft)	200		200			
Base Capacity (vph)	240	1336	509	1343	428	401
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.43	0.01	0.68	0.68	0.11

Intersection Summary

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

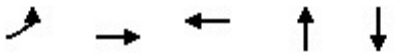
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	384	457	98	616	75	280	634	61	678
v/c Ratio	1.07	0.53	0.27	1.02	0.13	1.04	0.60	0.31	0.99
Control Delay	116.3	30.7	21.7	94.2	1.0	112.5	49.6	32.6	65.8
Queue Delay	0.0	0.0	0.0	28.4	0.0	0.0	0.0	0.0	0.0
Total Delay	116.3	30.7	21.7	122.6	1.0	112.5	49.6	32.6	65.8
Queue Length 50th (ft)	~413	330	47	~708	0	~280	314	23	151
Queue Length 95th (ft)	#634	440	79	#953	4	#477	382	m47	#503
Internal Link Dist (ft)		1262		576			207		1278
Turn Bay Length (ft)	200		100		100	50		200	
Base Capacity (vph)	359	860	367	603	558	269	1051	197	685
Starvation Cap Reductn	0	0	0	63	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.53	0.27	1.14	0.13	1.04	0.60	0.31	0.99

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

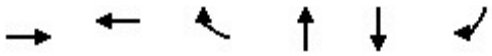


Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	74	440	440	631	312
v/c Ratio	0.31	0.70	0.71	1.12	0.42
Control Delay	17.4	22.1	23.4	97.0	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	22.1	23.4	97.0	12.3
Queue Length 50th (ft)	20	129	136	~295	61
Queue Length 95th (ft)	49	217	226	#540	140
Internal Link Dist (ft)		576	741	199	1282
Turn Bay Length (ft)	200				
Base Capacity (vph)	313	811	806	564	735
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.54	0.55	1.12	0.42

Intersection Summary

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

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



Lane Group	EBT	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	981	429	4	22	95	454
v/c Ratio	0.69	0.84	0.01	0.25	0.56	0.45
Control Delay	41.6	69.4	0.0	76.5	81.9	4.0
Queue Delay	0.0	1.0	0.0	0.0	0.0	0.0
Total Delay	41.6	70.3	0.0	76.5	81.9	4.0
Queue Length 50th (ft)	471	444	0	21	100	13
Queue Length 95th (ft)	#661	562	0	53	m161	m76
Internal Link Dist (ft)	574	572		161	200	
Turn Bay Length (ft)						
Base Capacity (vph)	1414	559	492	255	212	1005
Starvation Cap Reductn	0	28	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.81	0.01	0.09	0.45	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

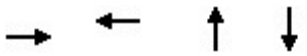
Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	1009	575	899	109	1016	122	659	668
v/c Ratio	1.16	0.63	1.16	0.44	1.04	1.07	0.82	0.87
Control Delay	136.4	28.6	137.4	49.2	98.6	138.4	45.7	19.9
Queue Delay	0.0	0.0	0.0	0.0	16.3	0.0	0.0	0.2
Total Delay	136.4	28.6	137.4	49.2	114.9	138.4	45.7	20.0
Queue Length 50th (ft)	~665	408	~593	61	~601	~105	362	108
Queue Length 95th (ft)	#802	541	#734	m98	m#671	m#182	m348	m77
Internal Link Dist (ft)		1278	186		1278		558	
Turn Bay Length (ft)	200			75		200		250
Base Capacity (vph)	870	919	776	247	973	114	950	766
Starvation Cap Reductn	0	0	0	0	0	0	0	4
Spillback Cap Reductn	0	0	0	0	38	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.16	0.63	1.16	0.44	1.09	1.07	0.69	0.88

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	361	64	2109	1629
v/c Ratio	1.20	0.16	0.92	0.74
Control Delay	168.2	36.8	14.0	6.1
Queue Delay	0.0	0.0	16.5	0.0
Total Delay	168.2	36.8	30.4	6.1
Queue Length 50th (ft)	~472	39	378	75
Queue Length 95th (ft)	#689	84	m330	80
Internal Link Dist (ft)	1907	265	558	1004
Turn Bay Length (ft)				
Base Capacity (vph)	301	402	2297	2209
Starvation Cap Reductn	0	0	245	1
Spillback Cap Reductn	0	0	39	6
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.20	0.16	1.03	0.74

Intersection Summary

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

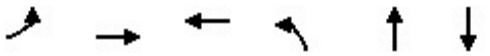
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1038	253	1195	85	114	197	34	126
v/c Ratio	0.79	0.65	0.54	0.62	0.29	0.43	0.26	0.61
Control Delay	21.0	21.1	3.8	66.1	33.1	7.1	45.0	49.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	21.1	3.8	66.1	33.1	7.1	45.0	49.6
Queue Length 50th (ft)	100	54	301	56	62	0	21	70
Queue Length 95th (ft)	m81	m97	11	#116	102	51	49	125
Internal Link Dist (ft)	191		1643		1248			604
Turn Bay Length (ft)		100		200		100	125	
Base Capacity (vph)	1310	389	2216	148	598	606	237	356
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.65	0.54	0.57	0.19	0.33	0.14	0.35

Intersection Summary

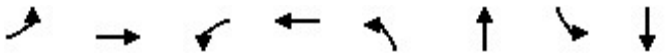
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	24	1080	1442	91	394	163
v/c Ratio	0.21	0.52	0.75	0.78	0.81	0.78
Control Delay	69.7	4.2	29.4	89.5	40.2	61.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.7	4.2	29.4	89.5	40.2	61.7
Queue Length 50th (ft)	17	34	380	61	196	98
Queue Length 95th (ft)	m25	44	#661	#150	284	158
Internal Link Dist (ft)		1643	1220		1241	596
Turn Bay Length (ft)	100			150		
Base Capacity (vph)	179	2080	1921	116	591	300
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.52	0.75	0.78	0.67	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	1387	34	1389	37	141	41	91
v/c Ratio	0.19	0.66	0.15	0.67	0.37	0.64	0.41	0.40
Control Delay	6.1	11.0	8.2	17.8	58.0	40.2	60.3	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	11.0	8.2	17.8	58.0	40.2	60.3	15.6
Queue Length 50th (ft)	5	190	7	357	24	56	27	4
Queue Length 95th (ft)	m12	328	20	#541	58	114	63	49
Internal Link Dist (ft)		1220		547		1248		600
Turn Bay Length (ft)	150		150		100		200	
Base Capacity (vph)	239	2113	236	2071	102	378	101	371
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.66	0.14	0.67	0.36	0.37	0.41	0.25

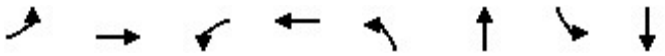
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	24	381	108	12	690	413	63	143
v/c Ratio	0.14	0.42	0.13	0.08	0.84	1.00	0.14	0.32
Control Delay	39.0	11.2	2.1	39.7	25.5	76.6	11.6	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	11.2	2.1	39.7	25.5	76.6	11.6	28.2
Queue Length 50th (ft)	8	80	0	4	190	138	2	36
Queue Length 95th (ft)	41	183	21	26	446	#566	40	146
Internal Link Dist (ft)		313			739	1282		254
Turn Bay Length (ft)	150		100	200			100	
Base Capacity (vph)	515	1517	1302	505	1474	413	464	448
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.25	0.08	0.02	0.47	1.00	0.14	0.32

Intersection Summary

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	189	1031	39	923	144	502	48	546
v/c Ratio	0.83	0.80	0.42	1.03	0.82	0.80	0.51	0.96
Control Delay	74.2	35.7	64.6	77.1	81.8	40.5	69.2	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	35.7	64.6	77.1	81.8	40.5	69.2	54.3
Queue Length 50th (ft)	131	357	27	~376	101	308	34	273
Queue Length 95th (ft)	#248	#485	63	#506	#211	#488	#81	#498
Internal Link Dist (ft)		610		2115		235		752
Turn Bay Length (ft)	150		150		200		200	
Base Capacity (vph)	241	1281	93	896	180	630	96	592
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.80	0.42	1.03	0.80	0.80	0.50	0.92

Intersection Summary

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

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

Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	28	44	35	2158	1508
v/c Ratio	0.47	0.34	0.13	0.72	0.53
Control Delay	119.1	12.1	1.9	4.0	4.1
Queue Delay	0.0	0.0	0.0	0.0	2.2
Total Delay	119.1	12.1	1.9	4.0	6.4
Queue Length 50th (ft)	38	0	3	286	227
Queue Length 95th (ft)	79	19	8	438	315
Internal Link Dist (ft)		580		2015	365
Turn Bay Length (ft)			150		
Base Capacity (vph)	584	695	279	3002	2855
Starvation Cap Reductn	0	0	0	0	1160
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.13	0.72	0.89

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	198	272	175	54
v/c Ratio	0.31	0.41	0.27	0.07
Control Delay	7.3	9.1	8.5	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.3	9.1	8.5	7.2
Queue Length 50th (ft)	14	25	16	5
Queue Length 95th (ft)	48	72	51	20
Internal Link Dist (ft)	1238	449	594	960
Turn Bay Length (ft)				
Base Capacity (vph)	1559	1623	1321	1524
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.17	0.13	0.04

Intersection Summary

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	940	623	935	1196
v/c Ratio	0.99	0.29	0.92	0.79
Control Delay	63.5	8.6	52.1	21.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	63.5	8.6	52.1	21.0
Queue Length 50th (ft)	322	91	~341	303
Queue Length 95th (ft)	#459	127	#498	383
Internal Link Dist (ft)		620	557	
Turn Bay Length (ft)	200			
Base Capacity (vph)	952	2145	1013	1624
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.99	0.29	0.92	0.74

Intersection Summary

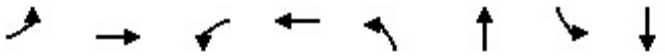
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	46	607	21	208	1252	302	59
v/c Ratio	0.13	0.25	0.02	0.32	0.49	0.78	0.42
Control Delay	3.4	6.5	0.1	4.8	8.7	21.8	46.4
Queue Delay	0.0	0.2	0.0	0.6	3.5	0.4	0.0
Total Delay	3.4	6.7	0.1	5.4	12.3	22.2	46.4
Queue Length 50th (ft)	4	69	0	44	232	15	33
Queue Length 95th (ft)	15	132	0	m71	220	103	70
Internal Link Dist (ft)		423			199	260	508
Turn Bay Length (ft)	200		100	75			
Base Capacity (vph)	378	2383	1064	784	2556	620	414
Starvation Cap Reductn	0	0	0	307	1184	0	0
Spillback Cap Reductn	0	936	0	0	0	80	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.42	0.02	0.44	0.91	0.56	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	862	179	1408	84	334	43	160
v/c Ratio	0.20	0.52	0.47	0.73	0.32	0.83	0.30	0.40
Control Delay	13.8	28.3	14.0	24.8	33.3	56.7	32.7	35.7
Queue Delay	0.0	1.8	0.2	3.0	1.5	0.0	0.0	0.3
Total Delay	13.8	30.1	14.2	27.8	34.8	56.7	32.7	36.0
Queue Length 50th (ft)	14	289	77	555	48	226	24	93
Queue Length 95th (ft)	m27	391	37	#707	78	306	46	142
Internal Link Dist (ft)		199		198		592		1248
Turn Bay Length (ft)	100		100		100		100	
Base Capacity (vph)	210	1642	469	1916	265	570	143	572
Starvation Cap Reductn	0	582	50	388	0	0	0	0
Spillback Cap Reductn	0	0	0	334	80	0	0	117
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.81	0.43	0.92	0.45	0.59	0.30	0.35

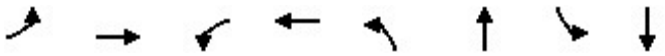
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	11	955	58	1414	183	41
v/c Ratio	0.04	0.43	0.15	0.59	0.76	0.14
Control Delay	6.3	8.7	6.0	10.4	65.7	24.4
Queue Delay	0.0	1.0	0.0	13.0	0.0	0.0
Total Delay	6.3	9.7	6.0	23.4	65.7	24.4
Queue Length 50th (ft)	2	120	10	218	136	14
Queue Length 95th (ft)	m4	145	28	473	201	42
Internal Link Dist (ft)		198		1365	596	195
Turn Bay Length (ft)	100		200			
Base Capacity (vph)	294	2199	411	2410	358	437
Starvation Cap Reductn	0	902	0	0	0	0
Spillback Cap Reductn	0	0	0	997	0	5
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.74	0.14	1.00	0.51	0.09

Intersection Summary

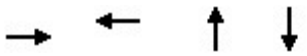
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	81	726	154	1093	306	600	39	133
v/c Ratio	0.51	0.72	0.57	0.88	0.49	0.91	0.25	0.57
Control Delay	31.6	35.7	26.9	40.5	24.9	46.0	24.7	46.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	35.7	26.9	40.5	24.9	46.0	24.7	46.4
Queue Length 50th (ft)	33	238	67	397	132	359	14	77
Queue Length 95th (ft)	#69	311	112	#547	200	#586	33	134
Internal Link Dist (ft)		1365		1250		752		1241
Turn Bay Length (ft)	75		125		200		100	
Base Capacity (vph)	158	1120	284	1293	636	755	157	541
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.65	0.54	0.85	0.48	0.79	0.25	0.25

Intersection Summary

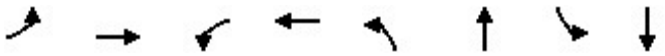
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	847	1148	357	68
v/c Ratio	0.45	0.60	0.82	0.17
Control Delay	8.3	10.0	40.5	12.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.3	10.0	40.5	12.7
Queue Length 50th (ft)	100	156	138	8
Queue Length 95th (ft)	135	207	#304	40
Internal Link Dist (ft)	548	1262	181	1265
Turn Bay Length (ft)				
Base Capacity (vph)	2278	2339	459	432
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.49	0.78	0.16

Intersection Summary

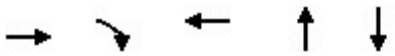
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	297	616	109	758	314	598	60	697
v/c Ratio	0.92	0.92	0.29	0.97	0.94	0.47	0.25	0.89
Control Delay	95.6	82.5	52.7	85.8	78.6	38.2	22.7	39.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.6	82.5	52.7	85.8	78.6	38.2	22.7	39.6
Queue Length 50th (ft)	349	361	106	451	270	260	16	99
Queue Length 95th (ft)	#549	#476	173	#600	#460	315	m36	#471
Internal Link Dist (ft)		1262		576		207		1278
Turn Bay Length (ft)	200		100		50		200	
Base Capacity (vph)	327	678	377	781	345	1283	243	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.91	0.29	0.97	0.91	0.47	0.25	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	438	105	475	631	339
v/c Ratio	0.87	0.18	0.78	1.10	0.44
Control Delay	39.1	4.3	28.7	89.6	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	4.3	28.7	89.6	10.4
Queue Length 50th (ft)	154	0	156	~298	61
Queue Length 95th (ft)	#308	26	#298	#485	120
Internal Link Dist (ft)	576		741	199	1282
Turn Bay Length (ft)					
Base Capacity (vph)	536	601	644	573	773
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	0.17	0.74	1.10	0.44

Intersection Summary

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

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

Lane Group	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	1006	444	22	97	431
v/c Ratio	0.70	0.90	0.25	0.56	0.43
Control Delay	43.1	77.1	76.6	82.5	3.2
Queue Delay	0.0	1.7	0.0	0.0	0.0
Total Delay	43.1	78.8	76.6	82.5	3.2
Queue Length 50th (ft)	495	459	21	102	1
Queue Length 95th (ft)	#697	587	53	163	58
Internal Link Dist (ft)	574	572	161	200	
Turn Bay Length (ft)					
Base Capacity (vph)	1438	559	253	212	1007
Starvation Cap Reductn	0	35	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.85	0.09	0.46	0.43

Intersection Summary

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

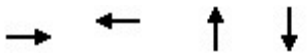
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	968	465	555	258	65	1052	124	721	638
v/c Ratio	1.22	0.49	1.16	0.55	0.40	1.13	1.10	0.76	0.80
Control Delay	161.2	23.6	145.5	36.5	44.9	117.5	144.7	39.8	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3
Total Delay	161.2	23.6	145.5	36.5	44.9	117.9	144.7	39.8	12.7
Queue Length 50th (ft)	~662	291	~711	152	41	~666	~114	393	70
Queue Length 95th (ft)	#798	389	#952	253	m60	m#803	m#205	m397	m108
Internal Link Dist (ft)		801	186			1278		558	
Turn Bay Length (ft)	200			150	75		200		250
Base Capacity (vph)	793	946	477	465	164	933	113	999	801
Starvation Cap Reductn	0	0	0	0	0	0	0	0	17
Spillback Cap Reductn	0	0	0	2	0	69	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.49	1.16	0.56	0.40	1.22	1.10	0.72	0.81

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	371	51	2106	1629
v/c Ratio	1.19	0.12	0.92	0.73
Control Delay	165.4	39.0	17.3	6.0
Queue Delay	0.0	0.0	12.6	0.0
Total Delay	165.4	39.0	30.0	6.0
Queue Length 50th (ft)	~484	33	393	77
Queue Length 95th (ft)	#702	73	m331	83
Internal Link Dist (ft)	1907	265	558	1004
Turn Bay Length (ft)				
Base Capacity (vph)	311	413	2297	2219
Starvation Cap Reductn	0	0	224	1
Spillback Cap Reductn	0	0	39	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.19	0.12	1.02	0.73

Intersection Summary

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

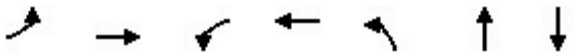
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	94	854	129	1100	86	105	146	34	125
v/c Ratio	0.47	0.72	0.37	0.91	0.52	0.36	0.44	0.42	0.74
Control Delay	13.0	20.8	7.9	32.4	74.8	63.1	12.2	83.9	88.8
Queue Delay	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	23.7	7.9	32.4	74.8	63.1	12.2	83.9	88.8
Queue Length 50th (ft)	21	521	30	928	82	101	0	35	121
Queue Length 95th (ft)	41	798	54	#1407	135	160	66	74	193
Internal Link Dist (ft)		191		1643		1248			604
Turn Bay Length (ft)	200		200		200		100	125	
Base Capacity (vph)	201	1185	398	1210	167	339	362	103	215
Starvation Cap Reductn	0	223	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.89	0.32	0.91	0.51	0.31	0.40	0.33	0.58

Intersection Summary

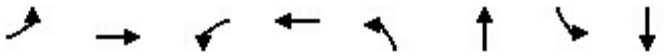
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	24	770	13	1130	85	268	166
v/c Ratio	0.33	0.61	0.19	0.93	0.58	0.85	0.84
Control Delay	81.7	13.6	75.8	36.0	70.7	79.0	86.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	13.6	75.8	36.0	70.7	79.0	86.8
Queue Length 50th (ft)	23	310	13	1013	76	240	148
Queue Length 95th (ft)	57	630	37	#1447	133	336	#235
Internal Link Dist (ft)		1643		1220		1241	596
Turn Bay Length (ft)	200		100		150		
Base Capacity (vph)	73	1263	70	1211	178	381	241
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.61	0.19	0.93	0.48	0.70	0.69

Intersection Summary

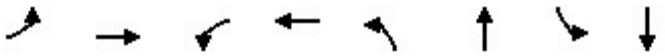
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	933	17	1009	39	126	34	166
v/c Ratio	0.16	0.70	0.05	0.79	0.59	0.62	0.36	0.83
Control Delay	8.0	14.5	6.5	19.3	101.8	68.2	76.5	90.0
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	14.8	6.5	19.3	101.8	68.2	76.5	90.0
Queue Length 50th (ft)	14	531	4	651	40	105	34	149
Queue Length 95th (ft)	28	737	12	931	85	179	73	#250
Internal Link Dist (ft)		1220		547		1248		600
Turn Bay Length (ft)	150		150		100		200	
Base Capacity (vph)	321	1328	315	1279	78	235	110	230
Starvation Cap Reductn	0	85	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.75	0.05	0.79	0.50	0.54	0.31	0.72

Intersection Summary

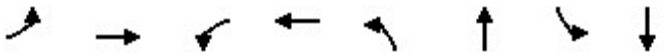
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	451	22	609	214	247	20	126
v/c Ratio	0.15	0.58	0.13	0.78	0.58	0.45	0.07	0.23
Control Delay	35.7	15.6	36.1	23.1	33.5	25.3	25.2	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	15.6	36.1	23.1	33.5	25.3	25.2	24.1
Queue Length 50th (ft)	10	96	8	156	64	66	5	33
Queue Length 95th (ft)	42	233	35	374	#249	207	29	113
Internal Link Dist (ft)		313		739		1282		254
Turn Bay Length (ft)	150		200		200		200	
Base Capacity (vph)	830	1396	787	1393	367	548	280	552
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.32	0.03	0.44	0.58	0.45	0.07	0.23

Intersection Summary

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



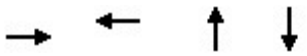
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	971	39	893	128	538	59	469
v/c Ratio	0.88	0.72	0.42	0.94	0.82	0.91	0.61	0.87
Control Delay	81.7	31.2	64.1	55.7	86.1	53.1	77.2	42.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	31.2	64.1	55.7	86.1	53.1	77.2	42.4
Queue Length 50th (ft)	145	321	27	327	91	347	42	219
Queue Length 95th (ft)	#283	407	63	#465	#200	#558	#105	#400
Internal Link Dist (ft)		610		2115		235		752
Turn Bay Length (ft)	150		150		200		200	
Base Capacity (vph)	241	1348	94	951	156	613	97	587
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.72	0.41	0.94	0.82	0.88	0.61	0.80

Intersection Summary

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

Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	28	44	35	2160	1508
v/c Ratio	0.47	0.34	0.13	0.72	0.53
Control Delay	119.1	12.1	1.9	4.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	2.2
Total Delay	119.1	12.1	1.9	4.1	6.4
Queue Length 50th (ft)	38	0	3	287	227
Queue Length 95th (ft)	79	19	8	439	315
Internal Link Dist (ft)		580		2015	365
Turn Bay Length (ft)			150		
Base Capacity (vph)	584	695	279	3002	2855
Starvation Cap Reductn	0	0	0	0	1160
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.13	0.72	0.89

Intersection Summary



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	201	265	182	53
v/c Ratio	0.32	0.41	0.28	0.07
Control Delay	7.3	9.2	8.5	7.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.3	9.2	8.5	7.1
Queue Length 50th (ft)	14	24	16	4
Queue Length 95th (ft)	49	72	54	19
Internal Link Dist (ft)	1238	449	594	960
Turn Bay Length (ft)				
Base Capacity (vph)	1552	1622	1309	1512
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.16	0.14	0.04

Intersection Summary

Lane Group	EBT	SBL	SBR
Lane Group Flow (vph)	1069	172	1919
v/c Ratio	0.82	0.21	0.74
Control Delay	33.3	14.8	1.9
Queue Delay	0.0	0.0	0.0
Total Delay	33.3	14.8	1.9
Queue Length 50th (ft)	271	59	0
Queue Length 95th (ft)	388	99	0
Internal Link Dist (ft)	620	515	
Turn Bay Length (ft)			
Base Capacity (vph)	1469	821	2600
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.73	0.21	0.74

Intersection Summary

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	1354	352	136
v/c Ratio	0.44	0.82	0.30
Control Delay	11.6	51.5	34.3
Queue Delay	0.2	0.2	0.0
Total Delay	11.8	51.7	34.3
Queue Length 50th (ft)	171	234	84
Queue Length 95th (ft)	267	306	121
Internal Link Dist (ft)	423	260	508
Turn Bay Length (ft)			
Base Capacity (vph)	3051	677	745
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	696	49	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.56	0.18

Intersection Summary

Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1582	214	200	39	435
v/c Ratio	0.55	0.41	0.45	0.15	0.83
Control Delay	15.5	34.2	31.2	28.7	51.7
Queue Delay	0.2	0.0	0.0	0.0	0.0
Total Delay	15.7	34.2	31.2	28.7	51.7
Queue Length 50th (ft)	317	132	109	22	313
Queue Length 95th (ft)	431	176	157	44	385
Internal Link Dist (ft)	199	592			1248
Turn Bay Length (ft)				100	
Base Capacity (vph)	2884	746	625	373	746
Starvation Cap Reductn	504	0	0	0	0
Spillback Cap Reductn	353	0	1	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.66	0.29	0.32	0.10	0.58

Intersection Summary

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	1649	129	74
v/c Ratio	0.44	0.68	0.36
Control Delay	6.6	66.9	51.3
Queue Delay	0.7	0.0	0.0
Total Delay	7.3	66.9	51.3
Queue Length 50th (ft)	70	97	53
Queue Length 95th (ft)	321	155	96
Internal Link Dist (ft)	198	596	195
Turn Bay Length (ft)			
Base Capacity (vph)	3784	444	474
Starvation Cap Reductn	1621	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.76	0.29	0.16

Intersection Summary

Lane Group	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	1844	801	116	94
v/c Ratio	1.04	0.96	1.04	0.11
Control Delay	60.9	45.5	123.4	11.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	60.9	45.5	123.4	11.6
Queue Length 50th (ft)	~417	412	~72	26
Queue Length 95th (ft)	#515	#683	#178	51
Internal Link Dist (ft)	1365	752		1241
Turn Bay Length (ft)			100	
Base Capacity (vph)	1773	834	112	890
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.04	0.96	1.04	0.11

Intersection Summary

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

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

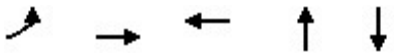
Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	1925	198	63
v/c Ratio	0.70	0.50	0.18
Control Delay	11.0	21.2	16.1
Queue Delay	0.0	0.0	0.0
Total Delay	11.0	21.2	16.1
Queue Length 50th (ft)	146	51	15
Queue Length 95th (ft)	253	100	39
Internal Link Dist (ft)	548	181	1265
Turn Bay Length (ft)			
Base Capacity (vph)	2738	533	473
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.70	0.37	0.13

Intersection Summary

Lane Group	EBL	EBT	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	572	1182	257	285	566	61	473
v/c Ratio	0.88	0.87	0.88	0.77	0.72	0.40	0.49
Control Delay	58.3	50.5	94.5	44.2	64.8	34.3	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	50.5	94.5	44.2	64.8	34.3	22.8
Queue Length 50th (ft)	616	632	272	143	311	23	101
Queue Length 95th (ft)	#878	748	#398	260	384	m56	m126
Internal Link Dist (ft)		1262			207		1278
Turn Bay Length (ft)			100	100		200	
Base Capacity (vph)	658	1367	330	396	798	154	974
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.86	0.78	0.72	0.71	0.40	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	280	783	365	765	222
v/c Ratio	0.79	1.01	0.86	1.56	0.37
Control Delay	31.9	55.6	43.3	282.7	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	55.6	43.3	282.7	11.4
Queue Length 50th (ft)	67	~294	130	~447	40
Queue Length 95th (ft)	#160	#528	#277	#648	88
Internal Link Dist (ft)		576	741	199	1282
Turn Bay Length (ft)	200				
Base Capacity (vph)	354	773	423	491	603
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	1.01	0.86	1.56	0.37

Intersection Summary

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

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

Lane Group	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	1049	629	16	104	331
v/c Ratio	0.97dl	1.01	0.26	0.60	0.41
Control Delay	52.7	89.4	81.5	85.0	12.9
Queue Delay	0.0	30.2	0.0	0.0	0.0
Total Delay	52.7	119.6	81.5	85.0	12.9
Queue Length 50th (ft)	542	~786	15	109	102
Queue Length 95th (ft)	656	#1034	44	176	174
Internal Link Dist (ft)	574	572	161	200	
Turn Bay Length (ft)					
Base Capacity (vph)	1252	622	61	208	810
Starvation Cap Reductn	0	49	0	0	0
Spillback Cap Reductn	0	0	0	0	12
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.84	1.10	0.26	0.50	0.41

Intersection Summary

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

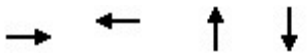
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	1215	308	1290	243	285	772
v/c Ratio	0.95	0.57	0.82	0.79	0.15	0.94
Control Delay	70.7	21.2	38.8	88.5	25.0	63.7
Queue Delay	14.2	0.0	49.0	0.0	0.0	46.7
Total Delay	84.9	21.2	87.7	88.5	25.0	110.4
Queue Length 50th (ft)	459	138	503	230	134	855
Queue Length 95th (ft)	#554	m178	582	m241	m134	m887
Internal Link Dist (ft)	186		1278		558	
Turn Bay Length (ft)		75		200		250
Base Capacity (vph)	1283	543	1618	309	1856	823
Starvation Cap Reductn	0	0	0	0	0	307
Spillback Cap Reductn	94	0	612	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.57	1.28	0.79	0.15	1.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	615	122	1872	1568
v/c Ratio	1.15	0.19	1.10	0.97
Control Delay	131.3	29.0	101.8	36.3
Queue Delay	1.9	0.0	1.8	42.5
Total Delay	133.2	29.0	103.6	78.7
Queue Length 50th (ft)	~785	77	~1230	232
Queue Length 95th (ft)	#1035	126	m#1357	#394
Internal Link Dist (ft)	1907	265	558	1004
Turn Bay Length (ft)				
Base Capacity (vph)	533	655	1705	1622
Starvation Cap Reductn	0	0	414	0
Spillback Cap Reductn	104	0	0	311
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.43	0.19	1.45	1.20

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	2441	125	131	110
v/c Ratio	0.71	0.71	0.47	0.40
Control Delay	9.0	60.9	42.6	32.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.0	60.9	42.6	32.4
Queue Length 50th (ft)	256	76	76	50
Queue Length 95th (ft)	405	130	125	95
Internal Link Dist (ft)	1643		1248	604
Turn Bay Length (ft)		200		
Base Capacity (vph)	3426	247	391	379
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.71	0.51	0.34	0.29

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	2293	321	265	140
v/c Ratio	0.76	1.25	0.60	0.60
Control Delay	14.0	169.8	34.9	41.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.0	169.8	34.9	41.4
Queue Length 50th (ft)	297	~213	133	65
Queue Length 95th (ft)	430	#366	196	117
Internal Link Dist (ft)	1220		1241	596
Turn Bay Length (ft)		150		
Base Capacity (vph)	3019	257	631	414
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.76	1.25	0.42	0.34

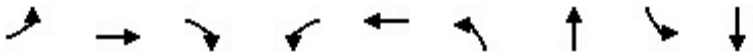
Intersection Summary

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

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

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	2079	189	155	126
v/c Ratio	0.66	0.77	0.41	0.39
Control Delay	12.0	56.4	35.4	33.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.0	56.4	35.4	33.1
Queue Length 50th (ft)	255	114	85	64
Queue Length 95th (ft)	402	174	129	105
Internal Link Dist (ft)	547		1248	600
Turn Bay Length (ft)		100		
Base Capacity (vph)	3135	346	530	453
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.66	0.55	0.29	0.28

Intersection Summary

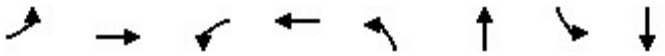


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	73	114	9	817	385	312	20	142
v/c Ratio	0.26	0.08	0.14	0.10	1.01	0.95	0.50	0.08	0.24
Control Delay	56.6	13.9	3.3	51.9	63.4	67.2	27.6	24.1	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	13.9	3.3	51.9	63.4	67.2	27.6	24.1	18.2
Queue Length 50th (ft)	17	23	0	6	~632	267	159	9	49
Queue Length 95th (ft)	45	56	31	23	#872	#468	246	27	97
Internal Link Dist (ft)		313			739		1282		254
Turn Bay Length (ft)	150		100	200		150		200	
Base Capacity (vph)	94	894	815	93	809	408	624	261	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.08	0.14	0.10	1.01	0.94	0.50	0.08	0.24

Intersection Summary

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

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



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	181	846	39	933	129	557	47	536
v/c Ratio	0.87	0.64	0.37	0.95	0.72	0.93	0.26	0.89
Control Delay	79.9	27.0	55.2	52.2	42.2	52.4	19.2	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	27.0	55.2	52.2	42.2	52.4	19.2	36.6
Queue Length 50th (ft)	116	247	24	~314	47	326	16	192
Queue Length 95th (ft)	#247	324	59	#455	#123	#545	37	#386
Internal Link Dist (ft)		610		2115		235		752
Turn Bay Length (ft)	150		150		200		200	
Base Capacity (vph)	208	1329	106	987	178	627	179	682
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.64	0.37	0.95	0.72	0.89	0.26	0.79

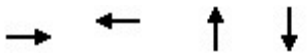
Intersection Summary

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

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

Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	27	44	37	2171	1508
v/c Ratio	0.45	0.34	0.13	0.72	0.53
Control Delay	118.7	12.3	1.9	4.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	2.2
Total Delay	118.7	12.3	1.9	4.1	6.3
Queue Length 50th (ft)	37	0	3	287	226
Queue Length 95th (ft)	77	19	9	441	313
Internal Link Dist (ft)		580		2015	365
Turn Bay Length (ft)			150		
Base Capacity (vph)	584	695	279	3004	2860
Starvation Cap Reductn	0	0	0	0	1165
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.13	0.72	0.89

Intersection Summary

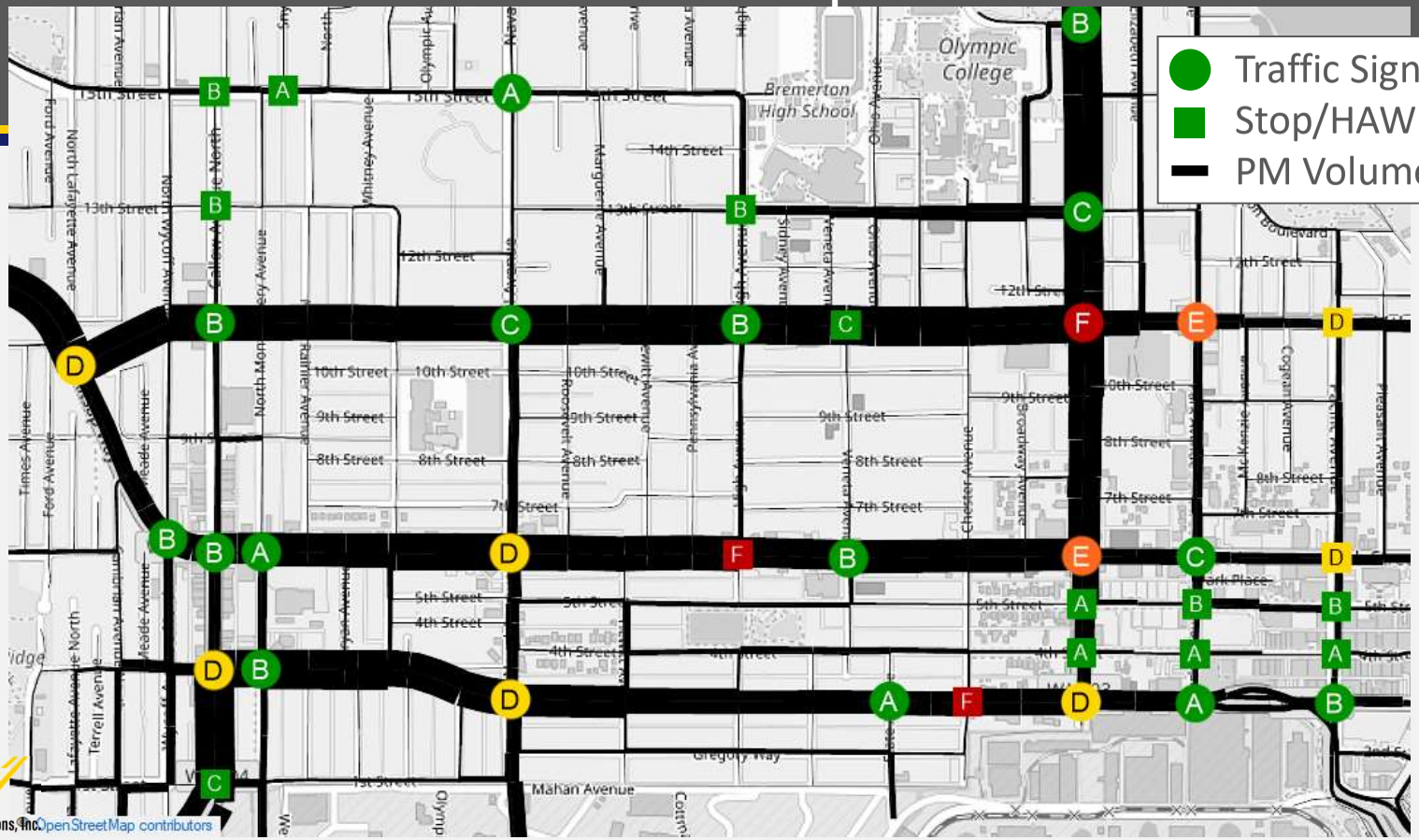


Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	370	186	213	62
v/c Ratio	0.55	0.28	0.48	0.12
Control Delay	11.1	8.3	13.3	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.1	8.3	13.3	9.2
Queue Length 50th (ft)	38	18	24	6
Queue Length 95th (ft)	118	59	85	29
Internal Link Dist (ft)	1238	449	594	960
Turn Bay Length (ft)				
Base Capacity (vph)	1535	1556	1128	1325
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.24	0.12	0.19	0.05

Intersection Summary

Appendix C. Level of Service Graphics

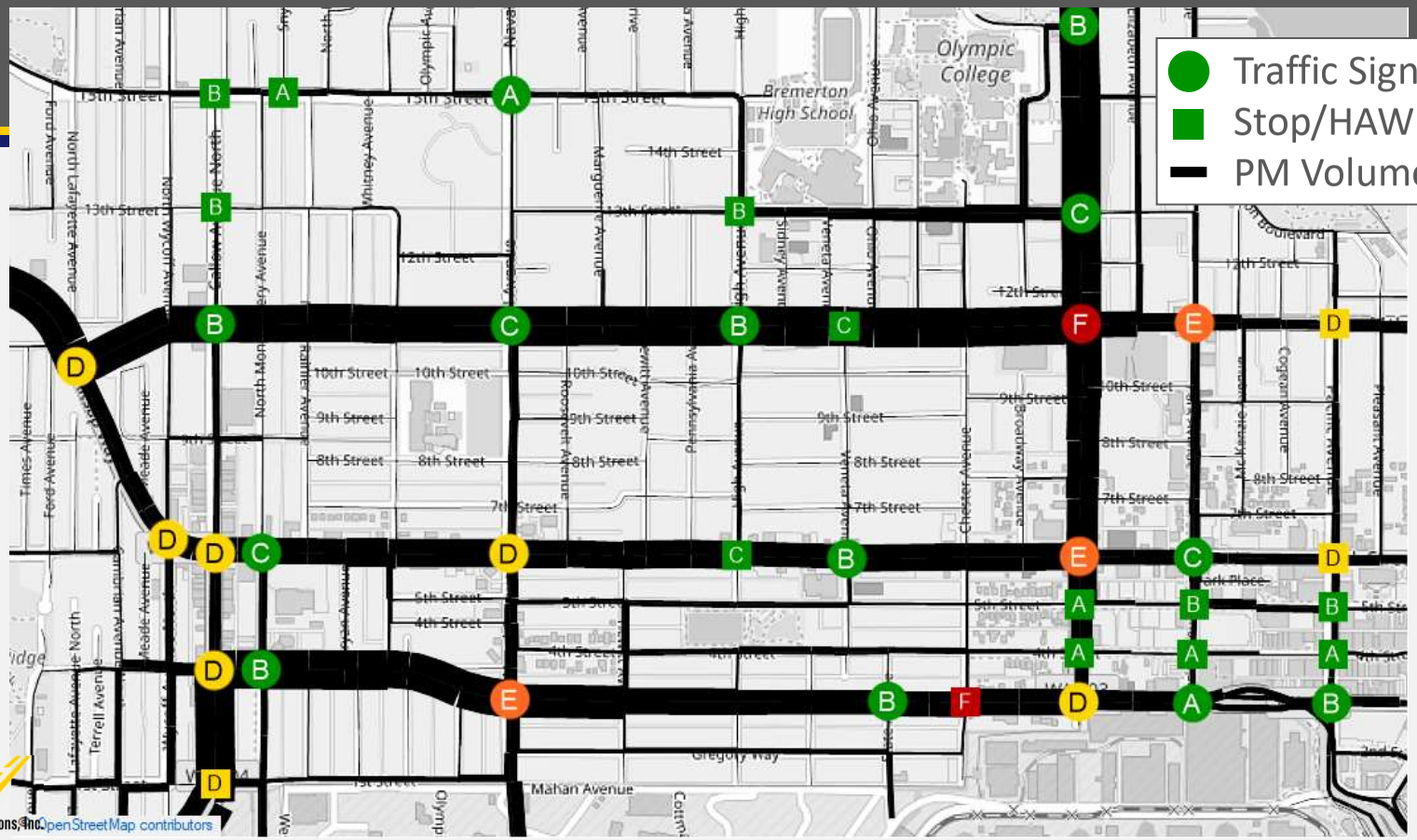
2040 PM LOS: Baseline / No Improvement



TSI Transportation Solutions, Inc.

CITY OF BREMERTON

2040 PM LOS: 6th St Rechannelization



TSI Transportation Solutions, Inc.

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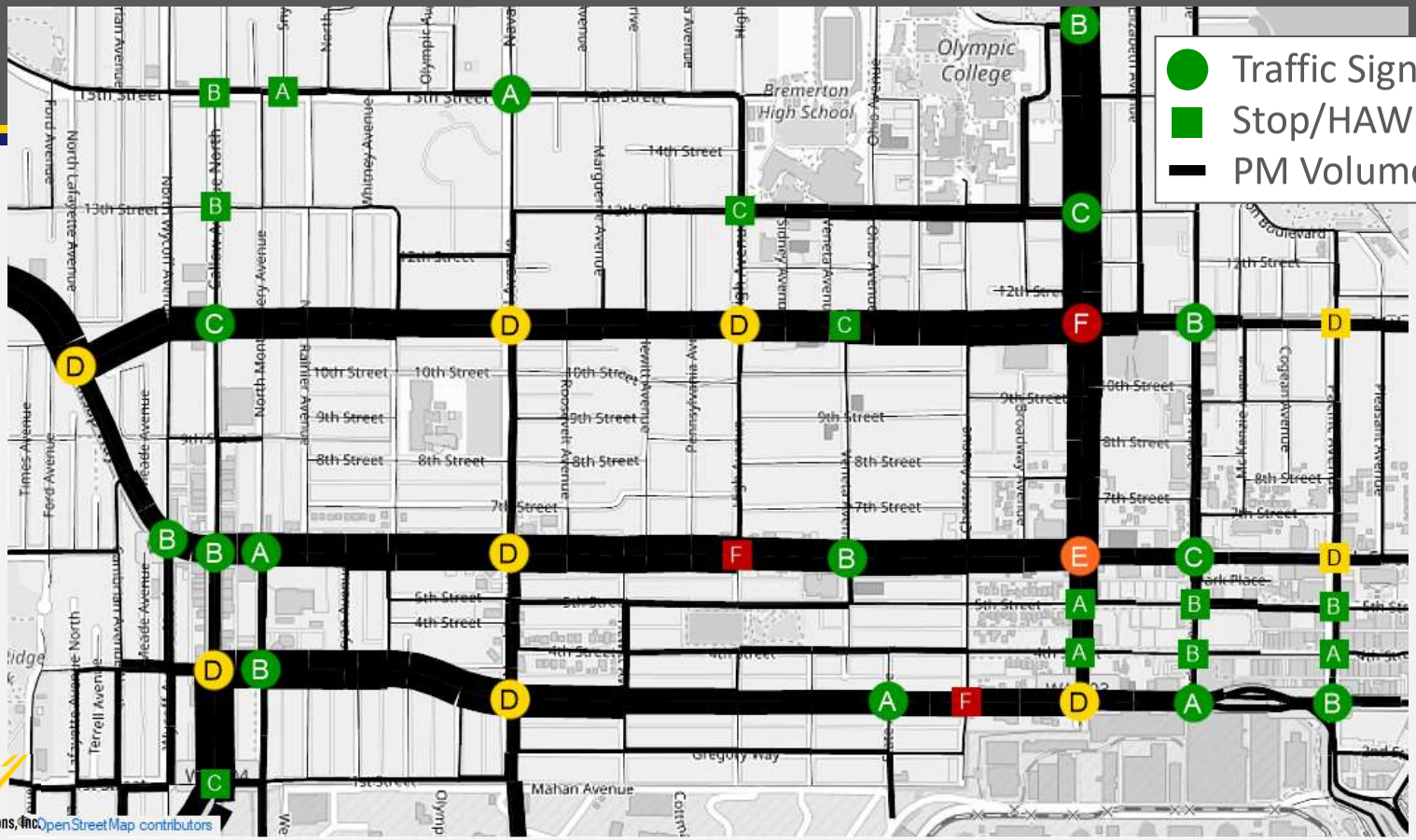
2040 PM LOS: 11th St Rechannelization



TSI Transportation Solutions, Inc.

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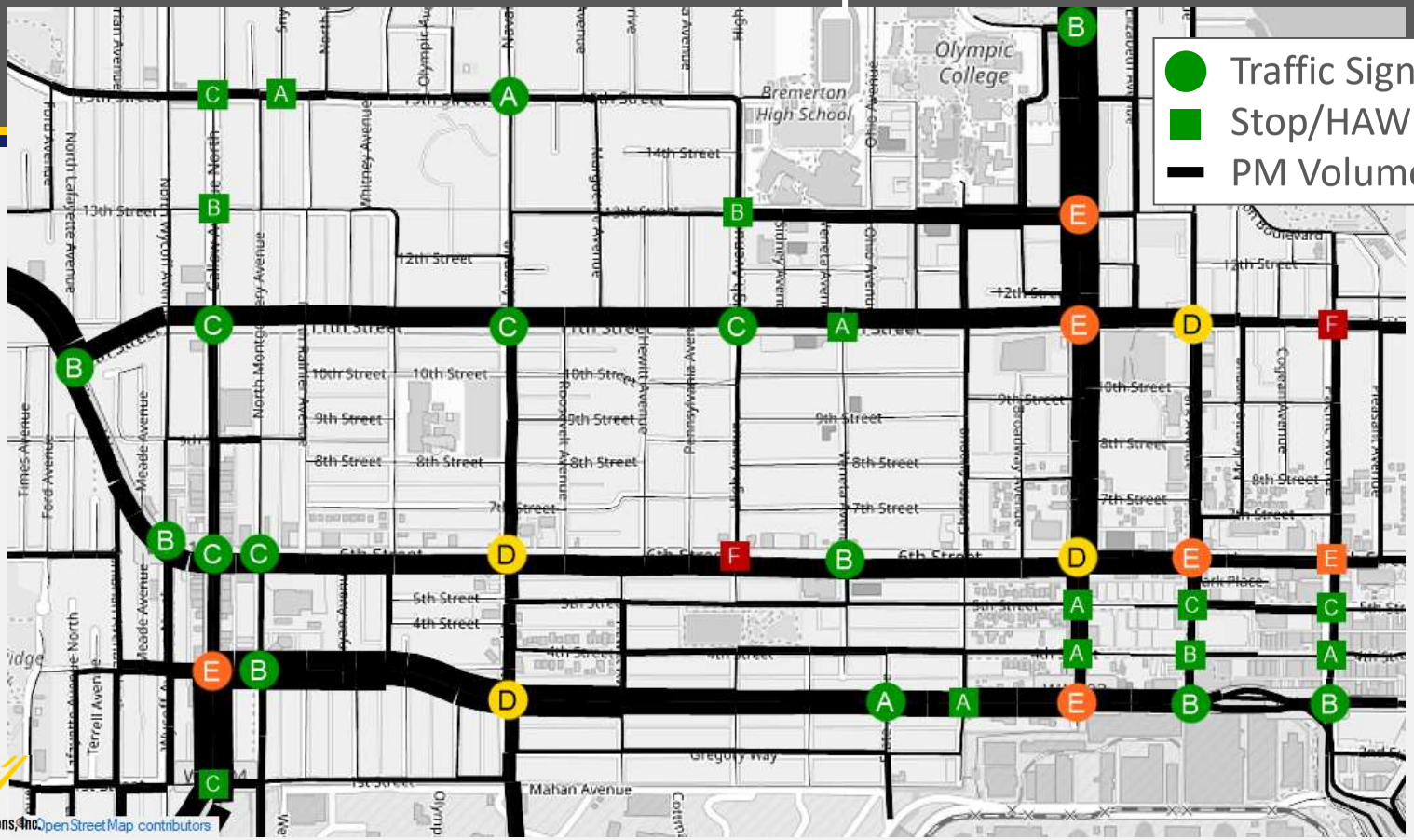
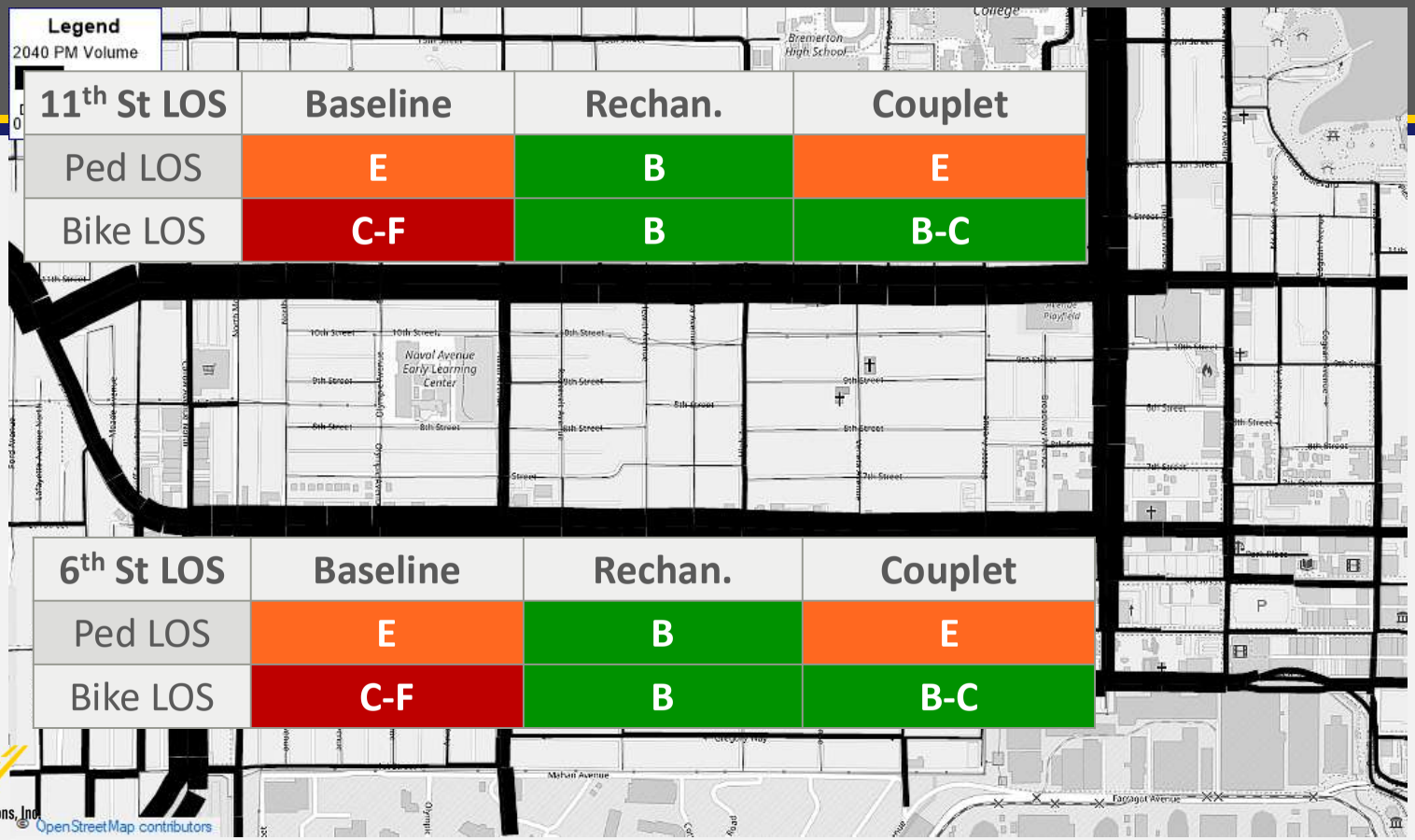
2040 PM LOS: 6th St/11th St Couplet



2040 PM Multimodal LOS



11th St LOS	Baseline	Rechan.	Couplet
Ped LOS	E	B	E
Bike LOS	C-F	B	B-C

6th St LOS	Baseline	Rechan.	Couplet
Ped LOS	E	B	E
Bike LOS	C-F	B	B-C

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