Traffic Impact Analysis

MARYSVILLE WATERFRONT ANALYSIS

Prepared for:
The City of Marysville

February 2024

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Introduction

The purpose of this traffic impact analysis (TIA) is to identify potential transportation-related impacts to the surrounding street network associated with the development of the proposed mixed-use project in Marysville, WA.

Project Description

The proposed project would develop a mixed-use development including residential units, hotel, restaurant, a multipurpose recreational facility, and an indoor sports complex. The development is located east of State Avenue between 1st Street and the Ebey Waterfront in Marysville. The site vicinity is shown in Figure 1.

Access to the site is proposed via two locations: one location via the south leg of the 1st Street/Alder Avenue intersection and a right-in/right-out driveway along State Avenue (SR 529). Figure 2 illustrates a preliminary site plan. It is anticipated that the development would be constructed and occupied by 2027.

Study Scope

The scope of this analysis is based on anticipated impacts to City of Marysville facilities and the 25-trip threshold in the City of Marysville. Based on anticipated travel patterns for project-generated vehicle traffic and the City's 25-trip criteria, the following intersections were selected for analysis during the designated horizon years:

	Study Intersection	Evaluation Years
1	State Avenue/88th Street NE	Existing, 2027, 2033
2	State Avenue/72nd Street NE	Existing, 2027, 2033
3	State Avenue/8th Street	Existing, 2027, 2033
4	State Avenue/6th Street	Existing, 2027, 2033
5	I-5 SB Ramps/4th Street (SR 528)	Existing, 2027, 2033
6	I-5 NB Ramps/4th Street (SR 528)	Existing, 2027, 2033
7	Cedar Avenue/4th Street (SR 528)	Existing, 2027, 2033
8	State Avenue/4th Street (SR 528)	Existing, 2027, 2033
9	Liberty Street/4th Street (SR 528)	Existing, 2027, 2033
10	53rd Avenue NE/64th Street (SR 528)	Existing, 2027, 2033
11	67th Avenue NE/64th Street (SR 528)	Existing, 2027, 2033
12	83rd Avenue NE/64th Street (SR 528)	Existing, 2027, 2033
13	SR 9/64th Street (SR 528)	Existing, 2027, 2033
14	State Avenue/3rd Street	Existing, 2027, 2033
15	Liberty Street/3rd Street	Existing, 2027, 2033
16	53rd Avenue NE/61st Street NE	Existing, 2027, 2033
17	Sunnyside Boulevard/52nd Street/Everett-Arlington Road	Existing, 2027, 2033
18	Beach Avenue/1st Street	Existing, 2027, 2033
19	State Avenue/1st Street	Existing, 2027, 2033
20	Alder Avenue/1st Street	Existing, 2027, 2033
21	State Avenue/Site Access	Existing, 2027, 2033

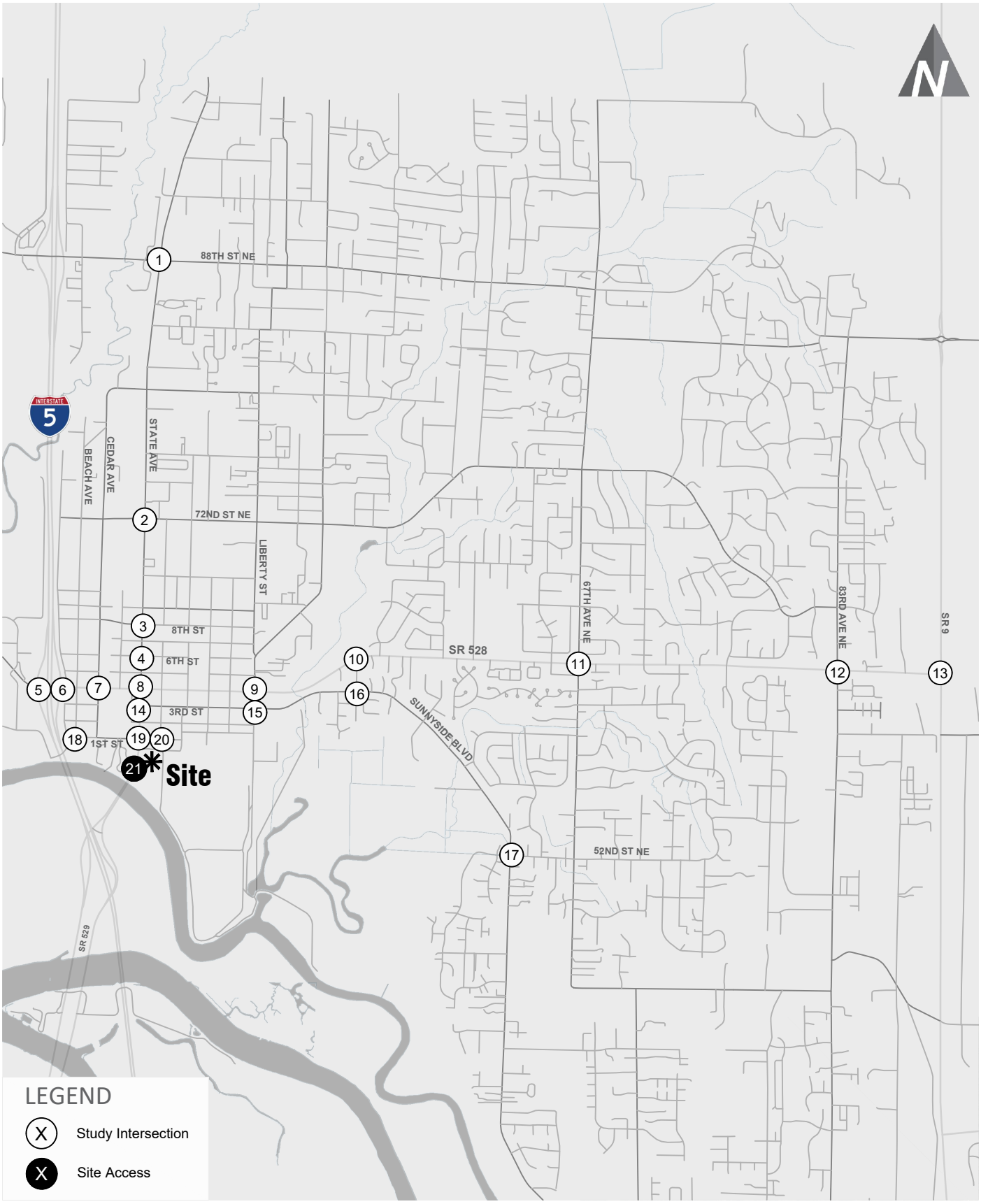
The study intersections are shown on Figure 1. Consistent with City and WSDOT requirements, the scope of the analysis included a review of the weekday PM peak hour conditions. Future year scenarios were analyzed including 2027 year of opening analysis and 2033 horizon year analysis of without and with-project conditions.

Consistent with City TIA requirements the analysis included a review of the following:

- Identification of the local street system
- Summary of non-motorized facilities
- Identification of existing transit service
- Collection of existing traffic volumes and forecasts for the future (2027 and 2033) without-project PM peak hour traffic volumes
- Traffic operations analysis
- Review of traffic safety within the study areas

Future (2027 and 2033) with-project conditions were evaluated by adding site-generated traffic to future (2027 and 2033) without-project volumes to identify the relative impacts the proposed project has on the surrounding transportation system.

The City of Marysville utilizes two forecast analysis years, the year of opening and a horizon year. The horizon year is defined as six years after the year of opening. The year of opening is utilized for the State Environmental Policy Act (SEPA) disclosure and the horizon year analysis is utilized for the concurrency review.



Site Vicinity & Study Intersections

FIGURE 1

Marysville Waterfront Analysis

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Preliminary Site Plan

Marysville Waterfront Analysis

FIGURE 2

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Existing & Future Without-Project Conditions

This section describes existing and future (2027 and 2033) without-project conditions within the study area. Study area characteristics are provided for the street system, non-motorized facilities, transit service, existing and future without-project peak hour traffic volumes, traffic operations, and traffic safety.

Street System

The following describes the existing street network within the vicinity of the proposed project and any anticipated changes resulting from planned improvements.

Existing Inventory

Characteristics of the existing street system in the project vicinity are described in Table 1.

Table 1. Study Area Existing Roadway Network Summary

Roadway	Roadway Classification	Posted Speed Limit	# Lanes	Parking	Pedestrian Facilities	Bicycle Facilities
SR 528 (4th Street)	State Highway	25 to 35 mph	4 to 5	No	Sidewalk	No
SR 9	State Highway	55 mph	3	No	No	No
I-5 Ramps	Interstate	60 mph	2 to 3	No	No	No
Cedar Avenue	Minor Arterial	30 mph	2	Yes	Sidewalk	Yes
State Avenue	Principal Arterial	30 mph	4	No	Sidewalk	No
Liberty Street	Collector Arterial	25 mph	2	Yes	Sidewalk	Yes
Alder Avenue	Local Road	25 mph	2	Yes	Sidewalk	No
Beach Avenue	Local Road	25 mph	2	Yes	Sidewalk	No
1st Street	Major Collector	30 mph	3	Yes	Sidewalk	Yes
First Street Bypass	Minor Arterial	35 mph	2	Yes	Sidewalk	Yes
3rd Street	Collector Arterial	25 mph	2	Yes	Sidewalk	No
6th Street	Local Road	25 mph	2	Yes	Sidewalk	No
8th Street	Major Collector	25 mph	2	Yes	Sidewalk	Yes
61st Street NE	Minor Arterial	25 mph	2 to 3	No	Sidewalk	No
72nd Street NE	Minor Arterial	30 mph	3	No	Sidewalk	No
88th Street NE	Other Principal Arterial	35 mph	3 to 4	No	Sidewalk	No
53rd Avenue NE	Local Road	25 mph	2	Yes	Sidewalk	No
67th Avenue NE	Minor Arterial	35 mph	2	No	Sidewalk	Yes
83rd Avenue NE	Minor Arterial	35 mph	2	No	Sidewalk	Yes
Sunnyside Boulevard	Minor Arterial	25 mph	2	No	Sidewalk	No
52nd Street NE/Everett-Arlington Road	Major Collector	25 mph	2	No	Sidewalk	No

Note: mph = miles per hour

Planned Improvements

Based on a review of the Washington Department of Transportation (WSDOT) 2023-2026 Statewide Transportation Program (STIP), the *Snohomish County 2023-2028 Six-Year Transportation Improvement Program (TIP)*, and the *City of Marysville 2023-2028 TIP* there are several planned improvements in the area that would impact capacity at study intersections in either the 2027 or the 2033 horizon years. The following summarizes the short-term (2027) and long-term (2033) projects planned in the area as assumed in the traffic analysis.

2027 Planned Improvements

The following improvements were funded or partially funded and assumed to be complete by the 2027 opening year:

- **83rd Avenue NE Pedestrian and Bicycle Improvements:** Construct curb, gutter, sidewalk, and bicycle facilities south of 84th Street NE. The project is partially funded by the City.
- **53rd Avenue NE and Sunnyside Boulevard Intersection Improvements:** Construct a traffic signal at the intersection. This project is partially funded by the Highway State Improvement Program.
- **I-5 HOV Lane Extension and SR 529 Interchange Improvements**: Construct northbound shoulder running lane during peak congestion and interchange improvements at I-5 and SR 529. This project is funded by WSDOT and Freight Mobility Strategic Investment Board (FMSIB).
- **I-5 Northbound Marine View Drive to SR 529 Corridor and Interchange Improvements:** The interchange improvements will complete the current half at I-5 and SR 529 interchange by constructing a new I-5 northbound off-ramp to SR 529 and a new southbound on-ramp from SR 529 to I-5. The interchange improvements will allow traffic to avoid at-grade crossings with the Burlington Northern Santa Fe (BNSF) mainline. This project is funded by WSDOT and FMSIB.
- **I-5 Interchange with SR 528 (4th Street)**: This project will convert existing signalized ramp intersections to roundabouts. The project is funded by Connecting Washington Partners and the Tulalip Tribe. Construction is estimated to begin in 2024 and estimated to be completed in 2025.

2033 Planned Improvements

The following improvements were assumed to be complete by the 2033 horizon year:

- **SR 528 Intersection Corner Modifications:** Modify turn radii at SE and NW corners of SR 528/State Avenue intersection, and NW corner of SR 528/67th Ave NE intersection to improve truck movements.
- **Sunnyside Boulevard Widening (47th Avenue NE to 52nd Street NE):** Widen to a five-lane roadway including the construction of curb, gutter, bicycle lanes and sidewalks.
- **88th Street NE Widening (State Avenue to 67th Avenue NE):** Widen to a three-lane roadway with the addition of a right/thru lane at State Avenue. Construction will include curb, gutter, and multi-use paths on both sides of 88th Street NE. This project is jointly funded by the City of Marysville and Snohomish County.

Additionally, along 88th Street NE at the I-5 interchange and at 36th Avenue NE, west of the study area, the City is working with the Tulalip Tribe and WSDOT to construct roundabouts at these locations. These improvements would help alleviate congestion along 88th Street NE near the I-5 interchange.

Non-Motorized

The following describes the existing non-motorized facilities within the vicinity of the proposed project and any anticipated changes resulting from planned improvements.

Existing Facilities

Existing non-motorized facilities in the vicinity of the project are present for pedestrians but limited for bicyclists. There are sidewalks available on all roadways surrounding the project site except for the I-5 Ramps and SR 9. Intermittent bicycle lanes are available throughout the study area along 1st Street, 8th Street, Cedar Street, Liberty Street, 67th Avenue NE and 83rd Avenue NE.

Planned Improvements

The City of Marysville has a Priority Pedestrian System Plan which identifies numerous planned additions to the pedestrian access route network within the study area. The City's Bicycle Systems Plan when completed, will provide a comprehensive network of bicycle facilities between the City's residential neighborhoods, the transit system, employment areas, schools, and parks and includes improvements to the arterials and SR 9 within the study area.

Specifically, as identified in the panned improvements above, there is a substantial amount of pedestrian infrastructure planned in the vicinity of the proposed project. This includes bicycle lanes and sidewalks planned along 83rd Avenue NE between Soper Hills Road and SR 528, 40th Street NE from Sunnyside to 87th Avenue NE, and a multiuse path along the Ebey waterfront running past the proposed project site.

The Ebey Waterfront Trail and Shoreline Access Project would add to the existing trail network located along the north side of the of Steamboat and Ebey Slough. Design and construction funding is currently available for the portion of the proposed trail near Sunnyside Boulevard. Additionally, multi-use trail is partially funded to be constructed along 53rd avenue NE from Sunnyside Boulevard to 64th Street NE (SR 528).

Transit Service

Transit service in the study area is provided by Community Transit. The nearest bus stop to the site is located on State Avenue and 1st Street and is served by Route 201/202. Three Park and Ride facilities are located within the study area at Beach Avenue/2nd Street, Ash Avenue/6th Street, and SR 528/Cedar Avenue. Table 2 shows the transit routes that operate within the project vicinity.

Table 2. Existing Transit Service

Route	Area Served	Approximate Operating Hours	PM Peak Headways (minutes)
821	Marysville – Northgate Station	4:50 a.m. to 8:45 a.m. and 2:50 p.m. to 6:30 p.m.	30
201/202	Smokey Point – Lynnwood	5:00 a.m. to 5:30 p.m.	40
209	Smokey Point – Lake Stevens	5:30 a.m. to 10:00 p.m.	60
227	Arlington – Seaway Transit Center	4:10 a.m. to 5:30 a.m. and 3:00 p.m. to 4:50 p.m.	60
421	Marysville – Seattle	4:30 a.m. to 9:00 a.m. and 2:30 p.m. to 6:50 p.m.	30
222	Fairwood – Renton – Downtown Seattle	4:40 a.m. to 11:59 p.m.	15

Source: Community Transit, August 2023
Note: Operating Hours and headways are approximate

Traffic Volumes

The following summarizes the traffic volumes for existing and future without-project conditions.

Existing

Existing weekday PM peak period (4 to 6 p.m.) traffic volumes were collected in June 2022 and March, April, May, and June 2023. Volumes collected in June 2022 were adjusted to represent 2023 conditions using an average annual growth rate of 3 percent consistent with City requirements. The existing weekday PM peak hour traffic volumes are shown on and Figure 3 and Figure 4. Existing and forecast 2023 traffic volumes were rounded to the nearest 5 vehicles to account for daily fluctuations in traffic volumes. Detailed traffic counts are provided in Appendix A.

Future Without-Project Traffic Volumes

Consistent with City requirements, future (2027 and 2033) without-project traffic volumes were forecast by applying a 3 percent annual growth rate to existing traffic volumes. The future (2027) without-project weekday peak hour traffic volumes are shown on Figure 5 and Figure 6. The future (2033) without-project weekday peak hour traffic volumes are show in Figure 7 and Figure 8.

Existing Weekday PM Peak Hour Traffic Volumes (1/2)

FIGURE 3

Marysville Waterfront Analysis

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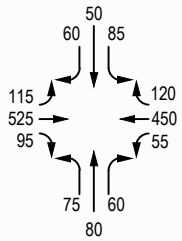
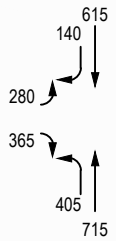
- (X) Study Intersection
- x Weekday PM Peak Hour Traffic Volumes

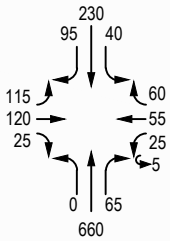
12 83rd Ave NE / SR 528



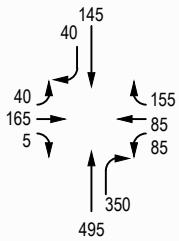
13 SR 9 / SR 528



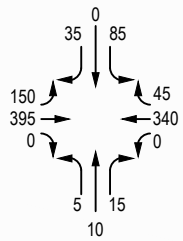
14 State Ave / 3rd St



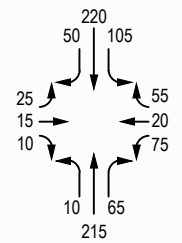
15 Liberty St / 3rd St



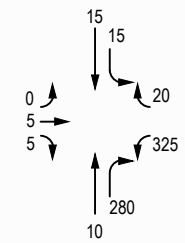
16 53rd Ave NE / 61st St NE



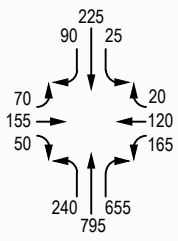
17 Sunnyside Blvd / 52nd St/ Everett-Arlington Rd



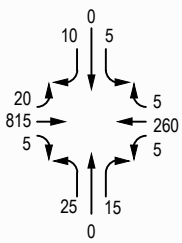
18 Beach Ave / 1st St



19 State Ave / 1st St



20 Alder Ave / 1st St



Existing Weekday PM Peak Hour Traffic Volumes (2/2)

FIGURE 4

Marysville Waterfront Analysis

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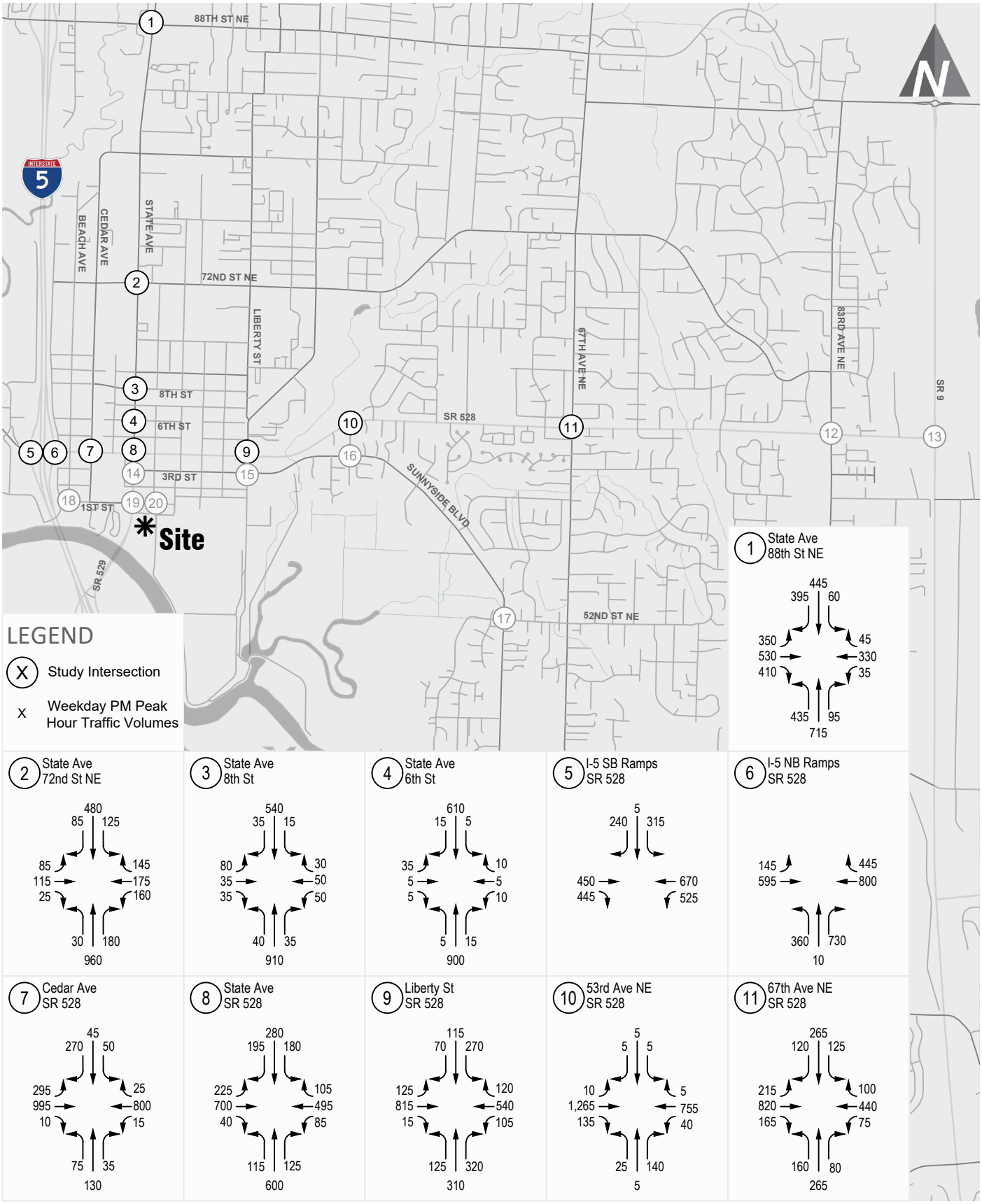

Future (2027) Without-Project Weekday PM Peak Hour Traffic Volumes (1/2)

FIGURE 5

Marysville Waterfront Analysis

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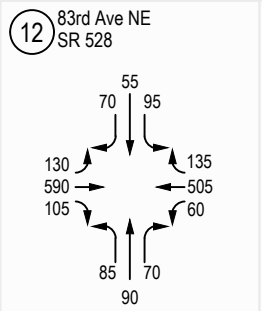

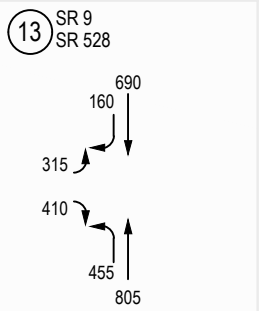

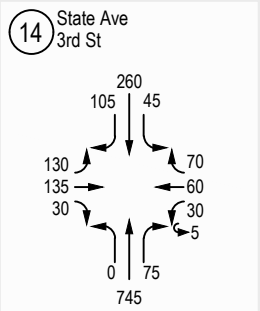

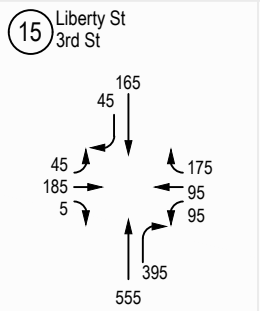

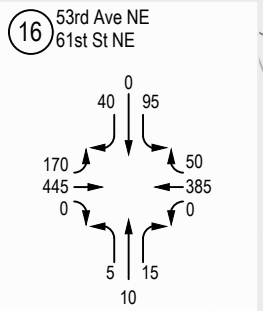

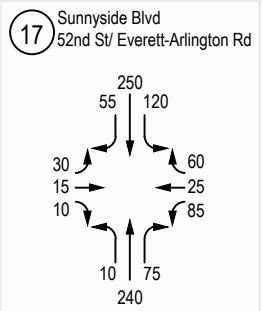

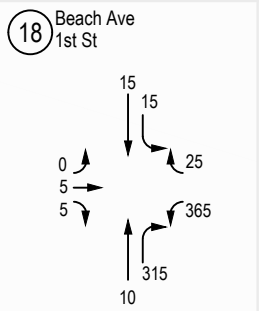

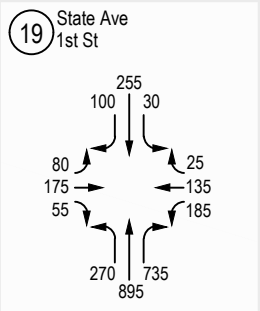

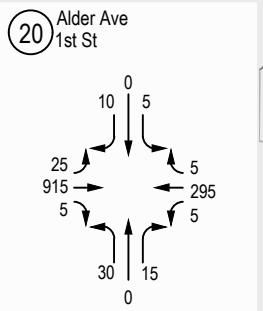

Future (2027) Without-Project Weekday PM Peak Hour Traffic Volumes (2/2) FIGURE 6

Marysville Waterfront Analysis

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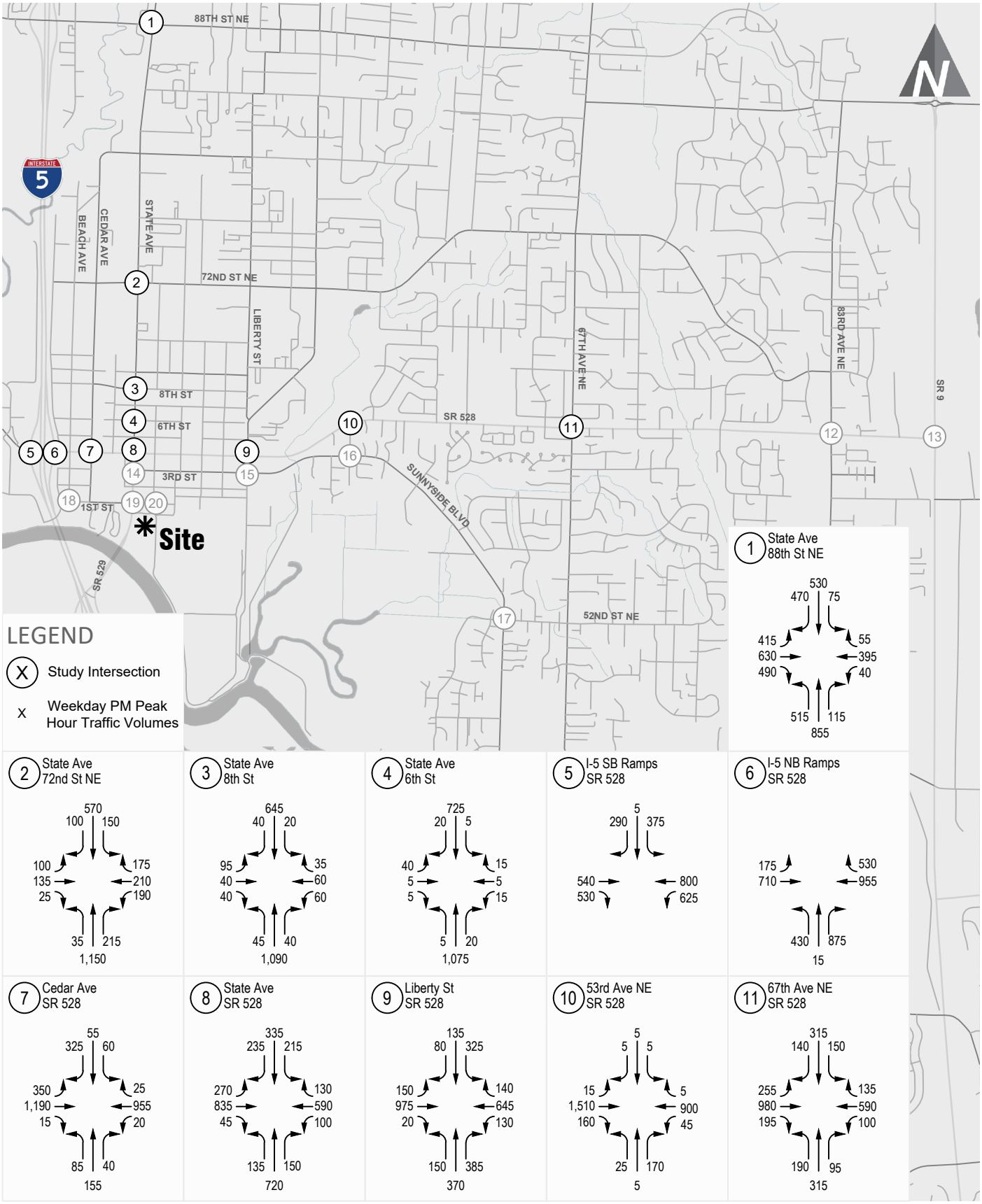

Future (2033) Without-Project Weekday PM Peak Hour Traffic Volumes (1/2)

FIGURE 7

Marysville Waterfront Analysis

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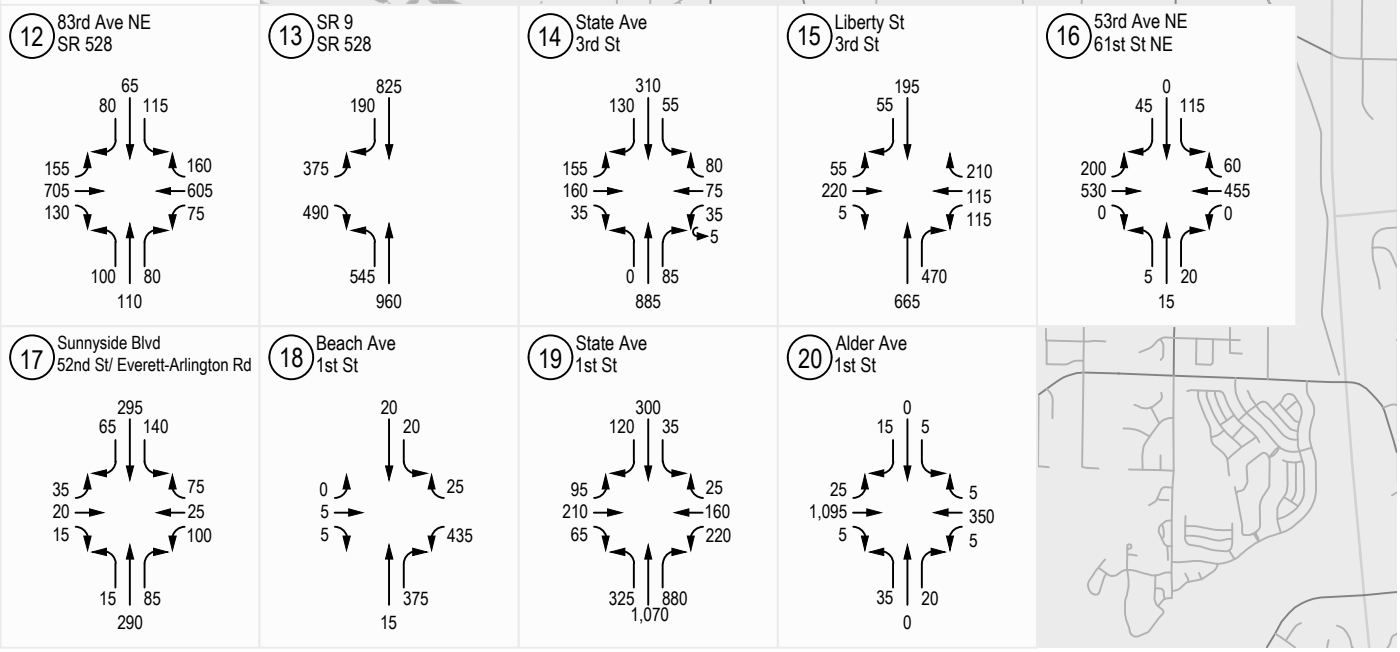

Future (2033) Without-Project Weekday PM Peak Hour Traffic Volumes (2/2) FIGURE 8

Marysville Waterfront Analysis

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Traffic Operations

The following sections summarize traffic operations for existing and future conditions within the study area.

The operational characteristics of an intersection are determined by calculating the intersection level of service (LOS). At signalized, all-way stop, and roundabout intersections, LOS is measured in average control delay per vehicle and is typically reported using the intersection delay. At unsignalized side-street, stop-controlled intersections, LOS is measured by the average delay on the worst-movement of the intersection. Traffic operations and average vehicle delay for an intersection can be described qualitatively with a range of levels of service (LOS A through LOS F), with LOS A indicating free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays. Appendix B contains a detailed explanation of LOS criteria and definitions.

Signal timing was provided by WSDOT and City of Marysville. Under future conditions, signal timing adjustments were applied as well as inclusion of the planned improvements as noted above. Additionally, under future (2033) without-project conditions signal timing splits were optimized accounting for routine adjustments that may be made to signal timing.

City of Marysville LOS Standards. The following criteria summarize the current LOS standards established by the City.

- **LOS E "mitigated"** for arterial-arterial or arterial-collector intersections along the following corridors (LOS E "mitigated" means that the congestion should be mitigated through improvements, transit, ridesharing, or other travel modes when the intersection falls below LOS E):
    - SR 529/State Avenue between the south City limits and north City limits
    - 4th Street/64th Street NE (SR 528) between I-5 and SR 9
- **LOS D** for arterial-arterial or arterial-collector intersections along the remaining City corridors

State Highway LOS Standards. The LOS standards are set forth by state law and are based on whether the facility is classified as a Highway of Statewide Significance (HSS) or a Highway of Regional Significance (HRS). The LOS standard for HSS facilities in urban areas is LOS D and LOS C for HSS facilities in rural areas. I-5 and SR 9 are HSS facilities serving Marysville. Both I-5 and SR 9 are classified as Urban within Marysville, so LOS D applies.

The LOS standards for HRS facilities are divided into three categories including Tiers 1, 2 and 3. The LOS standard for Tier 1 highways (SR 528 and SR 529) is LOS E- "Mitigated" meaning that mitigation must be provided during the PM peak hour if the level of service falls below LOS E.

Weekday PM peak hour traffic operations for existing and future without-project conditions were evaluated at the study intersections based on the procedures identified in the *Highway Capacity Manual* 6th Edition, unless otherwise noted for signal timing constraints, and were evaluated using *Synchro 11*. *Synchro 11* is a software program that uses *HCM* methodology to evaluate intersection LOS and average vehicle delays. Results for the existing and future without-project operations analyses are summarized in Table 3 and Table 4 for 2026 and 2032, respectively. Detailed LOS worksheets for each intersection analysis are included in Appendix C.

Table 3. Existing & Future (2027) Weekday PM Peak Hour Intersection LOS Summary

Intersection	Traffic Control[1]	Existing			Future 2027 Without-Project		
		LOS[2]	Delay[3]	WM[4]	LOS	Delay	WM
1. State Avenue/88th Street NE	Signal	E	66.6	-	F	91.9	-
2. State Avenue/72nd Street NE	Signal	C	21.1	-	C	25.5	-
3. State Avenue/8th Street[5]	Signal	B	11.4	-	B	12.4	-
4. State Avenue/6th Street	Signal	A	6.2	-	A	6.3	-
5. I-5 SB Ramps/4th Street (SR 528)[5]	Signal/RAB[6]	D	52.9	-	A	8.0	0.49
6. I-5 NB Ramps/4th Street (SR 528)[5]	Signal/RAB[6]	E	62.2	-	A	6.4	0.42
7. Cedar Avenue/4th Street (SR 528)	Signal	C	21.9	-	C	27.5	-
8. State Avenue/4th Street (SR 528)	Signal	C	21.7	-	C	24.4	-
9. Liberty Street/4th Street (SR 528)	Signal	C	28.7	-	C	31.6	-
10. 53rd Avenue NE/64th Street (SR 528)	Signal	A	9.1	-	A	9.9	-
11. 67th Avenue NE/64th Street (SR 528)	Signal	C	23.3	-	C	25.9	-
12. 83rd Avenue NE/64th Street (SR 528)[5]	Signal	B	13.6	-	B	15.0	-
13. SR 9/64th Street (SR 528)	Signal	C	31.0	-	D	44.3	-
14. State Avenue/3rd Street[5]	Signal	A	8.9	-	A	9.5	-
15. Liberty Street/3rd Street	Signal	B	16.9	-	B	17.6	-
16. 53rd Avenue NE/61st Street NE	SSSC/ Signal[6]	F	60.0	SB	B	11.0	-
17. Sunnyside Blvd/52nd Street/Everett-Arlington Road	AWSC	B	12.2	-	B	14.2	-
18. Beach Avenue/1st Street	AWSC	B	12.5	-	B	14.9	-
19. State Avenue/1st Street	Signal	B	19.2	-	C	20.6	-
20. Alder Avenue/1st Street[5]	Signal	A	6.7	-	A	6.9	-

1. AWSC = all-way stop-control, SSSC = side-street stop-control, RAB = Roundabout
2. Level of Service (A – F) as defined by the *Highway Capacity Manual* (HCM) 6th Edition (TRB)
3. Average delay per vehicle in seconds.
4. Worst movement reported for two-way stop-controlled intersections. EBL = Eastbound Left-turn, WB = Westbound
5. Intersections run utilizing HCM 2000 methodology due to signal timing constraints not allowed under HCM 6th Edition.
6. Existing/future traffic control with implementation of improvements.

As shown in Table 3, under existing conditions all of the study intersections currently meet WSDOT or City LOS standards except for two intersections. The I-5 NB Ramps at SR 528 currently operate at LOS E and don't meet WSDOT standards. Similarly, the 53rd Avenue NE/61st Street NE intersection currently operates at LOS F and doesn't meet City of Marysville standards.

Under forecast (2027) without-project conditions with the planned improvements at the I-5 Ramps with SR 528 are forecast to improve to LOS A and would meet WSDOT standards. Additionally, with the planned signal, the 53rd Avenue NE/61st Street NE intersection is forecast to improve to LOS B. Under future (2027) without-project conditions the State Avenue/88th Street NE intersection is forecast to degrade to LOS F and wouldn't meet WSDOT or City of Marysville standards.

Table 4. Existing & Future (2033) Weekday PM Peak Hour Intersection LOS Summary

Intersection	Traffic Control[1]	Existing			Future 2033 Without-Project		
		LOS[2]	Delay[3]	WM[4]	LOS	Delay	WM
1. State Avenue/88th Street NE	Signal	E	66.6	-	F	141.3	-
2. State Avenue/72nd Street NE	Signal	C	21.1	-	D	37.6	-
3. State Avenue/8th Street[5]	Signal	B	11.4	-	B	13.2	-
4. State Avenue/6th Street	Signal	A	6.2	-	A	7.2	-
5. I-5 SB Ramps/4th Street (SR 528)[5]	Signal/RAB[6]	D	52.9	-	A	8.9	0.54
6. I-5 NB Ramps/4th Street (SR 528)[5]	Signal/RAB[6]	E	62.2	-	A	7.3	0.55
7. Cedar Avenue/4th Street (SR 528)	Signal	C	21.9	-	D	38.0	-
8. State Avenue/4th Street (SR 528)	Signal	C	21.7	-	C	33.1	-
9. Liberty Street/4th Street (SR 528)	Signal	C	28.7	-	D	41.0	-
10. 53rd Avenue NE/64th Street (SR 528)	Signal	A	9.1	-	B	13.2	-
11. 67th Avenue NE/64th Street (SR 528)	Signal	C	23.3	-	D	35.7	-
12. 83rd Avenue NE/64th Street (SR 528)[5]	Signal	B	13.6	-	C	20.6	-
13. SR 9/64th Street (SR 528)	Signal	C	31.0	-	F	80.2	-
14. State Avenue/3rd Street[5]	Signal	A	8.9	-	B	10.7	-
15. Liberty Street/3rd Street	Signal	B	16.9	-	B	20.0	-
16. 53rd Avenue NE/61st Street NE	SSSC/ Signal[6]	F	60.0	SB	B	12.8	-
17. Sunnyside Blvd/52nd Street/Everett-Arlington Road	AWSC	B	12.2	-	C	19.9	-
18. Beach Avenue/1st Street	AWSC	B	12.5	-	C	23.0	-
19. State Avenue/1st Street	Signal	B	19.2	-	C	23.7	-
20. Alder Avenue/1st Street[5]	Signal	A	6.7	-	A	8.8	-

1. AWSC = all-way stop-control, SSSC = side-street stop-control, EBL = Eastbound Left-turn, WB = Westbound
2. Level of Service (A – F) as defined by the *Highway Capacity Manual* (HCM) 6th Edition (TRB)
3. Average delay per vehicle in seconds.
4. Worst movement reported for two-way stop-controlled intersections.
5. Intersections run utilizing HCM 2000 methodology due to signal timing constraints not allowed under HCM 6th Edition.
6. Existing/future traffic control with implementation of improvements.

As shown in Table 4, the State Avenue/88th Street NE and SR 9/4th Street (SR 528) intersections are forecast to degrade to LOS F under future (2033) without-project conditions.

Traffic Safety

Recent collision records were reviewed within the study area to identify existing traffic safety issues at the study intersections. The most recent complete five-year summary of accident data from the WSDOT is for the period between January 1, 2018, and December 31, 2022. This information is summarized in Table 5.

Table 5. Five-Year Collision Summary – 2018 to 2022

Location	Number of Collisions					Total	Annual Average
	2018	2019	2020	2021	2022		
1. State Avenue/88th Street NE	28	22	23	21	14	108	21.6
1. State Avenue/88th Street NE	2	11	6	4	5	28	5.6
3. State Avenue/8th Street[5]	4	0	2	2	2	10	2.0
4. State Avenue/6th Street	2	1	1	1	0	5	1.0
5. I-5 SB Ramps/4th Street (SR 528)	10	5	6	6	4	31	6.2
6. I-5 NB Ramps/4th Street (SR 528)	26	30	27	22	22	127	25.4
7. Cedar Avenue/4th Street (SR 528)	16	14	9	9	6	54	10.8
8. State Avenue/4th Street (SR 528)	24	19	17	22	11	93	18.6
9. Liberty Street/4th Street (SR 528)	12	8	8	7	15	50	10.0
10. 53rd Avenue NE/64th Street (SR 528)	2	2	0	1	2	7	1.4
11. 67th Avenue NE/64th Street (SR 528)	15	11	11	16	9	62	12.4
12. 83rd Avenue NE/64th Street (SR 528)	8	4	4	5	1	22	4.4
13. SR 9/64th Street (SR 528)	14	17	10	11	8	60	12.0
14. State Avenue/3rd Street	6	3	4	9	4	26	5.2
15. Liberty Street/3rd Street	2	3	1	1	2	9	1.8
16. 53rd Avenue NE/61st Street NE	0	0	1	0	2	3	0.6
17. Sunnyside Blvd/52nd Street/Everett-Arlington Road	2	2	1	1	0	6	1.2
18. Beach Avenue/1st Street	0	0	0	0	0	0	0.0
19. State Avenue/1st Street	5	4	2	3	7	21	4.2
20. Alder Avenue/1st Street	0	0	0	0	0	0	0.0

Source: WSDOT 2023
Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

As shown in Table 5, the total number of collisions at the study area intersections ranged between 0 and 127 over the five-year period reviewed or an annual average between 0 and 25.4 collisions per year. In the study area there were 22 reported collisions involving pedestrians or bicyclists over the five-year period. Of those reported collisions 17 involved right or left-turning vehicles hitting a pedestrian or bicyclist and resulted in 15 suspected or minor injuries, 3 suspected serious injury, 3 property damage only, and one fatality.

There were four reported fatalities within the study area over the five-year period. Of the reported fatalities, three were reported at the I-5 NB Ramp/SR 528 intersection and one at I-5 SB Ramp/SR 528. There are no patterns to the reported fatalities. As noted previously, roundabouts are proposed at the I-5 Ramp intersections with SR 528 and could result in improvements to safety as well as operational improvements.

Project Impacts

This section of the report documents the proposed project's impacts on the surrounding street network and study intersections. First, estimated traffic volumes generated by the proposed project are distributed and assigned to adjacent streets and intersections within the study area for the weekday PM peak hour study period. Next, project trips are added to future without-project traffic volumes and any potential impact to traffic operations. Site specific items are also discussed such as the operation of the site access driveways.

Trip Generation

The proposed project includes a mix of multifamily residential units, a hotel, a restaurant, a multipurpose recreational facility, and an indoor sports complex. Trip generation estimates have been prepared for the development based on trip rates identified using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2021) based on the Multifamily (Mid-Rise) (LU #221), Hotel (LU #310), High-Turnover (Sit-Down) Restaurant (LU #932), and Multipurpose Recreational Facility (LU #435). A programmatic approach was used to estimate trips generated by the proposed sports complex as it does not fall under any of ITE's Land Use categories descriptions.

The sports complex is primarily anticipated to facilitate weekend sporting tournaments that would have a regional draw. It is anticipated, however; that the complex would be utilized locally during the weekday. The proposed sports complex would be a building up to approximately 100,000 square feet that would house a variety of sports courts including the potential for volleyball, basketball, futsal, pickleball, and indoor soccer. The facility would also include permanent on-site staff and a sports medicine facility totaling approximately 3,000 square feet.

To estimate the weekday PM peak hour trip generation, it was assumed that a mix of volleyball, basketball, and futsal would be taking place at one time. It was also assumed that the practice length would be longer than 1 hour, 80 percent of participants would be dropped-off, and the average vehicle occupancy is 1.5. Table 6 provides a summary of the trip generation assumptions for the sports complex during the weekday PM peak hour.

Table 6. Weekday PM Peak Hour Sports Complex Programmatic Trip Generation Summary

Trip Generator Type	Independent Variable	People/Team	Coaches/Team	Weekday PM Peak Hour Trips		
				In	Out	Total
Staff						
5 to 9 PM	12 People	-	-	12	0	12
8 AM to 5 PM	5 People	-	-	0	5	5
Sports Medicine[1]	3,000 sf	-	-	3	6	9
Volleyball	3 Team	12	2	42	34	76
Basketball	2 Team	10	2	36	29	65
Futsal	2 Teams	10	2	24	19	43
Subtotal				**117**	**93**	**210**
AVO				1.5	1.5	1.5
Total				***78***	***62***	***140***

Source: Transpo Group, August 2023
1. Based on ITE Land Use 720 fitted curve.

Table 7 provides a summary of the trip generation for the proposed land uses. A detailed summary of the trip generation calculations for these uses has been provided in Appendix D.

Table 7. Estimated Weekday Vehicle Trip Generation (Primary Trips)

Land Use	Size	Daily Trips[1]	AM Peak-Hour Trips			PM Peak-Hour Trips		
			In	Out	Total	In	Out	Total
Proposed								
Multifamily (Mid-Rise) (LU #221)	450 du	2,044	43	143	186	107	69	176
Sports Complex (Programmatic)	100,000 sf	1,400[3]	-	-	-	78	62	140
Hotel (LU #310)	160 rooms	1,278	41	32	73	46	45	91
High-Turnover (Sit-Down) Restaurant (LU # 932)	7,000 sf	750	37	30	67	38	25	63
Multipurpose Recreational Facility (LU #435)	50,000 sf	1,790[3]	-	-	-	98	81	179
Gross Trips		**7,262**	**121**	**205**	**326**	**367**	**282**	**649**
Less Internal Trips		*402*	*11*	*11*	*22*	*23*	*23*	*46*
Less Pass-By		*-*	*-*	*-*	*-*	*10*	*10*	*20*
Total Primary Trips		**6,860**	**110**	**194**	**304**	**334**	**249**	**583**

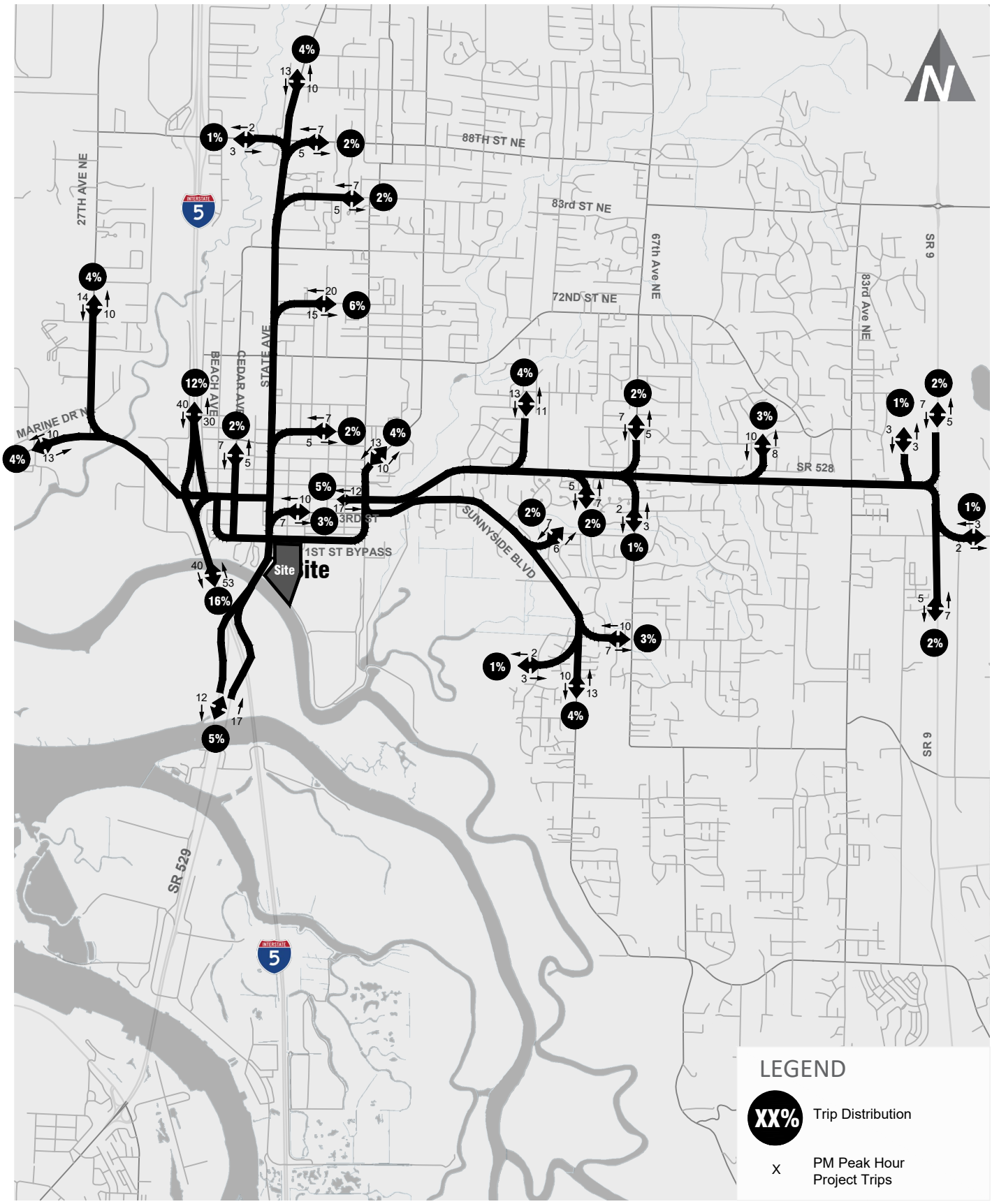
Notes: sf = square-feet, DU = dwelling unit
1. Based on rates or equations published in the ITE Trip Generation Manual 11th Edition, September 2021.
2. AVO = average vehicle occupancy. Retail and Residential AVO based on NCHRP 365 for urban areas with populations over 1 million people. No AVO rate if trips calculated based on person trip rate.
3. For purposes of the impact fee the daily trips were assumed to be 10 time the PM peak hour trips. For the Multipurpose Recreational Facility (LU #435) ITE does not provide a weekday daily trip generation rate.

As shown in Table 7, the proposed project is anticipated to generate approximately 6,860 primary new weekday daily vehicle trips with approximately 304 trips during the weekday AM peak hour and 583 trips during the weekday PM peak hour. Note that no credit for the existing land use was included such that the site access points reflect the total with-project volumes. As a result, off-site impacts are a conservative estimate.

Trip Distribution & Assignment

Trip distribution patterns developed for the project were based on the City of Marysville travel demand model and reflects the anticipated travel patterns for the proposed land uses. Figure 9 illustrates the 2027 and 2033 vehicle trip distribution and assignment for the proposed project. The resulting future (2027) with-project weekday PM peak hour traffic volumes are shown on Figure 10 and Figure 11. The resulting future (2033) with-project weekday PM peak hour traffic volumes are shown on Figure 12 and Figure 13.

Additionally, consistent with Snohomish County requirements, project trips have been shown at key intersections impacted by three or more directional trips on an approach or departure. The project trips are shown graphically and in tabular form in Appendix E.

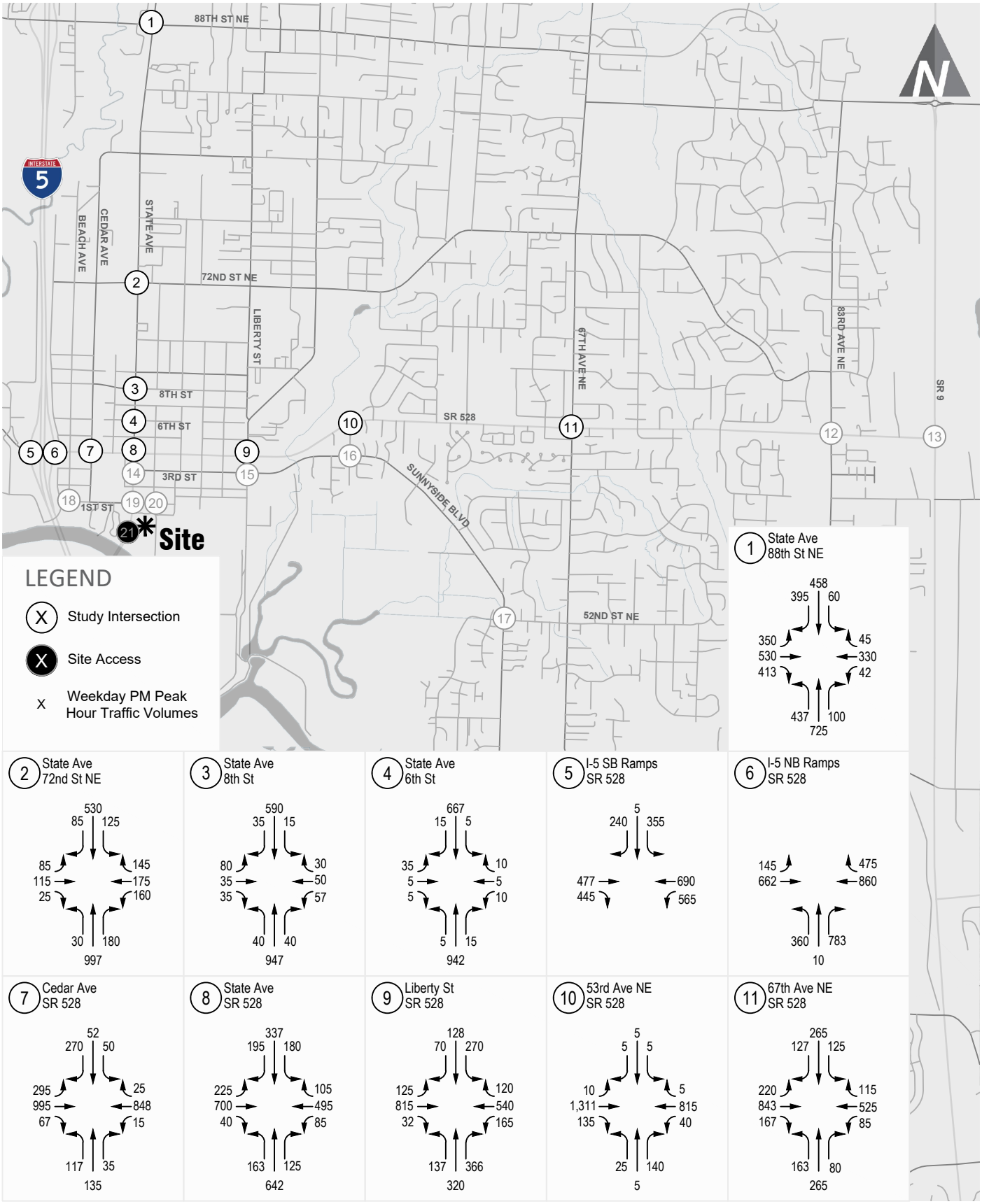


Future (2027 & 2033) Weekday PM Peak Hour Project Trip Distribution & Assignment

FIGURE 9

Marysville Waterfront Analysis

transpogroup

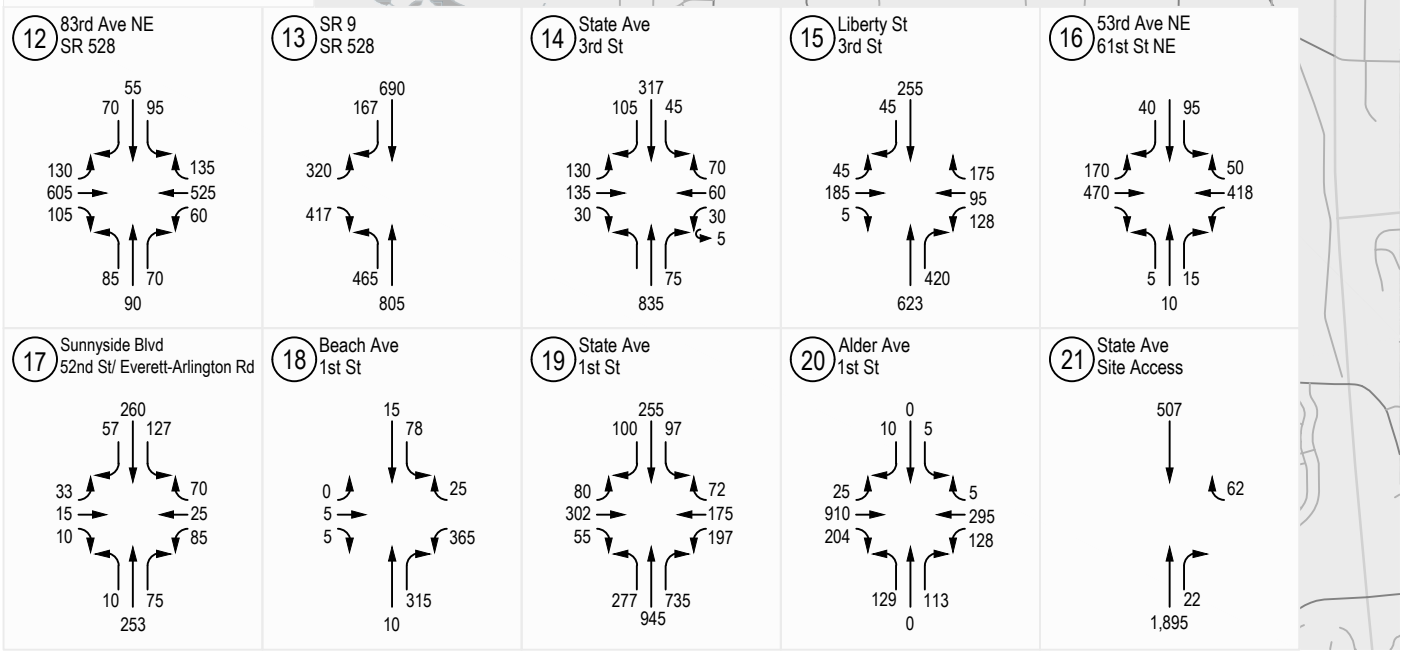


Future (2027) With-Project Weekday PM Peak Hour Traffic Volumes (1/2)

FIGURE 10

Marysville Waterfront Analysis

transpogroup



Future (2027) With-Project Weekday PM Peak Hour Traffic Volumes (2/2)

FIGURE 11

Marysville Waterfront Analysis

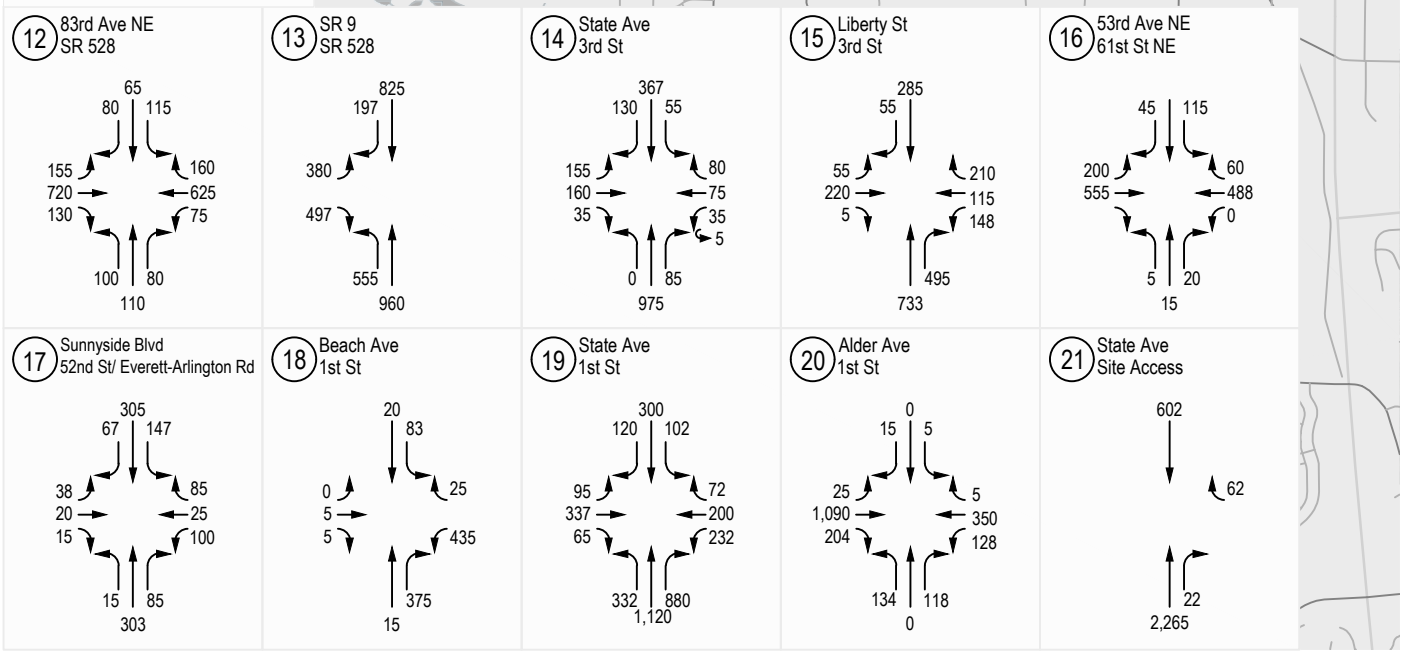
transpogroup

Future (2033) With-Project Weekday PM Peak Hour Traffic Volumes (1/2)

FIGURE 12

Marysville Waterfront Analysis

transpogroup



Future (2033) With-Project Weekday PM Peak Hour Traffic Volumes (2/2)

FIGURE 13

Marysville Waterfront Analysis

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Traffic Operations

The following section summarizes the future (2027 and 2033) with-project LOS at the study intersections and provides a comparison to the future without-project conditions to identify project-related impacts.

Intersection parameters such as channelization and intersection control applied to the with-project analyses were consistent with those used in the evaluation of without-project conditions. As noted previously, signal timing splits were optimized under future (2033) without-project conditions. That signal timing was then utilized in the future (2033) with-project conditions. A comparison of the future (2027) without-project and with-project weekday PM peak hour traffic operations are summarized in Table 8. A comparison of the future (2033) without-project and with-project weekday PM peak hour traffic operations are summarized in Table 9. Detailed LOS worksheets are provided in Appendix C.

City of Marysville LOS Standards. The following criteria summarize the current LOS standards established by the City.

- **LOS E "mitigated"** for arterial-arterial or arterial-collector intersections along the following corridors (LOS E "mitigated" means that the congestion should be mitigated through improvements, transit, ridesharing, or other travel modes when the intersection falls below LOS E).
    - SR 529/State Avenue/Smokey Point Boulevard between the south City limits and north City limits
    - 4th Street/64th Street NE (SR 528) between I-5 and SR 9
- **LOS D** for arterial-arterial or arterial-collector intersections along the remaining City corridors

State Highway LOS Standards. The LOS standards are set forth by state law and are based on whether the facility is classified as a Highway of Statewide Significance (HSS) or a Highway of Regional Significance (HRS). The LOS standard for HSS facilities in urban areas is LOS D and LOS C for HSS facilities in rural areas. I-5 and SR 9 are HSS facilities serving Marysville. Both I-5 and SR 9 are classified as Urban within Marysville, so LOS D applies.

The LOS standards for HRS facilities are divided into three categories including Tiers 1, 2 and 3. The LOS standard for Tier 1 highways (SR 528 and SR 529) is LOS E- "Mitigated" meaning that mitigation must be provided during the PM peak hour if the level of service falls below LOS E.

Table 8. Year of Opening (2027) Weekday PM Peak Hour Intersection LOS Summary

Intersection	Traffic Control[1]	Future 2027 Without-Project			Future 2027 With-Project		
		LOS[2]	Delay[3]	WM[4]	LOS	Delay	WM
1. State Avenue/88th Street NE	Signal	F	91.9	-	F	93.1	-
2. State Avenue/72nd Street NE	Signal	C	25.5	-	C	26.3	-
3. State Avenue/8th Street[5]	Signal	B	12.4	-	B	12.5	-
4. State Avenue/6th Street	Signal	A	6.3	-	A	6.3	-
5. I-5 SB Ramps/4th Street (SR 528)[5]	RAB	A	8.0	0.49	A	8.7	0.52
6. I-5 NB Ramps/4th Street (SR 528)[5]	RAB	A	6.4	0.42	A	6.9	0.50
7. Cedar Avenue/4th Street (SR 528)	Signal	C	27.5	-	C	31.5	-
8. State Avenue/4th Street (SR 528)	Signal	C	24.4	-	C	25.2	-
9. Liberty Street/4th Street (SR 528)	Signal	C	31.6	-	C	32.7	-
10. 53rd Avenue NE/64th Street (SR 528)	Signal	A	9.9	-	B	10.1	-
11. 67th Avenue NE/64th Street (SR 528)	Signal	C	25.9	-	C	26.6	-
12. 83rd Avenue NE/64th Street (SR 528)[5]	Signal	B	15.0	-	B	15.2	-
13. SR 9/64th Street (SR 528)	Signal	D	44.3	-	D	35.8	-
14. State Avenue/3rd Street[5]	Signal	A	9.5	-	A	9.6	-
15. Liberty Street/3rd Street[6]	Signal	B	17.6	-	B	17.5	-
16. 53rd Avenue NE/61st Street NE	Signal	B	11.0	-	B	11.2	-
17. Sunnyside Blvd/52nd Street/Everett-Arlington Road	AWSC	B	14.2	-	C	15.2	-
18. Beach Avenue/1st Street	AWSC	B	14.9	-	C	16.0	-
19. State Avenue/1st Street	Signal	C	20.6	-	C	29.3	-
20. Alder Avenue/1st Street[5]	Signal	A	6.9	-	B	16.3	-
21. State Ave/Site Access	SSSC	-	-	-	D	27.6	WBR

1. AWSC = all-way stop-control, RAB = Roundabout
2. Level of Service (A – F) as defined by the *Highway Capacity Manual* (HCM) 6th Edition (TRB)
3. Average delay per vehicle in seconds.
4. Worst movement reported for two-way stop-controlled intersections.
5. Intersections run utilizing HCM 2000 methodology due to signal timing constraints not allowed under HCM 6th Edition.
6. The decrease in delay is due to the increase in right-turning movement with the project reducing the overall weighted average delay at the intersection.

As shown in Table 8, all study intersections operate at the same LOS under without and with-project conditions with increases in delay generally less than 4 seconds with the exception of one intersection. The Alder Avenue/1st Street intersection, which serves as the primary access to the site, is forecast to degrade from LOS A to LOS B with the project but would continue to meet LOS standards.

Additionally, the State Avenue/88th Street NE street is forecast to operate at LOS F without or with the project. In addition to mitigation fees the project would be required to pay potential mitigation measures are reviewed in subsequent sections.

Table 9. Horizon Year (2033) Weekday PM Peak Hour Intersection LOS Summary

Intersection	Traffic Control[1]	Future 2033 Without-Project			Future 2033 With-Project		
		LOS[2]	Delay[3]	WM[4]	LOS	Delay	WM
1. State Avenue/88th Street NE	Signal	F	141.3	-	F	143.9	
2. State Avenue/72nd Street NE	Signal	D	37.6	-	D	39.4	
3. State Avenue/8th Street[5]	Signal	B	13.2	-	B	13.4	
4. State Avenue/6th Street	Signal	A	7.2	-	A	7.3	
5. I-5 SB Ramps/4th Street (SR 528)[5]	RAB	A	8.9	0.54	B	10.4	0.56
6. I-5 NB Ramps/4th Street (SR 528)[5]	RAB	A	7.3	0.55	A	7.6	0.59
7. Cedar Avenue/4th Street (SR 528)	Signal	D	38.0	-	D	40.0	-
8. State Avenue/4th Street (SR 528)	Signal	C	33.1	-	C	34.7	-
9. Liberty Street/4th Street (SR 528)	Signal	D	41.0	-	D	47.4	-
10. 53rd Avenue NE/64th Street (SR 528)	Signal	B	13.2	-	B	13.8	-
11. 67th Avenue NE/64th Street (SR 528)	Signal	D	35.7	-	D	37.6	-
12. 83rd Avenue NE/64th Street (SR 528)[5]	Signal	C	20.6	-	C	21.1	-
13. SR 9/64th Street (SR 528)	Signal	F	80.2	-	E	71.5	-
14. State Avenue/3rd Street[5]	Signal	B	10.7	-	B	11.3	-
15. Liberty Street/3rd Street[6]	Signal	B	20.0	-	C	20.1	-
16. 53rd Avenue NE/61st Street NE	Signal	B	12.8	-	B	13.1	-
17. Sunnyside Blvd/52nd Street/Everett-Arlington Road	AWSC	C	19.9	-	C	23.1	-
18. Beach Avenue/1st Street	AWSC	C	23.0	-	D	25.6	-
19. State Avenue/1st Street	Signal	C	23.7	-	C	31.6	-
20. Alder Avenue/1st Street[5]	Signal	A	8.8	-	C	21.0	-
21. State Ave/Site Access	SSSC	-	-	-	E	40.8	WBR

1. AWSC = all-way stop-control, RAB = roundabout.
2. Level of Service (A – F) as defined by the *Highway Capacity Manual* (HCM) 6th Edition (TRB).
3. Average delay per vehicle in seconds.
4. Worst movement reported for two-way stop-controlled intersections.
5. Intersections run utilizing HCM 2000 methodology due to signal timing constraints not allowed under HCM 6th Edition.

As shown in Table 9, all study intersections operate at the same LOS under without and with-project conditions except for three intersections. The I-5 SB Ramps/4th Street (SR 528) and Alder Avenue/1st Street intersections are forecast to degrade from LOS A to LOS B and LOS under with-project conditions, respectively. The Liberty Street/3rd Street intersection is forecast to degrade from LOS B to LOS C with the project. All three intersections would continue to meet LOS standards. The State Avenue/88th Street NE and SR 9/64th Street (SR 528) intersections are anticipated to operate at LOS F without or with the proposed project. As noted previously, impact fees and potential mitigation measures are discussed in subsequent sections.

Site Access

Access to parking would be provided two connections to the surrounding street network. One access is via the existing intersection of Alder Avenue/1st Street and one along State Avenue (SR 529). Based on coordination with City staff, the site access along State Avenue (SR 529) would be restricted to right-in/right-out only. Under future (2027) with-project conditions the site access at Alder Avenue is forecast to operate at LOS B and the site access along State Avenue (SR 529) is forecast to operate at LOS D. Under future (2033) with-project conditions the site access at Alder Avenue is forecast to operate at LOS B and the site access along State Avenue (SR 529) is forecast to operate at LOS E. Given the operations at the Alder Avenue/1st Street intersection vehicles may shift resulting in a reduced delay at the site access with State Avenue (SR 529).

Mitigation and Recommendations

Project impacts to the surrounding transportation system would be mitigated through City of Marysville, Snohomish County and WSDOT impact fee programs as well as local intersection improvements or proportionate share contributions to future improvements.

Intersection Improvements

As noted previously, impacts are anticipated at the State Avenue/88th Street NE and SR 9/4th Street (SR 528) intersections. The State Avenue/88th Street NE has physical constraints that make the addition of capacity difficult. The City is currently reviewing potential improvements at the intersection. At the SR 9/64th Street NE (SR 528) intersection the addition of overlapping right-turn phasing for the eastbound and southbound right-turns would mitigate the projects impacts and improve the intersection operations to LOS D. The proposed project could provide a proportionate share to the improvement. Under future (2033) conditions the project share at the intersection is 0.8 percent.

Transportation Mitigation Fees

To mitigate impacts of the proposal on the surrounding transportation system, the developer would be required to pay impact fees to three jurisdictions: the City of Marysville, Snohomish County, and WSDOT based on current interlocal agreements that have been established between these entities. The following provides an estimate only, the final fees will be calculated at time of permit issuance for the individual projects within the development and will be based on current fees and active interlocal agreements at the time of building permit issuance. No credit for the existing uses has been included. Final application of the existing credits will be provided by the City as appropriate.

City of Marysville

The City of Marysville traffic mitigation fees are currently $2,220 per PM peak hour trip generated by commercial use and $6,300 per PM peak hour trip by residential use. Based on the anticipated trip generation of 176 new residential trips and 430 new PM peak hour commercial trips the resulting City of Marysville impact fee would be **$2,063,400** ($2,220/trip x 430 trips + $6,300/trip x 176 trips). These fees will be reduced for TIF eligible improvements constructed by the applicant. The fee rate is subject to annual increases and will be based on the adopted rates at the time of building permit issuance. A breakdown of the fees for each use is provided in Table 10.

Table 10. City of Marysville Impact Fee Breakdown by Land Use

Land Use	New PM Peak Hour Trips	Marysville Fee Rate[1]	Marysville Impact Fee
Residential	176	$6,300/PM Peak Trip	$1,108,800
Sports Complex	140	$2,220/PM Peak Trip	$310,800
Hotel	91	$2,220/PM Peak Trip	$202,020
High-Turnover Sit-Down Restaurant	26	$2,220/PM Peak Trip	$57,720
Multipurpose Recreational Facility	173	$2,220/PM Peak Trip	$384,060
Total	**606**		**$2,063,400**

Source: Transpo Group, January 2024
1. City of Marysville fee rate for commercial or residential use.

Snohomish County

Snohomish County has an interlocal agreement with the City of Marysville. Per the Snohomish County Traffic Mitigation Worksheet for City Developments Impacting County Streets, the percent of trips impacting County Streets was determined to be 10 percent for the commercial portion and 15 percent for the residential portion. Per SCC 30.66B.330 the fee for commercial uses within the urban growth area of TSA is $157 per average daily trip (ADT) and $185 per ADT for residential uses. The resulting fee was estimated to be approximately **$138,644** (10% x 5,218 ADT x $157 per ADT + 15% x 2,044 x $185 per ADT). The fee rate is subject to annual increases and will be based on the adopted rates at the time of building permit issuance. A breakdown of the fees for each use is provided in Table 11.

Table 11. Snohomish County Impact Fee Breakdown by Land Use

Land Use	New ADT	Snohomish County Fee Rate[1]	Snohomish County Proportion	Snohomish County Impact Fee
Residential	2,044	$185/ADT	15%	$56,721
Sports Complex	1,400	$157/ADT	10%	$21,980
Hotel	1,278	$157/ADT	10%	$20,065
High-Turnover Sit-Down Restaurant	750	$157/ADT	10%	$9,232
Multipurpose Recreational Facility	1,790	$157/ADT	10%	$27,632
Total	**7,262**			**$138,644**

Source: Transpo Group, January 2024
2. Snohomish County fee rate for commercial or residential use in TSA A, within the Urban Growth Area (UGA).

WSDOT

Per the interlocal agreement with WSDOT, project-related impacts can be mitigated through the payment of a flat fee of $36 per ADT or a proportional share based on the WSDOT projects currently planned and listed on WSDOT's Exhibit C. Based on the project distribution, the project would impact one improvement project that is not completed, unfunded, or that the state is currently collecting fees for. As such, no impact fees are required for the WSDOT.

Findings and Conclusions

This transportation impact analysis summarizes the transportation impacts associated with the proposed mixed-use project in Marysville, WA.

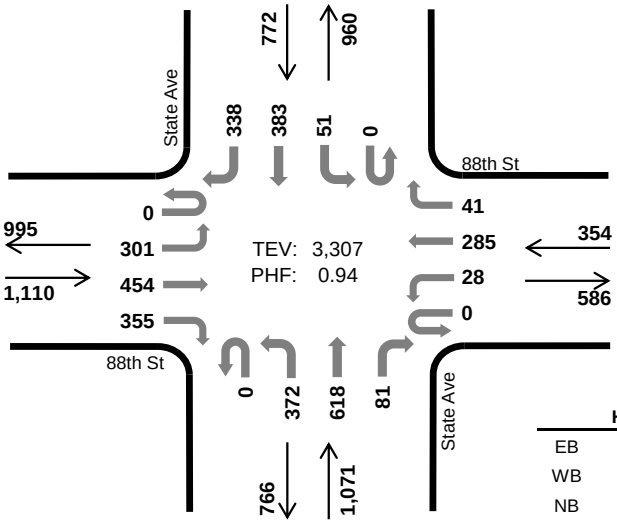
- The proposed project would develop a mixed-use development including a residential apartment building, hotel, a restaurant, a multipurpose recreational facility, and an indoor sports complex facility. The development is located south of the First Street Bypass, east of SR 529.
- The development is anticipated to generate approximately 6,860 new weekday daily vehicle trips with approximately 583 trips during the weekday PM peak hour.
- Under 2027 all study intersections operate at the same LOS under without and with-project conditions with increases in delay generally less than 4 seconds with the exception of one intersection. The Alter Avenue/1st Street intersection, which serves as the primary access to the site, is forecast to degrade from LOS A to LOS B with the project but would continue to meet LOS standards. The State Avenue/88th Street NE intersection is forecast to operate at LOS F without or with the proposed project. As noted previously, the City is currently reviewing potential improvements at the intersection. It is anticipated that future improvements that are identified will be incorporated into the City's Traffic Impact Fee program. Mitigation at this intersection will be addressed through the payment of traffic impact fees.
- Under 2033 horizon year conditions all study intersections operate at the same LOS under without and with-project conditions except for three intersections. The I-5 SB Ramps/4th Street (SR 528) and Alder Avenue/1st Street intersections are forecast to degrade from LOS A to LOS B, and LOS C under with-project conditions, respectively. The Liberty Street/3rd Street intersection is forecast to degrade from LOS B to LOS C with the project. All three intersections would continue to meet LOS standards. The State Avenue/88th Street NE intersection is forecast to continue to operate at LOS F in 2033. Additionally, the SR 9/64th Street NE (SE 528) intersection is forecast to operate at LSO F in 2033 without or with the proposed project. With the addition of eastbound and southbound right-turn overlap signal phasing the intersection is forecast to operate at LOS D and would meet LOS standards.
- Access to the site is proposed via two locations, a full access driveway at the Alder Avenue/1st Street intersection and a right-in/right-out access along SR 529. The Alter Avenue/1st Street intersection is forecast to operate at LOS B under future 2027 and 2033 with-project conditions. The site access along SR 529 is forecast to operate at LOS D under 2027 with-project conditions and LOS E under 2033 with-project conditions. Given the operations at the Alter Avenue access traffic is likely to shift and impacts aren't anticipated at the SR 529 access.
- The developer would be required to pay transportation mitigation fees to the City of Marysville based on current interlocal agreements that have been established between these entities. The mitigation fees are estimated to be a total of $2,199,030. A breakdown of the fees for each land use is provided below. Fees are subject to adopted rates in effect at the time of building permit issuance.
    - Residential: $1,165,521
    - Sports Complex: $332,780
    - Hotel: $222,085
    - High-Turnover Sit-Down Restaurant: $66,952
    - Multipurpose Recreational Facility: $411,692

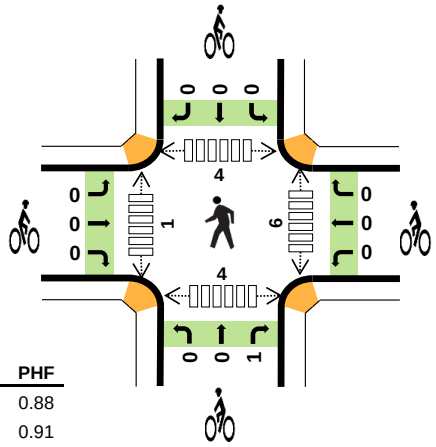
Appendix A: Traffic Counts

State Ave
88th St

Date: 06/01/2022
Count Period: 5:00 PM to 7:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	1.0%	0.88
WB	0.8%	0.91
NB	1.0%	0.97
SB	1.2%	0.91
TOTAL	1.0%	0.94

Two-Hour Count Summaries

Interval Start	88th St Eastbound				88th St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:00 PM	**0**	**87**	**142**	**86**	**0**	**9**	**83**	**5**	**0**	**96**	**158**	**18**	**0**	**14**	**100**	**80**	**878**	0
5:15 PM	**0**	**73**	**117**	**84**	**0**	**4**	**70**	**13**	**0**	**98**	**158**	**21**	**0**	**15**	**97**	**84**	**834**	0
5:30 PM	**0**	**70**	**95**	**92**	**0**	**4**	**65**	**14**	**0**	**84**	**159**	**25**	**0**	**11**	**107**	**95**	**821**	0
5:45 PM	**0**	**71**	**100**	**93**	**0**	**11**	**67**	**9**	**0**	**94**	**143**	**17**	**0**	**11**	**79**	**79**	**774**	**3,307**
6:00 PM	0	74	104	64	0	3	59	8	0	84	175	25	0	7	85	85	773	3,202
6:15 PM	0	78	112	71	0	4	60	11	0	70	163	18	0	10	92	93	782	3,150
6:30 PM	0	93	125	69	0	7	57	13	0	85	119	19	0	10	75	60	732	3,061
6:45 PM	0	79	116	68	0	9	79	9	0	66	117	14	0	11	77	59	704	2,991
Count Total	0	625	911	627	0	51	540	82	0	677	1,192	157	0	89	712	635	6,298	0
Peak Hour All	**0**	**301**	**454**	**355**	**0**	**28**	**285**	**41**	**0**	**372**	**618**	**81**	**0**	**51**	**383**	**338**	**3,307**	**0**
Peak Hour HV	**0**	**3**	**6**	**2**	**0**	**0**	**3**	**0**	**0**	**3**	**7**	**1**	**0**	**0**	**7**	**2**	**34**	**0**
Peak Hour HV%	**-**	**1%**	**1%**	**1%**	**-**	**0%**	**1%**	**0%**	**-**	**1%**	**1%**	**1%**	**-**	**0%**	**2%**	**1%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
5:00 PM	**3**	**1**	**1**	**2**	***7***	**0**	**0**	**1**	**0**	***1***	**1**	**0**	**0**	**0**	*1*
5:15 PM	**4**	**0**	**7**	**2**	***13***	**0**	**0**	**0**	**0**	***0***	**4**	**1**	**0**	**4**	*9*
5:30 PM	**3**	**0**	**1**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:45 PM	**1**	**2**	**2**	**3**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**4**	**0**	***5***
6:00 PM	6	1	5	4	*16*	0	0	0	0	*0*	1	0	1	2	*4*
6:15 PM	2	2	7	3	*14*	0	0	0	0	*0*	1	0	0	0	*1*
6:30 PM	4	0	2	1	*7*	0	0	0	0	*0*	4	0	3	0	*7*
6:45 PM	5	4	5	2	*16*	0	0	0	1	*1*	0	0	1	0	*1*
Count Total	28	10	30	19	*87*	0	0	1	1	*2*	12	1	9	6	*28*
Peak Hour	**11**	**3**	**11**	**9**	***34***	**0**	**0**	**1**	**0**	***1***	**6**	**1**	**4**	**4**	***15***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	88th St Eastbound				88th St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:00 PM	**0**	**2**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**7**	0
5:15 PM	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**1**	**0**	**0**	**2**	**0**	**13**	0
5:30 PM	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**6**	0
5:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**1**	**8**	**34**
6:00 PM	0	1	3	2	0	0	1	0	0	1	3	1	0	0	2	2	16	43
6:15 PM	0	0	0	2	0	1	1	0	0	2	4	1	0	0	2	1	14	44
6:30 PM	0	0	3	1	0	0	0	0	0	0	2	0	0	0	1	0	7	45
6:45 PM	0	4	1	0	0	0	3	1	0	1	3	1	0	0	1	1	16	53
Count Total	0	8	13	7	0	1	8	1	0	7	19	4	0	0	13	6	87	0
Peak Hour	**0**	**3**	**6**	**2**	**0**	**0**	**3**	**0**	**0**	**3**	**7**	**1**	**0**	**0**	**7**	**2**	**34**	**0**

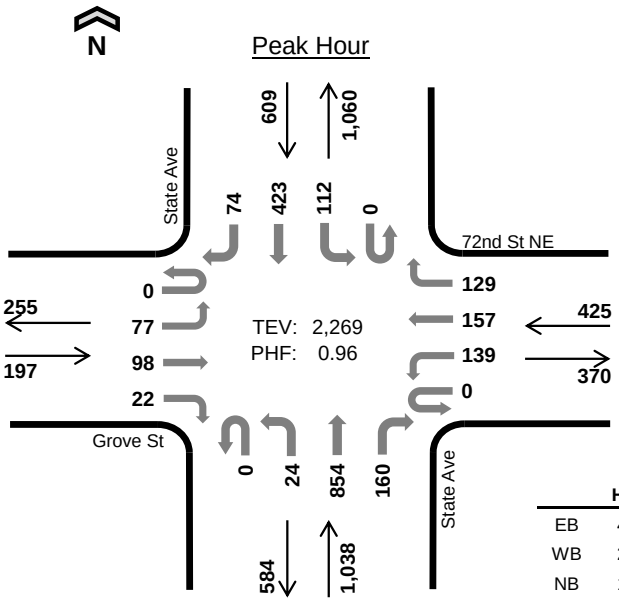
Two-Hour Count Summaries - Bikes

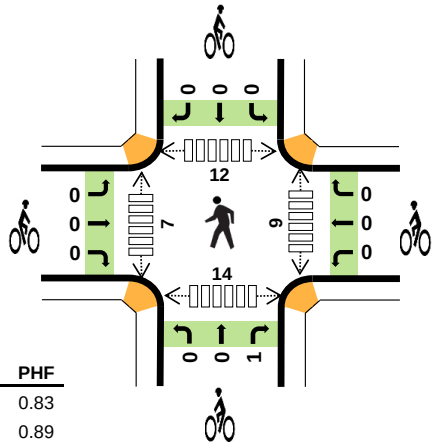
Interval Start	88th St Eastbound			88th St Westbound			State Ave Northbound			State Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Count Total	0	0	0	0	0	0	0	0	1	0	1	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

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

State Ave
Grove St

Date: 05/31/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	4.1%	0.83
WB	2.1%	0.89
NB	1.3%	0.97
SB	2.5%	0.95
TOTAL	2.0%	0.96

Two-Hour Count Summaries

Interval Start		Grove St Eastbound				72nd St NE Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**25**	**21**	**6**	**0**	**33**	**43**	**34**	**0**	**11**	**209**	**34**	**0**	**26**	**105**	**19**	**566**	0
4:15 PM		**0**	**11**	**22**	**6**	**0**	**42**	**21**	**37**	**0**	**6**	**216**	**42**	**0**	**31**	**112**	**18**	**564**	0
4:30 PM		**0**	**30**	**25**	**4**	**0**	**21**	**50**	**25**	**0**	**2**	**207**	**43**	**0**	**23**	**101**	**19**	**550**	0
4:45 PM		**0**	**11**	**30**	**6**	**0**	**43**	**43**	**33**	**0**	**5**	**222**	**41**	**0**	**32**	**105**	**18**	**589**	**2,269**
5:00 PM		0	14	25	1	0	45	34	31	0	4	192	30	0	32	107	16	531	2,234
5:15 PM		0	17	40	5	0	24	29	30	0	8	162	40	0	25	97	19	496	2,166
5:30 PM		0	14	19	8	0	31	31	33	0	8	154	41	0	34	111	15	499	2,115
5:45 PM		0	15	19	8	0	27	32	33	0	1	129	37	0	24	104	14	443	1,969
Count Total		0	137	201	44	0	266	283	256	0	45	1,491	308	0	227	842	138	4,238	0
Peak Hour	**All**	**0**	**77**	**98**	**22**	**0**	**139**	**157**	**129**	**0**	**24**	**854**	**160**	**0**	**112**	**423**	**74**	**2,269**	**0**
	HV	**0**	**3**	**1**	**4**	**0**	**2**	**4**	**3**	**0**	**0**	**10**	**3**	**0**	**0**	**11**	**4**	**45**	**0**
	HV%	**-**	**4%**	**1%**	**18%**	**-**	**1%**	**3%**	**2%**	**-**	**0%**	**1%**	**2%**	**-**	**0%**	**3%**	**5%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**2**	**5**	**2**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**6**	**2**	*10*
4:15 PM	**2**	**1**	**4**	**6**	***13***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**2**	**2**	*7*
4:30 PM	**1**	**1**	**2**	**6**	***10***	**0**	**0**	**0**	**0**	***0***	**4**	**0**	**4**	**3**	*11*
4:45 PM	**3**	**2**	**5**	**1**	***11***	**0**	**0**	**1**	**0**	***1***	**2**	**5**	**0**	**7**	***14***
5:00 PM	0	0	5	2	*7*	0	0	0	0	*0*	9	0	5	2	*16*
5:15 PM	1	1	5	4	*11*	0	0	0	0	*0*	4	0	3	5	*12*
5:30 PM	1	2	1	2	*6*	0	0	0	0	*0*	2	2	2	3	*9*
5:45 PM	1	1	2	3	*7*	0	0	0	0	*0*	4	0	1	2	*7*
Count Total	11	13	26	26	*76*	0	0	1	0	*1*	28	9	23	26	*86*
Peak Hour	**8**	**9**	**13**	**15**	***45***	**0**	**0**	**1**	**0**	***1***	**9**	**7**	**12**	**14**	***42***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Grove St Eastbound				72nd St NE Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**2**	**0**	**1**	**3**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1**	**11**	0
4:15 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**1**	**13**	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**2**	**10**	0
4:45 PM	**0**	**0**	**1**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**3**	**2**	**0**	**0**	**1**	**0**	**11**	**45**
5:00 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	1	7	41
5:15 PM	0	0	0	1	0	0	0	1	0	1	2	2	0	0	3	1	11	39
5:30 PM	0	0	0	1	0	0	1	1	0	0	1	0	0	0	2	0	6	35
5:45 PM	0	0	0	1	0	0	1	0	0	0	1	1	0	0	2	1	7	31
Count Total	0	3	1	7	0	2	6	5	0	1	19	6	0	1	18	7	76	0
Peak Hour	**0**	**3**	**1**	**4**	**0**	**2**	**4**	**3**	**0**	**0**	**10**	**3**	**0**	**0**	**11**	**4**	**45**	**0**

Two-Hour Count Summaries - Bikes

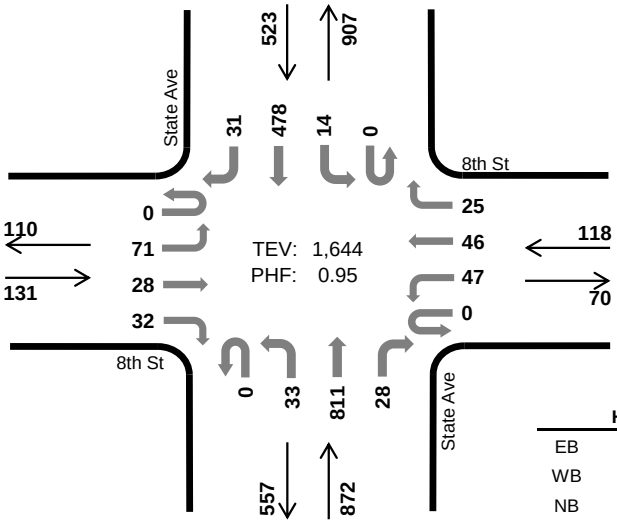
Interval Start	Grove St Eastbound			72nd St NE Westbound			State Ave Northbound			State Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

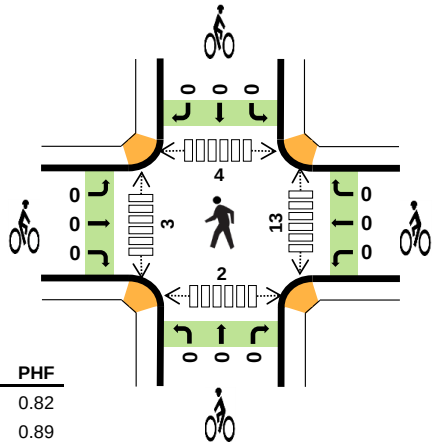
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

State Ave
8th St

Date: 06/01/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.82
WB	2.5%	0.89
NB	0.8%	0.90
SB	1.5%	0.86
TOTAL	1.1%	0.95

Two-Hour Count Summaries

Interval Start		8th St Eastbound				8th St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**20**	**8**	**11**	**0**	**11**	**4**	**8**	**0**	**6**	**227**	**8**	**0**	**2**	**104**	**2**	**411**	0
4:15 PM		**0**	**15**	**10**	**5**	**0**	**11**	**15**	**4**	**0**	**7**	**188**	**14**	**0**	**2**	**108**	**9**	**388**	0
4:30 PM		**0**	**24**	**7**	**9**	**0**	**13**	**12**	**8**	**0**	**10**	**194**	**3**	**0**	**2**	**140**	**10**	**432**	0
4:45 PM		**0**	**12**	**3**	**7**	**0**	**12**	**15**	**5**	**0**	**10**	**202**	**3**	**0**	**8**	**126**	**10**	**413**	**1,644**
5:00 PM		0	22	17	10	0	8	11	8	0	8	169	2	0	4	130	8	397	1,630
5:15 PM		0	12	9	4	0	9	8	4	0	8	196	8	0	4	124	3	389	1,631
5:30 PM		0	9	13	4	0	5	9	3	0	9	181	7	0	4	105	7	356	1,555
5:45 PM		0	10	8	3	0	10	13	4	0	6	167	8	0	1	134	7	371	1,513
Count Total		0	124	75	53	0	79	87	44	0	64	1,524	53	0	27	971	56	3,157	0
Peak Hour	**All**	**0**	**71**	**28**	**32**	**0**	**47**	**46**	**25**	**0**	**33**	**811**	**28**	**0**	**14**	**478**	**31**	**1,644**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**5**	**1**	**0**	**0**	**7**	**1**	**18**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**7%**	**0%**	**-**	**3%**	**1%**	**4%**	**-**	**0%**	**1%**	**3%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**1**	**2**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**4**	**0**	*6*
4:15 PM	**0**	**0**	**2**	**4**	***6***	**0**	**0**	**0**	**0**	***0***	**5**	**1**	**0**	**0**	*6*
4:30 PM	**0**	**2**	**2**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**4**	**1**	**0**	**1**	*6*
4:45 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**1**	***4***
5:00 PM	0	0	1	1	*2*	0	0	0	0	*0*	3	2	1	1	*7*
5:15 PM	0	0	2	3	*5*	0	0	0	0	*0*	1	2	0	1	*4*
5:30 PM	0	0	0	1	*1*	0	0	0	0	*0*	1	0	0	1	*2*
5:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	4	0	0	2	*6*
Count Total	0	3	10	14	*27*	0	0	0	0	*0*	22	7	5	7	*41*
Peak Hour	**0**	**3**	**7**	**8**	***18***	**0**	**0**	**0**	**0**	***0***	**13**	**3**	**4**	**2**	***22***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	8th St Eastbound				8th St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**4**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**1**	**6**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**5**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	**18**
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	16
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	1	5	15
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	11
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	9
Count Total	0	0	0	0	0	0	3	0	0	1	8	1	0	0	10	4	27	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**5**	**1**	**0**	**0**	**7**	**1**	**18**	**0**

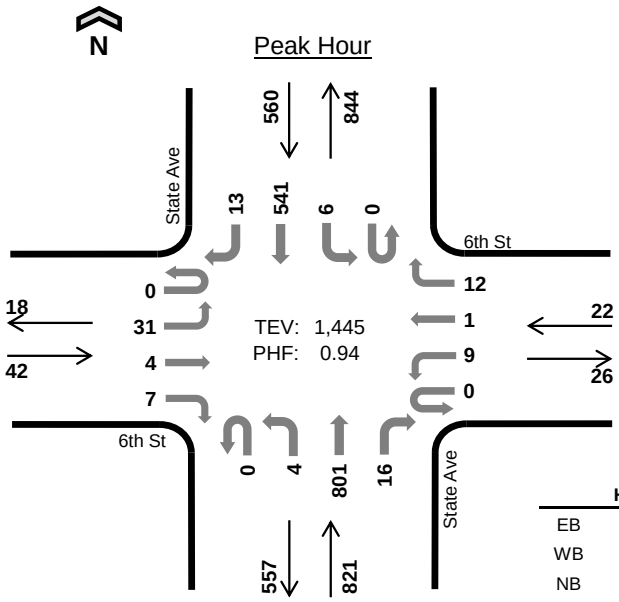
Two-Hour Count Summaries - Bikes

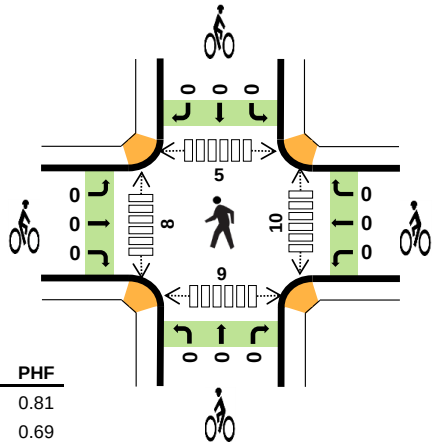
Interval Start	8th St Eastbound			8th St Westbound			State Ave Northbound			State Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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

State Ave
6th St

Date: 06/01/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	0.0%	0.81
WB	0.0%	0.69
NB	1.0%	0.87
SB	1.4%	0.89
TOTAL	1.1%	0.94

Two-Hour Count Summaries

Interval Start		6th St Eastbound				6th St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**6**	**1**	**3**	**0**	**2**	**0**	**2**	**0**	**0**	**231**	**6**	**0**	**1**	**130**	**1**	**383**	0
4:15 PM		**0**	**6**	**1**	**1**	**0**	**3**	**0**	**3**	**0**	**2**	**185**	**5**	**0**	**0**	**124**	**2**	**332**	0
4:30 PM		**0**	**8**	**1**	**2**	**0**	**1**	**0**	**3**	**0**	**1**	**200**	**2**	**0**	**3**	**151**	**4**	**376**	0
4:45 PM		**0**	**11**	**1**	**1**	**0**	**3**	**1**	**4**	**0**	**1**	**185**	**3**	**0**	**2**	**136**	**6**	**354**	**1,445**
5:00 PM		0	11	1	4	0	2	0	4	0	0	164	1	0	3	136	4	330	1,392
5:15 PM		0	10	1	3	0	3	0	3	0	4	208	4	0	1	127	4	368	1,428
5:30 PM		0	6	2	6	0	1	0	5	0	2	165	4	0	6	108	6	311	1,363
5:45 PM		0	4	0	3	0	1	1	4	0	3	182	3	0	4	138	4	347	1,356
Count Total		0	62	8	23	0	16	2	28	0	13	1,520	28	0	20	1,050	31	2,801	0
Peak Hour	**All**	**0**	**31**	**4**	**7**	**0**	**9**	**1**	**12**	**0**	**4**	**801**	**16**	**0**	**6**	**541**	**13**	**1,445**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**8**	**0**	**16**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**1%**	**0%**	**-**	**0%**	**1%**	**0%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**1**	**5**	*10*
4:15 PM	**0**	**0**	**2**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**1**	*3*
4:30 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**5**	**6**	**3**	**1**	*15*
4:45 PM	**0**	**0**	**3**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**2**	***4***
5:00 PM	0	0	3	0	*3*	0	0	0	0	*0*	4	4	1	0	*9*
5:15 PM	0	0	2	2	*4*	0	0	0	0	*0*	2	3	1	2	*8*
5:30 PM	0	0	1	1	*2*	0	0	0	0	*0*	1	1	1	0	*3*
5:45 PM	0	0	3	0	*3*	0	0	0	0	*0*	0	1	0	1	*2*
Count Total	0	0	17	11	*28*	0	0	0	0	*0*	17	17	8	12	*54*
Peak Hour	**0**	**0**	**8**	**8**	***16***	**0**	**0**	**0**	**0**	***0***	**10**	**8**	**5**	**9**	***32***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	6th St Eastbound				6th St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**3**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**5**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**6**	**16**
5:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	16
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	15
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	15
5:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	12
Count Total	0	0	0	0	0	0	0	0	0	0	17	0	0	0	11	0	28	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**8**	**0**	**16**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	6th St Eastbound			6th St Westbound			State Ave Northbound			State Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

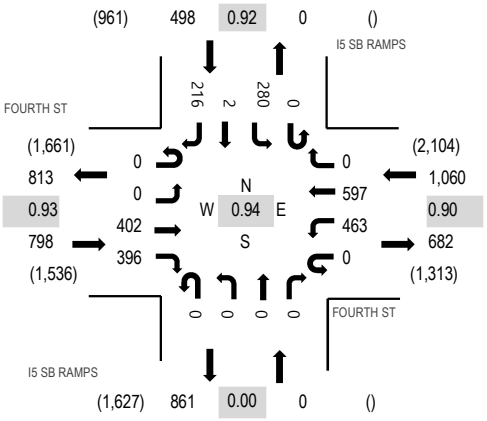
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

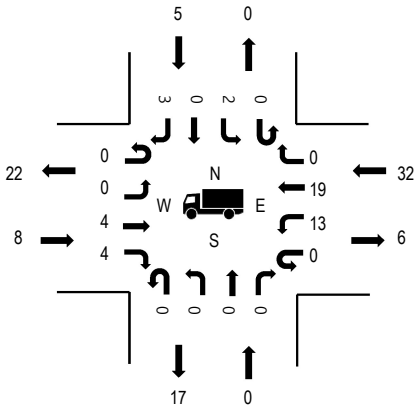
Location: 2 I5 SB RAMPS & FOURTH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour

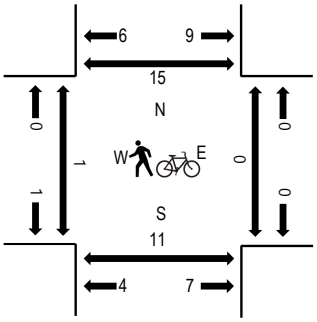
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.0%	0.93
WB	3.0%	0.90
NB	0.0%	0.00
SB	1.0%	0.92
All	1.9%	0.94

Traffic Counts - Motorized Vehicles

Interval Start Time	FOURTH ST Eastbound				FOURTH ST Westbound				I5 SB RAMPS Northbound				I5 SB RAMPS Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	105	101	0	98	145	0	0	0	0	0	0	73	0	62	584	2,317
4:15 PM	0	0	94	92	0	97	146	0	0	0	0	0	0	53	0	52	534	2,295
4:30 PM	0	0	105	109	0	128	166	0	0	0	0	0	0	66	1	53	628	2,356
4:45 PM	0	0	101	89	0	114	150	0	0	0	0	0	0	59	1	57	571	2,279
5:00 PM	0	0	90	98	0	109	129	0	0	0	0	0	0	82	0	54	562	2,284
5:15 PM	0	0	106	100	0	112	152	0	0	0	0	0	0	73	0	52	595	
5:30 PM	0	0	88	78	0	107	174	0	0	0	0	0	0	63	0	41	551	
5:45 PM	0	0	88	92	0	101	176	0	0	0	0	0	0	67	0	52	576	
Count Total	0	0	777	759	0	866	1,238	0	0	0	0	0	0	536	2	423	4,601	
Peak Hour	0	0	402	396	0	463	597	0	0	0	0	0	0	280	2	216	2,356	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

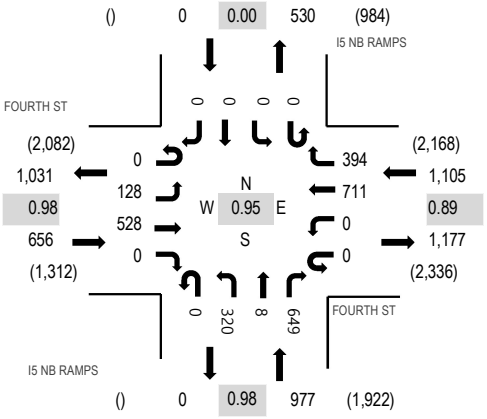
Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	6	0	6	4	16	4:00 PM	0	4	0	4	8
4:15 PM	2	0	3	1	6	4:15 PM	0	3	0	3	6
4:30 PM	1	0	8	1	10	4:30 PM	0	3	0	6	9
4:45 PM	1	0	8	1	10	4:45 PM	0	3	0	4	7
5:00 PM	3	0	8	2	13	5:00 PM	0	3	0	2	5
5:15 PM	3	0	8	1	12	5:15 PM	1	2	0	3	6
5:30 PM	3	0	3	1	7	5:30 PM	1	2	0	6	9
5:45 PM	2	0	6	0	8	5:45 PM	0	4	0	4	8
Count Total	21	0	50	11	82	Count Total	2	24	0	32	58
Peak Hour	8	0	32	5	45	Peak Hour	1	11	0	15	27

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

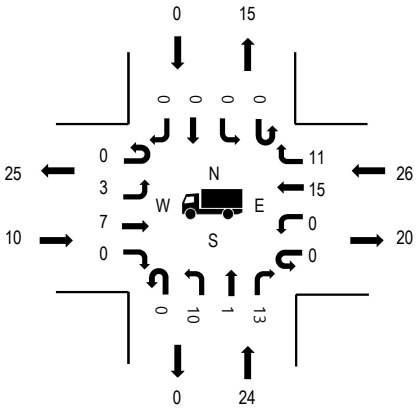
Location: 3 I5 NB RAMPS & FOURTH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour

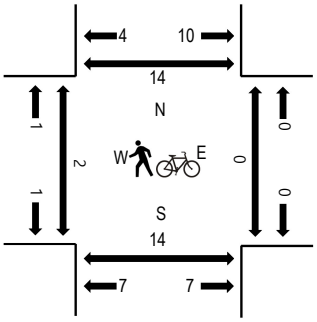
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.5%	0.98
WB	2.4%	0.89
NB	2.5%	0.98
SB	0.0%	0.00
All	2.2%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	FOURTH ST Eastbound				FOURTH ST Westbound				I5 NB RAMPS Northbound				I5 NB RAMPS Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	31	146	0	0	0	161	95	0	84	1	164	0	0	0	0	682	2,738
4:15 PM	0	25	122	0	0	0	167	95	0	70	5	164	0	0	0	0	648	2,626
4:30 PM	0	36	134	0	0	0	208	104	0	84	0	155	0	0	0	0	721	2,676
4:45 PM	0	36	126	0	0	0	175	100	0	82	2	166	0	0	0	0	687	2,654
5:00 PM	0	42	129	0	0	0	182	66	0	58	1	92	0	0	0	0	570	2,664
5:15 PM	0	25	148	0	0	0	186	82	0	83	4	170	0	0	0	0	698	
5:30 PM	0	29	128	0	0	0	195	87	0	87	0	173	0	0	0	0	699	
5:45 PM	0	23	132	0	0	0	172	93	0	88	2	187	0	0	0	0	697	
Count Total	0	247	1,065	0	0	0	1,446	722	0	636	15	1,271	0	0	0	0	5,402	
Peak Hour	0	128	528	0	0	0	711	394	0	320	8	649	0	0	0	0	2,738	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

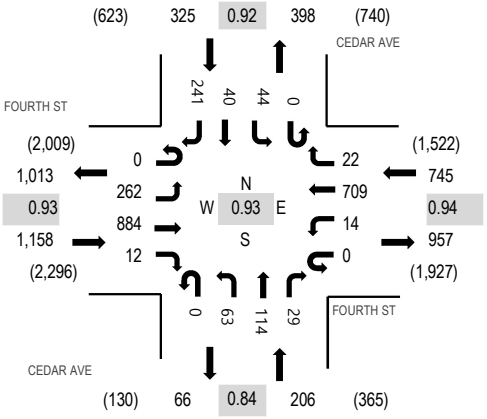
Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	5	6	0	15	4:00 PM	1	5	0	3	9
4:15 PM	2	7	5	0	14	4:15 PM	0	1	0	3	4
4:30 PM	2	7	7	0	16	4:30 PM	0	4	0	3	7
4:45 PM	2	5	8	0	15	4:45 PM	1	4	0	5	10
5:00 PM	1	6	5	0	12	5:00 PM	1	4	0	3	8
5:15 PM	1	1	5	0	7	5:15 PM	0	2	0	5	7
5:30 PM	3	9	4	0	16	5:30 PM	0	4	0	4	8
5:45 PM	2	3	3	0	8	5:45 PM	1	2	0	2	5
Count Total	17	43	43	0	103	Count Total	4	26	0	28	58
Peak Hour	10	24	26	0	60	Peak Hour	2	14	0	14	30

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 CEDAR AVE & FOURTH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour

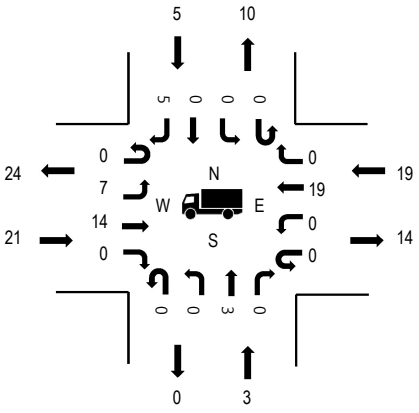
Motorized Vehicles



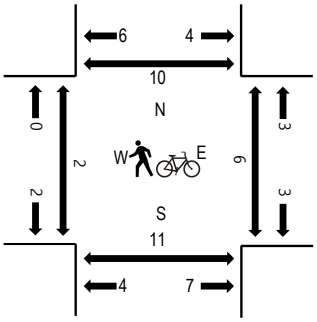
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.8%	0.93
WB	2.6%	0.94
NB	1.5%	0.84
SB	1.5%	0.92
All	2.0%	0.93

Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	FOURTH ST Eastbound				FOURTH ST Westbound				CEDAR AVE Northbound				CEDAR AVE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	57	241	7	0	1	162	10	0	17	30	5	0	13	12	63	618	2,434
4:15 PM	0	81	184	1	0	4	177	3	0	10	21	9	0	15	6	46	557	2,346
4:30 PM	0	63	212	2	0	3	180	4	0	23	23	7	0	7	11	72	607	2,419
4:45 PM	0	61	247	2	0	6	190	5	0	13	40	8	0	9	11	60	652	2,407
5:00 PM	0	36	166	1	0	2	188	6	0	12	24	8	0	8	11	67	529	2,374
5:15 PM	0	74	260	1	0	7	167	5	0	12	25	6	0	17	7	49	630	
5:30 PM	0	56	225	3	0	5	199	6	0	13	18	10	0	5	11	44	595	
5:45 PM	0	64	248	4	0	5	177	10	0	10	18	3	0	14	7	58	618	
Count Total	0	492	1,783	21	0	33	1,440	49	0	110	199	56	0	88	76	459	4,806	
Peak Hour	0	262	884	12	0	14	709	22	0	63	114	29	0	44	40	241	2,434	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	9	2	4	3	18	4:00 PM	0	4	0	1	5
4:15 PM	4	0	2	1	7	4:15 PM	0	1	1	3	5
4:30 PM	4	0	6	0	10	4:30 PM	0	3	5	2	10
4:45 PM	4	1	7	1	13	4:45 PM	2	3	0	4	9
5:00 PM	3	0	3	3	9	5:00 PM	0	3	2	1	6
5:15 PM	4	1	3	1	9	5:15 PM	1	0	2	3	6
5:30 PM	7	0	2	2	11	5:30 PM	1	2	0	3	6
5:45 PM	2	1	1	2	6	5:45 PM	2	7	0	5	14
Count Total	37	5	28	13	83	Count Total	6	23	10	22	61
Peak Hour	21	3	19	5	48	Peak Hour	2	11	6	10	29

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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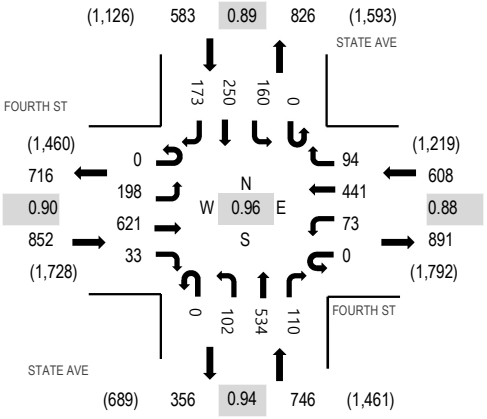
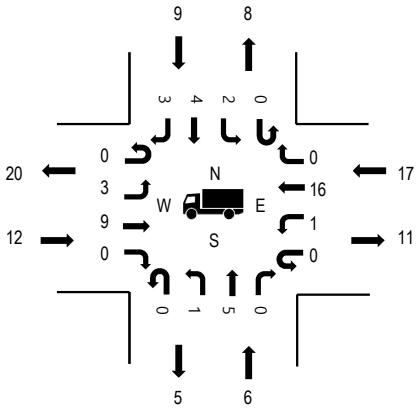
Location: 5 STATE AVE & FOURTH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour

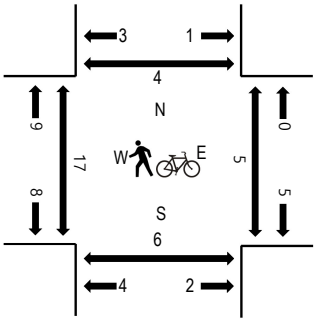
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.4%	0.90
WB	2.8%	0.88
NB	0.8%	0.94
SB	1.5%	0.89
All	1.6%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	FOURTH ST Eastbound				FOURTH ST Westbound				STATE AVE Northbound				STATE AVE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	59	155	9	0	12	108	24	0	24	141	31	0	34	70	36	703	2,789
4:15 PM	0	39	141	9	0	14	108	21	0	25	124	33	0	35	58	48	655	2,747
4:30 PM	0	45	142	9	0	26	97	22	0	36	137	27	0	56	62	46	705	2,766
4:45 PM	0	55	183	6	0	21	128	27	0	17	132	19	0	35	60	43	726	2,755
5:00 PM	0	35	142	7	0	13	109	23	0	33	138	28	0	33	55	45	661	2,745
5:15 PM	0	63	165	8	0	21	97	25	0	29	106	22	0	40	55	43	674	
5:30 PM	0	54	149	12	1	23	119	15	0	26	118	36	0	27	58	56	694	
5:45 PM	0	57	175	9	0	13	126	26	0	36	107	36	0	47	59	25	716	
Count Total	0	407	1,252	69	1	143	892	183	0	226	1,003	232	0	307	477	342	5,534	
Peak Hour	0	198	621	33	0	73	441	94	0	102	534	110	0	160	250	173	2,789	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	6	2	4	2	14	4:00 PM	2	3	2	1	8
4:15 PM	2	1	3	4	10	4:15 PM	1	1	0	1	3
4:30 PM	1	2	3	1	7	4:30 PM	9	0	2	2	13
4:45 PM	3	1	7	2	13	4:45 PM	5	2	1	0	8
5:00 PM	1	3	1	0	5	5:00 PM	0	0	4	1	5
5:15 PM	5	1	3	2	11	5:15 PM	1	0	1	3	5
5:30 PM	2	1	3	3	9	5:30 PM	2	1	2	4	9
5:45 PM	3	1	0	2	6	5:45 PM	5	3	3	3	14
Count Total	23	12	24	16	75	Count Total	25	10	15	15	65
Peak Hour	12	6	17	9	44	Peak Hour	17	6	5	4	32

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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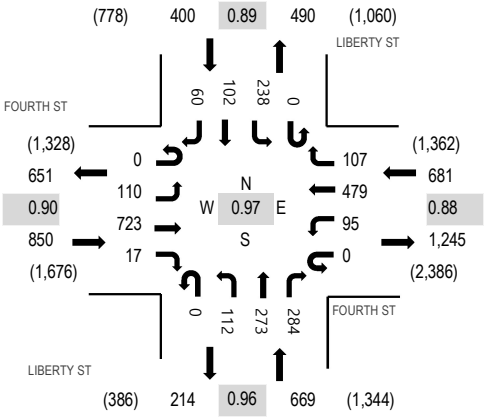
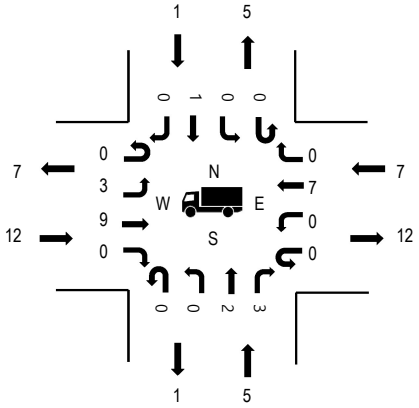
Location: 6 LIBERTY ST & FOURTH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour

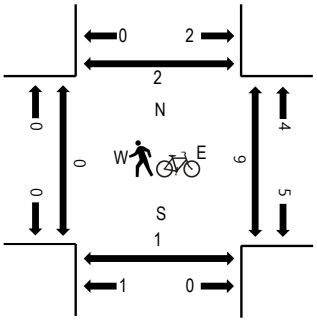
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.4%	0.90
WB	1.0%	0.88
NB	0.7%	0.96
SB	0.3%	0.89
All	1.0%	0.97

Traffic Counts - Motorized Vehicles

Interval Start Time	FOURTH ST Eastbound				FOURTH ST Westbound				LIBERTY ST Northbound				LIBERTY ST Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	31	167	5	0	22	118	32	0	27	88	54	0	51	16	19	630	2,560
4:15 PM	0	26	155	2	0	19	136	22	0	29	81	57	0	55	26	20	628	2,564
4:30 PM	0	32	200	6	0	21	113	31	0	24	87	65	0	62	16	26	683	2,595
4:45 PM	0	26	172	4	0	20	118	29	0	29	85	49	0	54	15	18	619	2,579
5:00 PM	0	27	178	2	0	16	103	29	0	35	55	92	0	56	26	15	634	2,600
5:15 PM	0	28	173	6	0	30	109	21	0	23	81	75	0	60	33	20	659	
5:30 PM	0	28	180	3	0	34	133	26	0	19	78	68	0	65	22	11	667	
5:45 PM	0	27	192	6	0	15	134	31	0	35	59	49	0	57	21	14	640	
Count Total	0	225	1,417	34	0	177	964	221	0	221	614	509	0	460	175	143	5,160	
Peak Hour	0	110	723	17	0	95	479	107	0	112	273	284	0	238	102	60	2,600	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	2	0	4	0	6	4:00 PM	0	1	2	1	4
4:15 PM	3	2	2	1	8	4:15 PM	1	2	2	0	5
4:30 PM	1	2	4	0	7	4:30 PM	0	0	5	0	5
4:45 PM	2	3	3	2	10	4:45 PM	1	0	9	0	10
5:00 PM	2	2	1	1	6	5:00 PM	0	0	3	1	4
5:15 PM	3	1	3	0	7	5:15 PM	0	0	4	1	5
5:30 PM	3	0	3	0	6	5:30 PM	0	1	1	0	2
5:45 PM	4	2	0	0	6	5:45 PM	0	0	1	0	1
Count Total	20	12	20	4	56	Count Total	2	4	27	3	36
Peak Hour	12	5	7	1	25	Peak Hour	0	1	9	2	12

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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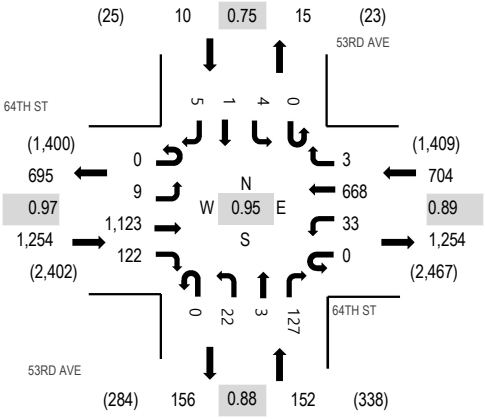
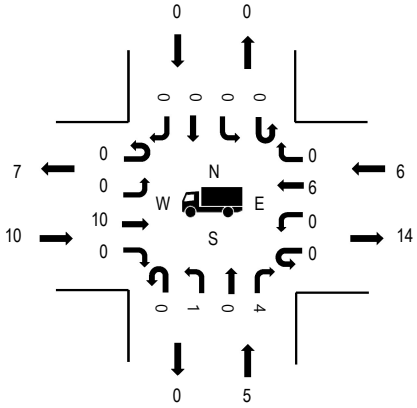
Location: 7 53RD AVE & 64TH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour

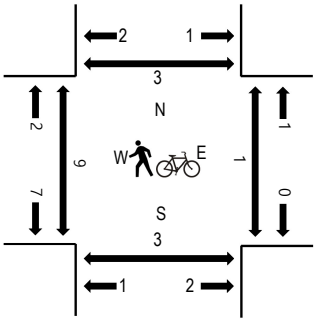
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.8%	0.97
WB	0.9%	0.89
NB	3.3%	0.88
SB	0.0%	0.75
All	1.0%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	64TH ST Eastbound				64TH ST Westbound				53RD AVE Northbound				53RD AVE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	239	16	0	7	167	5	0	10	0	43	0	1	1	3	492	2,054
4:15 PM	0	0	254	31	0	8	188	1	0	7	0	33	0	4	0	1	527	2,082
4:30 PM	0	2	296	27	0	5	167	0	0	6	0	37	0	0	0	2	542	2,112
4:45 PM	0	0	259	24	0	9	148	0	0	5	0	45	0	2	0	1	493	2,113
5:00 PM	0	3	282	31	0	10	154	3	0	6	2	27	0	2	0	0	520	2,120
5:15 PM	0	1	282	40	0	12	168	0	0	6	1	44	0	0	1	2	557	
5:30 PM	0	5	292	25	0	4	188	0	0	5	0	21	0	1	0	2	543	
5:45 PM	0	0	267	26	0	7	158	0	0	5	0	35	0	1	0	1	500	
Count Total	0	11	2,171	220	0	62	1,338	9	0	50	3	285	0	11	2	12	4,174	
Peak Hour	0	9	1,123	122	0	33	668	3	0	22	3	127	0	4	1	5	2,120	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

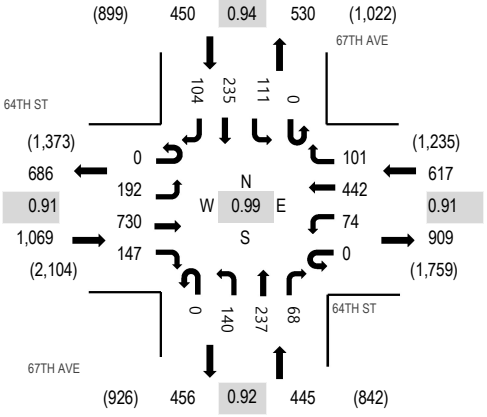
Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	5	0	6	4:00 PM	0	2	0	1	3
4:15 PM	5	0	2	0	7	4:15 PM	2	0	0	0	2
4:30 PM	1	0	4	0	5	4:30 PM	5	3	0	0	8
4:45 PM	1	0	3	0	4	4:45 PM	1	2	0	0	3
5:00 PM	4	2	1	0	7	5:00 PM	4	0	0	3	7
5:15 PM	1	1	2	0	4	5:15 PM	1	2	0	0	3
5:30 PM	2	1	3	0	6	5:30 PM	2	0	0	0	2
5:45 PM	3	1	0	0	4	5:45 PM	2	1	1	0	4
Count Total	18	5	20	0	43	Count Total	17	10	1	4	32
Peak Hour	10	5	6	0	21	Peak Hour	9	3	1	3	16

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

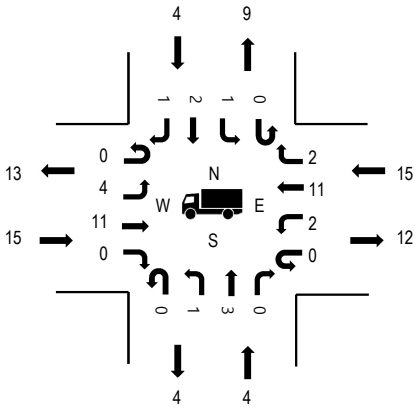
Location: 8 67TH AVE & 64TH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour

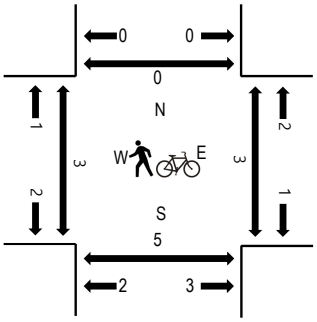
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.4%	0.91
WB	2.4%	0.91
NB	0.9%	0.92
SB	0.9%	0.94
All	1.5%	0.99

Traffic Counts - Motorized Vehicles

Interval Start Time	64TH ST Eastbound				64TH ST Westbound				67TH AVE Northbound				67TH AVE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	42	156	43	0	20	118	28	0	37	52	16	0	25	49	25	611	2,553
4:15 PM	0	48	167	29	0	28	128	17	0	37	71	15	0	27	67	19	653	2,581
4:30 PM	0	46	178	38	0	11	97	29	0	43	62	17	0	34	55	34	644	2,549
4:45 PM	0	64	194	44	0	24	95	33	0	28	54	20	0	22	46	21	645	2,564
5:00 PM	0	34	191	36	0	11	122	22	0	32	50	16	0	28	67	30	639	2,527
5:15 PM	0	44	179	51	0	19	95	23	0	31	46	12	0	34	52	35	621	
5:30 PM	0	43	176	42	0	15	109	24	0	45	62	16	0	36	59	32	659	
5:45 PM	0	48	157	54	0	16	116	35	0	18	45	17	0	26	50	26	608	
Count Total	0	369	1,398	337	0	144	880	211	0	271	442	129	0	232	445	222	5,080	
Peak Hour	0	192	730	147	0	74	442	101	0	140	237	68	0	111	235	104	2,581	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	3	2	7	0	12	4:00 PM	0	1	0	0	1
4:15 PM	5	1	7	2	15	4:15 PM	1	2	1	0	4
4:30 PM	1	1	4	1	7	4:30 PM	1	1	1	0	3
4:45 PM	4	2	2	0	8	4:45 PM	0	2	0	0	2
5:00 PM	5	0	2	1	8	5:00 PM	1	0	1	0	2
5:15 PM	3	0	0	2	5	5:15 PM	1	0	0	0	1
5:30 PM	1	0	4	0	5	5:30 PM	1	1	0	0	2
5:45 PM	6	0	1	0	7	5:45 PM	0	2	2	0	4
Count Total	28	6	27	6	67	Count Total	5	9	5	0	19
Peak Hour	15	4	15	4	38	Peak Hour	3	5	3	0	11

ALL TRAFFIC DATA SERVICES
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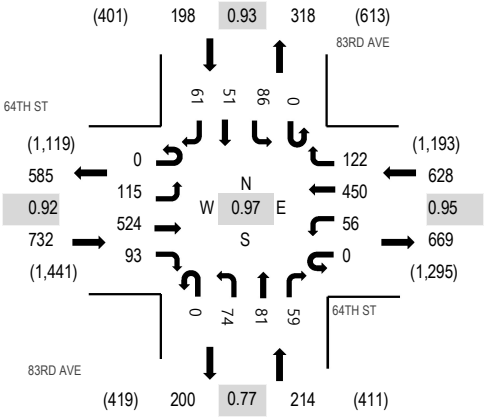
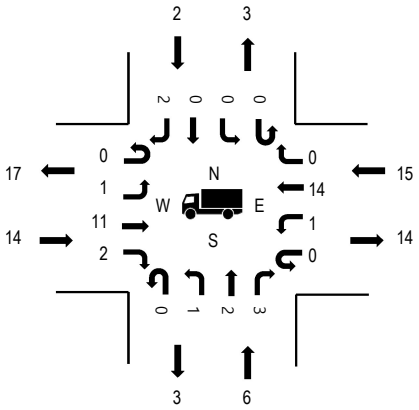
Location: 9 83RD AVE & 64TH ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour

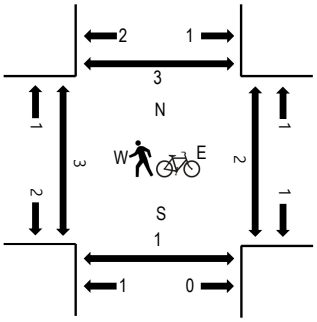
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.9%	0.92
WB	2.4%	0.95
NB	2.8%	0.77
SB	1.0%	0.93
All	2.1%	0.97

Traffic Counts - Motorized Vehicles

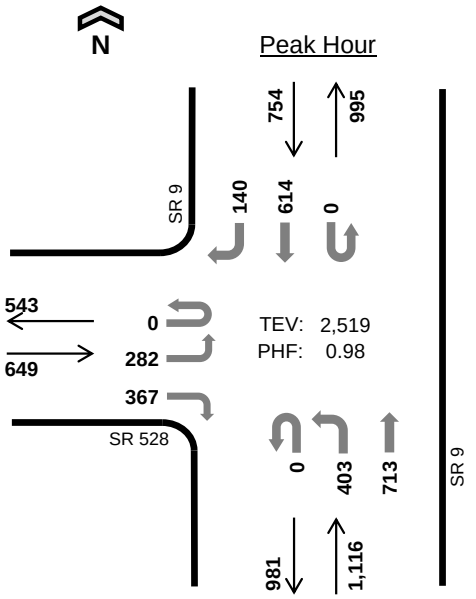
Interval Start Time	64TH ST Eastbound				64TH ST Westbound				83RD AVE Northbound				83RD AVE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	25	126	19	0	14	119	19	0	19	20	12	0	30	10	17	430	1,772
4:15 PM	0	29	123	34	0	9	126	30	0	14	20	11	0	19	12	15	442	1,737
4:30 PM	0	27	125	19	0	16	99	46	0	24	28	20	0	12	13	14	443	1,750
4:45 PM	0	34	150	21	0	17	106	27	0	17	13	16	0	25	16	15	457	1,761
5:00 PM	0	31	121	30	0	13	82	24	0	18	17	12	0	18	12	17	395	1,674
5:15 PM	0	29	138	28	0	17	95	34	0	25	16	15	0	31	10	17	455	
5:30 PM	0	23	124	29	0	24	109	33	0	21	23	14	0	18	13	23	454	
5:45 PM	0	24	107	25	0	11	98	25	0	15	16	5	0	23	7	14	370	
Count Total	0	222	1,014	205	0	121	834	238	0	153	153	105	0	176	93	132	3,446	
Peak Hour	0	115	524	93	0	56	450	122	0	74	81	59	0	86	51	61	1,772	

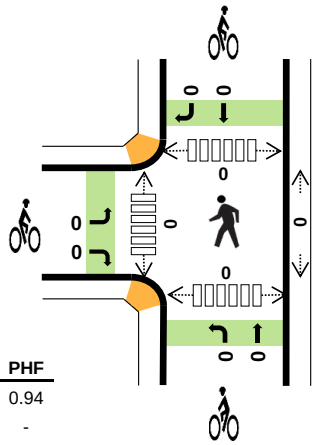
Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	3	0	5	0	8	4:00 PM	0	1	0	1	2
4:15 PM	5	3	6	0	14	4:15 PM	3	0	0	1	4
4:30 PM	3	3	2	2	10	4:30 PM	0	0	1	1	2
4:45 PM	3	0	2	0	5	4:45 PM	0	0	1	0	1
5:00 PM	2	2	1	0	5	5:00 PM	0	2	1	0	3
5:15 PM	2	0	0	0	2	5:15 PM	0	0	0	0	0
5:30 PM	1	0	3	1	5	5:30 PM	0	0	0	0	0
5:45 PM	3	0	0	0	3	5:45 PM	0	0	1	0	1
Count Total	22	8	19	3	52	Count Total	3	3	4	3	13
Peak Hour	14	6	15	2	37	Peak Hour	3	1	2	3	9

SR 9
SR 528

Date: 05/31/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM





	HV %:	PHF
EB	2.9%	0.94
WB	-	-
NB	3.0%	0.97
SB	3.3%	0.93
TOTAL	3.1%	0.98

Two-Hour Count Summaries

Interval Start		SR 528 Eastbound				0 Westbound				SR 9 Northbound				SR 9 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	68	0	97	0	0	0	0	0	96	187	0	0	0	143	45	636	0
4:15 PM		**0**	**70**	**0**	**87**	**0**	**0**	**0**	**0**	**0**	**111**	**177**	**0**	**0**	**0**	**156**	**31**	**632**	0
4:30 PM		**0**	**72**	**0**	**92**	**0**	**0**	**0**	**0**	**0**	**106**	**172**	**0**	**0**	**0**	**143**	**30**	**615**	0
4:45 PM		**0**	**69**	**0**	**87**	**0**	**0**	**0**	**0**	**0**	**88**	**184**	**0**	**0**	**0**	**157**	**46**	**631**	2,514
5:00 PM		**0**	**71**	**0**	**101**	**0**	**0**	**0**	**0**	**0**	**98**	**180**	**0**	**0**	**0**	**158**	**33**	**641**	**2,519**
5:15 PM		0	47	0	91	0	0	0	0	0	83	197	0	0	0	159	41	618	2,505
5:30 PM		0	40	0	98	0	0	0	0	0	90	194	0	0	0	133	38	593	2,483
5:45 PM		0	79	0	100	0	0	0	0	0	75	144	0	0	0	119	44	561	2,413
Count Total		0	516	0	753	0	0	0	0	0	747	1,435	0	0	0	1,168	308	4,927	0
Peak Hour	**All**	**0**	**282**	**0**	**367**	**0**	**0**	**0**	**0**	**0**	**403**	**713**	**0**	**0**	**0**	**614**	**140**	**2,519**	**0**
	HV	**0**	**6**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**7**	**27**	**0**	**0**	**0**	**22**	**3**	**78**	**0**
	HV%	**-**	**2%**	**-**	**4%**	**-**	**-**	**-**	**-**	**-**	**2%**	**4%**	**-**	**-**	**-**	**4%**	**2%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	7	0	4	9	*20*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	**4**	**0**	**5**	**5**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**9**	**0**	**9**	**9**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**3**	**0**	**8**	**6**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**3**	**0**	**12**	**5**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	2	0	6	3	*11*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	3	0	4	1	*8*	0	0	0	0	*0*	0	0	0	2	*2*
5:45 PM	1	0	5	4	*10*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	32	0	53	42	*127*	0	0	0	0	*0*	0	0	0	2	*2*
Peak Hr	**19**	**0**	**34**	**25**	***78***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	SR 528 Eastbound				0 Westbound				SR 9 Northbound				SR 9 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	7	0	0	0	0	0	1	3	0	0	0	8	1	20	0
4:15 PM	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**0**	**5**	**0**	**14**	0
4:30 PM	**0**	**4**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**3**	**6**	**0**	**0**	**0**	**8**	**1**	**27**	0
4:45 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**5**	**1**	**17**	78
5:00 PM	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**10**	**0**	**0**	**0**	**4**	**1**	**20**	**78**
5:15 PM	0	1	0	1	0	0	0	0	0	0	6	0	0	0	3	0	11	75
5:30 PM	0	2	0	1	0	0	0	0	0	1	3	0	0	0	0	1	8	56
5:45 PM	0	0	0	1	0	0	0	0	0	2	3	0	0	0	3	1	10	49
Count Total	0	9	0	23	0	0	0	0	0	11	42	0	0	0	36	6	127	0
Peak Hour	**0**	**6**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**7**	**27**	**0**	**0**	**0**	**22**	**3**	**78**	**0**

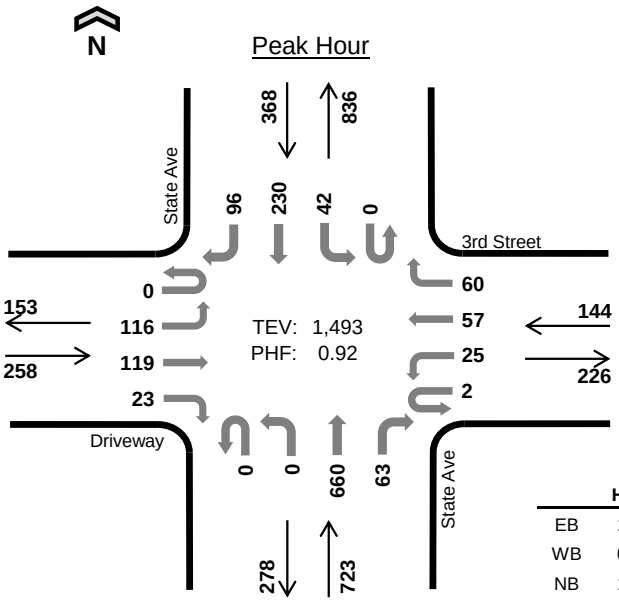
Two-Hour Count Summaries - Bikes

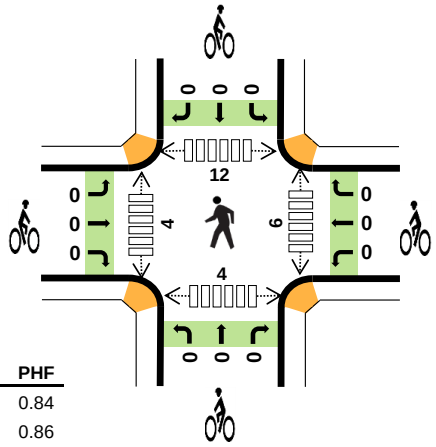
Interval Start	SR 528 Eastbound			0 Westbound			SR 9 Northbound			SR 9 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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

State Ave
3rd Street

Date: 05/31/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	1.2%	0.84
WB	0.7%	0.86
NB	1.5%	0.87
SB	2.7%	0.93
TOTAL	1.7%	0.92

Two-Hour Count Summaries

Interval Start		Driveway Eastbound				3rd Street Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**25**	**27**	**4**	**0**	**3**	**14**	**16**	**0**	**0**	**162**	**18**	**0**	**12**	**51**	**24**	**356**	0
4:15 PM		**0**	**28**	**31**	**4**	**1**	**6**	**15**	**19**	**0**	**0**	**188**	**19**	**0**	**9**	**59**	**28**	**407**	0
4:30 PM		**0**	**34**	**37**	**6**	**1**	**9**	**18**	**14**	**0**	**0**	**152**	**16**	**0**	**14**	**55**	**17**	**373**	0
4:45 PM		**0**	**29**	**24**	**9**	**0**	**7**	**10**	**11**	**0**	**0**	**158**	**10**	**0**	**7**	**65**	**27**	**357**	**1,493**
5:00 PM		0	28	28	6	0	6	11	15	0	0	148	14	0	10	53	13	332	1,469
5:15 PM		0	29	19	9	0	2	15	10	0	0	150	17	0	14	55	23	343	1,405
5:30 PM		0	28	23	4	0	2	17	16	0	0	141	17	0	8	48	17	321	1,353
5:45 PM		0	26	18	9	0	3	16	7	0	0	95	11	0	11	51	25	272	1,268
Count Total		0	227	207	51	2	38	116	108	0	0	1,194	122	0	85	437	174	2,761	0
Peak Hour	**All**	**0**	**116**	**119**	**23**	**2**	**25**	**57**	**60**	**0**	**0**	**660**	**63**	**0**	**42**	**230**	**96**	**1,493**	**0**
	HV	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	**1**	**0**	**0**	**10**	**0**	**25**	**0**
	HV%	**-**	**3%**	**0%**	**0%**	**0%**	**0%**	**0%**	**2%**	**-**	**-**	**2%**	**2%**	**-**	**0%**	**4%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**1**	**0**	**3**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**1**	*4*
4:15 PM	**2**	**1**	**4**	**6**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**4**	**0**	*4*
4:30 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**4**	**0**	*6*
4:45 PM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**5**	**2**	**2**	**3**	***12***
5:00 PM	1	0	5	2	*8*	0	0	0	0	*0*	2	0	0	4	*6*
5:15 PM	1	0	1	2	*4*	0	0	0	0	*0*	3	1	8	1	*13*
5:30 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	0	2	0	*2*
5:45 PM	0	0	1	0	*1*	0	0	0	0	*0*	2	3	1	3	*9*
Count Total	5	1	20	16	*42*	0	0	0	0	*0*	13	8	23	12	*56*
Peak Hour	**3**	**1**	**11**	**10**	***25***	**0**	**0**	**0**	**0**	***0***	**6**	**4**	**12**	**4**	***26***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				3rd Street				State Ave				State Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**5**	0
4:15 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**13**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**4**	**25**
5:00 PM	0	1	0	0	0	0	0	0	0	0	5	0	0	0	2	0	8	28
5:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	4	19
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	20
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	17
Count Total	0	4	1	0	0	0	0	1	0	0	19	1	0	0	16	0	42	0
Peak Hour	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	**1**	**0**	**0**	**10**	**0**	**25**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			3rd Street			State Ave			State Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

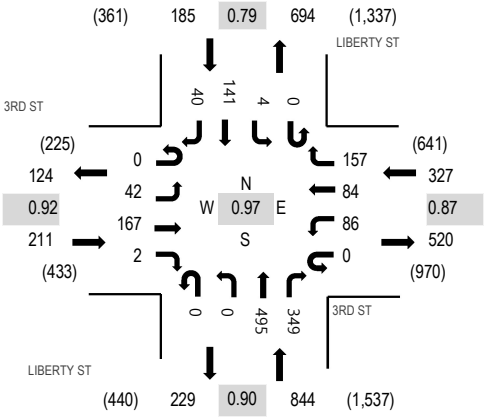
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

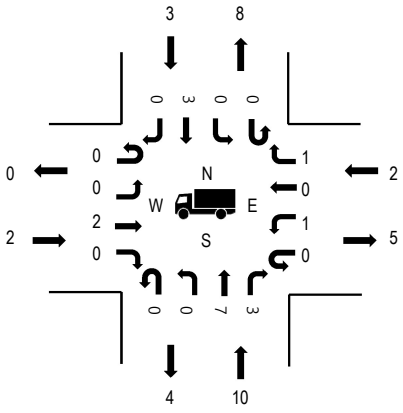
Location: 10 LIBERTY ST & 3RD ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour

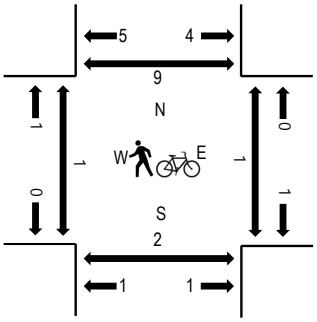
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.9%	0.92
WB	0.6%	0.87
NB	1.2%	0.90
SB	1.6%	0.79
All	1.1%	0.97

Traffic Counts - Motorized Vehicles

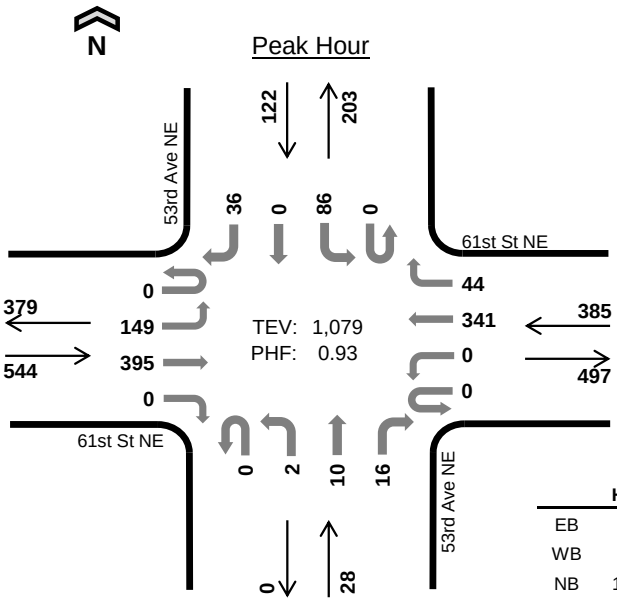
Interval Start Time	3RD ST Eastbound				3RD ST Westbound				LIBERTY ST Northbound				LIBERTY ST Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	12	38	1	0	20	12	51	0	0	118	85	0	0	34	8	379	1,506
4:15 PM	0	5	50	1	0	19	16	40	0	0	117	64	0	0	34	9	355	1,531
4:30 PM	0	8	43	1	0	19	25	28	0	0	139	95	0	1	30	10	399	1,567
4:45 PM	0	11	45	1	0	19	18	51	0	0	104	84	0	2	30	8	373	1,509
5:00 PM	0	11	41	0	0	30	20	45	0	0	125	90	0	0	36	6	404	1,466
5:15 PM	0	12	38	0	0	18	21	33	0	0	127	80	0	1	45	16	391	
5:30 PM	0	8	51	0	0	13	16	42	0	0	117	44	0	1	40	9	341	
5:45 PM	0	7	49	0	0	19	20	46	0	0	80	68	0	0	30	11	330	
Count Total	0	74	355	4	0	157	148	336	0	0	927	610	0	5	279	77	2,972	
Peak Hour	0	42	167	2	0	86	84	157	0	0	495	349	0	4	141	40	1,567	

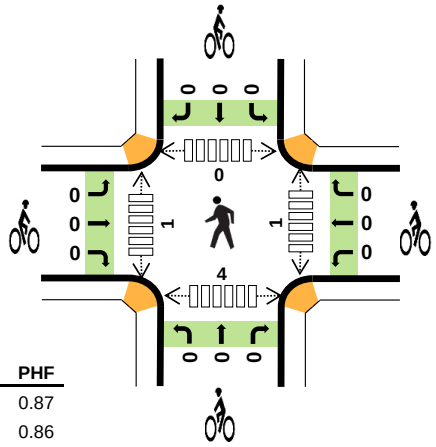
Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	1	1	3	4:00 PM	0	0	0	1	1
4:15 PM	0	2	0	0	2	4:15 PM	0	0	0	0	0
4:30 PM	0	3	0	0	3	4:30 PM	0	1	0	2	3
4:45 PM	1	2	2	2	7	4:45 PM	0	0	1	4	5
5:00 PM	1	2	0	1	4	5:00 PM	0	0	0	0	0
5:15 PM	0	3	0	0	3	5:15 PM	1	1	0	3	5
5:30 PM	0	0	0	0	0	5:30 PM	0	0	1	0	1
5:45 PM	0	1	0	0	1	5:45 PM	0	0	0	0	0
Count Total	3	13	3	4	23	Count Total	1	2	2	10	15
Peak Hour	2	10	2	3	17	Peak Hour	1	2	1	9	13

53rd Ave NE
61st St NE

Date: 05/31/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	0.7%	0.87
WB	2.9%	0.86
NB	10.7%	0.78
SB	3.3%	0.76
TOTAL	2.0%	0.93

Two-Hour Count Summaries

Interval Start		61st St NE Eastbound				61st St NE Westbound				53rd Ave NE Northbound				53rd Ave NE Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**30**	**98**	**0**	**0**	**0**	**84**	**9**	**0**	**0**	**2**	**7**	**0**	**27**	**0**	**13**	**270**	0
4:15 PM		**0**	**43**	**93**	**0**	**0**	**0**	**97**	**15**	**0**	**1**	**2**	**5**	**0**	**25**	**0**	**10**	**291**	0
4:30 PM		**0**	**41**	**115**	**0**	**0**	**0**	**80**	**9**	**0**	**0**	**2**	**1**	**0**	**15**	**0**	**5**	**268**	0
4:45 PM		**0**	**35**	**89**	**0**	**0**	**0**	**80**	**11**	**0**	**1**	**4**	**3**	**0**	**19**	**0**	**8**	**250**	**1,079**
5:00 PM		0	46	97	0	0	0	59	16	0	5	3	6	0	26	0	12	270	1,079
5:15 PM		0	36	95	0	0	0	70	7	0	0	0	6	0	31	0	5	250	1,038
5:30 PM		0	32	93	0	0	0	78	9	0	1	0	3	0	28	0	7	251	1,021
5:45 PM		0	31	87	0	0	0	66	9	0	4	1	7	0	21	0	6	232	1,003
Count Total		0	294	767	0	0	0	614	85	0	12	14	38	0	192	0	66	2,082	0
Peak Hour	**All**	**0**	**149**	**395**	**0**	**0**	**0**	**341**	**44**	**0**	**2**	**10**	**16**	**0**	**86**	**0**	**36**	**1,079**	**0**
	HV	**0**	**2**	**2**	**0**	**0**	**0**	**9**	**2**	**0**	**1**	**2**	**0**	**0**	**3**	**0**	**1**	**22**	**0**
	HV%	**-**	**1%**	**1%**	**-**	**-**	**-**	**3%**	**5%**	**-**	**50%**	**20%**	**0%**	**-**	**3%**	**-**	**3%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**1**	**1**	**0**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**2**	**4**	**0**	**3**	***9***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**2**	*4*
4:30 PM	**1**	**5**	**1**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**1**	**2**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
5:00 PM	2	1	1	0	*4*	0	0	0	0	*0*	0	1	0	3	*4*
5:15 PM	1	2	0	0	*3*	0	0	0	0	*0*	1	0	0	3	*4*
5:30 PM	0	0	0	0	*0*	2	0	0	0	*2*	0	0	0	3	*3*
5:45 PM	1	0	0	0	*1*	1	0	0	0	*1*	0	1	0	0	*1*
Count Total	8	14	4	4	*30*	3	0	0	0	*3*	2	3	0	13	*18*
Peak Hour	**4**	**11**	**3**	**4**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**4**	***6***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	61st St NE Eastbound				61st St NE Westbound				53rd Ave NE Northbound				53rd Ave NE Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	0
4:15 PM	**0**	**1**	**1**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**9**	0
4:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**7**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**22**
5:00 PM	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	4	23
5:15 PM	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	17
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
Count Total	0	4	4	0	0	0	11	3	0	2	2	0	0	3	0	1	30	0
Peak Hour	**0**	**2**	**2**	**0**	**0**	**0**	**9**	**2**	**0**	**1**	**2**	**0**	**0**	**3**	**0**	**1**	**22**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	61st St NE Eastbound			61st St NE Westbound			53rd Ave NE Northbound			53rd Ave NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	2
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	1	2	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

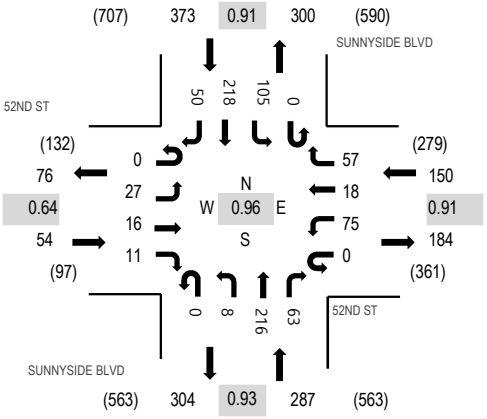
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 13 SUNNYSIDE BLVD & 52ND ST PM
Date: Tuesday, March 28, 2023
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour

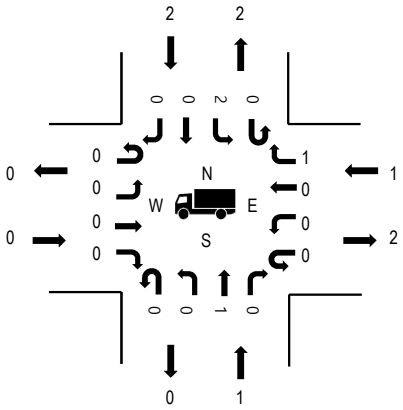
Motorized Vehicles



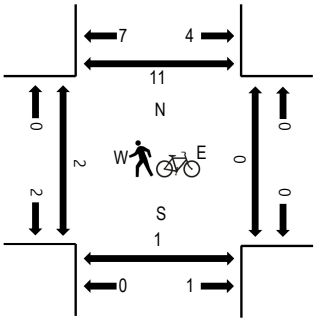
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.64
WB	0.7%	0.91
NB	0.3%	0.93
SB	0.5%	0.91
All	0.5%	0.96

Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	52ND ST Eastbound				52ND ST Westbound				SUNNYSIDE BLVD Northbound				SUNNYSIDE BLVD Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	7	5	3	0	15	4	15	0	2	67	11	0	20	40	7	196	839
4:15 PM	0	4	5	2	0	17	5	16	0	1	47	27	0	25	54	14	217	855
4:30 PM	0	2	4	2	0	17	4	14	0	3	56	14	0	28	67	8	219	864
4:45 PM	0	7	2	2	0	23	1	13	0	3	46	19	0	23	53	15	207	836
5:00 PM	0	11	7	3	0	17	6	14	0	0	55	15	0	24	48	12	212	807
5:15 PM	0	7	3	4	0	18	7	16	0	2	59	15	0	30	50	15	226	
5:30 PM	0	3	5	0	0	11	2	18	0	2	47	11	0	34	49	9	191	
5:45 PM	0	7	1	1	0	12	3	11	0	0	48	13	0	20	55	7	178	
Count Total	0	48	32	17	0	130	32	117	0	13	425	125	0	204	416	87	1,646	
Peak Hour	0	27	16	11	0	75	18	57	0	8	216	63	0	105	218	50	864	

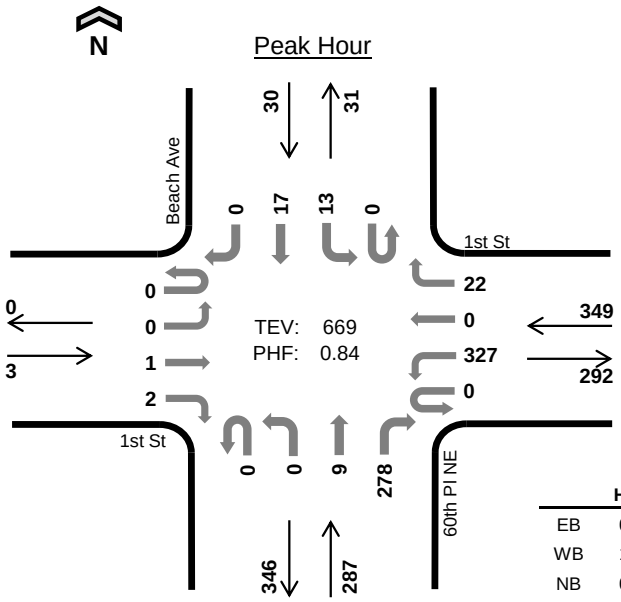
Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

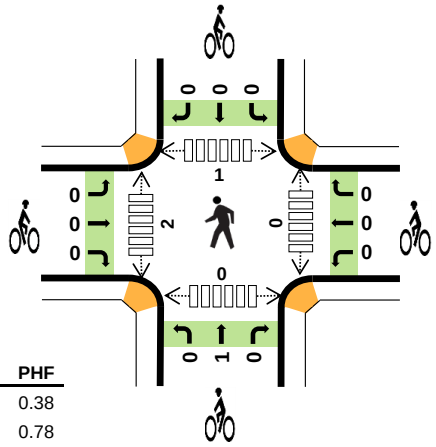
Interval Start Time	Heavy Vehicles				
	EB	NB	WB	SB	Total
4:00 PM	0	1	1	1	3
4:15 PM	0	1	0	0	1
4:30 PM	0	1	0	0	1
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
Count Total	0	4	2	3	9
Peak Hour	0	1	1	2	4

Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total
4:00 PM	0	1	0	1	2
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	2	2
4:45 PM	0	0	0	2	2
5:00 PM	2	0	0	4	6
5:15 PM	0	1	0	3	4
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
Count Total	2	2	0	14	18
Peak Hour	2	1	0	11	14

60th Pl NE
1st St

Date: 06/01/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	0.0%	0.38
WB	1.4%	0.78
NB	0.3%	0.96
SB	0.0%	0.68
TOTAL	0.9%	0.84

Two-Hour Count Summaries

Interval Start		1st St Eastbound				1st St Westbound				60th Pl NE Northbound				Beach Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	81	0	6	0	0	5	76	0	2	2	0	172	0
4:15 PM		0	3	0	0	0	56	0	8	0	0	2	59	0	3	1	0	132	0
4:30 PM		**0**	**0**	**1**	**0**	**0**	**105**	**0**	**7**	**0**	**0**	**2**	**72**	**0**	**5**	**6**	**0**	**198**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**71**	**0**	**5**	**0**	**0**	**2**	**68**	**0**	**2**	**3**	**0**	**151**	653
5:00 PM		**0**	**0**	**0**	**2**	**0**	**62**	**0**	**6**	**0**	**0**	**1**	**67**	**0**	**1**	**3**	**0**	**142**	623
5:15 PM		**0**	**0**	**0**	**0**	**0**	**89**	**0**	**4**	**0**	**0**	**4**	**71**	**0**	**5**	**5**	**0**	**178**	**669**
5:30 PM		0	0	0	0	0	60	0	4	0	0	6	43	0	4	3	0	120	591
5:45 PM		0	0	0	0	0	73	0	3	0	0	2	55	0	2	4	0	139	579
Count Total		0	3	1	2	0	597	0	43	0	0	24	511	0	24	27	0	1,232	0
Peak Hour	**All**	**0**	**0**	**1**	**2**	**0**	**327**	**0**	**22**	**0**	**0**	**9**	**278**	**0**	**13**	**17**	**0**	**669**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	**0**
	HV%	**-**	**-**	**0%**	**0%**	**-**	**2%**	**-**	**0%**	**-**	**-**	**0%**	**0%**	**-**	**0%**	**0%**	**-**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	1	0	*2*	0	0	1	0	*1*	0	0	0	0	*0*
4:15 PM	0	0	2	1	*3*	0	0	0	0	*0*	0	1	2	0	*3*
4:30 PM	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**0**	*3*
4:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**3**	**1**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
5:30 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	1	0	*1*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	2	0	*2*
Count Total	0	6	5	2	*13*	0	0	2	0	*2*	0	3	6	0	*9*
Peak Hour	**0**	**5**	**1**	**0**	***6***	**0**	**0**	**1**	**0**	***1***	**0**	**2**	**1**	**0**	***3***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	1st St Eastbound				1st St Westbound				60th Pl NE Northbound				Beach Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	7
5:00 PM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	9
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Count Total	0	0	0	0	0	6	0	0	0	0	0	5	0	1	1	0	13	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	**0**

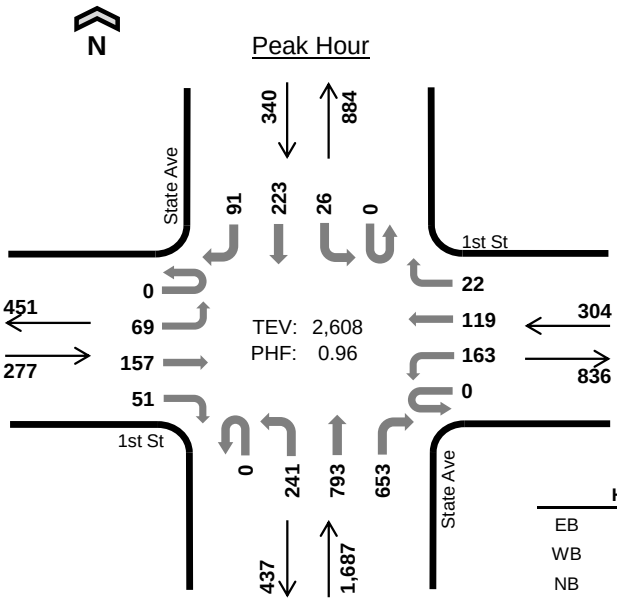
Two-Hour Count Summaries - Bikes

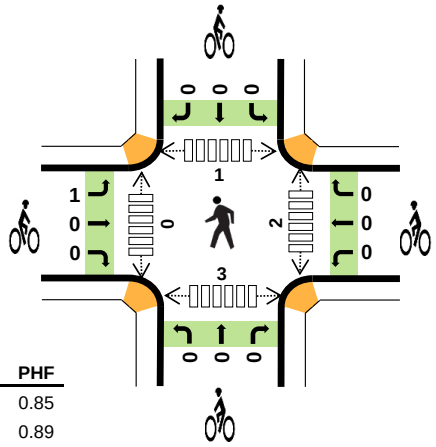
Interval Start	1st St Eastbound			1st St Westbound			60th Pl NE Northbound			Beach Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	1	1	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

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

State Ave
1st St

Date: 04/27/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	1.4%	0.85
WB	1.3%	0.89
NB	1.2%	0.96
SB	2.4%	0.86
TOTAL	1.4%	0.96

Two-Hour Count Summaries

Interval Start		1st St Eastbound				1st St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**23**	**43**	**15**	**0**	**37**	**43**	**5**	**0**	**67**	**191**	**172**	**0**	**12**	**49**	**19**	**676**	0
4:15 PM		**0**	**11**	**32**	**16**	**0**	**39**	**17**	**9**	**0**	**62**	**196**	**156**	**0**	**7**	**51**	**23**	**619**	0
4:30 PM		**0**	**20**	**44**	**11**	**0**	**46**	**23**	**4**	**0**	**51**	**201**	**153**	**0**	**4**	**59**	**36**	**652**	0
4:45 PM		**0**	**15**	**38**	**9**	**0**	**41**	**36**	**4**	**0**	**61**	**205**	**172**	**0**	**3**	**64**	**13**	**661**	**2,608**
5:00 PM		0	30	36	4	0	40	25	5	0	53	167	149	0	4	55	19	587	2,519
5:15 PM		0	26	41	10	0	47	26	4	0	55	179	144	0	3	53	21	609	2,509
5:30 PM		0	16	35	9	0	46	18	6	0	70	207	166	0	3	34	21	631	2,488
5:45 PM		0	12	18	5	0	31	20	4	0	52	196	194	0	9	54	20	615	2,442
Count Total		0	153	287	79	0	327	208	41	0	471	1,542	1,306	0	45	419	172	5,050	0
Peak Hour	**All**	**0**	**69**	**157**	**51**	**0**	**163**	**119**	**22**	**0**	**241**	**793**	**653**	**0**	**26**	**223**	**91**	**2,608**	**0**
	HV	**0**	**2**	**2**	**0**	**0**	**1**	**3**	**0**	**0**	**3**	**6**	**11**	**0**	**1**	**7**	**0**	**36**	**0**
	HV%	**-**	**3%**	**1%**	**0%**	**-**	**1%**	**3%**	**0%**	**-**	**1%**	**1%**	**2%**	**-**	**4%**	**3%**	**0%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**3**	**1**	**8**	**2**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**1**	**1**	**0**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**9**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**2**	*3*
4:45 PM	**0**	**2**	**3**	**1**	***6***	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**1**	**1**	***3***
5:00 PM	0	0	5	0	*5*	0	0	0	0	*0*	1	1	2	1	*5*
5:15 PM	0	1	5	2	*8*	0	0	0	0	*0*	0	1	2	0	*3*
5:30 PM	0	0	2	1	*3*	0	0	0	0	*0*	1	0	1	0	*2*
5:45 PM	0	0	6	0	*6*	0	0	0	0	*0*	0	2	1	2	*5*
Count Total	4	5	38	11	*58*	1	0	0	0	*1*	4	4	7	6	*21*
Peak Hour	**4**	**4**	**20**	**8**	***36***	**1**	**0**	**0**	**0**	***1***	**2**	**0**	**1**	**3**	***6***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	1st St Eastbound				1st St Westbound				State Ave Northbound				State Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**3**	**4**	**0**	**0**	**2**	**0**	**14**	0
4:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**5**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**5**	**0**	**0**	**2**	**0**	**11**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**1**	**0**	**6**	**36**
5:00 PM	0	0	0	0	0	0	0	0	0	1	3	1	0	0	0	0	5	27
5:15 PM	0	0	0	0	0	1	0	0	0	0	4	1	0	1	1	0	8	30
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	22
5:45 PM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	6	22
Count Total	0	2	2	0	0	2	3	0	0	4	18	16	0	2	9	0	58	0
Peak Hour	**0**	**2**	**2**	**0**	**0**	**1**	**3**	**0**	**0**	**3**	**6**	**11**	**0**	**1**	**7**	**0**	**36**	**0**

Two-Hour Count Summaries - Bikes

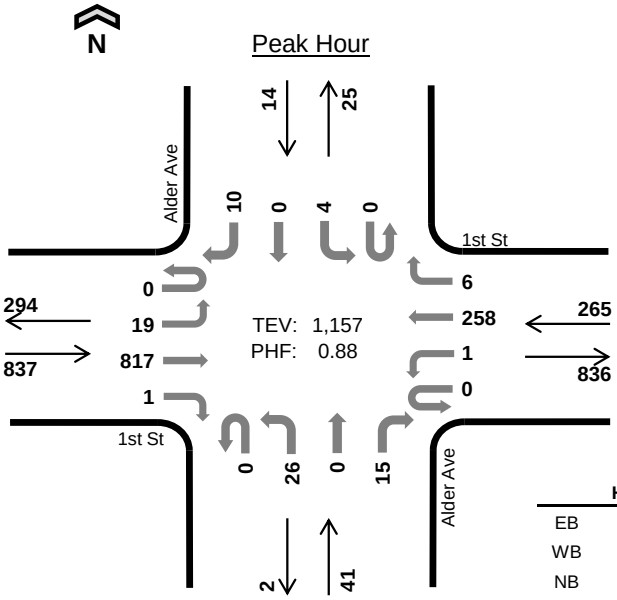
Interval Start	1st St Eastbound			1st St Westbound			State Ave Northbound			State Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

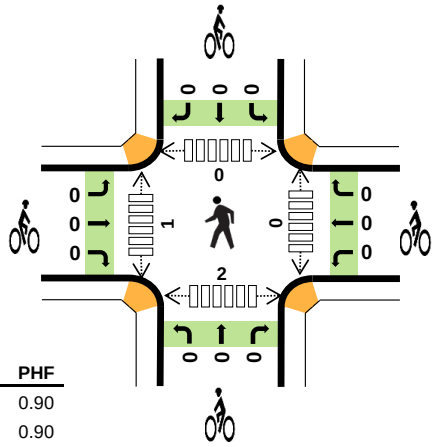
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Alder Ave
1st St

Date: 04/27/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Peak Hour





	HV %:	PHF
EB	1.7%	0.90
WB	1.5%	0.90
NB	0.0%	0.35
SB	0.0%	0.70
TOTAL	1.6%	0.88

Two-Hour Count Summaries

Interval Start		1st St Eastbound				1st St Westbound				Alder Ave Northbound				Alder Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**14**	**218**	**0**	**0**	**1**	**65**	**1**	**0**	**17**	**0**	**12**	**0**	**0**	**0**	**2**	**330**	0
4:15 PM		**0**	**2**	**197**	**0**	**0**	**0**	**56**	**3**	**0**	**5**	**0**	**2**	**0**	**1**	**0**	**2**	**268**	0
4:30 PM		**0**	**2**	**196**	**1**	**0**	**0**	**64**	**1**	**0**	**1**	**0**	**1**	**0**	**2**	**0**	**2**	**270**	0
4:45 PM		**0**	**1**	**206**	**0**	**0**	**0**	**73**	**1**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**4**	**289**	**1,157**
5:00 PM		1	1	187	4	0	0	61	2	0	1	0	0	0	0	0	2	259	1,086
5:15 PM		0	0	182	5	0	0	70	1	0	0	0	0	0	3	0	2	263	1,081
5:30 PM		0	0	201	4	0	1	64	0	0	1	0	0	0	0	0	2	273	1,084
5:45 PM		0	0	213	8	0	0	52	3	0	1	0	0	0	1	0	1	279	1,074
Count Total		1	20	1,600	22	0	2	505	12	0	29	0	15	0	8	0	17	2,231	0
Peak Hour	**All**	**0**	**19**	**817**	**1**	**0**	**1**	**258**	**6**	**0**	**26**	**0**	**15**	**0**	**4**	**0**	**10**	**1,157**	**0**
	HV	**0**	**1**	**13**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**
	HV%	**-**	**5%**	**2%**	**0%**	**-**	**0%**	**2%**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**6**	**1**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
4:15 PM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**4**	**1**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
4:45 PM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
5:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	3	1	0	*4*
5:15 PM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	0	1	*1*
5:30 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	1	*1*
5:45 PM	3	0	0	0	*3*	0	0	0	0	*0*	0	0	0	2	*2*
Count Total	21	5	0	0	*26*	0	0	0	0	*0*	0	4	1	6	*11*
Peak Hour	**14**	**4**	**0**	**0**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**2**	***3***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	1st St Eastbound				1st St Westbound				Alder Ave Northbound				Alder Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	0
4:15 PM	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	0
4:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	0
4:45 PM	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**18**
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12
5:15 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	12
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
5:45 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8
Count Total	0	1	20	0	0	0	5	0	0	0	0	0	0	0	0	0	26	0
Peak Hour	**0**	**1**	**13**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	1st St Eastbound			1st St Westbound			Alder Ave Northbound			Alder Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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

Appendix B: LOS Definitions

Highway Capacity Manual, 2000

Signalized intersection level of service (LOS) is defined in terms of the average total vehicle delay of all movements through an intersection. Vehicle delay is a method of quantifying several intangible factors, including driver discomfort, frustration, and lost travel time. Specifically, LOS criteria are stated in terms of average delay per vehicle during a specified time period (for example, the PM peak hour). Vehicle delay is a complex measure based on many variables, including signal phasing (i.e., progression of movements through the intersection), signal cycle length, and traffic volumes with respect to intersection capacity. Table 1 shows LOS criteria for signalized intersections, as described in the *Highway Capacity Manual* (Transportation Research Board, Special Report 209, 2000).

Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	General Description (Signalized Intersections)
A	≤10	Free Flow
B	>10 - 20	Stable Flow (slight delays)
C	>20 - 35	Stable flow (acceptable delays)
D	>35 - 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 - 80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report 209, 2000.

Unsignalized intersection LOS criteria can be further reduced into two intersection types: all-way stop-controlled and two-way stop-controlled. All-way, stop-controlled intersection LOS is expressed in terms of the average vehicle delay of all of the movements, much like that of a signalized intersection. Two-way, stop-controlled intersection LOS is defined in terms of the average vehicle delay of an individual movement(s). This is because the performance of a two-way, stop-controlled intersection is more closely reflected in terms of its individual movements, rather than its performance overall. For this reason, LOS for a two-way, stop-controlled intersection is defined in terms of its individual movements. With this in mind, total average vehicle delay (i.e., average delay of all movements) for a two-way, stop-controlled intersection should be viewed with discretion. Table 2 shows LOS criteria for unsignalized intersections (both all-way and two-way, stop-controlled).

Table 2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report 209, 2000.

Highway Capacity Manual 2010/6th Edition

Signalized intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table 1 summarizes the LOS criteria for signalized intersections, as described in the *Highway Capacity Manual 2010* and 6th Edition (Transportation Research Board, 2010 and 2016, respectively).

Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F[1]	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual 2010 and 6th Edition*, Transportation Research Board, 2010 and 2016, respectively.

1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

Unsignalized intersection LOS criteria can be further reduced into two intersection types: all-way stop and two-way stop control. All-way stop control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table 2 shows LOS criteria for unsignalized intersections.

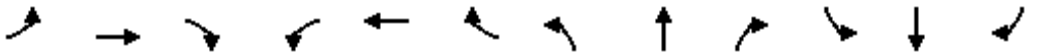
Table 2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F[1]	>50

Source: *Highway Capacity Manual 2010 and 6th Edition*, Transportation Research Board, 2010 and 2016, respectively.

1. If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

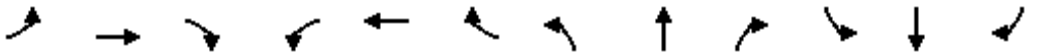
Appendix C: LOS Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	470	365	30	295	40	385	635	85	55	395	350
Future Volume (veh/h)	310	470	365	30	295	40	385	635	85	55	395	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	330	500	388	32	314	43	410	676	90	59	420	372
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	1	1	1	1	1	1
Cap, veh/h	287	658	555	41	344	47	329	1288	171	76	476	420
Arrive On Green	0.16	0.35	0.35	0.02	0.21	0.21	0.18	0.41	0.41	0.04	0.27	0.27
Sat Flow, veh/h	1795	1885	1592	1795	1622	222	1795	3165	421	1795	1792	1578
Grp Volume(v), veh/h	330	500	388	32	0	357	410	382	384	59	420	372
Grp Sat Flow(s),veh/h/ln	1795	1885	1592	1795	0	1844	1795	1791	1795	1795	1791	1580
Q Serve(g_s), s	17.0	25.0	22.3	1.9	0.0	20.1	19.5	17.1	17.1	3.5	23.9	24.1
Cycle Q Clear(g_c), s	17.0	25.0	22.3	1.9	0.0	20.1	19.5	17.1	17.1	3.5	23.9	24.1
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	287	658	555	41	0	391	329	729	730	76	476	420
V/C Ratio(X)	1.15	0.76	0.70	0.77	0.00	0.91	1.24	0.52	0.53	0.78	0.88	0.89
Avail Cap(c_a), veh/h	287	658	555	84	0	416	329	740	742	103	514	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	30.7	29.8	51.6	0.0	40.9	43.4	23.8	23.8	50.4	37.4	37.5
Incr Delay (d2), s/veh	99.6	5.2	3.9	25.8	0.0	23.6	133.0	0.7	0.7	22.1	15.5	17.8
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	15.4	12.1	9.0	1.1	0.0	11.6	20.7	7.2	7.3	2.0	12.4	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.2	35.8	33.6	77.4	0.0	64.5	176.4	24.4	24.4	72.4	52.9	55.3
LnGrp LOS	F	D	C	E	A	E	F	C	C	E	D	E
Approach Vol, veh/h		1218			389			1176			851	
Approach Delay, s/veh		64.5			65.6			77.4			55.3	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	47.7	7.4	42.1	24.0	32.8	22.0	27.5
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	6.1	43.9	5.0	36.0	19.5	30.5	17.0	24.0
Max Q Clear Time (g_c+I1), s	5.5	19.1	3.9	27.0	21.5	26.1	19.0	22.1
Green Ext Time (p_c), s	0.0	5.2	0.0	3.2	0.0	2.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	66.6
HCM 6th LOS	E



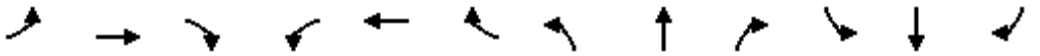
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	100	20	140	155	130	25	855	160	110	425	75
Future Volume (veh/h)	75	100	20	140	155	130	25	855	160	110	425	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	78	104	21	146	161	135	26	891	167	115	443	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	1	1	1	3	3	3
Cap, veh/h	275	301	61	432	220	184	418	1117	209	265	1219	213
Arrive On Green	0.05	0.20	0.20	0.09	0.24	0.24	0.03	0.37	0.37	0.06	0.41	0.41
Sat Flow, veh/h	1753	1481	299	1781	932	781	1795	2992	561	1767	2994	523
Grp Volume(v), veh/h	78	0	125	146	0	296	26	533	525	115	260	261
Grp Sat Flow(s),veh/h/ln	1753	0	1779	1781	0	1713	1795	1791	1762	1767	1763	1754
Q Serve(g_s), s	2.4	0.0	4.4	4.6	0.0	11.6	0.6	19.4	19.4	2.9	7.5	7.6
Cycle Q Clear(g_c), s	2.4	0.0	4.4	4.6	0.0	11.6	0.6	19.4	19.4	2.9	7.5	7.6
Prop In Lane	1.00		0.17	1.00		0.46	1.00		0.32	1.00		0.30
Lane Grp Cap(c), veh/h	275	0	362	432	0	404	418	669	658	265	718	715
V/C Ratio(X)	0.28	0.00	0.35	0.34	0.00	0.73	0.06	0.80	0.80	0.43	0.36	0.37
Avail Cap(c_a), veh/h	420	0	610	522	0	588	614	983	967	398	968	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	0.0	24.9	20.1	0.0	25.7	12.2	20.4	20.4	15.7	15.0	15.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	1.1	0.0	2.4	2.4	0.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.8	1.8	0.0	4.6	0.2	7.9	7.8	1.1	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	0.0	25.1	20.3	0.0	26.8	12.2	22.8	22.8	16.1	15.2	15.3
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		203			442			1084			636	
Approach Delay, s/veh		23.3			24.7			22.5			15.4	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	32.2	11.3	19.8	7.0	34.7	9.0	22.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	10.0	40.0	10.0	25.0	10.0	40.0	10.0	25.0
Max Q Clear Time (g_c+I1), s	4.9	21.4	6.6	6.4	2.6	9.6	4.4	13.6
Green Ext Time (p_c), s	0.1	5.8	0.1	0.4	0.0	2.8	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	30	30	45	45	25	35	810	30	15	480	30
Future Volume (vph)	70	30	30	45	45	25	35	810	30	15	480	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1802	1746		1751	1737		1786	3550		1768	3503	
Flt Permitted	0.71	1.00		0.72	1.00		0.43	1.00		0.26	1.00	
Satd. Flow (perm)	1346	1746		1318	1737		816	3550		476	3503	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	32	32	47	47	26	37	853	32	16	505	32
RTOR Reduction (vph)	0	27	0	0	23	0	0	3	0	0	4	0
Lane Group Flow (vph)	74	37	0	47	50	0	37	882	0	16	533	0
Confl. Peds. (#/hr)	4		2	2		4	3		13	13		3
Heavy Vehicles (%)	0%	0%	0%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	10.1	8.1		10.1	6.5		27.7	27.1		27.7	26.0	
Effective Green, g (s)	10.1	8.1		10.1	6.5		27.7	27.1		27.7	26.0	
Actuated g/C Ratio	0.18	0.15		0.18	0.12		0.50	0.49		0.50	0.47	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.0		2.5	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	273	253		254	202		434	1724		250	1632	
v/s Ratio Prot	c0.02	0.02		0.01	0.03		c0.00	c0.25		0.00	0.15	
v/s Ratio Perm	c0.03			0.03			0.04			0.03		
v/c Ratio	0.27	0.14		0.19	0.25		0.09	0.51		0.06	0.33	
Uniform Delay, d1	19.5	20.8		19.2	22.4		7.2	9.8		7.4	9.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.3	0.2		0.0	0.2		0.0	0.1	
Delay (s)	19.9	20.9		19.5	22.7		7.3	10.0		7.5	9.5	
Level of Service	B	C		B	C		A	B		A	A	
Approach Delay (s)		20.4			21.4			9.9			9.4	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

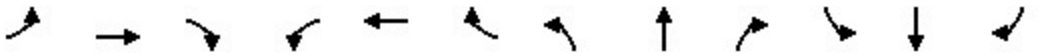
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	5	5	10	5	10	5	800	15	5	540	15
Future Volume (veh/h)	30	5	5	10	5	10	5	800	15	5	540	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	0.98		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	32	5	5	11	5	11	5	851	16	5	574	16
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, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	320	29	19	219	47	69	543	1661	31	435	1643	46
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.01	0.46	0.46	0.01	0.46	0.46
Sat Flow, veh/h	1049	276	179	500	444	649	1795	3595	68	1795	3558	99
Grp Volume(v), veh/h	42	0	0	27	0	0	5	424	443	5	289	301
Grp Sat Flow(s),veh/h/ln	1504	0	0	1592	0	0	1795	1791	1872	1795	1791	1866
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	5.1	5.1	0.0	3.2	3.2
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.4	0.0	0.0	0.0	5.1	5.1	0.0	3.2	3.2
Prop In Lane	0.76		0.12	0.41		0.41	1.00		0.04	1.00		0.05
Lane Grp Cap(c), veh/h	368	0	0	336	0	0	543	827	865	435	827	862
V/C Ratio(X)	0.11	0.00	0.00	0.08	0.00	0.00	0.01	0.51	0.51	0.01	0.35	0.35
Avail Cap(c_a), veh/h	976	0	0	982	0	0	857	2085	2179	749	2085	2172
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	12.4	0.0	0.0	4.5	5.8	5.8	4.8	5.3	5.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	0.0	0.0	0.0	1.0	1.1	0.0	0.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	0.0	0.0	12.4	0.0	0.0	4.5	6.3	6.3	4.8	5.5	5.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		42			27			872			595	
Approach Delay, s/veh		12.6			12.4			6.3			5.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	18.6		7.2	4.7	18.6		7.2				
Change Period (Y+Rc), s	4.5	4.5		4.0	4.5	4.5		4.0				
Max Green Setting (Gmax), s	5.5	35.5		16.0	5.5	35.5		16.0				
Max Q Clear Time (g_c+I1), s	2.0	7.1		2.7	2.0	5.2		2.4				
Green Ext Time (p_c), s	0.0	6.2		0.1	0.0	3.9		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

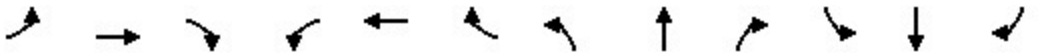
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	400	395	465	595	0	0	0	0	280	5	215
Future Volume (vph)	0	400	395	465	595	0	0	0	0	280	5	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8	5.4	5.4						5.8	5.8
Lane Util. Factor		1.00	1.00	0.97	1.00						1.00	1.00
Frpb, ped/bikes		1.00	0.96	1.00	1.00						1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		1881	1549	3400	1845						1793	1577
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		1881	1549	3400	1845						1793	1577
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	426	420	495	633	0	0	0	0	298	5	229
RTOR Reduction (vph)	0	0	193	0	0	0	0	0	0	0	0	192
Lane Group Flow (vph)	0	426	227	495	633	0	0	0	0	0	303	37
Confl. Peds. (#/hr)	15		11	11		15	1					1
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	0%	0%	0%	1%	1%	1%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		2 8		1	1 2 6 8					4	4	
Permitted Phases			2 8									4
Actuated Green, G (s)		83.4	83.4	28.9	118.1						24.9	24.9
Effective Green, g (s)		83.4	83.4	28.9	112.3						24.9	24.9
Actuated g/C Ratio		0.54	0.54	0.19	0.73						0.16	0.16
Clearance Time (s)				5.4							5.8	5.8
Vehicle Extension (s)				4.0							3.5	3.5
Lane Grp Cap (vph)		1017	837	637	1343						289	254
v/s Ratio Prot		c0.23		c0.15	c0.34						c0.17	
v/s Ratio Perm			0.15									0.02
v/c Ratio		0.41	0.27	0.77	0.47						1.04	0.14
Uniform Delay, d1		21.0	19.0	59.5	8.6						64.6	55.5
Progression Factor		1.00	1.00	0.86	0.58						1.00	1.00
Incremental Delay, d2		0.3	0.2	4.9	0.2						66.1	0.3
Delay (s)		21.3	19.2	56.2	5.3						130.8	55.8
Level of Service		C	B	E	A						F	E
Approach Delay (s/veh)		20.3			27.7			0.0			98.5	
Approach LOS		C			C			A			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	40.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	154.2	Sum of lost time (s)	22.8
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

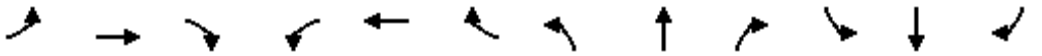
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	530	0	0	710	395	320	10	650	0	0	0
Future Volume (vph)	130	530	0	0	710	395	320	10	650	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.8			5.8		5.8	5.8	5.8			
Lane Util. Factor	1.00	1.00			0.95		1.00	0.95	0.95			
Frpb, ped/bikes	1.00	1.00			0.97		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.94		1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1770	1863			3277		1752	1498	1490			
Flt Permitted	0.12	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	233	1863			3277		1752	1498	1490			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	558	0	0	747	416	337	11	684	0	0	0
RTOR Reduction (vph)	0	0	0	0	49	0	0	250	260	0	0	0
Lane Group Flow (vph)	137	558	0	0	1114	0	337	96	89	0	0	0
Confl. Peds. (#/hr)	14		14	14		14	2					2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	0%	0%	0%
Turn Type	custom	NA			NA		Split	NA	Perm			
Protected Phases	5	2 4 5 6			4 6		8	8				
Permitted Phases	6								8			
Actuated Green, G (s)	67.3	103.4			88.4		39.2	39.2	39.2			
Effective Green, g (s)	67.3	103.4			88.4		39.2	39.2	39.2			
Actuated g/C Ratio	0.44	0.67			0.57		0.25	0.25	0.25			
Clearance Time (s)	5.4						5.8	5.8	5.8			
Vehicle Extension (s)	2.0						3.5	3.5	3.5			
Lane Grp Cap (vph)	197	1249			1878		445	380	378			
v/s Ratio Prot	c0.04	0.30			c0.34		c0.19	0.06				
v/s Ratio Perm	c0.26								0.06			
v/c Ratio	0.69	0.44			0.59		0.75	0.25	0.23			
Uniform Delay, d1	30.2	11.9			21.2		53.1	45.8	45.6			
Progression Factor	1.59	2.16			1.00		1.00	1.00	1.00			
Incremental Delay, d2	6.1	0.2			0.5		7.4	0.4	0.3			
Delay (s)	54.3	26.0			21.8		60.5	46.2	45.9			
Level of Service	D	C			C		E	D	D			
Approach Delay (s/veh)		31.6			21.8			50.8			0.0	
Approach LOS		C			C			D			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	154.2	Sum of lost time (s)	22.8
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



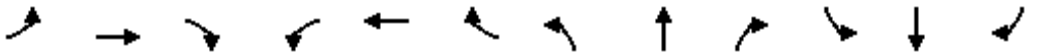
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	885	10	15	710	20	65	115	30	45	40	240
Future Volume (veh/h)	260	885	10	15	710	20	65	115	30	45	40	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	280	952	11	16	763	22	70	124	32	48	43	258
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, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	326	1786	21	34	1163	34	391	295	76	344	367	308
Arrive On Green	0.18	0.50	0.50	0.02	0.33	0.33	0.05	0.21	0.21	0.04	0.20	0.20
Sat Flow, veh/h	1781	3598	42	1767	3497	101	1781	1431	369	1781	1870	1571
Grp Volume(v), veh/h	280	470	493	16	384	401	70	0	156	48	43	258
Grp Sat Flow(s),veh/h/ln	1781	1777	1862	1767	1763	1835	1781	0	1800	1781	1870	1571
Q Serve(g_s), s	10.4	12.4	12.4	0.6	12.7	12.7	2.1	0.0	5.1	1.4	1.3	10.8
Cycle Q Clear(g_c), s	10.4	12.4	12.4	0.6	12.7	12.7	2.1	0.0	5.1	1.4	1.3	10.8
Prop In Lane	1.00		0.02	1.00		0.05	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	326	882	925	34	586	610	391	0	371	344	367	308
V/C Ratio(X)	0.86	0.53	0.53	0.47	0.66	0.66	0.18	0.00	0.42	0.14	0.12	0.84
Avail Cap(c_a), veh/h	418	882	925	285	1059	1103	974	0	422	683	438	368
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	11.8	11.8	33.1	19.4	19.5	20.0	0.0	23.5	19.9	22.6	26.4
Incr Delay (d2), s/veh	11.2	0.8	0.8	3.8	1.8	1.7	0.2	0.0	0.6	0.1	0.1	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	4.5	4.7	0.3	5.1	5.3	0.8	0.0	2.1	0.6	0.6	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	12.6	12.6	36.9	21.2	21.2	20.2	0.0	24.1	20.0	22.7	39.1
LnGrp LOS	D	B	B	D	C	C	C	A	C	B	C	D
Approach Vol, veh/h		1243			801			226			349	
Approach Delay, s/veh		18.3			21.5			22.9			34.5	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	37.9	7.7	17.4	16.5	26.7	7.0	18.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	26.0	26.0	16.0	16.0	41.0	16.0	16.0
Max Q Clear Time (g_c+I1), s	2.6	14.4	4.1	12.8	12.4	14.7	3.4	7.1
Green Ext Time (p_c), s	0.0	6.2	0.1	0.3	0.2	7.7	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

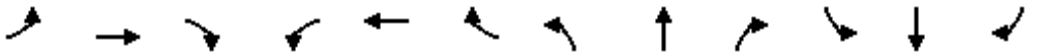
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	620	35	75	440	95	100	535	110	160	250	175
Future Volume (veh/h)	200	620	35	75	440	95	100	535	110	160	250	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	208	646	36	78	458	99	104	557	115	167	260	182
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	2	2	2
Cap, veh/h	386	1005	56	299	665	143	415	828	170	363	637	429
Arrive On Green	0.12	0.29	0.29	0.06	0.23	0.23	0.06	0.28	0.28	0.10	0.32	0.32
Sat Flow, veh/h	1795	3448	192	1767	2883	619	1795	2947	606	1781	2018	1359
Grp Volume(v), veh/h	208	335	347	78	279	278	104	338	334	167	228	214
Grp Sat Flow(s),veh/h/ln	1795	1791	1849	1767	1763	1738	1795	1791	1763	1781	1777	1599
Q Serve(g_s), s	5.9	11.3	11.3	2.1	10.0	10.1	2.6	11.6	11.7	4.5	7.0	7.3
Cycle Q Clear(g_c), s	5.9	11.3	11.3	2.1	10.0	10.1	2.6	11.6	11.7	4.5	7.0	7.3
Prop In Lane	1.00		0.10	1.00		0.36	1.00		0.34	1.00		0.85
Lane Grp Cap(c), veh/h	386	522	539	299	406	401	415	503	495	363	561	505
V/C Ratio(X)	0.54	0.64	0.64	0.26	0.69	0.69	0.25	0.67	0.68	0.46	0.41	0.42
Avail Cap(c_a), veh/h	708	789	815	468	777	766	821	776	764	576	770	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	21.4	21.4	16.4	24.3	24.4	14.7	22.1	22.1	16.0	18.6	18.7
Incr Delay (d2), s/veh	0.9	1.0	1.0	0.3	1.5	1.6	0.2	1.2	1.2	0.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.6	4.7	0.8	4.1	4.1	1.0	4.7	4.7	1.7	2.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	22.4	22.3	16.8	25.9	26.0	14.9	23.2	23.3	16.7	19.0	19.1
LnGrp LOS	B	C	C	B	C	C	B	C	C	B	B	B
Approach Vol, veh/h		890			635			776			609	
Approach Delay, s/veh		21.5			24.8			22.1			18.4	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	24.7	9.3	26.8	12.6	20.5	11.7	24.5
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	10.5	30.5	20.0	30.0	20.5	30.5	15.0	30.0
Max Q Clear Time (g_c+I1), s	4.1	13.3	4.6	9.3	7.9	12.1	6.5	13.7
Green Ext Time (p_c), s	0.1	3.3	0.1	2.2	0.3	2.7	0.2	3.2

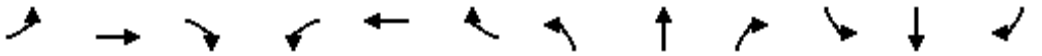
Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	725	15	95	480	105	110	275	285	240	100	60
Future Volume (veh/h)	110	725	15	95	480	105	110	275	285	240	100	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	113	747	15	98	495	108	113	284	294	247	103	62
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, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	438	1506	30	379	1222	265	402	406	341	317	275	166
Arrive On Green	0.07	0.42	0.42	0.07	0.42	0.42	0.07	0.22	0.22	0.10	0.25	0.25
Sat Flow, veh/h	1795	3591	72	1795	2925	635	1795	1885	1584	1810	1108	667
Grp Volume(v), veh/h	113	372	390	98	302	301	113	284	294	247	0	165
Grp Sat Flow(s),veh/h/ln	1795	1791	1872	1795	1791	1769	1795	1885	1584	1810	0	1774
Q Serve(g_s), s	3.5	15.2	15.3	3.0	11.8	11.9	4.6	13.9	17.9	10.0	0.0	7.7
Cycle Q Clear(g_c), s	3.5	15.2	15.3	3.0	11.8	11.9	4.6	13.9	17.9	10.0	0.0	7.7
Prop In Lane	1.00		0.04	1.00		0.36	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	438	751	785	379	748	739	402	406	341	317	0	441
V/C Ratio(X)	0.26	0.50	0.50	0.26	0.40	0.41	0.28	0.70	0.86	0.78	0.00	0.37
Avail Cap(c_a), veh/h	497	751	785	441	748	739	461	566	475	317	0	532
HCM Platoon Ratio	1.00	1.00	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	0.79	0.79	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.0	21.3	21.3	15.4	20.4	20.4	25.3	36.3	37.8	29.6	0.0	31.1
Incr Delay (d2), s/veh	0.2	1.8	1.8	0.3	1.6	1.7	0.3	1.5	9.4	11.2	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(50%),veh/ln	1.4	6.6	6.9	1.2	5.2	5.2	2.0	6.5	7.7	5.6	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	23.1	23.1	15.7	22.0	22.1	25.6	37.8	47.2	40.8	0.0	31.5
LnGrp LOS	B	C	C	B	C	C	C	D	D	D	A	C
Approach Vol, veh/h		875			701			691			412	
Approach Delay, s/veh		22.1			21.2			39.8			37.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	46.9	11.7	29.8	11.7	46.8	15.0	26.5
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	10.0	30.0	10.0	30.0	10.0	30.0	10.0	30.0
Max Q Clear Time (g_c+I1), s	5.0	17.3	6.6	9.7	5.5	13.9	12.0	19.9
Green Ext Time (p_c), s	0.1	3.3	0.1	0.7	0.1	2.8	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C



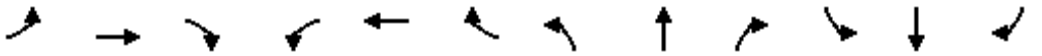
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1125	120	35	670	5	20	5	125	5	5	5
Future Volume (veh/h)	10	1125	120	35	670	5	20	5	125	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	11	1184	126	37	705	5	21	5	132	5	5	5
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	3	3	3	1	1	1
Cap, veh/h	516	1740	185	329	2074	15	368	8	219	129	105	69
Arrive On Green	0.01	0.53	0.53	0.04	0.57	0.57	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1795	3266	347	1795	3646	26	1375	57	1496	222	719	471
Grp Volume(v), veh/h	11	648	662	37	346	364	21	0	137	15	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1822	1795	1791	1880	1375	0	1553	1412	0	0
Q Serve(g_s), s	0.1	13.2	13.3	0.4	5.2	5.2	0.0	0.0	4.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	13.2	13.3	0.4	5.2	5.2	0.6	0.0	4.1	4.1	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.01	1.00		0.96	0.33		0.33
Lane Grp Cap(c), veh/h	516	954	971	329	1019	1070	368	0	228	303	0	0
V/C Ratio(X)	0.02	0.68	0.68	0.11	0.34	0.34	0.06	0.00	0.60	0.05	0.00	0.00
Avail Cap(c_a), veh/h	1048	1614	1642	796	1614	1695	607	0	498	568	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.6	8.5	8.6	6.6	5.8	5.8	18.4	0.0	19.9	18.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.1	0.2	0.2	0.0	0.0	1.0	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	0.0	3.9	4.0	0.1	1.4	1.4	0.2	0.0	1.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	9.4	9.4	6.6	6.0	5.9	18.4	0.0	20.9	18.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	C	B	A	A
Approach Vol, veh/h		1321			747			158			15	
Approach Delay, s/veh		9.4			6.0			20.6			18.4	
Approach LOS		A			A			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	31.6		11.3	5.2	33.4		11.3				
Change Period (Y+Rc), s	5.0	5.0		4.0	4.5	5.0		4.0				
Max Green Setting (Gmax), s	15.0	45.0		16.0	15.5	45.0		16.0				
Max Q Clear Time (g_c+I1), s	2.4	15.3		6.1	2.1	7.2		6.1				
Green Ext Time (p_c), s	0.0	11.3		0.0	0.0	5.0		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		9.1	
HCM 6th LOS		A	

Notes

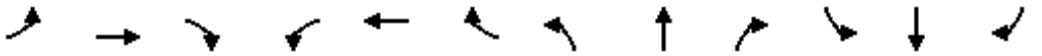
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	730	145	75	440	100	140	235	70	110	235	105
Future Volume (veh/h)	190	730	145	75	440	100	140	235	70	110	235	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	192	737	146	76	444	101	141	237	71	111	237	106
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	441	975	193	267	701	158	332	342	103	358	297	133
Arrive On Green	0.14	0.33	0.33	0.05	0.24	0.24	0.09	0.25	0.25	0.09	0.24	0.24
Sat Flow, veh/h	1795	2975	589	1781	2874	649	1795	1391	417	1795	1232	551
Grp Volume(v), veh/h	192	444	439	76	273	272	141	0	308	111	0	343
Grp Sat Flow(s),veh/h/ln	1795	1791	1774	1781	1777	1746	1795	0	1808	1795	0	1784
Q Serve(g_s), s	5.2	15.6	15.6	1.9	9.7	9.8	4.0	0.0	10.9	3.1	0.0	12.7
Cycle Q Clear(g_c), s	5.2	15.6	15.6	1.9	9.7	9.8	4.0	0.0	10.9	3.1	0.0	12.7
Prop In Lane	1.00		0.33	1.00		0.37	1.00		0.23	1.00		0.31
Lane Grp Cap(c), veh/h	441	587	581	267	434	426	332	0	445	358	0	430
V/C Ratio(X)	0.44	0.76	0.76	0.29	0.63	0.64	0.42	0.00	0.69	0.31	0.00	0.80
Avail Cap(c_a), veh/h	574	1396	1383	547	1385	1361	674	0	897	455	0	885
HCM Platoon Ratio	1.00	1.00	1.00	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	15.9	21.2	21.2	16.0	23.8	23.9	18.3	0.0	24.2	17.6	0.0	25.2
Incr Delay (d2), s/veh	0.3	1.5	1.5	0.2	1.1	1.2	0.6	0.0	1.9	0.5	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.3	6.3	0.7	4.0	4.0	1.6	0.0	4.6	1.2	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	22.7	22.7	16.2	24.9	25.1	19.0	0.0	26.1	18.1	0.0	28.6
LnGrp LOS	B	C	C	B	C	C	B	A	C	B	A	C
Approach Vol, veh/h		1075			621			449			454	
Approach Delay, s/veh		21.5			23.9			23.9			26.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	28.1	11.6	22.0	14.8	22.2	11.2	22.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	15.0	55.0	20.0	35.0	15.0	55.0	10.0	35.0
Max Q Clear Time (g_c+I1), s	3.9	17.6	6.0	14.7	7.2	11.8	5.1	12.9
Green Ext Time (p_c), s	0.1	5.4	0.2	2.1	0.2	3.0	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	525	95	55	450	120	75	80	60	85	50	60
Future Volume (vph)	115	525	95	55	450	120	75	80	60	85	50	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99			0.99			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1768	1863	1549	1769	3409			1732			1822	1576
Flt Permitted	0.42	1.00	1.00	0.31	1.00			0.83			0.67	1.00
Satd. Flow (perm)	778	1863	1549	582	3409			1469			1257	1576
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	119	541	98	57	464	124	77	82	62	88	52	62
RTOR Reduction (vph)	0	0	54	0	30	0	0	22	0	0	0	48
Lane Group Flow (vph)	119	541	44	57	558	0	0	199	0	0	140	14
Confl. Peds. (#/hr)	3		1	1		3	3		2	2		3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6		2	2			8			4		4
Actuated Green, G (s)	26.6	24.6	24.6	26.6	22.8			12.7			12.2	12.2
Effective Green, g (s)	26.6	24.6	24.6	26.6	22.8			12.7			12.2	12.2
Actuated g/C Ratio	0.49	0.45	0.45	0.49	0.42			0.23			0.22	0.22
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0			2.5			2.5	2.5
Lane Grp Cap (vph)	446	836	695	325	1418			340			279	350
v/s Ratio Prot	c0.02	c0.29		0.01	0.16							
v/s Ratio Perm	0.11		0.03	0.08				c0.14			0.11	0.01
v/c Ratio	0.27	0.65	0.06	0.18	0.39			0.59			0.50	0.04
Uniform Delay, d1	7.8	11.7	8.6	8.1	11.2			18.7			18.6	16.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	1.9	0.1	0.1	0.2			2.1			1.0	0.0
Delay (s)	7.9	13.7	8.6	8.2	11.4			20.9			19.7	16.7
Level of Service	A	B	A	A	B			C			B	B
Approach Delay (s)		12.1			11.1			20.9			18.8	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	280	365	405	715	615	140
Future Volume (veh/h)	280	365	405	715	615	140
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	286	372	413	730	628	143
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	471	419	650	1062	755	640
Arrive On Green	0.27	0.27	0.10	0.57	0.41	0.41
Sat Flow, veh/h	1767	1572	3428	1856	1856	1572
Grp Volume(v), veh/h	286	372	413	730	628	143
Grp Sat Flow(s),veh/h/ln	1767	1572	1714	1856	1856	1572
Q Serve(g_s), s	12.8	20.6	5.8	25.1	27.5	5.4
Cycle Q Clear(g_c), s	12.8	20.6	5.8	25.1	27.5	5.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	471	419	650	1062	755	640
V/C Ratio(X)	0.61	0.89	0.64	0.69	0.83	0.22
Avail Cap(c_a), veh/h	552	491	1406	1062	964	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	31.9	18.1	13.7	24.1	17.5
Incr Delay (d2), s/veh	1.7	16.4	1.0	2.2	6.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	18.1	2.2	10.4	12.9	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.8	48.3	19.1	15.9	30.2	17.8
LnGrp LOS	C	D	B	B	C	B
Approach Vol, veh/h	658			1143	771	
Approach Delay, s/veh	40.7			17.1	27.9	
Approach LOS	D			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		59.8		30.9	15.0	44.8
Change Period (Y+Rc), s		7.9		6.7	5.7	7.9
Max Green Setting (Gmax), s		47.1		28.3	29.3	47.1
Max Q Clear Time (g_c+I1), s		27.1		22.6	7.8	29.5
Green Ext Time (p_c), s		8.5		1.6	1.5	7.4

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	26.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

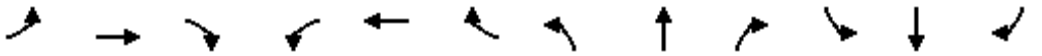
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	115	120	25	5	25	55	60	0	660	65	40	230
Future Volume (vph)	115	120	25	5	25	55	60	0	660	65	40	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Lane Util. Factor	1.00	1.00				1.00	1.00		0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00				1.00	0.98		1.00		1.00	0.99
Flpb, ped/bikes	0.99	1.00				1.00	1.00		1.00		1.00	1.00
Frt	1.00	0.97				1.00	0.85		0.99		1.00	0.96
Flt Protected	0.95	1.00				0.98	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1776	1828				1848	1569		3483		1752	3327
Flt Permitted	0.70	1.00				0.85	1.00		1.00		0.24	1.00
Satd. Flow (perm)	1304	1828				1597	1569		3483		445	3327
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	130	27	5	27	60	65	0	717	71	43	250
RTOR Reduction (vph)	0	13	0	0	0	0	52	0	12	0	0	43
Lane Group Flow (vph)	125	144	0	0	0	92	13	0	776	0	43	310
Confl. Peds. (#/hr)	12		4		4		12	4		6	6	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%
Turn Type	Perm	NA			Perm	NA	Perm	pm+pt	NA		pm+pt	NA
Protected Phases		4				8		5	2		1	6
Permitted Phases	4				8		8	2			6	
Actuated Green, G (s)	8.3	8.3				8.3	8.3		17.1		23.2	23.2
Effective Green, g (s)	8.3	8.3				8.3	8.3		17.1		23.2	23.2
Actuated g/C Ratio	0.21	0.21				0.21	0.21		0.43		0.58	0.58
Clearance Time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0				2.0	2.0		2.5		2.0	2.5
Lane Grp Cap (vph)	270	379				331	325		1488		310	1929
v/s Ratio Prot		0.08							c0.22		0.01	c0.09
v/s Ratio Perm	c0.10					0.06	0.01				0.07	
v/c Ratio	0.46	0.38				0.28	0.04		0.52		0.14	0.16
Uniform Delay, d1	13.9	13.6				13.3	12.7		8.4		4.2	3.9
Progression Factor	1.00	1.00				1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.5	0.2				0.2	0.0		0.3		0.1	0.0
Delay (s)	14.4	13.9				13.5	12.7		8.7		4.3	3.9
Level of Service	B	B				B	B		A		A	A
Approach Delay (s)		14.1				13.2			8.7			4.0
Approach LOS		B				B			A			A

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	95
Future Volume (vph)	95
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	103
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	165	5	85	85	155	0	495	350	0	145	40
Future Volume (veh/h)	40	165	5	85	85	155	0	495	350	0	145	40
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	0	1885	1885	0	1870	1870
Adj Flow Rate, veh/h	41	170	5	88	88	160	0	510	361	0	149	41
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, %	1	1	1	1	1	1	0	1	1	0	2	2
Cap, veh/h	213	340	284	179	116	211	0	1182	1083	0	1739	464
Arrive On Green	0.04	0.18	0.18	0.05	0.20	0.20	0.00	0.63	0.63	0.00	0.63	0.63
Sat Flow, veh/h	1795	1885	1574	3483	594	1079	0	1885	1596	0	2866	740
Grp Volume(v), veh/h	41	170	5	88	0	248	0	510	361	0	94	96
Grp Sat Flow(s),veh/h/ln	1795	1885	1574	1742	0	1673	0	1885	1596	0	1777	1736
Q Serve(g_s), s	1.5	6.9	0.2	2.1	0.0	11.9	0.0	11.8	8.0	0.0	1.8	1.9
Cycle Q Clear(g_c), s	1.5	6.9	0.2	2.1	0.0	11.9	0.0	11.8	8.0	0.0	1.8	1.9
Prop In Lane	1.00		1.00	1.00		0.65	0.00		1.00	0.00		0.43
Lane Grp Cap(c), veh/h	213	340	284	179	0	326	0	1182	1083	0	1114	1089
V/C Ratio(X)	0.19	0.50	0.02	0.49	0.00	0.76	0.00	0.43	0.33	0.00	0.08	0.09
Avail Cap(c_a), veh/h	379	688	574	451	0	610	0	1182	1083	0	1114	1089
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	0.00	0.94	0.94
Uniform Delay (d), s/veh	26.5	31.4	28.7	39.2	0.0	32.3	0.0	8.1	5.7	0.0	6.2	6.3
Incr Delay (d2), s/veh	0.3	0.8	0.0	1.5	0.0	2.7	0.0	1.1	0.8	0.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.2	0.1	0.9	0.0	4.9	0.0	4.5	11.5	0.0	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	32.2	28.7	40.8	0.0	35.0	0.0	9.2	6.5	0.0	6.4	6.4
LnGrp LOS	C	C	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		216			336			871			190	
Approach Delay, s/veh		31.1			36.5			8.1			6.4	
Approach LOS		C			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	19.3		57.3	7.1	20.6		57.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	11.0	31.0		31.0	11.0	31.0		31.0				
Max Q Clear Time (g_c+I1), s	4.1	8.9		3.9	3.5	13.9		13.8				
Green Ext Time (p_c), s	0.1	0.7		0.9	0.0	1.1		3.5				

Intersection Summary			
HCM 6th Ctrl Delay		16.9	
HCM 6th LOS		B	

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	150	395	0	0	340	45	5	10	15	85	0	35
Future Vol, veh/h	150	395	0	0	340	45	5	10	15	85	0	35
Conflicting Peds, #/hr	0	0	4	4	0	0	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	1	1	3	3	3	11	11	11	3	3	3
Mvmt Flow	161	425	0	0	366	48	5	11	16	91	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	429	0	0	1161	1165	430	1152	1141	391
Stage 1	-	-	-	-	-	-	751	751	-	390	390	-
Stage 2	-	-	-	-	-	-	410	414	-	762	751	-
Critical Hdwy	4.11	-	-	4.13	-	-	7.21	6.61	6.31	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.61	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.61	-	6.13	5.53	-
Follow-up Hdwy	2.209	-	-	2.227	-	-	3.599	4.099	3.399	3.527	4.027	3.327
Pot Cap-1 Maneuver	1150	-	-	1125	-	-	165	187	606	174	200	655
Stage 1	-	-	-	-	-	-	389	405	-	632	606	-
Stage 2	-	-	-	-	-	-	601	578	-	396	417	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1150	-	-	1121	-	-	138	160	603	143	171	654
Mov Cap-2 Maneuver	-	-	-	-	-	-	138	160	-	143	171	-
Stage 1	-	-	-	-	-	-	333	347	-	544	606	-
Stage 2	-	-	-	-	-	-	566	578	-	321	357	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	0	22.1	60
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	243	1150	-	-	1121	-	-	185
HCM Lane V/C Ratio	0.133	0.14	-	-	-	-	-	0.697
HCM Control Delay (s)	22.1	8.6	-	-	0	-	-	60
HCM Lane LOS	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.5	0.5	-	-	0	-	-	4.3

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	15	10	75	20	55	10	215	65	105	220	50
Future Vol, veh/h	25	15	10	75	20	55	10	215	65	105	220	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	26	16	10	78	21	57	10	224	68	109	229	52
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.6	10.5	11.7	13.6
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	50%	50%	32%	0%
Vol Thru, %	74%	30%	13%	68%	0%
Vol Right, %	22%	20%	37%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	290	50	150	325	50
LT Vol	10	25	75	105	0
Through Vol	215	15	20	220	0
RT Vol	65	10	55	0	50
Lane Flow Rate	302	52	156	339	52
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.423	0.086	0.245	0.529	0.069
Departure Headway (Hd)	5.041	5.959	5.643	5.628	4.78
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	716	601	636	643	754
Service Time	3.066	4.001	3.677	3.35	2.48
HCM Lane V/C Ratio	0.422	0.087	0.245	0.527	0.069
HCM Control Delay	11.7	9.6	10.5	14.5	7.8
HCM Lane LOS	B	A	B	B	A
HCM 95th-tile Q	2.1	0.3	1	3.1	0.2

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	5	325	0	20	0	10	280	15	15	0
Future Vol, veh/h	0	5	5	325	0	20	0	10	280	15	15	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	0	6	6	387	0	24	0	12	333	18	18	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	14.3	10.8	8.9
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	94%	50%
Vol Thru, %	3%	50%	0%	50%
Vol Right, %	97%	50%	6%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	290	10	345	30
LT Vol	0	0	325	15
Through Vol	10	5	0	15
RT Vol	280	5	20	0
Lane Flow Rate	345	12	411	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.427	0.017	0.564	0.055
Departure Headway (Hd)	4.453	5.125	4.94	5.51
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	804	703	723	643
Service Time	2.507	3.125	3.019	3.602
HCM Lane V/C Ratio	0.429	0.017	0.568	0.056
HCM Control Delay	10.8	8.2	14.3	8.9
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	2.2	0.1	3.6	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	155	50	165	120	20	240	795	655	25	225	90
Future Volume (veh/h)	70	155	50	165	120	20	240	795	655	25	225	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	73	161	52	172	125	21	250	828	0	26	234	94
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	484	219	71	582	424	71	519	1194		260	557	217
Arrive On Green	0.06	0.16	0.16	0.17	0.27	0.27	0.14	0.33	0.00	0.03	0.22	0.22
Sat Flow, veh/h	1795	1358	439	3483	1572	264	1795	3582	2812	1781	2495	972
Grp Volume(v), veh/h	73	0	213	172	0	146	250	828	0	26	165	163
Grp Sat Flow(s),veh/h/ln	1795	0	1796	1742	0	1837	1795	1791	1406	1781	1777	1690
Q Serve(g_s), s	1.7	0.0	6.8	2.6	0.0	3.8	6.2	12.0	0.0	0.6	4.7	5.0
Cycle Q Clear(g_c), s	1.7	0.0	6.8	2.6	0.0	3.8	6.2	12.0	0.0	0.6	4.7	5.0
Prop In Lane	1.00		0.24	1.00		0.14	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	484	0	290	582	0	495	519	1194		260	396	377
V/C Ratio(X)	0.15	0.00	0.74	0.30	0.00	0.29	0.48	0.69		0.10	0.42	0.43
Avail Cap(c_a), veh/h	693	0	465	1483	0	495	733	2094		669	1039	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	23.9	21.9	0.0	17.4	14.4	17.3	0.0	13.6	19.9	20.0
Incr Delay (d2), s/veh	0.1	0.0	3.6	0.3	0.0	0.3	0.5	0.7	0.0	0.1	0.7	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	0.6	0.0	3.0	1.0	0.0	1.5	2.3	4.5	0.0	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	0.0	27.5	22.2	0.0	17.7	14.9	18.0	0.0	13.7	20.6	20.8
LnGrp LOS	B	A	C	C	A	B	B	B		B	C	C
Approach Vol, veh/h		286			318			1078			354	
Approach Delay, s/veh		24.1			20.1			17.3			20.2	
Approach LOS		C			C			B			C	

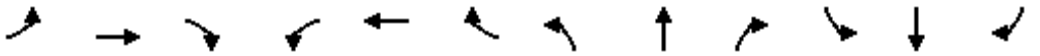
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	25.0	14.5	14.2	12.9	18.4	8.0	20.6
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5
Max Green Setting (Gmax), s	15.5	35.0	25.5	15.5	15.5	35.0	10.5	15.5
Max Q Clear Time (g_c+I1), s	2.6	14.0	4.6	8.8	8.2	7.0	3.7	5.8
Green Ext Time (p_c), s	0.0	6.0	0.7	0.6	0.3	2.0	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

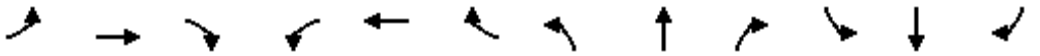
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	815	5	5	260	5	25	0	15	5	0	10
Future Volume (vph)	20	815	5	5	260	5	25	0	15	5	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3535		1769	3529		1804	1615		1805	1595	
Flt Permitted	0.57	1.00		0.27	1.00		1.00	1.00		1.00	1.00	
Satd. Flow (perm)	1058	3535		505	3529		1899	1615		1900	1595	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	23	926	6	6	295	6	28	0	17	6	0	11
RTOR Reduction (vph)	0	0	0	0	1	0	0	16	0	0	10	0
Lane Group Flow (vph)	23	932	0	6	300	0	28	1	0	6	1	0
Confl. Peds. (#/hr)			2	2			1					1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	34.9	29.7		29.9	34.9		3.3	2.7		3.3	2.5	
Effective Green, g (s)	34.9	29.7		29.9	34.9		3.3	2.7		3.3	2.5	
Actuated g/C Ratio	0.67	0.57		0.57	0.67		0.06	0.05		0.06	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	3.5		3.0	3.5		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	707	2011		294	2359		118	83		119	76	
v/s Ratio Prot		c0.26		0.00	c0.09		c0.00	0.00		0.00	0.00	
v/s Ratio Perm	0.02			0.01			c0.01			0.00		
v/c Ratio	0.03	0.46		0.02	0.13		0.24	0.01		0.05	0.01	
Uniform Delay, d1	2.9	6.6		4.9	3.1		23.3	23.5		23.0	23.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.0	0.0		1.0	0.1		0.2	0.0	
Delay (s)	2.9	6.8		4.9	3.2		24.3	23.5		23.2	23.7	
Level of Service	A	A		A	A		C	C		C	C	
Approach Delay (s)		6.7			3.2			24.0			23.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

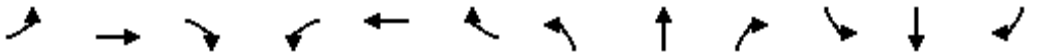
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	530	410	35	330	45	435	715	95	60	445	395
Future Volume (veh/h)	350	530	410	35	330	45	435	715	95	60	445	395
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	372	564	436	37	351	48	463	761	101	64	473	420
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	1	1	1	1	1	1
Cap, veh/h	277	653	552	47	354	48	318	1294	172	82	497	438
Arrive On Green	0.15	0.35	0.35	0.03	0.22	0.22	0.18	0.41	0.41	0.05	0.28	0.28
Sat Flow, veh/h	1795	1885	1592	1795	1622	222	1795	3166	420	1795	1791	1580
Grp Volume(v), veh/h	372	564	436	37	0	399	463	430	432	64	473	420
Grp Sat Flow(s),veh/h/ln	1795	1885	1592	1795	0	1844	1795	1791	1795	1795	1791	1580
Q Serve(g_s), s	17.0	30.7	27.1	2.3	0.0	23.7	19.5	20.6	20.6	3.9	28.5	28.8
Cycle Q Clear(g_c), s	17.0	30.7	27.1	2.3	0.0	23.7	19.5	20.6	20.6	3.9	28.5	28.8
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	277	653	552	47	0	402	318	732	734	82	497	438
V/C Ratio(X)	1.34	0.86	0.79	0.79	0.00	0.99	1.45	0.59	0.59	0.78	0.95	0.96
Avail Cap(c_a), veh/h	277	653	552	82	0	402	318	732	734	100	497	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	33.5	32.3	53.3	0.0	42.9	45.3	25.3	25.3	51.9	39.0	39.1
Incr Delay (d2), s/veh	175.6	11.5	7.6	24.3	0.0	42.6	221.3	1.2	1.2	26.4	28.7	32.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.1	15.8	11.4	1.3	0.0	15.4	28.2	8.9	8.9	2.3	16.3	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	222.1	45.0	40.0	77.6	0.0	85.5	266.6	26.6	26.6	78.4	67.8	71.5
LnGrp LOS	F	D	D	E	A	F	F	C	C	E	E	E
Approach Vol, veh/h		1372			436			1325			957	
Approach Delay, s/veh		91.4			84.8			110.4			70.1	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	49.5	7.9	43.1	24.0	35.0	22.0	29.0
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	6.1	43.9	5.0	36.0	19.5	30.5	17.0	24.0
Max Q Clear Time (g_c+I1), s	5.9	22.6	4.3	32.7	21.5	30.8	19.0	25.7
Green Ext Time (p_c), s	0.0	5.7	0.0	1.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	91.9
HCM 6th LOS	F



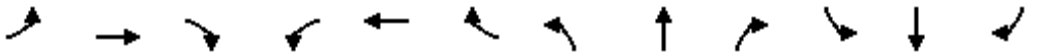
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	115	25	160	175	145	30	960	180	125	480	85
Future Volume (veh/h)	85	115	25	160	175	145	30	960	180	125	480	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	89	120	26	167	182	151	31	1000	188	130	500	89
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	1	1	1	3	3	3
Cap, veh/h	243	292	63	415	226	188	405	1187	223	245	1285	228
Arrive On Green	0.05	0.20	0.20	0.10	0.24	0.24	0.03	0.40	0.40	0.06	0.43	0.43
Sat Flow, veh/h	1753	1460	316	1781	937	777	1795	2992	561	1767	2987	529
Grp Volume(v), veh/h	89	0	146	167	0	333	31	598	590	130	294	295
Grp Sat Flow(s),veh/h/ln	1753	0	1776	1781	0	1714	1795	1791	1762	1767	1763	1754
Q Serve(g_s), s	3.1	0.0	5.9	6.0	0.0	15.0	0.8	24.9	25.0	3.5	9.4	9.5
Cycle Q Clear(g_c), s	3.1	0.0	5.9	6.0	0.0	15.0	0.8	24.9	25.0	3.5	9.4	9.5
Prop In Lane	1.00		0.18	1.00		0.45	1.00		0.32	1.00		0.30
Lane Grp Cap(c), veh/h	243	0	356	415	0	414	405	711	699	245	758	755
V/C Ratio(X)	0.37	0.00	0.41	0.40	0.00	0.80	0.08	0.84	0.84	0.53	0.39	0.39
Avail Cap(c_a), veh/h	361	0	539	462	0	521	567	870	856	346	857	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	28.7	22.8	0.0	29.4	12.7	22.5	22.5	18.1	16.0	16.1
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.2	0.0	5.6	0.0	5.9	6.1	0.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.5	2.5	0.0	6.6	0.3	10.9	10.9	1.4	3.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	29.0	23.0	0.0	35.0	12.8	28.4	28.6	18.8	16.3	16.3
LnGrp LOS	C	A	C	C	A	D	B	C	C	B	B	B
Approach Vol, veh/h		235			500			1219			719	
Approach Delay, s/veh		26.8			31.0			28.1			16.7	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	37.7	12.9	21.5	7.5	40.4	9.5	24.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	10.0	40.0	10.0	25.0	10.0	40.0	10.0	25.0
Max Q Clear Time (g_c+I1), s	5.5	27.0	8.0	7.9	2.8	11.5	5.1	17.0
Green Ext Time (p_c), s	0.1	5.7	0.0	0.4	0.0	3.2	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

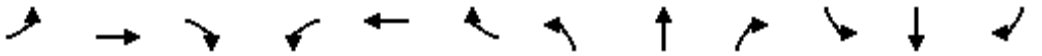
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	35	35	50	50	30	40	910	35	15	540	35
Future Volume (vph)	80	35	35	50	50	30	40	910	35	15	540	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1802	1746		1751	1731		1786	3549		1769	3502	
Flt Permitted	0.70	1.00		0.71	1.00		0.39	1.00		0.20	1.00	
Satd. Flow (perm)	1331	1746		1307	1731		728	3549		381	3502	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	37	37	53	53	32	42	958	37	16	568	37
RTOR Reduction (vph)	0	32	0	0	28	0	0	3	0	0	5	0
Lane Group Flow (vph)	84	42	0	53	57	0	42	992	0	16	600	0
Confl. Peds. (#/hr)	4		2	2		4	3		13	13		3
Heavy Vehicles (%)	0%	0%	0%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	11.2	7.8		11.2	7.4		27.6	26.9		27.6	25.7	
Effective Green, g (s)	11.2	7.8		11.2	7.4		27.6	26.9		27.6	25.7	
Actuated g/C Ratio	0.20	0.14		0.20	0.13		0.49	0.47		0.49	0.45	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.0		2.5	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	293	239		284	225		389	1680		202	1584	
v/s Ratio Prot	c0.02	0.02		0.01	0.03		c0.00	c0.28		0.00	0.17	
v/s Ratio Perm	c0.04			0.03			0.05			0.04		
v/c Ratio	0.29	0.18		0.19	0.25		0.11	0.59		0.08	0.38	
Uniform Delay, d1	19.2	21.7		18.9	22.2		7.7	10.9		8.1	10.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.2	0.2		0.0	0.5		0.1	0.1	
Delay (s)	19.6	21.8		19.1	22.4		7.8	11.4		8.2	10.4	
Level of Service	B	C		B	C		A	B		A	B	
Approach Delay (s)		20.6			21.2			11.2			10.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	5	5	10	5	10	5	900	15	5	610	15
Future Volume (veh/h)	35	5	5	10	5	10	5	900	15	5	610	15
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	0.98		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	37	5	5	11	5	11	5	957	16	5	649	16
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, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	312	30	17	207	51	70	520	1757	29	406	1740	43
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.01	0.49	0.49	0.01	0.49	0.49
Sat Flow, veh/h	1060	278	159	473	475	651	1795	3604	60	1795	3571	88
Grp Volume(v), veh/h	47	0	0	27	0	0	5	476	497	5	325	340
Grp Sat Flow(s),veh/h/ln	1498	0	0	1598	0	0	1795	1791	1874	1795	1791	1868
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	0.0	3.7	3.7
Cycle Q Clear(g_c), s	0.8	0.0	0.0	0.5	0.0	0.0	0.0	6.0	6.0	0.0	3.7	3.7
Prop In Lane	0.79		0.11	0.41		0.41	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	359	0	0	328	0	0	520	873	913	406	873	911
V/C Ratio(X)	0.13	0.00	0.00	0.08	0.00	0.00	0.01	0.54	0.54	0.01	0.37	0.37
Avail Cap(c_a), veh/h	914	0	0	921	0	0	813	1952	2042	700	1952	2036
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	0.0	13.2	0.0	0.0	4.4	5.8	5.8	4.8	5.2	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.1	0.0	0.0	0.0	1.3	1.3	0.0	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	0.0	13.2	0.0	0.0	4.4	6.4	6.3	4.8	5.5	5.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		47			27			978			670	
Approach Delay, s/veh		13.4			13.2			6.3			5.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	20.4		7.5	4.7	20.4		7.5				
Change Period (Y+Rc), s	4.5	4.5		4.0	4.5	4.5		4.0				
Max Green Setting (Gmax), s	5.5	35.5		16.0	5.5	35.5		16.0				
Max Q Clear Time (g_c+I1), s	2.0	8.0		2.8	2.0	5.7		2.5				
Green Ext Time (p_c), s	0.0	7.1		0.1	0.0	4.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		6.3
HCM 6th LOS		A

Notes

User approved pedestrian interval to be less than phase max green.

MOVEMENT SUMMARY

Site: 5 [I-5 SB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2027 Without-Project)]

Future (2027) Without-Project PM Peak Hour
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
East: SR 528 (4th St)														
1	L2	525	3.0	559	3.0	0.490	9.7	LOS A	0.0	0.0	0.00	0.65	0.00	35.2
6	T1	670	3.0	713	3.0	0.490	3.6	LOS A	0.0	0.0	0.00	0.40	0.00	37.9
Approach		1195	3.0	1271	3.0	0.490	6.3	LOS A	0.0	0.0	0.00	0.51	0.00	36.7
North: I-5 SB Off-Ramp														
7	L2	315	1.0	335	1.0	0.433	14.7	LOS B	2.1	52.7	0.68	0.94	0.83	32.5
4	T1	5	1.0	5	1.0	0.433	8.6	LOS A	2.1	52.7	0.68	0.94	0.83	32.5
14	R2	240	1.0	255	1.0	0.395	9.9	LOS A	1.8	44.1	0.68	0.87	0.81	33.5
Approach		560	1.0	596	1.0	0.433	12.6	LOS B	2.1	52.7	0.68	0.91	0.82	32.9
West: SR 528 (4th St)														
2	T1	450	1.0	479	1.0	0.355	10.8	LOS B	2.6	66.0	0.87	0.87	0.87	34.2
12	R2	445	1.0	473	1.0	0.286	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		895	1.0	952	1.0	0.355	7.3	LOS A	2.6	66.0	0.44	0.67	0.44	35.5
All Vehicles		2650	1.9	2819	1.9	0.490	8.0	LOS A	2.6	66.0	0.29	0.65	0.32	35.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

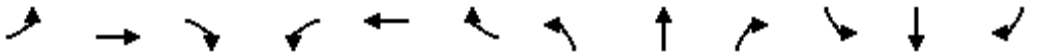
Site: 6 [I-5 NB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2027 Without-Project)]

Future (2027) Without-Project PM Peak Hour
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: I-5 NB Off-Ramp														
3	L2	360	3.0	379	3.0	0.343	11.8	LOS B	1.5	37.4	0.54	0.81	0.54	33.7
8	T1	10	3.0	11	3.0	0.343	5.7	LOS A	1.5	37.4	0.54	0.81	0.54	33.7
18	R2	730	3.0	768	3.0	0.387	7.0	LOS A	1.9	47.9	0.60	0.81	0.64	35.0
Approach		1100	3.0	1158	3.0	0.387	8.5	LOS A	1.9	47.9	0.58	0.81	0.61	34.5
East: SR 528 (4th St)														
6	T1	800	2.0	842	2.0	0.423	6.5	LOS A	2.8	72.4	0.69	0.67	0.69	35.8
16	R2	445	2.0	468	2.0	0.285	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1245	2.0	1311	2.0	0.423	5.5	LOS A	2.8	72.4	0.44	0.60	0.44	36.2
West: SR 528 (4th St)														
5	L2	145	2.0	153	2.0	0.297	9.7	LOS A	0.0	0.0	0.00	0.53	0.00	36.9
2	T1	595	2.0	626	2.0	0.297	3.6	LOS A	0.0	0.0	0.00	0.43	0.00	37.7
Approach		740	2.0	779	2.0	0.297	4.8	LOS A	0.0	0.0	0.00	0.45	0.00	37.6
All Vehicles		3085	2.4	3247	2.4	0.423	6.4	LOS A	2.8	72.4	0.39	0.64	0.40	35.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



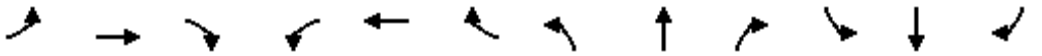
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	995	10	15	800	25	75	130	35	50	45	270
Future Volume (veh/h)	295	995	10	15	800	25	75	130	35	50	45	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	317	1070	11	16	860	27	81	140	38	54	48	290
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, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	354	1889	19	33	1201	38	372	298	81	318	378	318
Arrive On Green	0.20	0.52	0.52	0.02	0.34	0.34	0.05	0.21	0.21	0.04	0.20	0.20
Sat Flow, veh/h	1781	3603	37	1767	3487	109	1781	1414	384	1781	1870	1571
Grp Volume(v), veh/h	317	528	553	16	435	452	81	0	178	54	48	290
Grp Sat Flow(s),veh/h/ln	1781	1777	1863	1767	1763	1834	1781	0	1797	1781	1870	1571
Q Serve(g_s), s	13.7	15.9	15.9	0.7	17.0	17.0	2.8	0.0	6.9	1.8	1.7	14.3
Cycle Q Clear(g_c), s	13.7	15.9	15.9	0.7	17.0	17.0	2.8	0.0	6.9	1.8	1.7	14.3
Prop In Lane	1.00		0.02	1.00		0.06	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	354	932	977	33	607	631	372	0	379	318	378	318
V/C Ratio(X)	0.90	0.57	0.57	0.48	0.72	0.72	0.22	0.00	0.47	0.17	0.13	0.91
Avail Cap(c_a), veh/h	360	932	977	246	913	950	864	0	379	600	378	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	12.7	12.7	38.4	22.6	22.6	23.0	0.0	27.3	23.0	25.8	30.9
Incr Delay (d2), s/veh	22.8	1.0	1.0	4.0	2.3	2.2	0.3	0.0	0.7	0.1	0.1	29.1
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	5.9	6.2	0.3	7.0	7.3	1.2	0.0	2.9	0.8	0.7	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.7	13.7	13.7	42.5	24.8	24.8	23.3	0.0	28.0	23.1	26.0	60.0
LnGrp LOS	D	B	B	D	C	C	C	A	C	C	C	E
Approach Vol, veh/h		1398			903			259			392	
Approach Delay, s/veh		22.8			25.1			26.6			50.7	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	45.5	8.2	20.0	19.7	31.2	7.5	20.7
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	11.0	26.0	26.0	16.0	16.0	41.0	16.0	16.0
Max Q Clear Time (g_c+I1), s	2.7	17.9	4.8	16.3	15.7	19.0	3.8	8.9
Green Ext Time (p_c), s	0.0	5.2	0.2	0.0	0.0	8.3	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

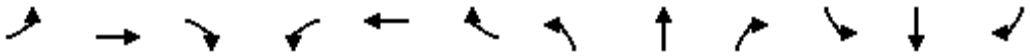
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	700	40	85	495	105	115	600	125	180	280	195
Future Volume (veh/h)	225	700	40	85	495	105	115	600	125	180	280	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	234	729	42	89	516	109	120	625	130	188	292	203
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	2	2	2
Cap, veh/h	379	1070	62	279	699	147	394	843	175	337	644	434
Arrive On Green	0.12	0.31	0.31	0.06	0.24	0.24	0.07	0.29	0.29	0.10	0.32	0.32
Sat Flow, veh/h	1795	3441	198	1767	2895	609	1795	2942	611	1781	2017	1359
Grp Volume(v), veh/h	234	379	392	89	313	312	120	380	375	188	256	239
Grp Sat Flow(s),veh/h/ln	1795	1791	1848	1767	1763	1741	1795	1791	1762	1781	1777	1600
Q Serve(g_s), s	7.3	14.2	14.2	2.6	12.6	12.7	3.4	14.7	14.8	5.6	8.8	9.2
Cycle Q Clear(g_c), s	7.3	14.2	14.2	2.6	12.6	12.7	3.4	14.7	14.8	5.6	8.8	9.2
Prop In Lane	1.00		0.11	1.00		0.35	1.00		0.35	1.00		0.85
Lane Grp Cap(c), veh/h	379	557	575	279	425	420	394	513	505	337	567	511
V/C Ratio(X)	0.62	0.68	0.68	0.32	0.74	0.74	0.30	0.74	0.74	0.56	0.45	0.47
Avail Cap(c_a), veh/h	635	712	735	423	701	692	742	700	689	508	695	626
HCM Platoon Ratio	1.00	1.00	1.00	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	19.2	23.1	23.1	17.7	26.8	26.9	16.1	24.8	24.8	18.1	20.8	20.9
Incr Delay (d2), s/veh	1.2	1.5	1.4	0.5	1.9	1.9	0.3	2.3	2.4	1.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	5.9	6.1	1.0	5.3	5.3	1.3	6.3	6.2	2.2	3.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	24.6	24.5	18.2	28.7	28.8	16.4	27.1	27.2	19.2	21.2	21.4
LnGrp LOS	C	C	C	B	C	C	B	C	C	B	C	C
Approach Vol, veh/h		1005			714			875			683	
Approach Delay, s/veh		23.6			27.5			25.7			20.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	28.4	10.1	29.5	14.1	23.0	12.6	27.0
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	10.5	30.5	20.0	30.0	20.5	30.5	15.0	30.0
Max Q Clear Time (g_c+I1), s	4.6	16.2	5.4	11.2	9.3	14.7	7.6	16.8
Green Ext Time (p_c), s	0.1	3.5	0.2	2.4	0.4	2.9	0.2	3.4

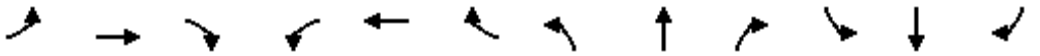
Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	815	15	105	540	120	125	310	320	270	115	70
Future Volume (veh/h)	125	815	15	105	540	120	125	310	320	270	115	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	129	840	15	108	557	124	129	320	330	278	119	72
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, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	386	1427	25	330	1150	255	412	447	376	317	295	179
Arrive On Green	0.07	0.40	0.40	0.07	0.39	0.39	0.07	0.24	0.24	0.10	0.27	0.27
Sat Flow, veh/h	1795	3600	64	1795	2912	646	1795	1885	1585	1810	1105	669
Grp Volume(v), veh/h	129	418	437	108	342	339	129	320	330	278	0	191
Grp Sat Flow(s),veh/h/ln	1795	1791	1873	1795	1791	1767	1795	1885	1585	1810	0	1774
Q Serve(g_s), s	4.2	18.4	18.4	3.4	14.3	14.4	5.1	15.6	20.1	10.0	0.0	8.8
Cycle Q Clear(g_c), s	4.2	18.4	18.4	3.4	14.3	14.4	5.1	15.6	20.1	10.0	0.0	8.8
Prop In Lane	1.00		0.03	1.00		0.37	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	386	710	743	330	707	698	412	447	376	317	0	474
V/C Ratio(X)	0.33	0.59	0.59	0.33	0.48	0.49	0.31	0.72	0.88	0.88	0.00	0.40
Avail Cap(c_a), veh/h	444	710	743	390	707	698	466	566	476	317	0	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	23.8	23.8	17.4	22.6	22.7	24.1	35.0	36.7	30.4	0.0	30.1
Incr Delay (d2), s/veh	0.3	2.6	2.5	0.4	2.4	2.4	0.3	2.3	11.9	22.6	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(50%),veh/ln	1.7	8.1	8.4	1.4	6.4	6.3	2.2	7.3	8.9	3.9	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	26.3	26.2	17.8	25.0	25.1	24.4	37.4	48.7	52.9	0.0	30.5
LnGrp LOS	B	C	C	B	C	C	C	D	D	D	A	C
Approach Vol, veh/h		984			789			779			469	
Approach Delay, s/veh		25.1			24.0			40.0			43.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	44.6	12.0	31.7	11.8	44.5	15.0	28.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	10.0	30.0	10.0	30.0	10.0	30.0	10.0	30.0
Max Q Clear Time (g_c+I1), s	5.4	20.4	7.1	10.8	6.2	16.4	12.0	22.1
Green Ext Time (p_c), s	0.1	3.2	0.1	0.8	0.1	3.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C



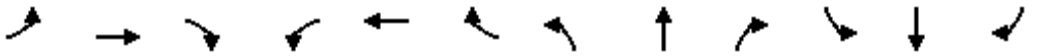
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1265	135	40	755	5	25	5	140	5	5	5
Future Volume (veh/h)	10	1265	135	40	755	5	25	5	140	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	11	1332	142	42	795	5	26	5	147	5	5	5
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	3	3	3	1	1	1
Cap, veh/h	486	1834	195	297	2185	14	331	8	224	113	97	63
Arrive On Green	0.01	0.56	0.56	0.04	0.60	0.60	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1795	3266	346	1795	3649	23	1376	51	1501	192	649	420
Grp Volume(v), veh/h	11	727	747	42	390	410	26	0	152	15	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1822	1795	1791	1881	1376	0	1553	1261	0	0
Q Serve(g_s), s	0.1	17.0	17.3	0.5	6.3	6.3	0.0	0.0	5.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	17.0	17.3	0.5	6.3	6.3	0.9	0.0	5.2	5.3	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.01	1.00		0.97	0.33		0.33
Lane Grp Cap(c), veh/h	486	1005	1023	297	1073	1127	331	0	231	272	0	0
V/C Ratio(X)	0.02	0.72	0.73	0.14	0.36	0.36	0.08	0.00	0.66	0.06	0.00	0.00
Avail Cap(c_a), veh/h	952	1422	1446	695	1422	1493	515	0	438	475	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.6	9.2	9.2	7.5	5.8	5.8	20.9	0.0	22.8	20.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	1.1	0.1	0.2	0.2	0.0	0.0	1.2	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	0.0	5.2	5.4	0.1	1.8	1.9	0.3	0.0	1.8	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	10.3	10.4	7.6	6.0	6.0	21.0	0.0	23.9	20.8	0.0	0.0
LnGrp LOS	A	B	B	A	A	A	C	A	C	C	A	A
Approach Vol, veh/h		1485			842			178			15	
Approach Delay, s/veh		10.3			6.1			23.5			20.8	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	36.8		12.4	5.3	38.9		12.4				
Change Period (Y+Rc), s	5.0	5.0		4.0	4.5	5.0		4.0				
Max Green Setting (Gmax), s	15.0	45.0		16.0	15.5	45.0		16.0				
Max Q Clear Time (g_c+I1), s	2.5	19.3		7.3	2.1	8.3		7.2				
Green Ext Time (p_c), s	0.0	12.6		0.0	0.0	5.8		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		9.9	
HCM 6th LOS		A	

Notes

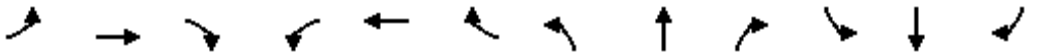
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	820	165	85	495	115	160	265	80	125	265	120
Future Volume (veh/h)	215	820	165	85	495	115	160	265	80	125	265	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	217	828	167	86	500	116	162	268	81	126	268	121
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	414	1045	211	240	810	187	302	371	112	330	318	143
Arrive On Green	0.12	0.35	0.35	0.05	0.28	0.28	0.09	0.27	0.27	0.08	0.26	0.26
Sat Flow, veh/h	1795	2965	598	1781	2861	660	1795	1388	420	1795	1228	555
Grp Volume(v), veh/h	217	500	495	86	309	307	162	0	349	126	0	389
Grp Sat Flow(s),veh/h/ln	1795	1791	1772	1781	1777	1745	1795	0	1808	1795	0	1783
Q Serve(g_s), s	6.6	20.4	20.4	2.5	12.3	12.4	5.2	0.0	14.2	4.0	0.0	16.8
Cycle Q Clear(g_c), s	6.6	20.4	20.4	2.5	12.3	12.4	5.2	0.0	14.2	4.0	0.0	16.8
Prop In Lane	1.00		0.34	1.00		0.38	1.00		0.23	1.00		0.31
Lane Grp Cap(c), veh/h	414	631	625	240	503	494	302	0	483	330	0	461
V/C Ratio(X)	0.52	0.79	0.79	0.36	0.62	0.62	0.54	0.00	0.72	0.38	0.00	0.84
Avail Cap(c_a), veh/h	526	1213	1200	475	1203	1181	583	0	779	405	0	768
HCM Platoon Ratio	1.00	1.00	1.00	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	17.6	23.6	23.6	18.1	25.3	25.3	21.0	0.0	27.0	20.0	0.0	28.5
Incr Delay (d2), s/veh	0.4	1.7	1.7	0.3	0.9	1.0	1.1	0.0	2.1	0.7	0.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	8.4	8.3	1.0	5.1	5.1	2.2	0.0	6.2	1.7	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	25.3	25.4	18.4	26.2	26.3	22.1	0.0	29.1	20.7	0.0	33.0
LnGrp LOS	B	C	C	B	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1212			702			511			515	
Approach Delay, s/veh		24.0			25.3			26.9			30.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	33.6	12.3	26.0	14.9	28.0	11.6	26.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	15.0	55.0	20.0	35.0	15.0	55.0	10.0	35.0
Max Q Clear Time (g_c+I1), s	4.5	22.4	7.2	18.8	8.6	14.4	6.0	16.2
Green Ext Time (p_c), s	0.1	6.3	0.2	2.2	0.2	3.5	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	590	105	60	505	135	85	90	70	95	55	70
Future Volume (vph)	130	590	105	60	505	135	85	90	70	95	55	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99			1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1768	1863	1548	1769	3409			1736			1822	1576
Flt Permitted	0.37	1.00	1.00	0.25	1.00			0.83			0.63	1.00
Satd. Flow (perm)	687	1863	1548	466	3409			1459			1185	1576
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	134	608	108	62	521	139	88	93	72	98	57	72
RTOR Reduction (vph)	0	0	59	0	30	0	0	22	0	0	0	55
Lane Group Flow (vph)	134	608	49	62	630	0	0	231	0	0	155	17
Confl. Peds. (#/hr)	3		1	1		3	3		2	2		3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6		2	2			8			4		4
Actuated Green, G (s)	28.1	26.1	26.1	28.1	24.4			14.0			13.5	13.5
Effective Green, g (s)	28.1	26.1	26.1	28.1	24.4			14.0			13.5	13.5
Actuated g/C Ratio	0.49	0.45	0.45	0.49	0.42			0.24			0.23	0.23
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0			2.5			2.5	2.5
Lane Grp Cap (vph)	404	844	701	272	1444			354			277	369
v/s Ratio Prot	c0.02	c0.33		0.01	0.18							
v/s Ratio Perm	0.14		0.03	0.10				c0.16			0.13	0.01
v/c Ratio	0.33	0.72	0.07	0.23	0.44			0.65			0.56	0.05
Uniform Delay, d1	8.2	12.8	8.9	9.0	11.7			19.6			19.4	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.2	3.3	0.1	0.2	0.3			3.8			2.0	0.0
Delay (s)	8.4	16.0	9.0	9.1	12.0			23.4			21.4	17.1
Level of Service	A	B	A	A	B			C			C	B
Approach Delay (s)		13.9			11.8			23.4			20.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	315	410	455	805	690	160
Future Volume (veh/h)	315	410	455	805	690	160
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	321	418	464	821	704	163
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	485	432	589	1083	783	664
Arrive On Green	0.27	0.27	0.11	0.58	0.42	0.42
Sat Flow, veh/h	1767	1572	3428	1856	1856	1572
Grp Volume(v), veh/h	321	418	464	821	704	163
Grp Sat Flow(s),veh/h/ln	1767	1572	1714	1856	1856	1572
Q Serve(g_s), s	16.6	27.1	7.3	34.0	36.4	6.9
Cycle Q Clear(g_c), s	16.6	27.1	7.3	34.0	36.4	6.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	485	432	589	1083	783	664
V/C Ratio(X)	0.66	0.97	0.79	0.76	0.90	0.25
Avail Cap(c_a), veh/h	485	432	1199	1083	848	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	36.9	21.6	16.0	27.7	19.2
Incr Delay (d2), s/veh	3.5	35.1	2.4	3.5	12.6	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	24.8	2.9	14.7	18.5	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.7	72.0	24.0	19.5	40.3	19.5
LnGrp LOS	D	E	C	B	D	B
Approach Vol, veh/h	739			1285	867	
Approach Delay, s/veh	56.7			21.1	36.4	
Approach LOS	E			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.1		35.0	16.7	51.4
Change Period (Y+Rc), s		7.9		6.7	5.7	7.9
Max Green Setting (Gmax), s		47.1		28.3	29.3	47.1
Max Q Clear Time (g_c+I1), s		36.0		29.1	9.3	38.4
Green Ext Time (p_c), s		6.5		0.0	1.7	5.1

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		34.8
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

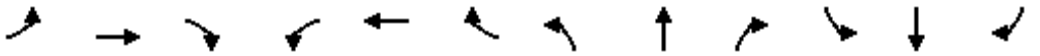
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	130	135	30	5	30	60	70	0	745	75	45	260
Future Volume (vph)	130	135	30	5	30	60	70	0	745	75	45	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Lane Util. Factor	1.00	1.00				1.00	1.00		0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00				1.00	0.98		1.00		1.00	0.99
Flpb, ped/bikes	0.99	1.00				1.00	1.00		1.00		1.00	1.00
Frt	1.00	0.97				1.00	0.85		0.99		1.00	0.96
Flt Protected	0.95	1.00				0.98	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1775	1825				1846	1568		3482		1752	3329
Flt Permitted	0.69	1.00				0.83	1.00		1.00		0.20	1.00
Satd. Flow (perm)	1290	1825				1563	1568		3482		377	3329
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	147	33	5	33	65	76	0	810	82	49	283
RTOR Reduction (vph)	0	15	0	0	0	0	60	0	12	0	0	47
Lane Group Flow (vph)	141	165	0	0	0	103	16	0	880	0	49	350
Confl. Peds. (#/hr)	12		4		4		12	4		6	6	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%
Turn Type	Perm	NA			Perm	NA	Perm	pm+pt	NA		pm+pt	NA
Protected Phases		4				8		5	2		1	6
Permitted Phases	4				8		8	2			6	
Actuated Green, G (s)	8.8	8.8				8.8	8.8		18.6		24.8	24.8
Effective Green, g (s)	8.8	8.8				8.8	8.8		18.6		24.8	24.8
Actuated g/C Ratio	0.21	0.21				0.21	0.21		0.44		0.59	0.59
Clearance Time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0				2.0	2.0		2.5		2.0	2.5
Lane Grp Cap (vph)	269	381				326	327		1538		277	1961
v/s Ratio Prot		0.09							c0.25		0.01	c0.11
v/s Ratio Perm	c0.11					0.07	0.01				0.10	
v/c Ratio	0.52	0.43				0.32	0.05		0.57		0.18	0.18
Uniform Delay, d1	14.8	14.5				14.1	13.3		8.8		4.5	4.0
Progression Factor	1.00	1.00				1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.9	0.3				0.2	0.0		0.4		0.1	0.0
Delay (s)	15.6	14.8				14.3	13.3		9.2		4.7	4.0
Level of Service	B	B				B	B		A		A	A
Approach Delay (s)		15.2				13.9			9.2			4.1
Approach LOS		B				B			A			A

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	42.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	105
Future Volume (vph)	105
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	114
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

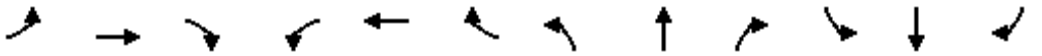
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	185	5	95	95	175	0	555	395	0	165	45
Future Volume (veh/h)	45	185	5	95	95	175	0	555	395	0	165	45
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	0	1885	1885	0	1870	1870
Adj Flow Rate, veh/h	46	191	5	98	98	180	0	572	407	0	170	46
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, %	1	1	1	1	1	1	0	1	1	0	2	2
Cap, veh/h	213	370	309	185	124	228	0	1149	1058	0	1696	446
Arrive On Green	0.04	0.20	0.20	0.05	0.21	0.21	0.00	0.61	0.61	0.00	0.61	0.61
Sat Flow, veh/h	1795	1885	1576	3483	590	1084	0	1885	1596	0	2876	732
Grp Volume(v), veh/h	46	191	5	98	0	278	0	572	407	0	107	109
Grp Sat Flow(s),veh/h/ln	1795	1885	1576	1742	0	1674	0	1885	1596	0	1777	1738
Q Serve(g_s), s	1.7	7.7	0.2	2.3	0.0	13.4	0.0	14.5	9.8	0.0	2.1	2.2
Cycle Q Clear(g_c), s	1.7	7.7	0.2	2.3	0.0	13.4	0.0	14.5	9.8	0.0	2.1	2.2
Prop In Lane	1.00		1.00	1.00		0.65	0.00		1.00	0.00		0.42
Lane Grp Cap(c), veh/h	213	370	309	185	0	352	0	1149	1058	0	1083	1059
V/C Ratio(X)	0.22	0.52	0.02	0.53	0.00	0.79	0.00	0.50	0.38	0.00	0.10	0.10
Avail Cap(c_a), veh/h	375	688	575	451	0	610	0	1149	1058	0	1083	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.92	0.92
Uniform Delay (d), s/veh	25.7	30.6	27.5	39.2	0.0	31.8	0.0	9.3	6.5	0.0	6.9	6.9
Incr Delay (d2), s/veh	0.4	0.8	0.0	1.8	0.0	3.0	0.0	1.5	1.1	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.5	0.1	1.0	0.0	5.6	0.0	5.7	13.2	0.0	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	31.4	27.6	41.0	0.0	34.8	0.0	10.8	7.6	0.0	7.1	7.1
LnGrp LOS	C	C	C	D	A	C	A	B	A	A	A	A
Approach Vol, veh/h		242			376			979			216	
Approach Delay, s/veh		30.3			36.4			9.5			7.1	
Approach LOS		C			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	20.7		55.8	7.3	21.9		55.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	11.0	31.0		31.0	11.0	31.0		31.0				
Max Q Clear Time (g_c+I1), s	4.3	9.7		4.2	3.7	15.4		16.5				
Green Ext Time (p_c), s	0.1	0.8		1.0	0.0	1.3		3.8				

Intersection Summary			
HCM 6th Ctrl Delay		17.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	445	0	0	385	50	5	10	15	95	0	40
Future Volume (veh/h)	170	445	0	0	385	50	5	10	15	95	0	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1737	1737	1737	1856	1856	1856
Adj Flow Rate, veh/h	183	478	0	0	414	54	5	11	16	102	0	43
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	3	3	3	11	11	11	3	3	3
Cap, veh/h	245	1147	0	5	573	75	124	108	125	306	16	69
Arrive On Green	0.14	0.61	0.00	0.00	0.36	0.36	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1795	1885	0	1767	1607	210	106	672	779	927	100	433
Grp Volume(v), veh/h	183	478	0	0	0	468	32	0	0	145	0	0
Grp Sat Flow(s),veh/h/ln	1795	1885	0	1767	0	1816	1557	0	0	1459	0	0
Q Serve(g_s), s	3.8	5.2	0.0	0.0	0.0	8.7	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	3.8	5.2	0.0	0.0	0.0	8.7	0.7	0.0	0.0	3.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.12	0.16		0.50	0.70		0.30
Lane Grp Cap(c), veh/h	245	1147	0	5	0	647	357	0	0	392	0	0
V/C Ratio(X)	0.75	0.42	0.00	0.00	0.00	0.72	0.09	0.00	0.00	0.37	0.00	0.00
Avail Cap(c_a), veh/h	733	2053	0	227	0	1470	855	0	0	861	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	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.2	4.0	0.0	0.0	0.0	10.9	14.0	0.0	0.0	15.1	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.2	0.0	0.0	0.0	1.5	0.1	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	1.6	0.9	0.0	0.0	0.0	2.9	0.2	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	4.2	0.0	0.0	0.0	12.4	14.1	0.0	0.0	15.7	0.0	0.0
LnGrp LOS	C	A	A	A	A	B	B	A	A	B	A	A
Approach Vol, veh/h		661			468			32			145	
Approach Delay, s/veh		8.8			12.4			14.1			15.7	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.8	0.0	28.2		10.8	9.8	18.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.1	5.0	42.4		19.1	15.9	31.5				
Max Q Clear Time (g_c+I1), s		2.7	0.0	7.2		5.5	5.8	10.7				
Green Ext Time (p_c), s		0.1	0.0	3.4		0.6	0.3	3.0				

Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	15	10	85	25	60	10	240	75	120	250	55
Future Vol, veh/h	30	15	10	85	25	60	10	240	75	120	250	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	31	16	10	89	26	63	10	250	78	125	260	57
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	10.1	11.4	13.3	16.5
HCM LOS	B	B	B	C

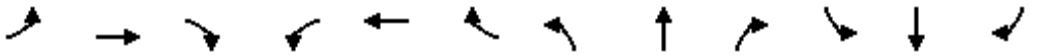
Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	55%	50%	32%	0%
Vol Thru, %	74%	27%	15%	68%	0%
Vol Right, %	23%	18%	35%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	325	55	170	370	55
LT Vol	10	30	85	120	0
Through Vol	240	15	25	250	0
RT Vol	75	10	60	0	55
Lane Flow Rate	339	57	177	385	57
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.494	0.101	0.291	0.622	0.079
Departure Headway (Hd)	5.248	6.327	5.926	5.808	4.936
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	687	564	604	621	725
Service Time	3.288	4.392	3.981	3.545	2.672
HCM Lane V/C Ratio	0.493	0.101	0.293	0.62	0.079
HCM Control Delay	13.3	10.1	11.4	17.7	8.1
HCM Lane LOS	B	B	B	C	A
HCM 95th-tile Q	2.8	0.3	1.2	4.3	0.3

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	5	365	0	25	0	10	315	15	15	0
Future Vol, veh/h	0	5	5	365	0	25	0	10	315	15	15	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	0	6	6	435	0	30	0	12	375	18	18	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	17.7	12.2	9.3
HCM LOS	A	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	94%	50%
Vol Thru, %	3%	50%	0%	50%
Vol Right, %	97%	50%	6%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	325	10	390	30
LT Vol	0	0	365	15
Through Vol	10	5	0	15
RT Vol	315	5	25	0
Lane Flow Rate	387	12	464	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.495	0.018	0.664	0.058
Departure Headway (Hd)	4.609	5.374	5.151	5.865
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	770	668	706	611
Service Time	2.706	3.39	3.151	3.896
HCM Lane V/C Ratio	0.503	0.018	0.657	0.059
HCM Control Delay	12.2	8.5	17.7	9.3
HCM Lane LOS	B	A	C	A
HCM 95th-tile Q	2.8	0.1	5.1	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	175	55	185	135	25	270	895	735	30	255	100
Future Volume (veh/h)	80	175	55	185	135	25	270	895	735	30	255	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	83	182	57	193	141	26	281	932	0	31	266	104
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	453	234	73	537	410	76	529	1278		248	607	231
Arrive On Green	0.06	0.17	0.17	0.15	0.27	0.27	0.15	0.36	0.00	0.03	0.24	0.24
Sat Flow, veh/h	1795	1370	429	3483	1547	285	1795	3582	2812	1781	2513	957
Grp Volume(v), veh/h	83	0	239	193	0	167	281	932	0	31	186	184
Grp Sat Flow(s),veh/h/ln	1795	0	1798	1742	0	1833	1795	1791	1406	1781	1777	1693
Q Serve(g_s), s	2.1	0.0	8.2	3.2	0.0	4.8	7.3	14.7	0.0	0.7	5.8	6.0
Cycle Q Clear(g_c), s	2.1	0.0	8.2	3.2	0.0	4.8	7.3	14.7	0.0	0.7	5.8	6.0
Prop In Lane	1.00		0.24	1.00		0.16	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	453	0	307	537	0	486	529	1278		248	429	409
V/C Ratio(X)	0.18	0.00	0.78	0.36	0.00	0.34	0.53	0.73		0.12	0.43	0.45
Avail Cap(c_a), veh/h	636	0	430	1370	0	486	692	1933		615	959	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	25.7	24.6	0.0	19.3	14.7	18.1	0.0	14.0	20.8	20.9
Incr Delay (d2), s/veh	0.1	0.0	5.9	0.5	0.0	0.4	0.6	0.8	0.0	0.2	0.7	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	0.8	0.0	3.8	1.3	0.0	2.0	2.8	5.6	0.0	0.3	2.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	0.0	31.6	25.0	0.0	19.7	15.3	18.9	0.0	14.2	21.5	21.7
LnGrp LOS	B	A	C	C	A	B	B	B		B	C	C
Approach Vol, veh/h		322			360			1213			401	
Approach Delay, s/veh		27.5			22.6			18.1			21.0	
Approach LOS		C			C			B			C	

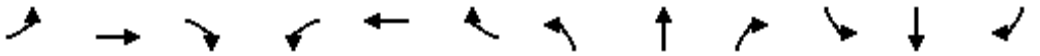
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	28.1	14.5	15.6	14.1	20.7	8.4	21.7
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5
Max Green Setting (Gmax), s	15.5	35.0	25.5	15.5	15.5	35.0	10.5	15.5
Max Q Clear Time (g_c+I1), s	2.7	16.7	5.2	10.2	9.3	8.0	4.1	6.8
Green Ext Time (p_c), s	0.0	6.5	0.8	0.6	0.3	2.3	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

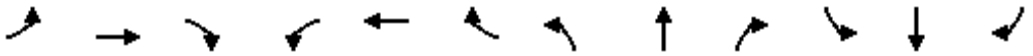
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	915	5	5	295	5	30	0	15	5	0	10
Future Volume (vph)	25	915	5	5	295	5	30	0	15	5	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3536		1769	3530		1804	1615		1805	1595	
Flt Permitted	0.55	1.00		0.23	1.00		1.00	1.00		1.00	1.00	
Satd. Flow (perm)	1018	3536		428	3530		1899	1615		1900	1595	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	28	1040	6	6	335	6	34	0	17	6	0	11
RTOR Reduction (vph)	0	0	0	0	1	0	0	16	0	0	10	0
Lane Group Flow (vph)	28	1046	0	6	340	0	34	1	0	6	1	0
Confl. Peds. (#/hr)			2	2			1					1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	36.4	31.2		31.4	36.4		3.5	2.8		3.5	2.7	
Effective Green, g (s)	36.4	31.2		31.4	36.4		3.5	2.8		3.5	2.7	
Actuated g/C Ratio	0.68	0.58		0.58	0.68		0.06	0.05		0.06	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	3.5		3.0	3.5		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	687	2046		254	2383		121	83		122	79	
v/s Ratio Prot		c0.30		0.00	c0.10		c0.00	0.00		0.00	0.00	
v/s Ratio Perm	0.03			0.01			c0.01			0.00		
v/c Ratio	0.04	0.51		0.02	0.14		0.28	0.01		0.05	0.01	
Uniform Delay, d1	2.9	6.8		4.9	3.1		23.8	24.2		23.7	24.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.3		0.0	0.0		1.3	0.1		0.2	0.0	
Delay (s)	2.9	7.0		5.0	3.2		25.1	24.3		23.8	24.4	
Level of Service	A	A		A	A		C	C		C	C	
Approach Delay (s)		6.9			3.2			24.8			24.2	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	53.9	Sum of lost time (s)	19.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

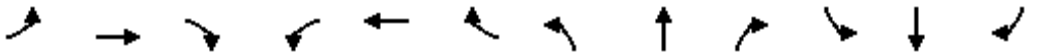
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	630	490	40	395	55	515	855	115	75	530	470
Future Volume (veh/h)	415	630	490	40	395	55	515	855	115	75	530	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	441	670	521	43	420	59	548	910	122	80	564	500
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	1	1	1	1	1	1
Cap, veh/h	277	628	530	55	338	47	335	1286	172	102	497	438
Arrive On Green	0.15	0.33	0.33	0.03	0.21	0.21	0.19	0.41	0.41	0.06	0.28	0.28
Sat Flow, veh/h	1795	1885	1592	1795	1616	227	1795	3162	424	1795	1791	1580
Grp Volume(v), veh/h	441	670	521	43	0	479	548	515	517	80	564	500
Grp Sat Flow(s),veh/h/ln	1795	1885	1592	1795	0	1843	1795	1791	1794	1795	1791	1580
Q Serve(g_s), s	17.0	36.6	35.7	2.6	0.0	23.0	20.5	26.4	26.4	4.8	30.5	30.5
Cycle Q Clear(g_c), s	17.0	36.6	35.7	2.6	0.0	23.0	20.5	26.4	26.4	4.8	30.5	30.5
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	277	628	530	55	0	385	335	728	730	102	497	438
V/C Ratio(X)	1.59	1.07	0.98	0.78	0.00	1.24	1.64	0.71	0.71	0.78	1.14	1.14
Avail Cap(c_a), veh/h	277	628	530	73	0	385	335	728	730	126	497	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	36.7	36.4	52.9	0.0	43.5	44.8	27.2	27.2	51.2	39.8	39.8
Incr Delay (d2), s/veh	281.7	55.3	34.6	31.0	0.0	129.6	300.2	3.2	3.2	22.3	83.3	87.6
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	29.2	26.1	18.6	1.7	0.0	24.2	36.9	11.7	11.7	2.8	24.7	22.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	328.2	92.0	71.0	83.9	0.0	173.1	345.0	30.3	30.3	73.5	123.1	127.3
LnGrp LOS	F	F	E	F	A	F	F	C	C	E	F	F
Approach Vol, veh/h		1632			522			1580			1144	
Approach Delay, s/veh		149.1			165.7			139.5			121.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	49.2	8.4	41.6	25.0	35.0	22.0	28.0
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	7.7	43.3	4.5	35.5	20.5	30.5	17.0	23.0
Max Q Clear Time (g_c+I1), s	6.8	28.4	4.6	38.6	22.5	32.5	19.0	25.0
Green Ext Time (p_c), s	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0

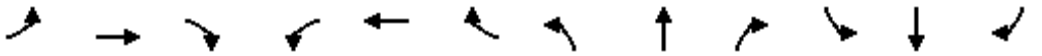
Intersection Summary	
HCM 6th Ctrl Delay	141.3
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	135	25	190	210	175	35	1150	215	150	570	100
Future Volume (veh/h)	100	135	25	190	210	175	35	1150	215	150	570	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	104	141	26	198	219	182	36	1198	224	156	594	104
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	1	1	1	3	3	3
Cap, veh/h	185	386	71	375	240	199	379	1291	239	207	1398	244
Arrive On Green	0.05	0.26	0.26	0.05	0.26	0.26	0.03	0.43	0.43	0.07	0.47	0.47
Sat Flow, veh/h	1753	1507	278	1781	937	778	1795	2999	556	1767	2995	523
Grp Volume(v), veh/h	104	0	167	198	0	401	36	711	711	156	349	349
Grp Sat Flow(s),veh/h/ln	1753	0	1785	1781	0	1715	1795	1791	1764	1767	1763	1755
Q Serve(g_s), s	4.5	0.0	7.8	5.0	0.0	23.1	1.0	38.2	39.1	4.9	13.4	13.5
Cycle Q Clear(g_c), s	4.5	0.0	7.8	5.0	0.0	23.1	1.0	38.2	39.1	4.9	13.4	13.5
Prop In Lane	1.00		0.16	1.00		0.45	1.00		0.32	1.00		0.30
Lane Grp Cap(c), veh/h	185	0	458	375	0	440	379	771	759	207	823	819
V/C Ratio(X)	0.56	0.00	0.37	0.53	0.00	0.91	0.10	0.92	0.94	0.75	0.42	0.43
Avail Cap(c_a), veh/h	185	0	491	375	0	472	410	792	780	210	823	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	31.0	31.1	0.0	36.7	14.0	27.4	27.6	23.2	18.0	18.1
Incr Delay (d2), s/veh	2.4	0.0	0.2	0.7	0.0	20.3	0.0	15.9	18.0	12.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	3.4	1.9	0.0	12.0	0.4	19.0	19.5	2.6	5.4	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	31.2	31.8	0.0	57.1	14.1	43.2	45.7	35.8	18.3	18.3
LnGrp LOS	C	A	C	C	A	E	B	D	D	D	B	B
Approach Vol, veh/h		271			599			1458			854	
Approach Delay, s/veh		31.3			48.7			43.7			21.5	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	48.8	10.0	31.1	8.2	52.5	10.0	31.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	45.0	5.0	28.0	5.0	47.0	5.0	28.0
Max Q Clear Time (g_c+I1), s	6.9	41.1	7.0	9.8	3.0	15.5	6.5	25.1
Green Ext Time (p_c), s	0.0	2.7	0.0	0.5	0.0	3.9	0.0	0.5

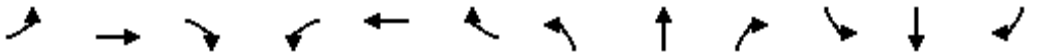
Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	40	40	60	60	35	45	1090	40	20	645	40
Future Volume (vph)	95	40	40	60	60	35	45	1090	40	20	645	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1802	1746		1751	1733		1787	3550		1769	3504	
Flt Permitted	0.69	1.00		0.70	1.00		0.33	1.00		0.14	1.00	
Satd. Flow (perm)	1313	1746		1295	1733		615	3550		270	3504	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	42	42	63	63	37	47	1147	42	21	679	42
RTOR Reduction (vph)	0	35	0	0	31	0	0	3	0	0	4	0
Lane Group Flow (vph)	100	49	0	63	69	0	47	1186	0	21	717	0
Confl. Peds. (#/hr)	4		2	2		4	3		13	13		3
Heavy Vehicles (%)	0%	0%	0%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	12.4	10.1		12.4	9.2		31.2	30.7		31.2	29.8	
Effective Green, g (s)	12.4	10.1		12.4	9.2		31.2	30.7		31.2	29.8	
Actuated g/C Ratio	0.20	0.16		0.20	0.15		0.51	0.50		0.51	0.48	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.0		2.5	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	289	286		277	258		338	1769		148	1695	
v/s Ratio Prot	c0.02	0.03		0.01	0.04		c0.00	c0.33		0.00	0.20	
v/s Ratio Perm	c0.05			0.04			0.07			0.07		
v/c Ratio	0.35	0.17		0.23	0.27		0.14	0.67		0.14	0.42	
Uniform Delay, d1	20.8	22.1		20.4	23.2		7.8	11.6		8.8	10.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.1		0.3	0.2		0.1	0.9		0.2	0.1	
Delay (s)	21.3	22.3		20.7	23.4		7.9	12.6		9.0	10.4	
Level of Service	C	C		C	C		A	B		A	B	
Approach Delay (s)		21.8			22.4			12.4			10.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	5	5	15	5	15	5	1075	20	5	725	20
Future Volume (veh/h)	40	5	5	15	5	15	5	1075	20	5	725	20
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	0.98		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	43	5	5	16	5	16	5	1144	21	5	771	21
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, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	327	38	19	199	68	96	457	1802	33	337	1784	49
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.01	0.50	0.50	0.01	0.50	0.50
Sat Flow, veh/h	1076	279	141	421	492	696	1795	3597	66	1795	3561	97
Grp Volume(v), veh/h	53	0	0	37	0	0	5	569	596	5	388	404
Grp Sat Flow(s),veh/h/ln	1495	0	0	1609	0	0	1795	1791	1873	1795	1791	1867
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.1	8.5	8.5	0.1	5.0	5.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0	0.7	0.0	0.0	0.1	8.5	8.5	0.1	5.0	5.0
Prop In Lane	0.81		0.09	0.43		0.43	1.00		0.04	1.00		0.05
Lane Grp Cap(c), veh/h	385	0	0	363	0	0	457	897	938	337	897	935
V/C Ratio(X)	0.14	0.00	0.00	0.10	0.00	0.00	0.01	0.63	0.63	0.01	0.43	0.43
Avail Cap(c_a), veh/h	1211	0	0	1241	0	0	643	1323	1383	524	1323	1379
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	0.0	13.9	0.0	0.0	4.8	6.7	6.7	5.5	5.8	5.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.2	0.0	0.0	0.0	2.0	2.1	0.0	1.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.0	0.0	13.9	0.0	0.0	4.8	7.4	7.4	5.5	6.1	6.1
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		53			37			1170			797	
Approach Delay, s/veh		14.1			13.9			7.4			6.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	22.8		9.0	4.7	22.8		9.0				
Change Period (Y+Rc), s	4.5	4.5		4.0	4.5	4.5		4.0				
Max Green Setting (Gmax), s	4.0	27.0		26.0	4.0	27.0		26.0				
Max Q Clear Time (g_c+I1), s	2.1	10.5		3.0	2.1	7.0		2.7				
Green Ext Time (p_c), s	0.0	7.3		0.2	0.0	5.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		7.2
HCM 6th LOS		A

MOVEMENT SUMMARY

Site: 5 [I-5 SB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2033 Without-Project)]

Future (2033) Without-Project PM Peak Hour
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
East: SR 528 (4th St)														
1	L2	625	3.0	665	3.0	0.542	9.7	LOS A	0.0	0.0	0.00	0.65	0.00	35.2
6	T1	800	3.0	851	3.0	0.542	3.6	LOS A	0.0	0.0	0.00	0.40	0.00	38.0
Approach		1425	3.0	1516	3.0	0.542	6.3	LOS A	0.0	0.0	0.00	0.51	0.00	36.7
North: I-5 SB Off-Ramp														
7	L2	375	1.0	399	1.0	0.458	15.0	LOS B	2.5	62.3	0.72	0.97	0.91	32.4
4	T1	5	1.0	5	1.0	0.458	8.9	LOS A	2.5	62.3	0.72	0.97	0.91	32.3
14	R2	290	1.0	309	1.0	0.472	11.3	LOS B	2.4	60.4	0.73	0.93	0.97	32.8
Approach		670	1.0	713	1.0	0.472	13.4	LOS B	2.5	62.3	0.72	0.95	0.93	32.5
West: SR 528 (4th St)														
2	T1	540	1.0	574	1.0	0.460	15.5	LOS B	4.4	110.8	0.99	1.02	1.15	31.9
12	R2	530	1.0	564	1.0	0.340	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1070	1.0	1138	1.0	0.460	9.7	LOS A	4.4	110.8	0.50	0.74	0.58	34.2
All Vehicles		3165	1.9	3367	1.9	0.542	8.9	LOS A	4.4	110.8	0.32	0.68	0.39	34.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

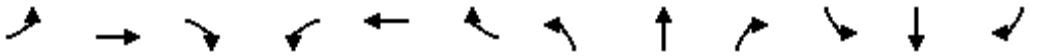
Site: 6 [I-5 NB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2033 Without-Project)]

Future (2033) Without-Project PM Peak HOur
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: I-5 NB Off-Ramp														
3	L2	430	3.0	453	3.0	0.364	11.7	LOS B	1.6	41.5	0.56	0.81	0.56	33.6
8	T1	15	3.0	16	3.0	0.364	5.6	LOS A	1.6	41.5	0.56	0.81	0.56	33.6
18	R2	875	3.0	921	3.0	0.429	7.3	LOS A	2.3	59.8	0.64	0.84	0.72	34.8
Approach		1320	3.0	1389	3.0	0.429	8.7	LOS A	2.3	59.8	0.61	0.83	0.67	34.4
East: SR 528 (4th St)														
6	T1	955	2.0	1005	2.0	0.547	9.5	LOS A	5.3	135.6	0.87	0.90	1.01	34.8
16	R2	530	2.0	558	2.0	0.340	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1485	2.0	1563	2.0	0.547	7.5	LOS A	5.3	135.6	0.56	0.74	0.65	35.5
West: SR 528 (4th St)														
5	L2	175	2.0	184	2.0	0.330	9.7	LOS A	0.0	0.0	0.00	0.53	0.00	36.9
2	T1	710	2.0	747	2.0	0.330	3.6	LOS A	0.0	0.0	0.00	0.43	0.00	37.8
Approach		885	2.0	932	2.0	0.330	4.8	LOS A	0.0	0.0	0.00	0.45	0.00	37.6
All Vehicles		3690	2.4	3884	2.4	0.547	7.3	LOS A	5.3	135.6	0.44	0.70	0.50	35.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



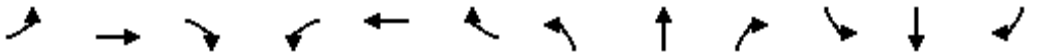
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1190	15	20	955	25	85	155	40	60	55	325
Future Volume (veh/h)	350	1190	15	20	955	25	85	155	40	60	55	325
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	376	1280	16	22	1027	27	91	167	43	65	59	349
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, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	406	1942	24	40	1174	31	361	354	91	311	450	378
Arrive On Green	0.23	0.54	0.54	0.02	0.33	0.33	0.05	0.25	0.25	0.04	0.24	0.24
Sat Flow, veh/h	1781	3594	45	1767	3508	92	1781	1432	369	1781	1870	1573
Grp Volume(v), veh/h	376	633	663	22	516	538	91	0	210	65	59	349
Grp Sat Flow(s),veh/h/ln	1781	1777	1862	1767	1763	1837	1781	0	1801	1781	1870	1573
Q Serve(g_s), s	22.0	27.1	27.1	1.3	29.4	29.4	4.1	0.0	10.6	2.9	2.6	23.1
Cycle Q Clear(g_c), s	22.0	27.1	27.1	1.3	29.4	29.4	4.1	0.0	10.6	2.9	2.6	23.1
Prop In Lane	1.00		0.02	1.00		0.05	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	406	960	1006	40	590	615	361	0	445	311	450	378
V/C Ratio(X)	0.93	0.66	0.66	0.55	0.88	0.88	0.25	0.00	0.47	0.21	0.13	0.92
Avail Cap(c_a), veh/h	484	1033	1082	83	628	654	361	0	456	324	473	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	17.5	17.5	51.6	33.4	33.4	28.6	0.0	34.2	28.7	31.8	39.5
Incr Delay (d2), s/veh	20.2	1.7	1.6	4.4	13.1	12.6	0.4	0.0	0.6	0.1	0.1	25.9
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	11.8	11.0	11.5	0.6	14.4	14.9	1.8	0.0	4.7	1.2	1.2	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	19.2	19.1	56.0	46.5	46.0	29.0	0.0	34.8	28.8	31.9	65.4
LnGrp LOS	E	B	B	E	D	D	C	A	C	C	C	E
Approach Vol, veh/h		1672			1076			301			473	
Approach Delay, s/veh		28.4			46.4			33.0			56.2	
Approach LOS		C			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	61.6	9.0	29.6	28.3	39.7	8.3	30.4
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	5.0	62.0	5.0	27.0	29.0	38.0	5.0	27.0
Max Q Clear Time (g_c+I1), s	3.3	29.1	6.1	25.1	24.0	31.4	4.9	12.6
Green Ext Time (p_c), s	0.0	16.2	0.0	0.3	0.3	4.3	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

Notes

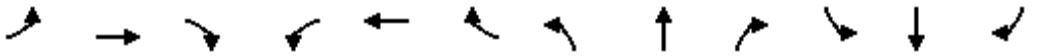
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	835	45	100	590	130	135	720	150	215	335	235
Future Volume (veh/h)	270	835	45	100	590	130	135	720	150	215	335	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	281	870	47	104	615	135	141	750	156	224	349	245
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	2	2	2
Cap, veh/h	360	1167	63	244	735	161	361	875	182	305	671	462
Arrive On Green	0.14	0.34	0.34	0.06	0.26	0.26	0.07	0.30	0.30	0.11	0.34	0.34
Sat Flow, veh/h	1795	3455	187	1767	2871	629	1795	2942	612	1781	1999	1376
Grp Volume(v), veh/h	281	451	466	104	377	373	141	457	449	224	309	285
Grp Sat Flow(s),veh/h/ln	1795	1791	1850	1767	1763	1737	1795	1791	1762	1781	1777	1598
Q Serve(g_s), s	10.7	21.1	21.1	3.6	19.2	19.3	4.8	22.8	22.8	8.1	13.3	13.7
Cycle Q Clear(g_c), s	10.7	21.1	21.1	3.6	19.2	19.3	4.8	22.8	22.8	8.1	13.3	13.7
Prop In Lane	1.00		0.10	1.00		0.36	1.00		0.35	1.00		0.86
Lane Grp Cap(c), veh/h	360	605	625	244	451	445	361	533	524	305	596	536
V/C Ratio(X)	0.78	0.75	0.75	0.43	0.84	0.84	0.39	0.86	0.86	0.74	0.52	0.53
Avail Cap(c_a), veh/h	491	807	833	300	578	570	405	642	632	411	768	691
HCM Platoon Ratio	1.00	1.00	1.00	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	23.4	27.8	27.8	21.4	33.4	33.4	19.3	31.4	31.4	22.9	25.3	25.5
Incr Delay (d2), s/veh	4.8	2.2	2.1	0.9	7.6	7.9	0.5	9.1	9.3	3.7	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	4.8	9.1	9.4	1.5	9.0	8.9	2.0	10.9	10.8	3.6	5.6	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	30.0	29.9	22.3	41.0	41.4	19.8	40.5	40.7	26.6	25.9	26.1
LnGrp LOS	C	C	C	C	D	D	B	D	D	C	C	C
Approach Vol, veh/h		1198			854			1047			818	
Approach Delay, s/veh		29.6			38.9			37.8			26.1	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	36.5	11.7	36.8	17.5	28.8	15.3	33.2
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	8.3	42.7	9.0	41.0	19.9	31.1	16.0	34.0
Max Q Clear Time (g_c+I1), s	5.6	23.1	6.8	15.7	12.7	21.3	10.1	24.8
Green Ext Time (p_c), s	0.0	4.9	0.1	3.3	0.4	2.9	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	975	20	130	645	140	150	370	385	325	135	80
Future Volume (veh/h)	150	975	20	130	645	140	150	370	385	325	135	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	155	1005	21	134	665	144	155	381	397	335	139	82
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, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	289	1170	24	230	931	201	479	471	397	396	375	221
Arrive On Green	0.08	0.33	0.33	0.07	0.32	0.32	0.07	0.25	0.25	0.16	0.34	0.34
Sat Flow, veh/h	1795	3587	75	1795	2927	633	1795	1885	1586	1810	1118	659
Grp Volume(v), veh/h	155	502	524	134	407	402	155	381	397	335	0	221
Grp Sat Flow(s),veh/h/ln	1795	1791	1872	1795	1791	1769	1795	1885	1586	1810	0	1777
Q Serve(g_s), s	5.7	26.2	26.2	4.9	20.0	20.1	5.6	19.0	25.0	13.5	0.0	9.4
Cycle Q Clear(g_c), s	5.7	26.2	26.2	4.9	20.0	20.1	5.6	19.0	25.0	13.5	0.0	9.4
Prop In Lane	1.00		0.04	1.00		0.36	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	289	584	610	230	570	563	479	471	397	396	0	596
V/C Ratio(X)	0.54	0.86	0.86	0.58	0.71	0.71	0.32	0.81	1.00	0.85	0.00	0.37
Avail Cap(c_a), veh/h	295	584	610	233	570	563	479	471	397	404	0	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	1.00	1.00	1.00	0.77	0.77	0.77	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.7	31.5	31.5	24.3	30.1	30.1	19.9	35.2	37.5	24.4	0.0	25.2
Incr Delay (d2), s/veh	0.8	9.2	8.8	3.1	7.4	7.6	0.2	7.7	40.0	14.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	12.5	13.0	2.2	9.6	9.5	2.3	9.6	13.9	7.2	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	40.7	40.4	27.4	37.5	37.7	20.1	43.0	77.5	39.2	0.0	25.5
LnGrp LOS	C	D	D	C	D	D	C	D	F	D	A	C
Approach Vol, veh/h		1181			943			933			556	
Approach Delay, s/veh		38.3			36.1			53.8			33.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	37.6	12.0	38.6	12.6	36.8	20.6	30.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	32.0	7.0	34.0	8.0	31.0	16.0	25.0
Max Q Clear Time (g_c+I1), s	6.9	28.2	7.6	11.4	7.7	22.1	15.5	27.0
Green Ext Time (p_c), s	0.0	2.0	0.0	1.0	0.0	2.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

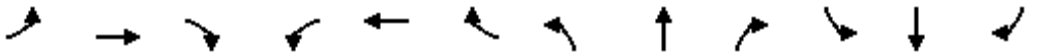
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1510	160	45	900	5	25	5	170	5	5	5
Future Volume (veh/h)	15	1510	160	45	900	5	25	5	170	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	16	1589	168	47	947	5	26	5	179	5	5	5
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	3	3	3	1	1	1
Cap, veh/h	432	1971	206	234	2311	12	282	7	247	91	84	55
Arrive On Green	0.02	0.60	0.60	0.04	0.63	0.63	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1795	3272	342	1795	3653	19	1379	42	1511	156	516	336
Grp Volume(v), veh/h	16	861	896	47	464	488	26	0	184	15	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1823	1795	1791	1882	1379	0	1554	1008	0	0
Q Serve(g_s), s	0.2	26.8	28.0	0.7	9.4	9.4	0.0	0.0	8.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	26.8	28.0	0.7	9.4	9.4	1.6	0.0	8.2	8.2	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.01	1.00		0.97	0.33		0.33
Lane Grp Cap(c), veh/h	432	1079	1098	234	1133	1190	282	0	254	230	0	0
V/C Ratio(X)	0.04	0.80	0.82	0.20	0.41	0.41	0.09	0.00	0.73	0.07	0.00	0.00
Avail Cap(c_a), veh/h	529	1253	1275	282	1258	1321	436	0	426	397	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.1	11.1	11.3	11.2	6.6	6.6	26.2	0.0	28.9	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	3.7	0.2	0.2	0.2	0.1	0.0	1.5	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	0.1	9.5	10.2	0.3	2.9	3.1	0.4	0.0	3.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	14.3	15.0	11.4	6.9	6.9	26.2	0.0	30.4	25.9	0.0	0.0
LnGrp LOS	A	B	B	B	A	A	C	A	C	C	A	A
Approach Vol, veh/h		1773			999			210			15	
Approach Delay, s/veh		14.6			7.1			29.9			25.9	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	48.9		15.9	5.9	51.1		15.9				
Change Period (Y+Rc), s	5.0	5.0		4.0	4.5	5.0		4.0				
Max Green Setting (Gmax), s	5.0	51.0		20.0	5.3	51.2		20.0				
Max Q Clear Time (g_c+I1), s	2.7	30.0		10.2	2.2	11.4		10.2				
Green Ext Time (p_c), s	0.0	13.9		0.0	0.0	7.5		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		13.2
HCM 6th LOS		B

Notes

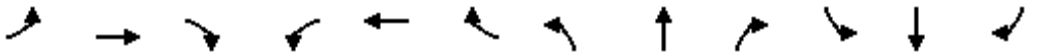
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	980	195	100	590	135	190	315	95	150	315	140
Future Volume (veh/h)	255	980	195	100	590	135	190	315	95	150	315	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	258	990	197	101	596	136	192	318	96	152	318	141
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	378	1159	230	193	932	212	271	423	128	298	355	158
Arrive On Green	0.11	0.39	0.39	0.05	0.32	0.32	0.09	0.30	0.30	0.08	0.29	0.29
Sat Flow, veh/h	1795	2974	591	1781	2870	653	1795	1389	419	1795	1236	548
Grp Volume(v), veh/h	258	595	592	101	368	364	192	0	414	152	0	459
Grp Sat Flow(s),veh/h/ln	1795	1791	1774	1781	1777	1747	1795	0	1808	1795	0	1784
Q Serve(g_s), s	10.5	33.8	33.9	3.7	19.6	19.7	8.2	0.0	22.9	6.4	0.0	27.4
Cycle Q Clear(g_c), s	10.5	33.8	33.9	3.7	19.6	19.7	8.2	0.0	22.9	6.4	0.0	27.4
Prop In Lane	1.00		0.33	1.00		0.37	1.00		0.23	1.00		0.31
Lane Grp Cap(c), veh/h	378	698	691	193	577	567	271	0	551	298	0	513
V/C Ratio(X)	0.68	0.85	0.86	0.52	0.64	0.64	0.71	0.00	0.75	0.51	0.00	0.90
Avail Cap(c_a), veh/h	528	951	943	233	720	708	345	0	733	371	0	691
HCM Platoon Ratio	1.00	1.00	1.00	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	23.1	31.0	31.0	25.1	32.0	32.0	28.0	0.0	34.8	26.1	0.0	38.0
Incr Delay (d2), s/veh	0.8	5.2	5.4	0.8	1.0	1.0	4.0	0.0	3.1	1.4	0.0	11.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	15.2	15.2	1.6	8.5	8.4	3.8	0.0	10.4	2.8	0.0	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	36.2	36.4	25.9	32.9	33.0	32.0	0.0	37.9	27.4	0.0	49.4
LnGrp LOS	C	D	D	C	C	C	C	A	D	C	A	D
Approach Vol, veh/h		1445			833			606			611	
Approach Delay, s/veh		34.1			32.1			36.0			43.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	48.3	15.4	36.9	17.7	41.1	13.4	38.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	59.0	15.0	43.0	22.0	45.0	13.0	45.0
Max Q Clear Time (g_c+I1), s	5.7	35.9	10.2	29.4	12.5	21.7	8.4	24.9
Green Ext Time (p_c), s	0.0	7.4	0.2	2.5	0.3	4.0	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	705	130	75	605	160	100	110	80	115	65	80
Future Volume (vph)	155	705	130	75	605	160	100	110	80	115	65	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99			1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1769	1863	1548	1770	3409			1738			1822	1575
Flt Permitted	0.28	1.00	1.00	0.14	1.00			0.79			0.58	1.00
Satd. Flow (perm)	530	1863	1548	253	3409			1395			1087	1575
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	160	727	134	77	624	165	103	113	82	119	67	82
RTOR Reduction (vph)	0	0	73	0	29	0	0	19	0	0	0	62
Lane Group Flow (vph)	160	727	61	77	760	0	0	279	0	0	186	20
Confl. Peds. (#/hr)	3		1	1		3	3		2	2		3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6		2	2			8			4		4
Actuated Green, G (s)	33.3	29.7	29.7	33.3	27.7			16.8			16.3	16.3
Effective Green, g (s)	33.3	29.7	29.7	33.3	27.7			16.8			16.3	16.3
Actuated g/C Ratio	0.51	0.45	0.45	0.51	0.42			0.26			0.25	0.25
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0			2.5			2.5	2.5
Lane Grp Cap (vph)	374	843	700	211	1439			357			270	391
v/s Ratio Prot	c0.04	c0.39		0.02	0.22							
v/s Ratio Perm	0.18		0.04	0.16				c0.20			0.17	0.01
v/c Ratio	0.43	0.86	0.09	0.36	0.53			0.78			0.69	0.05
Uniform Delay, d1	9.0	16.1	10.2	11.5	14.1			22.7			22.4	18.8
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.3	9.3	0.1	0.4	0.5			10.2			6.5	0.0
Delay (s)	9.3	25.5	10.3	11.9	14.5			32.9			28.9	18.8
Level of Service	A	C	B	B	B			C			C	B
Approach Delay (s)		20.9			14.3			32.9			25.8	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	375	490	545	960	825	190
Future Volume (veh/h)	375	490	545	960	825	190
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	383	500	556	980	842	194
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	442	394	654	1151	773	655
Arrive On Green	0.25	0.25	0.15	0.62	0.42	0.42
Sat Flow, veh/h	1767	1572	3428	1856	1856	1572
Grp Volume(v), veh/h	383	500	556	980	842	194
Grp Sat Flow(s),veh/h/ln	1767	1572	1714	1856	1856	1572
Q Serve(g_s), s	23.5	28.3	13.5	48.0	47.1	9.3
Cycle Q Clear(g_c), s	23.5	28.3	13.5	48.0	47.1	9.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	442	394	654	1151	773	655
V/C Ratio(X)	0.87	1.27	0.85	0.85	1.09	0.30
Avail Cap(c_a), veh/h	442	394	1016	1151	773	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	42.4	34.0	17.2	33.0	21.9
Incr Delay (d2), s/veh	16.5	140.3	4.3	6.6	59.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	37.0	7.9	21.3	33.5	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	57.1	182.6	38.3	23.9	92.4	22.4
LnGrp LOS	E	F	D	C	F	C
Approach Vol, veh/h	883			1536	1036	
Approach Delay, s/veh	128.2			29.1	79.2	
Approach LOS	F			C	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.1		35.0	23.1	55.0
Change Period (Y+Rc), s		7.9		6.7	5.7	7.9
Max Green Setting (Gmax), s		47.1		28.3	29.3	47.1
Max Q Clear Time (g_c+I1), s		50.0		30.3	15.5	49.1
Green Ext Time (p_c), s		0.0		0.0	1.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	69.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

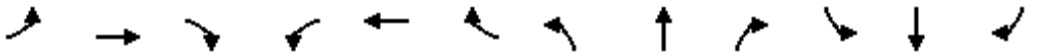
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	155	160	35	5	35	75	80	0	885	85	55	310
Future Volume (vph)	155	160	35	5	35	75	80	0	885	85	55	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Lane Util. Factor	1.00	1.00				1.00	1.00		0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00				1.00	0.98		1.00		1.00	0.99
Flpb, ped/bikes	0.99	1.00				1.00	1.00		1.00		1.00	1.00
Frt	1.00	0.97				1.00	0.85		0.99		1.00	0.96
Flt Protected	0.95	1.00				0.98	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1775	1826				1848	1567		3485		1752	3324
Flt Permitted	0.68	1.00				0.84	1.00		1.00		0.17	1.00
Satd. Flow (perm)	1265	1826				1581	1567		3485		310	3324
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	174	38	5	38	82	87	0	962	92	60	337
RTOR Reduction (vph)	0	18	0	0	0	0	66	0	10	0	0	51
Lane Group Flow (vph)	168	194	0	0	0	125	21	0	1044	0	60	427
Confl. Peds. (#/hr)	12		4		4		12	4		6	6	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%
Turn Type	Perm	NA		Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA
Protected Phases		4				8		5	2		1	6
Permitted Phases	4			8	8		8	2			6	
Actuated Green, G (s)	11.0	11.0				11.0	11.0		19.3		25.1	25.1
Effective Green, g (s)	11.0	11.0				11.0	11.0		19.3		25.1	25.1
Actuated g/C Ratio	0.25	0.25				0.25	0.25		0.43		0.56	0.56
Clearance Time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0				2.0	2.0		2.5		2.0	2.5
Lane Grp Cap (vph)	311	450				389	386		1508		216	1870
v/s Ratio Prot		0.11							c0.30		0.01	c0.13
v/s Ratio Perm	c0.13					0.08	0.01				0.15	
v/c Ratio	0.54	0.43				0.32	0.06		0.69		0.28	0.23
Uniform Delay, d1	14.6	14.2				13.7	12.8		10.2		6.0	4.9
Progression Factor	1.00	1.00				1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.0	0.2				0.2	0.0		1.3		0.3	0.0
Delay (s)	15.6	14.4				13.9	12.9		11.5		6.3	4.9
Level of Service	B	B				B	B		B		A	A
Approach Delay (s)		14.9				13.5			11.5			5.1
Approach LOS		B				B			B			A

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	44.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	130
Future Volume (vph)	130
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	141
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

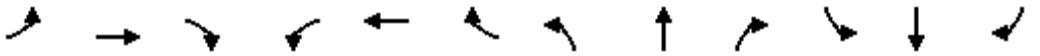
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	220	5	115	115	210	0	665	470	0	195	55
Future Volume (veh/h)	55	220	5	115	115	210	0	665	470	0	195	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	0	1885	1885	0	1870	1870
Adj Flow Rate, veh/h	57	227	5	119	119	216	0	686	485	0	201	57
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, %	1	1	1	1	1	1	0	1	1	0	2	2
Cap, veh/h	211	423	354	193	141	255	0	1092	1013	0	1592	440
Arrive On Green	0.04	0.22	0.22	0.06	0.24	0.24	0.00	0.58	0.58	0.00	0.58	0.58
Sat Flow, veh/h	1795	1885	1578	3483	595	1081	0	1885	1596	0	2843	760
Grp Volume(v), veh/h	57	227	5	119	0	335	0	686	485	0	128	130
Grp Sat Flow(s),veh/h/ln	1795	1885	1578	1742	0	1676	0	1885	1596	0	1777	1733
Q Serve(g_s), s	2.0	9.0	0.2	2.8	0.0	16.2	0.0	20.5	13.6	0.0	2.8	2.9
Cycle Q Clear(g_c), s	2.0	9.0	0.2	2.8	0.0	16.2	0.0	20.5	13.6	0.0	2.8	2.9
Prop In Lane	1.00		1.00	1.00		0.64	0.00		1.00	0.00		0.44
Lane Grp Cap(c), veh/h	211	423	354	193	0	396	0	1092	1013	0	1029	1003
V/C Ratio(X)	0.27	0.54	0.01	0.62	0.00	0.85	0.00	0.63	0.48	0.00	0.12	0.13
Avail Cap(c_a), veh/h	238	510	427	369	0	532	0	1092	1013	0	1029	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.87	0.87
Uniform Delay (d), s/veh	24.4	29.1	25.6	39.3	0.0	31.0	0.0	11.8	8.2	0.0	8.1	8.1
Incr Delay (d2), s/veh	0.5	0.8	0.0	2.4	0.0	8.4	0.0	2.7	1.6	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.1	0.1	1.3	0.0	7.3	0.0	8.4	16.1	0.0	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	29.8	25.7	41.7	0.0	39.4	0.0	14.6	9.8	0.0	8.3	8.4
LnGrp LOS	C	C	C	D	A	D	A	B	A	A	A	A
Approach Vol, veh/h		289			454			1171			258	
Approach Delay, s/veh		28.8			40.0			12.6			8.4	
Approach LOS		C			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	23.1		53.2	7.7	24.1		53.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	23.0		41.0	5.0	27.0		41.0				
Max Q Clear Time (g_c+I1), s	4.8	11.0		4.9	4.0	18.2		22.5				
Green Ext Time (p_c), s	0.1	0.8		1.3	0.0	1.2		5.3				

Intersection Summary												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	530	0	0	455	60	5	15	20	115	0	45
Future Volume (veh/h)	200	530	0	0	455	60	5	15	20	115	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1737	1737	1737	1856	1856	1856
Adj Flow Rate, veh/h	215	570	0	0	489	65	5	16	22	124	0	48
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	3	3	3	11	11	11	3	3	3
Cap, veh/h	279	1202	0	4	619	82	98	118	136	298	13	69
Arrive On Green	0.16	0.64	0.00	0.00	0.39	0.39	0.17	0.17	0.17	0.17	0.00	0.17
Sat Flow, veh/h	1795	1885	0	1767	1603	213	71	696	804	974	77	407
Grp Volume(v), veh/h	215	570	0	0	0	554	43	0	0	172	0	0
Grp Sat Flow(s),veh/h/ln	1795	1885	0	1767	0	1816	1571	0	0	1459	0	0
Q Serve(g_s), s	5.4	7.3	0.0	0.0	0.0	12.6	0.0	0.0	0.0	4.0	0.0	0.0
Cycle Q Clear(g_c), s	5.4	7.3	0.0	0.0	0.0	12.6	1.1	0.0	0.0	5.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.12	0.12		0.51	0.72		0.28
Lane Grp Cap(c), veh/h	279	1202	0	4	0	701	352	0	0	380	0	0
V/C Ratio(X)	0.77	0.47	0.00	0.00	0.00	0.79	0.12	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	596	1695	0	189	0	1225	731	0	0	729	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	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.9	4.4	0.0	0.0	0.0	12.7	16.6	0.0	0.0	18.1	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.3	0.0	0.0	0.0	2.0	0.2	0.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.6	0.0	0.0	0.0	4.4	0.4	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	4.7	0.0	0.0	0.0	14.7	16.7	0.0	0.0	19.0	0.0	0.0
LnGrp LOS	C	A	A	A	A	B	B	A	A	B	A	A
Approach Vol, veh/h		785			554			43			172	
Approach Delay, s/veh		9.8			14.7			16.7			19.0	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.4	0.0	34.3		12.4	11.8	22.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	5.0	42.0		19.5	15.5	31.5				
Max Q Clear Time (g_c+I1), s		3.1	0.0	9.3		7.1	7.4	14.6				
Green Ext Time (p_c), s		0.1	0.0	4.2		0.7	0.4	3.4				

Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	20	15	100	25	75	15	290	85	140	295	65
Future Vol, veh/h	35	20	15	100	25	75	15	290	85	140	295	65
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	36	21	16	104	26	78	16	302	89	146	307	68
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	11.2	13.4	18.3	24.9
HCM LOS	B	B	C	C

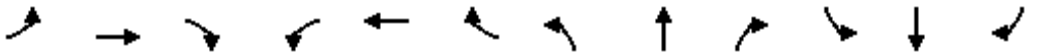
Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	4%	50%	50%	32%	0%
Vol Thru, %	74%	29%	12%	68%	0%
Vol Right, %	22%	21%	38%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	390	70	200	435	65
LT Vol	15	35	100	140	0
Through Vol	290	20	25	295	0
RT Vol	85	15	75	0	65
Lane Flow Rate	406	73	208	453	68
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.637	0.143	0.377	0.776	0.1
Departure Headway (Hd)	5.748	7.049	6.521	6.167	5.292
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	634	511	554	580	670
Service Time	3.748	5.061	4.521	3.961	3.086
HCM Lane V/C Ratio	0.64	0.143	0.375	0.781	0.101
HCM Control Delay	18.3	11.2	13.4	27.3	8.7
HCM Lane LOS	C	B	B	D	A
HCM 95th-tile Q	4.5	0.5	1.7	7.2	0.3

Intersection	
Intersection Delay, s/veh	23
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	5	435	0	25	0	15	375	20	20	0
Future Vol, veh/h	0	5	5	435	0	25	0	15	375	20	20	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	0	6	6	518	0	30	0	18	446	24	24	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	29.6	16.9	10
HCM LOS	A	D	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	95%	50%
Vol Thru, %	4%	50%	0%	50%
Vol Right, %	96%	50%	5%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	390	10	460	40
LT Vol	0	0	435	20
Through Vol	15	5	0	20
RT Vol	375	5	25	0
Lane Flow Rate	464	12	548	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.648	0.02	0.831	0.084
Departure Headway (Hd)	5.022	5.921	5.462	6.374
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	715	601	663	559
Service Time	3.073	3.991	3.497	4.45
HCM Lane V/C Ratio	0.649	0.02	0.827	0.086
HCM Control Delay	16.9	9.1	29.6	10
HCM Lane LOS	C	A	D	A
HCM 95th-tile Q	4.8	0.1	9	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	210	65	220	160	25	325	1070	880	35	300	120
Future Volume (veh/h)	95	210	65	220	160	25	325	1070	880	35	300	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	99	219	68	229	167	26	339	1115	0	36	312	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	413	274	85	440	427	67	547	1453		222	693	272
Arrive On Green	0.06	0.20	0.20	0.13	0.27	0.27	0.16	0.41	0.00	0.03	0.28	0.28
Sat Flow, veh/h	1795	1373	426	3483	1592	248	1795	3582	2812	1781	2490	977
Grp Volume(v), veh/h	99	0	287	229	0	193	339	1115	0	36	221	216
Grp Sat Flow(s),veh/h/ln	1795	0	1799	1742	0	1840	1795	1791	1406	1781	1777	1690
Q Serve(g_s), s	3.1	0.0	12.0	4.9	0.0	6.8	10.3	21.2	0.0	0.9	8.1	8.4
Cycle Q Clear(g_c), s	3.1	0.0	12.0	4.9	0.0	6.8	10.3	21.2	0.0	0.9	8.1	8.4
Prop In Lane	1.00		0.24	1.00		0.13	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	413	0	359	440	0	494	547	1453		222	494	470
V/C Ratio(X)	0.24	0.00	0.80	0.52	0.00	0.39	0.62	0.77		0.16	0.45	0.46
Avail Cap(c_a), veh/h	444	0	626	559	0	798	722	2088		277	692	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	30.2	32.3	0.0	23.6	16.0	20.3	0.0	15.7	23.5	23.6
Incr Delay (d2), s/veh	0.2	0.0	4.1	1.1	0.0	0.5	0.9	1.1	0.0	0.3	0.6	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	1.3	0.0	5.4	2.1	0.0	2.9	4.0	8.4	0.0	0.4	3.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	0.0	34.3	33.4	0.0	24.1	16.8	21.4	0.0	16.0	24.1	24.3
LnGrp LOS	B	A	C	C	A	C	B	C		B	C	C
Approach Vol, veh/h		386			422			1454			473	
Approach Delay, s/veh		30.5			29.2			20.3			23.6	
Approach LOS		C			C			C			C	

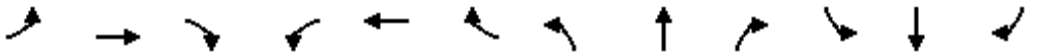
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	37.1	14.5	20.3	17.3	27.0	9.0	25.7
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5
Max Green Setting (Gmax), s	5.2	46.1	12.7	27.5	20.5	30.8	5.9	34.3
Max Q Clear Time (g_c+I1), s	2.9	23.2	6.9	14.0	12.3	10.4	5.1	8.8
Green Ext Time (p_c), s	0.0	8.8	0.5	1.4	0.5	2.6	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

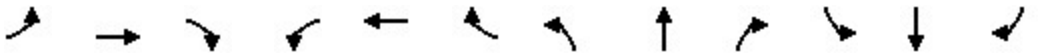
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1095	5	5	350	5	35	0	20	5	0	15
Future Volume (vph)	25	1095	5	5	350	5	35	0	20	5	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3536		1770	3531		1804	1615		1805	1594	
Flt Permitted	0.51	1.00		0.16	1.00		1.00	1.00		0.82	1.00	
Satd. Flow (perm)	958	3536		305	3531		1899	1615		1551	1594	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	28	1244	6	6	398	6	40	0	23	6	0	17
RTOR Reduction (vph)	0	0	0	0	1	0	0	21	0	0	16	0
Lane Group Flow (vph)	28	1250	0	6	403	0	40	2	0	6	1	0
Confl. Peds. (#/hr)			2	2			1					1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	36.5	35.9		36.5	35.9		5.7	4.9		5.7	3.0	
Effective Green, g (s)	36.5	35.9		36.5	35.9		5.7	4.9		5.7	3.0	
Actuated g/C Ratio	0.60	0.59		0.60	0.59		0.09	0.08		0.09	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	3.5		3.0	3.5		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	579	2074		196	2071		172	129		147	78	
v/s Ratio Prot	c0.00	c0.35		0.00	0.11		c0.01	0.00		0.00	0.00	
v/s Ratio Perm	0.03			0.02			c0.01			0.00		
v/c Ratio	0.05	0.60		0.03	0.19		0.23	0.01		0.04	0.01	
Uniform Delay, d1	5.1	8.1		5.8	5.9		25.7	25.9		25.2	27.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.5		0.1	0.1		0.7	0.0		0.1	0.1	
Delay (s)	5.1	8.6		5.8	6.0		26.4	26.0		25.4	27.7	
Level of Service	A	A		A	A		C	C		C	C	
Approach Delay (s)		8.5			6.0			26.3			27.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

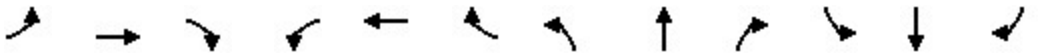
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	530	413	42	330	45	437	725	100	60	458	395
Future Volume (veh/h)	350	530	413	42	330	45	437	725	100	60	458	395
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	372	564	439	45	351	48	465	771	106	64	487	420
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	1	1	1	1	1	1
Cap, veh/h	277	642	542	58	354	48	318	1287	177	82	503	433
Arrive On Green	0.15	0.34	0.34	0.03	0.22	0.22	0.18	0.41	0.41	0.05	0.28	0.28
Sat Flow, veh/h	1795	1885	1592	1795	1622	222	1795	3150	433	1795	1813	1562
Grp Volume(v), veh/h	372	564	439	45	0	399	465	438	439	64	481	426
Grp Sat Flow(s),veh/h/ln	1795	1885	1592	1795	0	1844	1795	1791	1792	1795	1791	1584
Q Serve(g_s), s	17.0	31.0	27.6	2.7	0.0	23.7	19.5	21.1	21.1	3.9	29.2	29.2
Cycle Q Clear(g_c), s	17.0	31.0	27.6	2.7	0.0	23.7	19.5	21.1	21.1	3.9	29.2	29.2
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.24	1.00		0.99
Lane Grp Cap(c), veh/h	277	642	542	58	0	402	318	732	732	82	497	439
V/C Ratio(X)	1.34	0.88	0.81	0.78	0.00	0.99	1.46	0.60	0.60	0.78	0.97	0.97
Avail Cap(c_a), veh/h	277	642	542	82	0	402	318	732	732	100	497	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	34.1	33.0	52.8	0.0	42.9	45.2	25.5	25.5	51.9	39.3	39.3
Incr Delay (d2), s/veh	175.6	13.2	9.0	25.8	0.0	42.6	224.0	1.4	1.4	26.4	32.4	35.0
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	21.1	16.3	11.8	1.6	0.0	15.4	28.4	9.1	9.1	2.3	17.1	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	222.1	47.3	42.0	78.7	0.0	85.5	269.3	26.8	26.8	78.4	71.7	74.3
LnGrp LOS	F	D	D	E		F	F	C	C	E	E	E
Approach Vol, veh/h		1375			444			1342			971	
Approach Delay, s/veh		92.9			84.8			110.8			73.3	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	49.5	8.5	42.5	24.0	35.0	22.0	29.0
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	6.1	43.9	5.0	36.0	19.5	30.5	17.0	24.0
Max Q Clear Time (g_c+I1), s	5.9	23.1	4.7	33.0	21.5	31.2	19.0	25.7
Green Ext Time (p_c), s	0.0	5.8	0.0	1.6	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	93.3
HCM 6th LOS	F



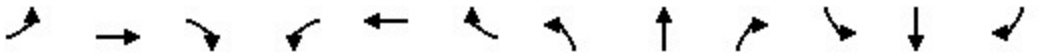
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	115	25	160	175	145	30	997	180	125	530	85
Future Volume (veh/h)	85	115	25	160	175	145	30	997	180	125	530	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	89	120	26	167	182	151	31	1039	188	130	552	89
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	1	1	1	3	3	3
Cap, veh/h	239	290	63	411	225	187	387	1217	220	238	1326	213
Arrive On Green	0.05	0.20	0.20	0.10	0.24	0.24	0.03	0.40	0.40	0.06	0.44	0.44
Sat Flow, veh/h	1753	1460	316	1781	937	777	1795	3013	544	1767	3037	488
Grp Volume(v), veh/h	89	0	146	167	0	333	31	616	611	130	320	321
Grp Sat Flow(s),veh/h/ln	1753	0	1776	1781	0	1714	1795	1791	1766	1767	1763	1762
Q Serve(g_s), s	3.2	0.0	6.0	6.1	0.0	15.4	0.8	26.3	26.4	3.5	10.5	10.5
Cycle Q Clear(g_c), s	3.2	0.0	6.0	6.1	0.0	15.4	0.8	26.3	26.4	3.5	10.5	10.5
Prop In Lane	1.00		0.18	1.00		0.45	1.00		0.31	1.00		0.28
Lane Grp Cap(c), veh/h	239	0	353	411	0	411	387	723	713	238	770	770
V/C Ratio(X)	0.37	0.00	0.41	0.41	0.00	0.81	0.08	0.85	0.86	0.55	0.42	0.42
Avail Cap(c_a), veh/h	353	0	529	454	0	511	546	853	842	336	840	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	29.3	23.3	0.0	30.1	12.8	22.7	22.8	18.5	16.3	16.3
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.2	0.0	6.2	0.0	6.9	7.3	0.7	0.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.5	2.5	0.0	6.8	0.3	11.8	11.7	1.4	4.1	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.9	0.0	29.6	23.6	0.0	36.3	12.8	29.7	30.1	19.3	16.5	16.5
LnGrp LOS	C		C	C		D	B	C	C	B	B	B
Approach Vol, veh/h		235			500			1258			771	
Approach Delay, s/veh		27.5			32.1			29.4			17.0	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	38.9	13.0	21.7	7.6	41.7	9.6	25.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	10.0	40.0	10.0	25.0	10.0	40.0	10.0	25.0
Max Q Clear Time (g_c+I1), s	5.5	28.4	8.1	8.0	2.8	12.5	5.2	17.4
Green Ext Time (p_c), s	0.1	5.5	0.0	0.4	0.0	3.5	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	26.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



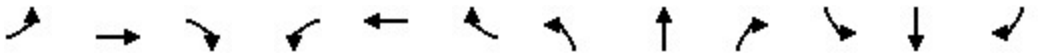
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	35	35	57	50	30	40	947	40	15	590	35
Future Volume (veh/h)	80	35	35	57	50	30	40	947	40	15	590	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	0.99		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	84	37	37	60	53	32	42	997	42	16	621	37
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, %	0	0	0	3	3	3	1	1	1	2	2	2
Cap, veh/h	381	112	112	379	124	75	419	1385	58	279	1262	75
Arrive On Green	0.07	0.13	0.13	0.06	0.12	0.12	0.05	0.40	0.40	0.02	0.37	0.37
Sat Flow, veh/h	1810	867	867	1767	1079	651	1795	3499	147	1781	3404	203
Grp Volume(v), veh/h	84	0	74	60	0	85	42	510	529	16	324	334
Grp Sat Flow(s),veh/h/ln	1810	0	1734	1767	0	1730	1795	1791	1856	1781	1777	1830
Q Serve(g_s), s	1.8	0.0	1.8	1.3	0.0	2.1	0.6	10.9	10.9	0.2	6.4	6.4
Cycle Q Clear(g_c), s	1.8	0.0	1.8	1.3	0.0	2.1	0.6	10.9	10.9	0.2	6.4	6.4
Prop In Lane	1.00		0.50	1.00		0.38	1.00		0.08	1.00		0.11
Lane Grp Cap(c), veh/h	381	0	223	379	0	199	419	709	735	279	659	678
V/C Ratio(X)	0.22	0.00	0.33	0.16	0.00	0.43	0.10	0.72	0.72	0.06	0.49	0.49
Avail Cap(c_a), veh/h	670	0	593	685	0	591	753	1007	1043	655	999	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	18.0	15.5	0.0	18.7	8.4	11.6	11.6	9.2	11.0	11.0
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.1	0.0	0.5	0.0	1.1	1.1	0.0	0.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.6	0.5	0.0	0.8	0.2	3.6	3.7	0.1	2.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.0	0.0	18.3	15.7	0.0	19.2	8.4	12.7	12.6	9.2	11.4	11.4
LnGrp LOS	B		B	B		B	A	B	B	A	B	B
Approach Vol, veh/h		158			145			1081			674	
Approach Delay, s/veh		17.1			17.8			12.5			11.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	22.5	7.2	10.3	6.6	21.3	7.8	9.7
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	10.5	25.5	10.5	15.5	10.5	25.5	10.5	15.5
Max Q Clear Time (g_c+I1), s	2.2	12.9	3.3	3.8	2.6	8.4	3.8	4.1
Green Ext Time (p_c), s	0.0	4.7	0.0	0.1	0.0	3.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	12.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



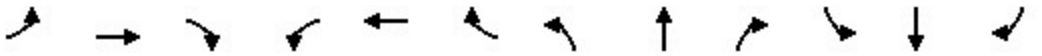
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	5	5	10	5	10	5	942	15	5	667	15
Future Volume (veh/h)	35	5	5	10	5	10	5	942	15	5	667	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	0.98		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	37	5	5	11	5	11	5	1002	16	5	710	16
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, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	305	31	17	202	52	70	499	1797	29	395	1783	40
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.01	0.50	0.50	0.01	0.50	0.50
Sat Flow, veh/h	1052	287	159	468	480	652	1795	3607	58	1795	3580	81
Grp Volume(v), veh/h	47	0	0	27	0	0	5	497	521	5	355	371
Grp Sat Flow(s),veh/h/ln	1498	0	0	1600	0	0	1795	1791	1874	1795	1791	1870
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.0	0.0	6.4	6.4	0.0	4.1	4.2
Cycle Q Clear(g_c), s	0.9	0.0	0.0	0.5	0.0	0.0	0.0	6.4	6.4	0.0	4.1	4.2
Prop In Lane	0.79		0.11	0.41		0.41	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	353	0	0	323	0	0	499	892	934	395	892	931
V/C Ratio(X)	0.13	0.00	0.00	0.08	0.00	0.00	0.01	0.56	0.56	0.01	0.40	0.40
Avail Cap(c_a), veh/h	891	0	0	898	0	0	785	1903	1991	681	1903	1986
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	0.0	13.5	0.0	0.0	4.4	5.8	5.8	4.8	5.2	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.2	0.0	0.0	0.0	1.4	1.4	0.0	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.8	0.0	0.0	13.6	0.0	0.0	4.4	6.4	6.3	4.8	5.5	5.5
LnGrp LOS	B			B			A	A	A	A	A	A
Approach Vol, veh/h		47			27			1023			731	
Approach Delay, s/veh		13.8			13.6			6.4			5.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	21.1		7.6	4.7	21.1		7.6				
Change Period (Y+Rc), s	4.5	4.5		4.0	4.5	4.5		4.0				
Max Green Setting (Gmax), s	5.5	35.5		16.0	5.5	35.5		16.0				
Max Q Clear Time (g_c+I1), s	2.0	8.4		2.9	2.0	6.2		2.5				
Green Ext Time (p_c), s	0.0	7.6		0.1	0.0	5.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	6.3
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.



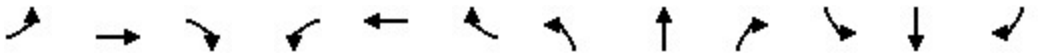
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	995	67	15	848	25	117	134	35	50	52	270
Future Volume (veh/h)	295	995	67	15	848	25	117	134	35	50	52	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	317	1070	72	16	912	27	126	144	38	54	56	290
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, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	338	1766	119	33	1229	36	395	322	85	327	355	298
Arrive On Green	0.19	0.52	0.52	0.02	0.35	0.35	0.08	0.23	0.23	0.04	0.19	0.19
Sat Flow, veh/h	1781	3376	227	1767	3494	103	1781	1424	376	1781	1870	1570
Grp Volume(v), veh/h	317	563	579	16	460	479	126	0	182	54	56	290
Grp Sat Flow(s),veh/h/ln	1781	1777	1827	1767	1763	1835	1781	0	1799	1781	1870	1570
Q Serve(g_s), s	14.8	18.6	18.6	0.8	19.3	19.3	4.7	0.0	7.3	1.9	2.1	15.5
Cycle Q Clear(g_c), s	14.8	18.6	18.6	0.8	19.3	19.3	4.7	0.0	7.3	1.9	2.1	15.5
Prop In Lane	1.00		0.12	1.00		0.06	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	338	930	956	33	620	645	395	0	406	327	355	298
V/C Ratio(X)	0.94	0.61	0.61	0.49	0.74	0.74	0.32	0.00	0.45	0.16	0.16	0.97
Avail Cap(c_a), veh/h	338	930	956	231	858	893	805	0	406	590	355	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	14.0	14.0	40.9	24.0	24.0	24.3	0.0	28.1	23.6	28.5	33.9
Incr Delay (d2), s/veh	32.6	1.3	1.3	4.1	2.9	2.8	0.5	0.0	0.6	0.1	0.2	44.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	7.2	7.4	0.4	8.2	8.5	2.0	0.0	3.1	0.8	0.9	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.2	15.4	15.3	45.1	26.9	26.8	24.8	0.0	28.7	23.7	28.7	78.3
LnGrp LOS	E	B	B	D	C	C	C		C	C	C	E
Approach Vol, veh/h		1459			955			308			400	
Approach Delay, s/veh		26.4			27.1			27.1			64.0	
Approach LOS		C			C			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	48.1	10.6	20.0	20.0	33.6	7.6	23.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	26.0	26.0	16.0	16.0	41.0	16.0	16.0
Max Q Clear Time (g_c+I1), s	2.8	20.6	6.7	17.5	16.8	21.3	3.9	9.3
Green Ext Time (p_c), s	0.0	3.8	0.3	0.0	0.0	8.3	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	31.5
HCM 6th LOS	C

Notes

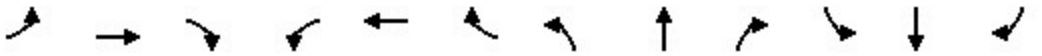
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	700	40	85	495	105	163	642	125	180	337	195
Future Volume (veh/h)	225	700	40	85	495	105	163	642	125	180	337	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	234	729	42	89	516	109	170	669	130	188	351	203
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	2	2	2
Cap, veh/h	376	1067	61	275	695	146	394	873	170	328	654	370
Arrive On Green	0.12	0.31	0.31	0.05	0.24	0.24	0.09	0.29	0.29	0.10	0.30	0.30
Sat Flow, veh/h	1795	3441	198	1767	2895	609	1795	2981	579	1781	2171	1230
Grp Volume(v), veh/h	234	379	392	89	313	312	170	402	397	188	286	268
Grp Sat Flow(s),veh/h/ln	1795	1791	1848	1767	1763	1741	1795	1791	1769	1781	1777	1624
Q Serve(g_s), s	7.4	14.5	14.5	2.6	12.8	12.9	5.0	15.9	16.0	5.6	10.5	10.8
Cycle Q Clear(g_c), s	7.4	14.5	14.5	2.6	12.8	12.9	5.0	15.9	16.0	5.6	10.5	10.8
Prop In Lane	1.00		0.11	1.00		0.35	1.00		0.33	1.00		0.76
Lane Grp Cap(c), veh/h	376	555	573	275	423	418	394	525	518	328	535	489
V/C Ratio(X)	0.62	0.68	0.68	0.32	0.74	0.75	0.43	0.77	0.77	0.57	0.53	0.55
Avail Cap(c_a), veh/h	624	701	723	416	690	681	692	689	681	495	684	625
HCM Platoon Ratio	1.00	1.00	1.00	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	19.6	23.5	23.6	18.1	27.4	27.4	16.9	25.1	25.1	18.4	22.7	22.8
Incr Delay (d2), s/veh	1.3	1.6	1.5	0.5	1.9	2.0	0.6	3.2	3.3	1.2	0.6	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	3.0	6.0	6.2	1.1	5.4	5.4	2.0	6.9	6.9	2.3	4.3	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.9	25.1	25.1	18.6	29.3	29.4	17.4	28.4	28.5	19.6	23.3	23.5
LnGrp LOS	C	C	C	B	C	C	B	C	C	B	C	C
Approach Vol, veh/h		1005			714			969			742	
Approach Delay, s/veh		24.1			28.0			26.5			22.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	28.7	12.0	28.5	14.2	23.2	12.7	27.8
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	10.5	30.5	20.0	30.0	20.5	30.5	15.0	30.0
Max Q Clear Time (g_c+I1), s	4.6	16.5	7.0	12.8	9.4	14.9	7.6	18.0
Green Ext Time (p_c), s	0.1	3.5	0.3	2.7	0.4	2.9	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	25.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	815	32	165	540	120	137	320	366	270	128	70
Future Volume (veh/h)	125	815	32	165	540	120	137	320	366	270	128	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	129	840	33	170	557	124	141	330	377	278	132	72
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, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	362	1258	49	314	1074	238	438	496	418	333	334	182
Arrive On Green	0.07	0.36	0.36	0.08	0.37	0.37	0.07	0.26	0.26	0.10	0.29	0.29
Sat Flow, veh/h	1795	3513	138	1795	2912	646	1795	1885	1587	1810	1153	629
Grp Volume(v), veh/h	129	428	445	170	342	339	141	330	377	278	0	204
Grp Sat Flow(s),veh/h/ln	1795	1791	1860	1795	1791	1767	1795	1885	1587	1810	0	1782
Q Serve(g_s), s	4.4	20.2	20.2	5.9	14.9	15.0	5.4	15.6	23.0	10.0	0.0	9.2
Cycle Q Clear(g_c), s	4.4	20.2	20.2	5.9	14.9	15.0	5.4	15.6	23.0	10.0	0.0	9.2
Prop In Lane	1.00		0.07	1.00		0.37	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	362	641	666	314	661	652	438	496	418	333	0	516
V/C Ratio(X)	0.36	0.67	0.67	0.54	0.52	0.52	0.32	0.67	0.90	0.83	0.00	0.40
Avail Cap(c_a), veh/h	419	641	666	351	661	652	486	566	476	333	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)	0.71	0.71	0.71	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	27.1	27.1	20.3	24.6	24.7	22.5	32.9	35.6	28.1	0.0	28.5
Incr Delay (d2), s/veh	0.3	3.9	3.8	1.1	2.9	3.0	0.3	1.8	15.7	16.1	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(50%),veh/ln	1.8	9.1	9.4	2.5	6.7	6.7	2.3	7.3	10.5	6.3	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.7	31.0	30.9	21.4	27.5	27.6	22.7	34.7	51.3	44.2	0.0	28.8
LnGrp LOS	B	C	C	C	C	C	C	C	D	D		C
Approach Vol, veh/h		1002			851			848			482	
Approach Delay, s/veh		29.4			26.3			40.1			37.7	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	40.8	12.3	34.0	11.8	41.9	15.0	31.3
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	10.0	30.0	10.0	30.0	10.0	30.0	10.0	30.0
Max Q Clear Time (g_c+I1), s	7.9	22.2	7.4	11.2	6.4	17.0	12.0	25.0
Green Ext Time (p_c), s	0.1	2.9	0.1	0.9	0.1	3.0	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	32.7
HCM 6th LOS	C

MOVEMENT SUMMARY

Site: 5 [I-5 SB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2027 With-Project - Jan Update)]

Future (2027) With-Project PM Peak Hour
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
East: SR 528 (4th St)														
1	L2	565	3.0	601	3.0	0.515	9.7	LOS A	0.0	0.0	0.00	0.66	0.00	35.2
6	T1	690	3.0	734	3.0	0.515	3.6	LOS A	0.0	0.0	0.00	0.40	0.00	38.0
Approach		1255	3.0	1335	3.0	0.515	6.3	LOS A	0.0	0.0	0.00	0.51	0.00	36.6
North: I-5 SB Off-Ramp														
7	L2	355	1.0	378	1.0	0.496	15.6	LOS B	2.6	65.8	0.71	0.97	0.93	32.1
4	T1	5	1.0	5	1.0	0.496	9.5	LOS A	2.6	65.8	0.71	0.97	0.93	32.1
14	R2	240	1.0	255	1.0	0.417	10.6	LOS B	1.9	47.6	0.69	0.89	0.86	33.1
Approach		600	1.0	638	1.0	0.496	13.5	LOS B	2.6	65.8	0.70	0.94	0.90	32.5
West: SR 528 (4th St)														
2	T1	477	1.0	507	1.0	0.418	13.4	LOS B	3.4	85.8	0.93	0.96	1.02	32.9
12	R2	445	1.0	473	1.0	0.286	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		922	1.0	981	1.0	0.418	8.8	LOS A	3.4	85.8	0.48	0.72	0.53	34.7
All Vehicles		2777	1.9	2954	1.9	0.515	8.7	LOS A	3.4	85.8	0.31	0.67	0.37	35.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

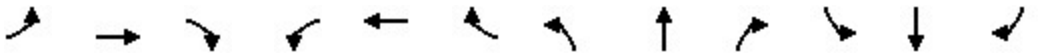
Site: 6 [I-5 NB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2027 With-Project - Jan Update)]

Future (2027) With-Project PM Peak Hour
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: I-5 NB Off-Ramp														
3	L2	360	3.0	379	3.0	0.434	13.3	LOS B	2.1	53.4	0.61	0.90	0.70	33.2
8	T1	10	3.0	11	3.0	0.434	7.1	LOS A	2.1	53.4	0.61	0.90	0.70	33.2
18	R2	783	3.0	824	3.0	0.386	6.9	LOS A	1.9	49.7	0.61	0.81	0.65	35.0
Approach		1153	3.0	1214	3.0	0.434	8.9	LOS A	2.1	53.4	0.61	0.84	0.67	34.4
East: SR 528 (4th St)														
6	T1	860	2.0	905	2.0	0.500	8.1	LOS A	4.1	105.2	0.80	0.81	0.87	35.4
16	R2	475	2.0	500	2.0	0.305	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1335	2.0	1405	2.0	0.500	6.6	LOS A	4.1	105.2	0.51	0.69	0.56	35.9
West: SR 528 (4th St)														
5	L2	145	2.0	153	2.0	0.324	9.7	LOS A	0.0	0.0	0.00	0.52	0.00	37.0
2	T1	662	2.0	697	2.0	0.324	3.6	LOS A	0.0	0.0	0.00	0.43	0.00	37.8
Approach		807	2.0	849	2.0	0.324	4.7	LOS A	0.0	0.0	0.00	0.44	0.00	37.6
All Vehicles		3295	2.3	3468	2.3	0.500	6.9	LOS A	4.1	105.2	0.42	0.68	0.46	35.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



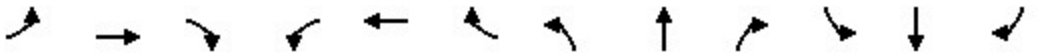
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1311	135	40	815	5	25	5	140	5	5	5
Future Volume (veh/h)	10	1311	135	40	815	5	25	5	140	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	11	1380	142	42	858	5	26	5	147	5	5	5
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	3	3	3	1	1	1
Cap, veh/h	462	1869	191	287	2215	13	323	8	222	110	95	61
Arrive On Green	0.01	0.57	0.57	0.04	0.61	0.61	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1795	3279	336	1795	3651	21	1376	51	1501	189	640	414
Grp Volume(v), veh/h	11	750	772	42	421	442	26	0	152	15	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1824	1795	1791	1881	1376	0	1552	1243	0	0
Q Serve(g_s), s	0.1	18.1	18.4	0.5	7.0	7.0	0.0	0.0	5.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	18.1	18.4	0.5	7.0	7.0	1.0	0.0	5.4	5.4	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.01	1.00		0.97	0.33		0.33
Lane Grp Cap(c), veh/h	462	1020	1039	287	1087	1141	323	0	229	266	0	0
V/C Ratio(X)	0.02	0.74	0.74	0.15	0.39	0.39	0.08	0.00	0.66	0.06	0.00	0.00
Avail Cap(c_a), veh/h	915	1383	1408	673	1383	1452	498	0	426	458	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.7	9.3	9.4	7.8	5.9	5.9	21.6	0.0	23.5	21.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	1.4	0.1	0.2	0.2	0.0	0.0	1.2	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	0.0	5.6	5.9	0.2	2.0	2.1	0.3	0.0	1.9	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	4.7	10.6	10.8	7.9	6.1	6.1	21.6	0.0	24.7	21.4	0.0	0.0
LnGrp LOS	A	B	B	A	A	A	C		C	C		
Approach Vol, veh/h		1533			905			178			15	
Approach Delay, s/veh		10.7			6.2			24.3			21.4	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	38.2		12.6	5.3	40.4		12.6				
Change Period (Y+Rc), s	5.0	5.0		4.0	4.5	5.0		4.0				
Max Green Setting (Gmax), s	15.0	45.0		16.0	15.5	45.0		16.0				
Max Q Clear Time (g_c+I1), s	2.5	20.4		7.4	2.1	9.0		7.4				
Green Ext Time (p_c), s	0.0	12.8		0.0	0.0	6.4		0.4				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	10.1
HCM 6th LOS	B

Notes

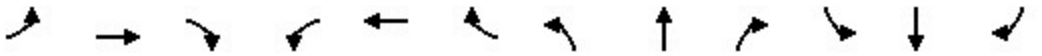
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	843	167	85	525	115	163	265	80	125	265	127
Future Volume (veh/h)	220	843	167	85	525	115	163	265	80	125	265	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	222	852	169	86	530	116	165	268	81	126	268	128
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	402	1066	211	233	844	184	298	379	115	331	315	150
Arrive On Green	0.12	0.36	0.36	0.05	0.29	0.29	0.09	0.27	0.27	0.08	0.26	0.26
Sat Flow, veh/h	1795	2975	590	1781	2896	631	1795	1388	420	1795	1204	575
Grp Volume(v), veh/h	222	513	508	86	324	322	165	0	349	126	0	396
Grp Sat Flow(s),veh/h/ln	1795	1791	1774	1781	1777	1750	1795	0	1808	1795	0	1779
Q Serve(g_s), s	7.0	21.6	21.6	2.5	13.3	13.4	5.5	0.0	14.6	4.1	0.0	17.7
Cycle Q Clear(g_c), s	7.0	21.6	21.6	2.5	13.3	13.4	5.5	0.0	14.6	4.1	0.0	17.7
Prop In Lane	1.00		0.33	1.00		0.36	1.00		0.23	1.00		0.32
Lane Grp Cap(c), veh/h	402	642	636	233	518	510	298	0	493	331	0	465
V/C Ratio(X)	0.55	0.80	0.80	0.37	0.63	0.63	0.55	0.00	0.71	0.38	0.00	0.85
Avail Cap(c_a), veh/h	511	1174	1163	460	1164	1147	564	0	754	403	0	742
HCM Platoon Ratio	1.00	1.00	1.00	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	18.2	24.2	24.2	18.7	25.8	25.8	21.7	0.0	27.5	20.4	0.0	29.4
Incr Delay (d2), s/veh	0.4	1.8	1.8	0.4	0.9	1.0	1.2	0.0	1.9	0.7	0.0	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	2.8	9.0	8.9	1.0	5.5	5.5	2.3	0.0	6.3	1.7	0.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.6	26.0	26.0	19.0	26.7	26.8	22.9	0.0	29.4	21.1	0.0	34.9
LnGrp LOS	B	C	C	B	C	C	C		C	C		C
Approach Vol, veh/h		1243			732			514			522	
Approach Delay, s/veh		24.7			25.8			27.3			31.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	35.1	12.6	27.0	14.9	29.4	11.6	27.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	15.0	55.0	20.0	35.0	15.0	55.0	10.0	35.0
Max Q Clear Time (g_c+I1), s	4.5	23.6	7.5	19.7	9.0	15.4	6.1	16.6
Green Ext Time (p_c), s	0.1	6.4	0.2	2.2	0.2	3.6	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	26.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	605	105	60	525	135	85	90	70	95	55	70
Future Volume (vph)	130	605	105	60	525	135	85	90	70	95	55	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99			0.99			1.00	0.98
Flpb, ped/bikes	0.99	1.00	1.00	0.99	1.00			0.99			0.99	1.00
Frt	1.00	1.00	0.85	1.00	0.96			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	1768	1863	1548	1769	3412			1736			1822	1576
Flt Permitted	0.35	1.00	1.00	0.23	1.00			0.82			0.62	1.00
Satd. Flow (perm)	666	1863	1548	445	3412			1459			1182	1576
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	134	624	108	62	541	139	88	93	72	98	57	72
RTOR Reduction (vph)	0	0	59	0	29	0	0	22	0	0	0	55
Lane Group Flow (vph)	134	624	49	62	651	0	0	231	0	0	155	17
Confl. Peds. (#/hr)	3		1	1		3	3		2	2		3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6		2	2			8			4		4
Actuated Green, G (s)	28.5	26.5	26.5	28.5	24.8			14.0			13.5	13.5
Effective Green, g (s)	28.5	26.5	26.5	28.5	24.8			14.0			13.5	13.5
Actuated g/C Ratio	0.49	0.46	0.46	0.49	0.43			0.24			0.23	0.23
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0			4.5			5.0	5.0
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0			2.5			2.5	2.5
Lane Grp Cap (vph)	397	851	707	264	1458			352			275	366
v/s Ratio Prot	c0.02	c0.33		0.01	0.19							
v/s Ratio Perm	0.14		0.03	0.11				c0.16			0.13	0.01
v/c Ratio	0.33	0.73	0.06	0.23	0.44			0.65			0.56	0.04
Uniform Delay, d1	8.1	12.8	8.8	9.0	11.7			19.8			19.6	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	3.5	0.0	0.1	0.2			3.9			2.1	0.0
Delay (s)	8.3	16.3	8.8	9.2	12.0			23.7			21.7	17.2
Level of Service	A	B	A	A	B			C			C	B
Approach Delay (s/veh)		14.2			11.8			23.7			20.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

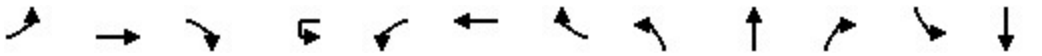
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	320	417	465	805	690	167
Future Volume (veh/h)	320	417	465	805	690	167
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	327	426	474	821	704	170
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	484	430	594	1086	783	663
Arrive On Green	0.27	0.27	0.11	0.59	0.42	0.42
Sat Flow, veh/h	1767	1572	3428	1856	1856	1572
Grp Volume(v), veh/h	327	426	474	821	704	170
Grp Sat Flow(s),veh/h/ln	1767	1572	1714	1856	1856	1572
Q Serve(g_s), s	17.1	27.9	7.5	34.0	36.6	7.2
Cycle Q Clear(g_c), s	17.1	27.9	7.5	34.0	36.6	7.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	484	430	594	1086	783	663
V/C Ratio(X)	0.68	0.99	0.80	0.76	0.90	0.26
Avail Cap(c_a), veh/h	484	430	1194	1086	845	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	37.4	21.6	16.0	27.9	19.4
Incr Delay (d2), s/veh	3.9	40.6	2.5	3.5	12.7	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	26.0	3.0	14.7	18.6	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	37.4	78.0	24.2	19.4	40.5	19.7
LnGrp LOS	D	E	C	B	D	B
Approach Vol, veh/h	753			1295	874	
Approach Delay, s/veh	60.4			21.2	36.5	
Approach LOS	E			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.4		35.0	16.9	51.5
Change Period (Y+Rc), s		7.9		6.7	5.7	7.9
Max Green Setting (Gmax), s		47.1		28.3	29.3	47.1
Max Q Clear Time (g_c+I1), s		36.0		29.9	9.5	38.6
Green Ext Time (p_c), s		6.5		0.0	1.7	5.1

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	35.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



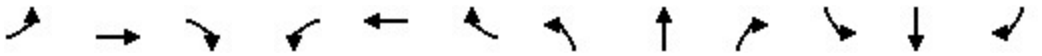
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	130	135	30	5	30	60	70	0	835	75	45	317
Future Volume (vph)	130	135	30	5	30	60	70	0	835	75	45	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Lane Util. Factor	1.00	1.00				1.00	1.00		0.95		1.00	0.95
Frpb, ped/bikes	1.00	0.99				1.00	0.98		0.99		1.00	0.99
Flpb, ped/bikes	0.99	1.00				0.99	1.00		1.00		0.99	1.00
Frt	1.00	0.97				1.00	0.85		0.98		1.00	0.96
Flt Protected	0.95	1.00				0.98	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1775	1825				1846	1568		3487		1752	3353
Flt Permitted	0.69	1.00				0.83	1.00		1.00		0.17	1.00
Satd. Flow (perm)	1290	1825				1563	1568		3487		319	3353
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	147	33	5	33	65	76	0	908	82	49	345
RTOR Reduction (vph)	0	15	0	0	0	0	60	0	10	0	0	37
Lane Group Flow (vph)	141	165	0	0	0	103	16	0	980	0	49	422
Confl. Peds. (#/hr)	12		4		4		12	4		6	6	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%
Turn Type	Perm	NA			Perm	NA	Perm	pm+pt	NA		pm+pt	NA
Protected Phases		4				8		5	2		1	6
Permitted Phases	4				8		8	2			6	
Actuated Green, G (s)	8.9	8.9				8.9	8.9		19.4		25.6	25.6
Effective Green, g (s)	8.9	8.9				8.9	8.9		19.4		25.6	25.6
Actuated g/C Ratio	0.21	0.21				0.21	0.21		0.45		0.60	0.60
Clearance Time (s)	4.0	4.0				4.0	4.0		4.5		4.5	4.5
Vehicle Extension (s)	2.0	2.0				2.0	2.0		2.5		2.0	2.5
Lane Grp Cap (vph)	267	377				323	324		1573		246	1996
v/s Ratio Prot		0.09							c0.28		0.01	c0.13
v/s Ratio Perm	c0.11					0.07	0.01				0.11	
v/c Ratio	0.52	0.43				0.31	0.04		0.62		0.19	0.21
Uniform Delay, d1	15.1	14.8				14.4	13.6		9.0		4.8	4.0
Progression Factor	1.00	1.00				1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.8	0.2				0.2	0.0		0.6		0.1	0.0
Delay (s)	16.0	15.1				14.6	13.6		9.6		4.9	4.0
Level of Service	B	B				B	B		A		A	A
Approach Delay (s/veh)		15.5				14.2			9.6			4.1
Approach LOS		B				B			A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	43.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	105
Future Volume (vph)	105
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	114
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

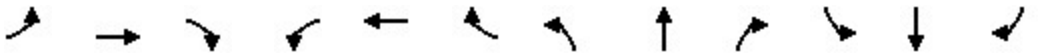
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	185	5	128	95	175	0	623	420	0	255	45
Future Volume (veh/h)	45	185	5	128	95	175	0	623	420	0	255	45
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	0	1885	1885	0	1870	1870
Adj Flow Rate, veh/h	46	191	5	132	98	180	0	642	433	0	263	46
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, %	1	1	1	1	1	1	0	1	1	0	2	2
Cap, veh/h	213	358	299	207	124	228	0	1149	1068	0	1847	319
Arrive On Green	0.04	0.19	0.19	0.06	0.21	0.21	0.00	0.61	0.61	0.00	0.61	0.61
Sat Flow, veh/h	1795	1885	1575	3483	590	1084	0	1885	1596	0	3123	523
Grp Volume(v), veh/h	46	191	5	132	0	278	0	642	433	0	153	156
Grp Sat Flow(s),veh/h/ln	1795	1885	1575	1742	0	1674	0	1885	1596	0	1777	1776
Q Serve(g_s), s	1.7	7.8	0.2	3.1	0.0	13.4	0.0	17.1	10.5	0.0	3.1	3.2
Cycle Q Clear(g_c), s	1.7	7.8	0.2	3.1	0.0	13.4	0.0	17.1	10.5	0.0	3.1	3.2
Prop In Lane	1.00		1.00	1.00		0.65	0.00		1.00	0.00		0.29
Lane Grp Cap(c), veh/h	213	358	299	207	0	352	0	1149	1068	0	1083	1083
V/C Ratio(X)	0.22	0.53	0.02	0.64	0.00	0.79	0.00	0.56	0.41	0.00	0.14	0.14
Avail Cap(c_a), veh/h	375	688	574	451	0	610	0	1149	1068	0	1083	1083
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	0.00	0.85	0.85
Uniform Delay (d), s/veh	25.7	31.0	28.0	39.1	0.0	31.8	0.0	9.8	6.4	0.0	7.1	7.1
Incr Delay (d2), s/veh	0.4	0.9	0.0	2.4	0.0	3.0	0.0	2.0	1.1	0.0	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.5	0.1	1.4	0.0	5.6	0.0	6.8	13.9	0.0	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.1	32.0	28.0	41.5	0.0	34.8	0.0	11.8	7.5	0.0	7.3	7.3
LnGrp LOS	C	C	C	D		C		B	A		A	A
Approach Vol, veh/h		242			410			1075			309	
Approach Delay, s/veh		30.8			37.0			10.1			7.3	
Approach LOS		C			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	20.1		55.8	7.3	21.9		55.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	11.0	31.0		31.0	11.0	31.0		31.0				
Max Q Clear Time (g_c+I1), s	5.1	9.8		5.2	3.7	15.4		19.1				
Green Ext Time (p_c), s	0.1	0.8		1.5	0.0	1.3		4.0				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			17.5									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	470	0	0	418	50	5	10	15	95	0	40
Future Volume (veh/h)	170	470	0	0	418	50	5	10	15	95	0	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1737	1737	1737	1856	1856	1856
Adj Flow Rate, veh/h	183	505	0	0	449	54	5	11	16	102	0	43
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	3	3	3	11	11	11	3	3	3
Cap, veh/h	243	1166	0	4	605	73	119	107	124	299	16	69
Arrive On Green	0.14	0.62	0.00	0.00	0.37	0.37	0.16	0.16	0.16	0.16	0.00	0.16
Sat Flow, veh/h	1795	1885	0	1767	1624	195	105	674	779	927	100	433
Grp Volume(v), veh/h	183	505	0	0	0	503	32	0	0	145	0	0
Grp Sat Flow(s),veh/h/ln	1795	1885	0	1767	0	1819	1558	0	0	1460	0	0
Q Serve(g_s), s	4.0	5.6	0.0	0.0	0.0	9.7	0.0	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	5.6	0.0	0.0	0.0	9.7	0.7	0.0	0.0	3.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.11	0.16		0.50	0.70		0.30
Lane Grp Cap(c), veh/h	243	1166	0	4	0	677	350	0	0	383	0	0
V/C Ratio(X)	0.75	0.43	0.00	0.00	0.00	0.74	0.09	0.00	0.00	0.38	0.00	0.00
Avail Cap(c_a), veh/h	643	1909	0	218	0	1416	875	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	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.9	4.0	0.0	0.0	0.0	11.0	14.6	0.0	0.0	15.8	0.0	0.0
Incr Delay (d2), s/veh	4.7	0.3	0.0	0.0	0.0	1.6	0.1	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	1.7	1.1	0.0	0.0	0.0	3.2	0.2	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.5	4.3	0.0	0.0	0.0	12.7	14.7	0.0	0.0	16.4	0.0	0.0
LnGrp LOS	C	A				B	B			B		
Approach Vol, veh/h		688			503			32			145	
Approach Delay, s/veh		8.9			12.7			14.7			16.4	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.9	0.0	29.5		10.9	10.0	19.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.0	41.0		20.5	14.5	31.5				
Max Q Clear Time (g_c+I1), s		2.7	0.0	7.6		5.7	6.0	11.7				
Green Ext Time (p_c), s		0.1	0.0	3.6		0.6	0.3	3.2				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			11.2									
HCM 6th LOS			B									

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	15	10	85	25	70	10	253	75	127	260	57
Future Vol, veh/h	33	15	10	85	25	70	10	253	75	127	260	57
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	34	16	10	89	26	73	10	264	78	132	271	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay, s/veh	10.4	11.8	14.2	18
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	57%	47%	33%	0%
Vol Thru, %	75%	26%	14%	67%	0%
Vol Right, %	22%	17%	39%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	338	58	180	387	57
LT Vol	10	33	85	127	0
Through Vol	253	15	25	260	0
RT Vol	75	10	70	0	57
Lane Flow Rate	352	60	188	403	59
Geometry Grp	4a	2	2	5	5
Degree of Util (X)	0.523	0.109	0.313	0.66	0.083
Departure Headway (Hd)	5.352	6.488	6.016	5.897	5.022
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	672	550	594	613	712
Service Time	3.399	4.562	4.076	3.639	2.763
HCM Lane V/C Ratio	0.524	0.109	0.316	0.657	0.083
HCM Control Delay, s/veh	14.2	10.4	11.8	19.4	8.2
HCM Lane LOS	B	B	B	C	A
HCM 95th-tile Q	3.1	0.4	1.3	4.9	0.3

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	5	365	0	25	0	10	315	78	15	0
Future Vol, veh/h	0	5	5	365	0	25	0	10	315	78	15	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	0	6	6	435	0	30	0	12	375	93	18	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.9	19.8	13.2	10.4
HCM LOS	A	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	94%	84%
Vol Thru, %	3%	50%	0%	16%
Vol Right, %	97%	50%	6%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	325	10	390	93
LT Vol	0	0	365	78
Through Vol	10	5	0	15
RT Vol	315	5	25	0
Lane Flow Rate	387	12	464	111
Geometry Grp	1	1	1	1
Degree of Util (X)	0.523	0.019	0.694	0.185
Departure Headway (Hd)	4.868	5.713	5.382	6.01
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	739	624	673	596
Service Time	2.912	3.771	3.412	4.064
HCM Lane V/C Ratio	0.524	0.019	0.689	0.186
HCM Control Delay, s/veh	13.2	8.9	19.8	10.4
HCM Lane LOS	B	A	C	B
HCM 95th-tile Q	3.1	0.1	5.6	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	302	55	197	175	72	277	945	735	97	255	100
Future Volume (veh/h)	80	302	55	197	175	72	277	945	735	97	255	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	83	315	57	205	182	75	289	984	0	101	266	104
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	382	321	58	465	362	149	536	1266		263	676	257
Arrive On Green	0.05	0.21	0.21	0.13	0.29	0.29	0.14	0.35	0.00	0.06	0.27	0.27
Sat Flow, veh/h	1795	1549	280	3483	1267	522	1795	3582	2812	1781	2513	957
Grp Volume(v), veh/h	83	0	372	205	0	257	289	984	0	101	186	184
Grp Sat Flow(s),veh/h/ln	1795	0	1829	1742	0	1789	1795	1791	1406	1781	1777	1694
Q Serve(g_s), s	2.4	0.0	15.2	4.1	0.0	9.0	8.4	18.3	0.0	2.6	6.4	6.7
Cycle Q Clear(g_c), s	2.4	0.0	15.2	4.1	0.0	9.0	8.4	18.3	0.0	2.6	6.4	6.7
Prop In Lane	1.00		0.15	1.00		0.29	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	382	0	379	465	0	511	536	1266		263	478	455
V/C Ratio(X)	0.22	0.00	0.98	0.44	0.00	0.50	0.54	0.78		0.38	0.39	0.40
Avail Cap(c_a), veh/h	536	0	379	1187	0	511	651	1675		527	831	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	29.5	29.8	0.0	22.3	15.8	21.6	0.0	16.4	22.3	22.4
Incr Delay (d2), s/veh	0.2	0.0	41.3	0.8	0.0	0.8	0.6	1.7	0.0	0.7	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	1.0	0.0	10.7	1.7	0.0	3.7	3.3	7.5	0.0	1.0	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	0.0	70.8	30.6	0.0	23.1	16.5	23.3	0.0	17.1	22.9	23.0
LnGrp LOS	B		E	C		C	B	C		B	C	C
Approach Vol, veh/h		455			462			1273			471	
Approach Delay, s/veh		61.2			26.4			21.7			21.7	
Approach LOS		E			C			C			C	

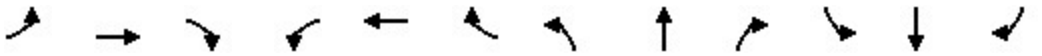
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	31.4	14.5	20.0	15.2	25.1	8.6	25.9
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5
Max Green Setting (Gmax), s	15.5	35.0	25.5	15.5	15.5	35.0	10.5	15.5
Max Q Clear Time (g_c+I1), s	4.6	20.3	6.1	17.2	10.4	8.7	4.4	11.0
Green Ext Time (p_c), s	0.1	6.1	0.8	0.0	0.3	2.3	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	29.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	910	204	128	295	5	129	0	113	5	0	10
Future Volume (vph)	25	910	204	128	295	5	129	0	113	5	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3428		1770	3530		1768	1583		1805	1594	
Flt Permitted	0.54	1.00		0.14	1.00		1.00	1.00		0.67	1.00	
Satd. Flow (perm)	1018	3428		264	3530		1861	1583		1282	1594	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	28	1034	232	145	335	6	147	0	128	6	0	11
RTOR Reduction (vph)	0	22	0	0	1	0	0	106	0	0	10	0
Lane Group Flow (vph)	28	1244	0	145	340	0	147	22	0	6	1	0
Confl. Peds. (#/hr)			2	2			1					1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	35.3	28.2		30.3	35.3		11.2	10.4		11.2	3.3	
Effective Green, g (s)	35.3	28.2		30.3	35.3		11.2	10.4		11.2	3.3	
Actuated g/C Ratio	0.58	0.47		0.50	0.58		0.19	0.17		0.19	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	0.2	3.5		3.0	3.5		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	593	1597		184	2059		332	272		244	86	
v/s Ratio Prot		0.36		c0.03	0.10		c0.06	0.01		0.00	0.00	
v/s Ratio Perm	0.03			c0.37			c0.02			0.00		
v/c Ratio	0.04	0.77		0.78	0.16		0.44	0.08		0.02	0.00	
Uniform Delay, d1	5.3	13.5		12.6	5.8		21.9	21.0		20.1	27.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	2.5		19.6	0.0		0.9	0.1		0.0	0.0	
Delay (s)	5.4	16.0		32.3	5.8		22.8	21.1		20.1	27.0	
Level of Service	A	B		C	A		C	C		C	C	
Approach Delay (s/veh)		15.8			13.7			22.0			24.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	19.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

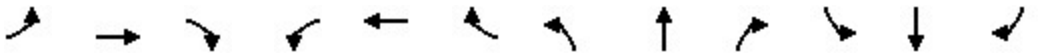
Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	62	1895	22	0	507
Future Vol, veh/h	0	62	1895	22	0	507
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	67	2060	24	0	551

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1042	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	226	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	226	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	27.6	0	0
HCM LOS	D		

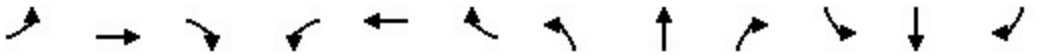
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	226	-
HCM Lane V/C Ratio	-	-	0.298	-
HCM Control Delay (s/veh)	-	-	27.6	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q (veh)	-	-	1.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	630	493	47	395	55	517	865	120	75	543	470
Future Volume (veh/h)	415	630	493	47	395	55	517	865	120	75	543	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	441	670	524	50	420	59	550	920	128	80	578	500
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	1	1	1	1	1	1
Cap, veh/h	277	618	522	64	338	47	335	1279	178	102	502	434
Arrive On Green	0.15	0.33	0.33	0.04	0.21	0.21	0.19	0.41	0.41	0.06	0.28	0.28
Sat Flow, veh/h	1795	1885	1592	1795	1616	227	1795	3145	437	1795	1811	1564
Grp Volume(v), veh/h	441	670	524	50	0	479	550	524	524	80	572	506
Grp Sat Flow(s),veh/h/ln	1795	1885	1592	1795	0	1843	1795	1791	1791	1795	1791	1584
Q Serve(g_s), s	17.0	36.1	36.1	3.0	0.0	23.0	20.5	27.0	27.0	4.8	30.5	30.5
Cycle Q Clear(g_c), s	17.0	36.1	36.1	3.0	0.0	23.0	20.5	27.0	27.0	4.8	30.5	30.5
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.24	1.00		0.99
Lane Grp Cap(c), veh/h	277	618	522	64	0	385	335	728	729	102	497	439
V/C Ratio(X)	1.59	1.08	1.00	0.78	0.00	1.24	1.64	0.72	0.72	0.78	1.15	1.15
Avail Cap(c_a), veh/h	277	618	522	73	0	385	335	728	729	126	497	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	37.0	37.0	52.6	0.0	43.5	44.7	27.4	27.4	51.2	39.8	39.8
Incr Delay (d2), s/veh	281.7	61.2	40.5	35.8	0.0	129.6	302.8	3.4	3.4	22.3	89.1	92.1
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	29.2	26.7	19.6	2.0	0.0	24.2	37.2	12.0	12.0	2.8	25.5	22.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	328.2	98.1	77.4	88.4	0.0	173.1	347.6	30.8	30.8	73.5	128.8	131.8
LnGrp LOS	F	F	F	F		F	F	C	C	E	F	F
Approach Vol, veh/h		1635			529			1598			1158	
Approach Delay, s/veh		153.6			165.1			139.8			126.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	49.2	8.9	41.1	25.0	35.0	22.0	28.0
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	7.7	43.3	4.5	35.5	20.5	30.5	17.0	23.0
Max Q Clear Time (g_c+I1), s	6.8	29.0	5.0	38.1	22.5	32.5	19.0	25.0
Green Ext Time (p_c), s	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	143.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	135	25	190	210	175	35	1187	215	150	620	100
Future Volume (veh/h)	100	135	25	190	210	175	35	1187	215	150	620	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	104	141	26	198	219	182	36	1236	224	156	646	104
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	1	1	1	3	3	3
Cap, veh/h	183	385	71	372	239	199	360	1308	235	201	1426	229
Arrive On Green	0.05	0.26	0.26	0.05	0.26	0.26	0.03	0.43	0.43	0.07	0.47	0.47
Sat Flow, veh/h	1753	1507	278	1781	937	778	1795	3017	542	1767	3037	488
Grp Volume(v), veh/h	104	0	167	198	0	401	36	729	731	156	375	375
Grp Sat Flow(s),veh/h/ln	1753	0	1785	1781	0	1715	1795	1791	1767	1767	1763	1762
Q Serve(g_s), s	4.5	0.0	7.9	5.0	0.0	23.3	1.0	39.9	41.0	5.0	14.7	14.7
Cycle Q Clear(g_c), s	4.5	0.0	7.9	5.0	0.0	23.3	1.0	39.9	41.0	5.0	14.7	14.7
Prop In Lane	1.00		0.16	1.00		0.45	1.00		0.31	1.00		0.28
Lane Grp Cap(c), veh/h	183	0	456	372	0	438	360	777	767	201	828	827
V/C Ratio(X)	0.57	0.00	0.37	0.53	0.00	0.92	0.10	0.94	0.95	0.78	0.45	0.45
Avail Cap(c_a), veh/h	183	0	487	372	0	468	391	786	775	203	828	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	31.4	31.5	0.0	37.1	14.2	27.7	28.0	23.5	18.3	18.3
Incr Delay (d2), s/veh	2.7	0.0	0.2	0.8	0.0	21.1	0.0	18.6	21.5	15.4	0.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	3.4	2.0	0.0	12.2	0.4	20.3	21.1	2.8	5.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.0	0.0	31.5	32.3	0.0	58.2	14.2	46.3	49.5	38.9	18.6	18.6
LnGrp LOS	C		C	C		E	B	D	D	D	B	B
Approach Vol, veh/h		271			599			1496			906	
Approach Delay, s/veh		31.7			49.6			47.1			22.1	
Approach LOS		C			D			D			C	

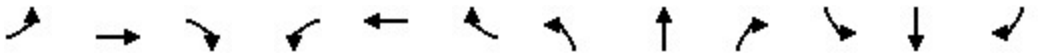
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	49.5	10.0	31.2	8.2	53.2	10.0	31.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	45.0	5.0	28.0	5.0	47.0	5.0	28.0
Max Q Clear Time (g_c+I1), s	7.0	43.0	7.0	9.9	3.0	16.7	6.5	25.3
Green Ext Time (p_c), s	0.0	1.5	0.0	0.5	0.0	4.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	39.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	40	40	67	60	35	45	1127	45	20	695	40
Future Volume (vph)	95	40	40	67	60	35	45	1127	45	20	695	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.92		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1802	1746		1751	1733		1787	3548		1769	3506	
Flt Permitted	0.69	1.00		0.70	1.00		0.30	1.00		0.13	1.00	
Satd. Flow (perm)	1313	1746		1295	1733		568	3548		249	3506	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	42	42	71	63	37	47	1186	47	21	732	42
RTOR Reduction (vph)	0	35	0	0	31	0	0	2	0	0	4	0
Lane Group Flow (vph)	100	49	0	71	69	0	47	1231	0	21	770	0
Confl. Peds. (#/hr)	4		2	2		4	3		13	13		3
Heavy Vehicles (%)	0%	0%	0%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	12.5	10.2		12.5	9.3		32.0	31.5		32.0	30.6	
Effective Green, g (s)	12.5	10.2		12.5	9.3		32.0	31.5		32.0	30.6	
Actuated g/C Ratio	0.20	0.16		0.20	0.15		0.51	0.50		0.51	0.49	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.0		2.5	2.0		2.0	2.5		2.0	2.5	
Lane Grp Cap (vph)	287	284		275	257		318	1788		139	1716	
v/s Ratio Prot	c0.02	0.03		0.01	0.04		c0.00	c0.35		0.00	0.22	
v/s Ratio Perm	c0.05			0.04			0.07			0.08		
v/c Ratio	0.34	0.17		0.25	0.26		0.14	0.68		0.15	0.44	
Uniform Delay, d1	21.1	22.5		20.8	23.5		7.8	11.7		8.9	10.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.1		0.3	0.2		0.0	1.0		0.1	0.1	
Delay (s)	21.7	22.6		21.2	23.7		7.9	12.7		9.1	10.5	
Level of Service	C	C		C	C		A	B		A	B	
Approach Delay (s/veh)		22.1			22.7			12.6			10.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	5	5	15	5	15	5	1117	20	5	782	20
Future Volume (veh/h)	40	5	5	15	5	15	5	1117	20	5	782	20
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	0.98		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	43	5	5	16	5	16	5	1188	21	5	832	21
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, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	323	38	19	196	68	95	436	1831	32	327	1815	46
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.01	0.51	0.51	0.01	0.51	0.51
Sat Flow, veh/h	1078	277	141	419	494	696	1795	3600	64	1795	3569	90
Grp Volume(v), veh/h	53	0	0	37	0	0	5	591	618	5	417	436
Grp Sat Flow(s),veh/h/ln	1495	0	0	1609	0	0	1795	1791	1873	1795	1791	1868
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.1	9.0	9.0	0.1	5.6	5.6
Cycle Q Clear(g_c), s	1.0	0.0	0.0	0.7	0.0	0.0	0.1	9.0	9.0	0.1	5.6	5.6
Prop In Lane	0.81		0.09	0.43		0.43	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	380	0	0	359	0	0	436	911	953	327	911	950
V/C Ratio(X)	0.14	0.00	0.00	0.10	0.00	0.00	0.01	0.65	0.65	0.02	0.46	0.46
Avail Cap(c_a), veh/h	1188	0	0	1217	0	0	619	1298	1357	510	1298	1353
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	0.0	14.2	0.0	0.0	4.8	6.7	6.7	5.5	5.9	5.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.4	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.2	0.0	0.0	0.0	2.2	2.2	0.0	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.4	0.0	0.0	14.2	0.0	0.0	4.8	7.5	7.5	5.5	6.2	6.2
LnGrp LOS	B			B			A	A	A	A	A	A
Approach Vol, veh/h		53			37			1214			858	
Approach Delay, s/veh		14.4			14.2			7.5			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	23.5		9.1	4.7	23.5		9.1				
Change Period (Y+Rc), s	4.5	4.5		4.0	4.5	4.5		4.0				
Max Green Setting (Gmax), s	4.0	27.0		26.0	4.0	27.0		26.0				
Max Q Clear Time (g_c+I1), s	2.1	11.0		3.0	2.1	7.6		2.7				
Green Ext Time (p_c), s	0.0	7.5		0.2	0.0	5.4		0.1				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	7.3
HCM 6th LOS	A

MOVEMENT SUMMARY

Site: 5 [I-5 SB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2033 With-Project Jan Update)]

Future (2033) Without-Project PM Peak Hour
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
East: SR 528 (4th St)														
1	L2	665	3.0	707	3.0	0.564	9.7	LOS A	0.0	0.0	0.00	0.66	0.00	35.1
6	T1	820	3.0	872	3.0	0.564	3.6	LOS A	0.0	0.0	0.00	0.39	0.00	38.0
Approach		1485	3.0	1580	3.0	0.564	6.3	LOS A	0.0	0.0	0.00	0.51	0.00	36.7
North: I-5 SB Off-Ramp														
7	L2	415	1.0	441	1.0	0.515	15.9	LOS B	3.0	76.5	0.75	1.00	1.01	32.0
4	T1	5	1.0	5	1.0	0.515	9.8	LOS A	3.0	76.5	0.75	1.00	1.01	31.9
14	R2	290	1.0	309	1.0	0.489	12.0	LOS B	2.5	63.9	0.75	0.95	1.02	32.4
Approach		710	1.0	755	1.0	0.515	14.2	LOS B	3.0	76.5	0.75	0.98	1.01	32.2
West: SR 528 (4th St)														
2	T1	567	1.0	603	1.0	0.547	22.2	LOS C	6.3	159.8	1.00	1.13	1.41	29.1
12	R2	530	1.0	564	1.0	0.340	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1097	1.0	1167	1.0	0.547	13.3	LOS B	6.3	159.8	0.52	0.81	0.73	32.4
All Vehicles		3292	1.9	3502	1.9	0.564	10.4	LOS B	6.3	159.8	0.33	0.71	0.46	34.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

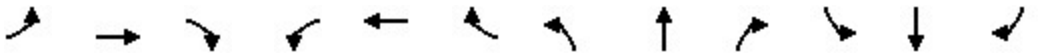
Site: 6 [I-5 NB Ramps/SR 528 (4th St) (Site Folder: I-5 Interchange - 2033 With-Project Jan Update)]

Future (2033) Without-Project PM Peak HOur
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: I-5 NB Off-Ramp														
3	L2	430	3.0	453	3.0	0.512	14.1	LOS B	2.8	71.7	0.67	0.95	0.83	32.8
8	T1	15	3.0	16	3.0	0.512	8.0	LOS A	2.8	71.7	0.67	0.95	0.83	32.8
18	R2	928	3.0	977	3.0	0.404	7.0	LOS A	2.3	58.1	0.64	0.82	0.70	34.9
Approach		1373	3.0	1445	3.0	0.512	9.2	LOS A	2.8	71.7	0.65	0.86	0.74	34.2
East: SR 528 (4th St)														
6	T1	1015	2.0	1068	2.0	0.591	10.3	LOS B	6.3	161.3	0.90	0.95	1.10	34.4
16	R2	560	2.0	589	2.0	0.359	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1575	2.0	1658	2.0	0.591	8.0	LOS A	6.3	161.3	0.58	0.77	0.71	35.2
West: SR 528 (4th St)														
5	L2	175	2.0	184	2.0	0.355	9.7	LOS A	0.0	0.0	0.00	0.52	0.00	37.0
2	T1	777	2.0	818	2.0	0.355	3.6	LOS A	0.0	0.0	0.00	0.43	0.00	37.8
Approach		952	2.0	1002	2.0	0.355	4.7	LOS A	0.0	0.0	0.00	0.45	0.00	37.6
All Vehicles		3900	2.4	4105	2.4	0.591	7.6	LOS A	6.3	161.3	0.46	0.72	0.55	35.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



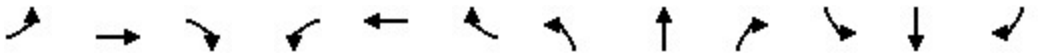
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1190	72	20	1003	25	127	160	40	60	62	325
Future Volume (veh/h)	350	1190	72	20	1003	25	127	160	40	60	62	325
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	376	1280	77	22	1078	27	137	172	43	65	67	349
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, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	406	1854	111	39	1191	30	353	355	89	304	448	377
Arrive On Green	0.23	0.54	0.54	0.02	0.34	0.34	0.05	0.25	0.25	0.04	0.24	0.24
Sat Flow, veh/h	1781	3404	204	1767	3513	88	1781	1442	360	1781	1870	1573
Grp Volume(v), veh/h	376	667	690	22	541	564	137	0	215	65	67	349
Grp Sat Flow(s),veh/h/ln	1781	1777	1831	1767	1763	1838	1781	0	1802	1781	1870	1573
Q Serve(g_s), s	22.4	29.7	29.8	1.3	31.7	31.7	5.0	0.0	11.1	2.9	3.1	23.5
Cycle Q Clear(g_c), s	22.4	29.7	29.8	1.3	31.7	31.7	5.0	0.0	11.1	2.9	3.1	23.5
Prop In Lane	1.00		0.11	1.00		0.05	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	406	968	997	39	598	623	353	0	443	304	448	377
V/C Ratio(X)	0.93	0.69	0.69	0.56	0.90	0.90	0.39	0.00	0.49	0.21	0.15	0.93
Avail Cap(c_a), veh/h	476	1016	1047	81	618	644	353	0	449	316	466	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	18.0	18.0	52.5	34.2	34.2	30.7	0.0	35.0	29.3	32.5	40.3
Incr Delay (d2), s/veh	21.0	2.1	2.1	4.5	17.0	16.4	0.7	0.0	0.6	0.1	0.1	27.1
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	12.1	12.1	12.6	0.6	16.1	16.7	3.0	0.0	4.9	1.3	1.4	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.0	20.1	20.1	57.0	51.1	50.6	31.4	0.0	35.6	29.5	32.6	67.4
LnGrp LOS	E	C	C	E	D	D	C		D	C	C	E
Approach Vol, veh/h		1733			1127			352			481	
Approach Delay, s/veh		29.2			51.0			34.0			57.4	
Approach LOS		C			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	63.0	9.0	30.0	28.7	40.8	8.3	30.7
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	5.0	62.0	5.0	27.0	29.0	38.0	5.0	27.0
Max Q Clear Time (g_c+I1), s	3.3	31.8	7.0	25.5	24.4	33.7	4.9	13.1
Green Ext Time (p_c), s	0.0	16.5	0.0	0.2	0.3	3.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	40.0
HCM 6th LOS	D

Notes

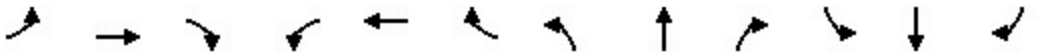
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	835	45	100	590	130	183	762	150	215	392	235
Future Volume (veh/h)	270	835	45	100	590	130	183	762	150	215	392	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	281	870	47	104	615	135	191	794	156	224	408	245
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	2	2	2
Cap, veh/h	357	1160	63	240	729	160	361	909	179	296	688	408
Arrive On Green	0.14	0.34	0.34	0.06	0.25	0.25	0.09	0.31	0.31	0.11	0.32	0.32
Sat Flow, veh/h	1795	3455	187	1767	2871	629	1795	2975	584	1781	2131	1264
Grp Volume(v), veh/h	281	451	466	104	377	373	191	478	472	224	339	314
Grp Sat Flow(s),veh/h/ln	1795	1791	1850	1767	1763	1737	1795	1791	1768	1781	1777	1619
Q Serve(g_s), s	11.0	21.7	21.7	3.7	19.7	19.8	6.8	24.5	24.5	8.2	15.5	15.8
Cycle Q Clear(g_c), s	11.0	21.7	21.7	3.7	19.7	19.8	6.8	24.5	24.5	8.2	15.5	15.8
Prop In Lane	1.00		0.10	1.00		0.36	1.00		0.33	1.00		0.78
Lane Grp Cap(c), veh/h	357	601	621	240	448	441	361	547	540	296	574	523
V/C Ratio(X)	0.79	0.75	0.75	0.43	0.84	0.85	0.53	0.87	0.87	0.76	0.59	0.60
Avail Cap(c_a), veh/h	479	789	815	293	565	557	366	628	620	399	751	684
HCM Platoon Ratio	1.00	1.00	1.00	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	24.1	28.6	28.6	22.0	34.3	34.4	20.4	31.9	31.9	23.3	27.5	27.6
Incr Delay (d2), s/veh	5.5	2.5	2.4	0.9	8.5	8.8	1.1	11.3	11.5	4.7	0.7	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	9.5	9.8	1.5	9.3	9.3	2.9	12.0	11.9	3.7	6.6	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	31.1	31.0	22.9	42.8	43.2	21.5	43.2	43.3	28.0	28.2	28.4
LnGrp LOS	C	C	C	C	D	D	C	D	D	C	C	C
Approach Vol, veh/h		1198			854			1141			877	
Approach Delay, s/veh		30.7			40.5			39.6			28.2	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	37.1	13.7	36.3	17.8	29.1	15.4	34.6
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	8.3	42.7	9.0	41.0	19.9	31.1	16.0	34.0
Max Q Clear Time (g_c+I1), s	5.7	23.7	8.8	17.8	13.0	21.8	10.2	26.5
Green Ext Time (p_c), s	0.0	4.8	0.0	3.6	0.4	2.8	0.2	3.1

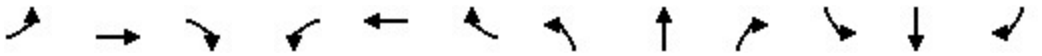
Intersection Summary	
HCM 6th Ctrl Delay, s/veh	34.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	975	37	190	645	140	162	380	431	325	148	80
Future Volume (veh/h)	150	975	37	190	645	140	162	380	431	325	148	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	155	1005	38	196	665	144	167	392	444	335	153	82
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, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	289	1142	43	227	931	201	468	471	397	389	390	209
Arrive On Green	0.08	0.32	0.32	0.07	0.32	0.32	0.07	0.25	0.25	0.16	0.34	0.34
Sat Flow, veh/h	1795	3519	133	1795	2927	633	1795	1885	1586	1810	1161	622
Grp Volume(v), veh/h	155	511	532	196	407	402	167	392	444	335	0	235
Grp Sat Flow(s),veh/h/ln	1795	1791	1861	1795	1791	1769	1795	1885	1586	1810	0	1784
Q Serve(g_s), s	5.7	27.0	27.0	7.0	20.0	20.1	6.1	19.7	25.0	13.5	0.0	10.1
Cycle Q Clear(g_c), s	5.7	27.0	27.0	7.0	20.0	20.1	6.1	19.7	25.0	13.5	0.0	10.1
Prop In Lane	1.00		0.07	1.00		0.36	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	289	581	604	227	570	563	468	471	397	389	0	599
V/C Ratio(X)	0.54	0.88	0.88	0.86	0.71	0.71	0.36	0.83	1.12	0.86	0.00	0.39
Avail Cap(c_a), veh/h	295	581	604	227	570	563	468	471	397	397	0	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	1.00	1.00	1.00	0.70	0.70	0.70	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.7	31.9	31.9	26.5	30.1	30.1	20.1	35.5	37.5	24.5	0.0	25.4
Incr Delay (d2), s/veh	0.8	10.5	10.1	26.6	7.4	7.6	0.2	8.5	75.2	16.7	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	13.1	13.5	4.7	9.6	9.5	2.5	10.0	17.8	7.4	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.5	42.4	42.1	53.2	37.5	37.7	20.3	44.0	112.7	41.3	0.0	25.7
LnGrp LOS	C	D	D	D	D	D	C	D	F	D		C
Approach Vol, veh/h		1198			1005			1003			570	
Approach Delay, s/veh		39.8			40.6			70.5			34.9	
Approach LOS		D			D			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	37.4	12.0	38.6	12.6	36.8	20.6	30.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	32.0	7.0	34.0	8.0	31.0	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.0	29.0	8.1	12.1	7.7	22.1	15.5	27.0
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.0	2.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	47.4
HCM 6th LOS	D



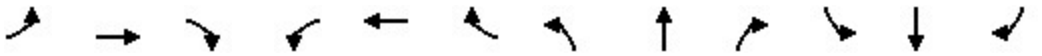
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1556	160	45	960	5	25	5	170	5	5	5
Future Volume (veh/h)	15	1556	160	45	960	5	25	5	170	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	16	1638	168	47	1011	5	26	5	179	5	5	5
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	3	3	3	1	1	1
Cap, veh/h	410	1996	202	226	2330	12	277	7	245	89	83	54
Arrive On Green	0.02	0.61	0.61	0.04	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1795	3283	332	1795	3655	18	1379	42	1511	153	509	331
Grp Volume(v), veh/h	16	884	922	47	495	521	26	0	184	15	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1824	1795	1791	1882	1379	0	1553	994	0	0
Q Serve(g_s), s	0.2	28.5	29.8	0.7	10.3	10.3	0.0	0.0	8.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	28.5	29.8	0.7	10.3	10.3	1.7	0.0	8.4	8.4	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.01	1.00		0.97	0.33		0.33
Lane Grp Cap(c), veh/h	410	1089	1109	226	1142	1200	277	0	252	226	0	0
V/C Ratio(X)	0.04	0.81	0.83	0.21	0.43	0.43	0.09	0.00	0.73	0.07	0.00	0.00
Avail Cap(c_a), veh/h	503	1226	1249	272	1231	1294	424	0	417	385	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	11.3	11.6	12.0	6.8	6.8	26.8	0.0	29.6	26.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.8	4.5	0.2	0.3	0.2	0.1	0.0	1.5	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	0.1	10.3	11.2	0.3	3.2	3.4	0.4	0.0	3.1	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	5.2	15.1	16.0	12.1	7.0	7.0	26.9	0.0	31.2	26.6	0.0	0.0
LnGrp LOS	A	B	B	B	A	A	C		C	C		
Approach Vol, veh/h		1822			1063			210			15	
Approach Delay, s/veh		15.5			7.2			30.6			26.6	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	50.3		16.1	5.9	52.5		16.1				
Change Period (Y+Rc), s	5.0	5.0		4.0	4.5	5.0		4.0				
Max Green Setting (Gmax), s	5.0	51.0		20.0	5.3	51.2		20.0				
Max Q Clear Time (g_c+I1), s	2.7	31.8		10.4	2.2	12.3		10.4				
Green Ext Time (p_c), s	0.0	13.4		0.0	0.0	8.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		13.8	
HCM 6th LOS		B	

Notes

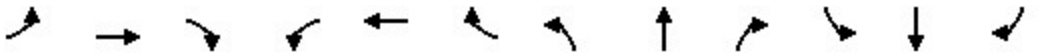
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	1003	197	100	620	135	193	315	95	150	315	147
Future Volume (veh/h)	260	1003	197	100	620	135	193	315	95	150	315	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	263	1013	199	101	626	136	195	318	96	152	318	148
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	370	1174	230	187	949	206	266	428	129	298	352	164
Arrive On Green	0.12	0.39	0.39	0.05	0.33	0.33	0.09	0.31	0.31	0.08	0.29	0.29
Sat Flow, veh/h	1795	2982	585	1781	2900	629	1795	1389	419	1795	1216	566
Grp Volume(v), veh/h	263	608	604	101	383	379	195	0	414	152	0	466
Grp Sat Flow(s),veh/h/ln	1795	1791	1776	1781	1777	1751	1795	0	1808	1795	0	1781
Q Serve(g_s), s	11.0	35.8	36.0	3.9	21.3	21.4	8.6	0.0	23.6	6.6	0.0	29.0
Cycle Q Clear(g_c), s	11.0	35.8	36.0	3.9	21.3	21.4	8.6	0.0	23.6	6.6	0.0	29.0
Prop In Lane	1.00		0.33	1.00		0.36	1.00		0.23	1.00		0.32
Lane Grp Cap(c), veh/h	370	705	699	187	582	573	266	0	558	298	0	516
V/C Ratio(X)	0.71	0.86	0.86	0.54	0.66	0.66	0.73	0.00	0.74	0.51	0.00	0.90
Avail Cap(c_a), veh/h	506	918	910	224	695	685	332	0	707	366	0	665
HCM Platoon Ratio	1.00	1.00	1.00	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	24.1	32.0	32.1	26.2	33.2	33.2	29.0	0.0	35.7	26.8	0.0	39.3
Incr Delay (d2), s/veh	1.4	6.2	6.5	0.9	1.5	1.5	5.4	0.0	3.2	1.3	0.0	13.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	16.4	16.4	1.6	9.3	9.2	4.1	0.0	10.8	2.9	0.0	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.5	38.3	38.6	27.1	34.7	34.7	34.4	0.0	38.9	28.1	0.0	52.5
LnGrp LOS	C	D	D	C	C	C	C		D	C		D
Approach Vol, veh/h		1475			863			609			618	
Approach Delay, s/veh		36.1			33.8			37.4			46.5	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	50.3	15.8	38.4	18.3	42.7	13.6	40.5
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	59.0	15.0	43.0	22.0	45.0	13.0	45.0
Max Q Clear Time (g_c+I1), s	5.9	38.0	10.6	31.0	13.0	23.4	8.6	25.6
Green Ext Time (p_c), s	0.0	7.3	0.2	2.4	0.3	4.1	0.1	2.5

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	37.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	720	130	75	625	160	100	110	80	115	65	80
Future Volume (veh/h)	155	720	130	75	625	160	100	110	80	115	65	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	160	742	134	77	644	165	103	113	82	119	67	82
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, %	2	2	2	2	2	2	3	3	3	1	1	1
Cap, veh/h	385	778	657	210	1138	291	142	148	86	252	126	486
Arrive On Green	0.08	0.42	0.42	0.05	0.41	0.41	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	1870	1579	1781	2799	716	253	484	280	567	412	1593
Grp Volume(v), veh/h	160	742	134	77	409	400	298	0	0	186	0	82
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1781	1777	1738	1018	0	0	979	0	1593
Q Serve(g_s), s	3.8	28.9	4.1	1.8	13.3	13.4	10.4	0.0	0.0	0.0	0.0	2.8
Cycle Q Clear(g_c), s	3.8	28.9	4.1	1.8	13.3	13.4	22.2	0.0	0.0	11.8	0.0	2.8
Prop In Lane	1.00		1.00	1.00		0.41	0.35		0.28	0.64		1.00
Lane Grp Cap(c), veh/h	385	778	657	210	722	707	375	0	0	377	0	486
V/C Ratio(X)	0.42	0.95	0.20	0.37	0.57	0.57	0.79	0.00	0.00	0.49	0.00	0.17
Avail Cap(c_a), veh/h	463	782	660	234	722	707	375	0	0	377	0	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	21.3	14.0	17.3	17.2	17.2	27.3	0.0	0.0	21.9	0.0	19.2
Incr Delay (d2), s/veh	0.3	21.8	0.2	0.4	1.3	1.3	10.9	0.0	0.0	0.7	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	16.2	1.4	0.7	5.3	5.2	6.2	0.0	0.0	2.7	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.9	43.1	14.3	17.7	18.5	18.6	38.2	0.0	0.0	22.6	0.0	19.3
LnGrp LOS	B	D	B	B	B	B	D			C		B
Approach Vol, veh/h		1036			886			298			268	
Approach Delay, s/veh		34.7			18.5			38.2			21.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	37.3		28.0	10.7	36.6		28.0				
Change Period (Y+Rc), s	6.0	* 6		5.0	5.0	6.0		* 5				
Max Green Setting (Gmax), s	5.0	* 32		22.5	9.0	27.5		* 23				
Max Q Clear Time (g_c+I1), s	3.8	30.9		13.8	5.8	15.4		24.2				
Green Ext Time (p_c), s	0.0	0.4		0.7	0.1	5.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		27.9	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	380	497	555	960	825	197
Future Volume (veh/h)	380	497	555	960	825	197
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	388	507	566	980	842	201
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	441	392	664	1154	770	653
Arrive On Green	0.25	0.25	0.16	0.62	0.42	0.42
Sat Flow, veh/h	1767	1572	3428	1856	1856	1572
Grp Volume(v), veh/h	388	507	566	980	842	201
Grp Sat Flow(s),veh/h/ln	1767	1572	1714	1856	1856	1572
Q Serve(g_s), s	24.0	28.3	13.9	48.0	47.1	9.7
Cycle Q Clear(g_c), s	24.0	28.3	13.9	48.0	47.1	9.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	441	392	664	1154	770	653
V/C Ratio(X)	0.88	1.29	0.85	0.85	1.09	0.31
Avail Cap(c_a), veh/h	441	392	1012	1154	770	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	42.6	34.2	17.2	33.2	22.2
Incr Delay (d2), s/veh	18.4	149.5	4.5	6.5	60.8	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	37.9	8.1	21.3	33.8	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	59.4	192.1	38.8	23.7	94.0	22.7
LnGrp LOS	E	F	D	C	F	C
Approach Vol, veh/h	895			1546	1043	
Approach Delay, s/veh	134.6			29.2	80.2	
Approach LOS	F			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.5		35.0	23.5	55.0
Change Period (Y+Rc), s		7.9		6.7	5.7	7.9
Max Green Setting (Gmax), s		47.1		28.3	29.3	47.1
Max Q Clear Time (g_c+I1), s		50.0		30.3	15.9	49.1
Green Ext Time (p_c), s		0.0		0.0	1.9	0.0

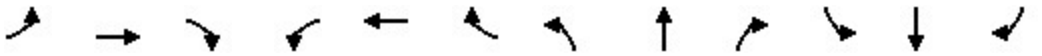
Intersection Summary	
HCM 6th Ctrl Delay, s/veh	71.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	130
Future Volume (vph)	130
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	141
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Heavy Vehicles (%)	3%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

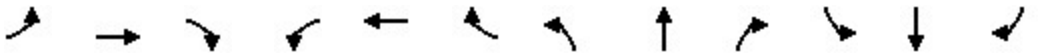
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	220	5	148	115	210	0	733	495	0	285	55
Future Volume (veh/h)	55	220	5	148	115	210	0	733	495	0	285	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	0	1885	1885	0	1870	1870
Adj Flow Rate, veh/h	57	227	5	153	119	216	0	756	510	0	294	57
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, %	1	1	1	1	1	1	0	1	1	0	2	2
Cap, veh/h	211	403	337	229	141	255	0	1092	1029	0	1723	330
Arrive On Green	0.04	0.21	0.21	0.07	0.24	0.24	0.00	0.58	0.58	0.00	0.58	0.58
Sat Flow, veh/h	1795	1885	1577	3483	595	1081	0	1885	1596	0	3069	569
Grp Volume(v), veh/h	57	227	5	153	0	335	0	756	510	0	174	177
Grp Sat Flow(s),veh/h/ln	1795	1885	1577	1742	0	1676	0	1885	1596	0	1777	1767
Q Serve(g_s), s	2.0	9.1	0.2	3.6	0.0	16.2	0.0	24.0	14.2	0.0	3.9	4.0
Cycle Q Clear(g_c), s	2.0	9.1	0.2	3.6	0.0	16.2	0.0	24.0	14.2	0.0	3.9	4.0
Prop In Lane	1.00		1.00	1.00		0.64	0.00		1.00	0.00		0.32
Lane Grp Cap(c), veh/h	211	403	337	229	0	396	0	1092	1029	0	1029	1023
V/C Ratio(X)	0.27	0.56	0.01	0.67	0.00	0.85	0.00	0.69	0.50	0.00	0.17	0.17
Avail Cap(c_a), veh/h	238	510	427	369	0	532	0	1092	1029	0	1029	1023
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	0.00	0.75	0.75
Uniform Delay (d), s/veh	24.4	29.9	26.3	38.8	0.0	31.0	0.0	12.6	7.9	0.0	8.3	8.4
Incr Delay (d2), s/veh	0.5	0.9	0.0	2.5	0.0	8.4	0.0	3.6	1.7	0.0	0.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.2	0.1	1.6	0.0	7.3	0.0	10.0	16.8	0.0	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.9	30.8	26.4	41.3	0.0	39.4	0.0	16.2	9.6	0.0	8.6	8.6
LnGrp LOS	C	C	C	D		D		B	A		A	A
Approach Vol, veh/h		289			488			1266			351	
Approach Delay, s/veh		29.5			40.0			13.5			8.6	
Approach LOS		C			D			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	22.2		53.2	7.7	24.1		53.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	23.0		41.0	5.0	27.0		41.0				
Max Q Clear Time (g_c+I1), s	5.6	11.1		6.0	4.0	18.2		26.0				
Green Ext Time (p_c), s	0.1	0.8		1.8	0.0	1.2		5.5				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			20.1									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	555	0	0	488	60	5	15	20	115	0	45
Future Volume (veh/h)	200	555	0	0	488	60	5	15	20	115	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1737	1737	1737	1856	1856	1856
Adj Flow Rate, veh/h	215	597	0	0	525	65	5	16	22	124	0	48
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	3	3	3	11	11	11	3	3	3
Cap, veh/h	277	1223	0	4	650	80	94	116	134	290	12	68
Arrive On Green	0.15	0.65	0.00	0.00	0.40	0.40	0.17	0.17	0.17	0.17	0.00	0.17
Sat Flow, veh/h	1795	1885	0	1767	1618	200	71	697	805	978	74	407
Grp Volume(v), veh/h	215	597	0	0	0	590	43	0	0	172	0	0
Grp Sat Flow(s),veh/h/ln	1795	1885	0	1767	0	1818	1572	0	0	1460	0	0
Q Serve(g_s), s	5.6	7.9	0.0	0.0	0.0	14.0	0.0	0.0	0.0	4.2	0.0	0.0
Cycle Q Clear(g_c), s	5.6	7.9	0.0	0.0	0.0	14.0	1.1	0.0	0.0	5.3	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.11	0.12		0.51	0.72		0.28
Lane Grp Cap(c), veh/h	277	1223	0	4	0	731	345	0	0	371	0	0
V/C Ratio(X)	0.77	0.49	0.00	0.00	0.00	0.81	0.12	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	570	1622	0	181	0	1174	700	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	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	4.4	0.0	0.0	0.0	12.9	17.4	0.0	0.0	19.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.3	0.0	0.0	0.0	2.2	0.2	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.7	0.0	0.0	0.0	5.0	0.4	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.4	4.7	0.0	0.0	0.0	15.1	17.6	0.0	0.0	19.9	0.0	0.0
LnGrp LOS	C	A				B	B			B		
Approach Vol, veh/h		812			590			43			172	
Approach Delay, s/veh		9.9			15.1			17.6			19.9	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.7	0.0	36.2		12.7	12.0	24.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	5.0	42.0		19.5	15.5	31.5				
Max Q Clear Time (g_c+I1), s		3.1	0.0	9.9		7.3	7.6	16.0				
Green Ext Time (p_c), s		0.1	0.0	4.5		0.7	0.4	3.6				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			13.1									
HCM 6th LOS			B									

Intersection	
Intersection Delay, s/veh	23.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	20	15	100	25	85	15	303	85	147	305	67
Future Vol, veh/h	38	20	15	100	25	85	15	303	85	147	305	67
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	40	21	16	104	26	89	16	316	89	153	318	70
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay, s/veh	11.6	14.1	20.8	30.2
HCM LOS	B	B	C	D

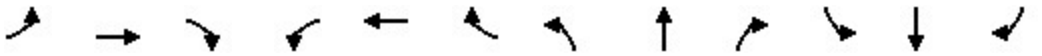
Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	4%	52%	48%	33%	0%
Vol Thru, %	75%	27%	12%	67%	0%
Vol Right, %	21%	21%	40%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	403	73	210	452	67
LT Vol	15	38	100	147	0
Through Vol	303	20	25	305	0
RT Vol	85	15	85	0	67
Lane Flow Rate	420	76	219	471	70
Geometry Grp	4a	2	2	5	5
Degree of Util (X)	0.686	0.153	0.403	0.834	0.107
Departure Headway (Hd)	5.882	7.253	6.634	6.38	5.502
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	617	493	543	570	654
Service Time	3.897	5.318	4.684	4.093	3.216
HCM Lane V/C Ratio	0.681	0.154	0.403	0.826	0.107
HCM Control Delay, s/veh	20.8	11.6	14.1	33.3	8.9
HCM Lane LOS	C	B	B	D	A
HCM 95th-tile Q	5.4	0.5	1.9	8.7	0.4

Intersection	
Intersection Delay, s/veh	25.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	5	435	0	25	0	15	375	83	20	0
Future Vol, veh/h	0	5	5	435	0	25	0	15	375	83	20	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	0	6	6	518	0	30	0	18	446	99	24	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.6	35	18.7	11.5
HCM LOS	A	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	95%	81%
Vol Thru, %	4%	50%	0%	19%
Vol Right, %	96%	50%	5%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	390	10	460	103
LT Vol	0	0	435	83
Through Vol	15	5	0	20
RT Vol	375	5	25	0
Lane Flow Rate	464	12	548	123
Geometry Grp	1	1	1	1
Degree of Util (X)	0.676	0.021	0.868	0.223
Departure Headway (Hd)	5.243	6.439	5.708	6.533
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	683	559	635	544
Service Time	3.318	4.439	3.763	4.633
HCM Lane V/C Ratio	0.679	0.021	0.863	0.226
HCM Control Delay, s/veh	18.7	9.6	35	11.5
HCM Lane LOS	C	A	D	B
HCM 95th-tile Q	5.3	0.1	10	0.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	337	65	232	200	72	332	1120	880	102	300	120
Future Volume (veh/h)	95	337	65	232	200	72	332	1120	880	102	300	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	99	351	68	242	208	75	346	1167	0	106	312	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	365	388	75	365	402	145	536	1415		218	723	284
Arrive On Green	0.05	0.25	0.25	0.10	0.30	0.30	0.16	0.40	0.00	0.05	0.29	0.29
Sat Flow, veh/h	1795	1530	296	3483	1321	476	1795	3582	2812	1781	2490	977
Grp Volume(v), veh/h	99	0	419	242	0	283	346	1167	0	106	221	216
Grp Sat Flow(s),veh/h/ln	1795	0	1826	1742	0	1798	1795	1791	1406	1781	1777	1691
Q Serve(g_s), s	3.6	0.0	21.2	6.4	0.0	12.4	12.6	27.9	0.0	3.3	9.6	9.9
Cycle Q Clear(g_c), s	3.6	0.0	21.2	6.4	0.0	12.4	12.6	27.9	0.0	3.3	9.6	9.9
Prop In Lane	1.00		0.16	1.00		0.27	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	365	0	463	365	0	547	536	1415		218	516	491
V/C Ratio(X)	0.27	0.00	0.90	0.66	0.00	0.52	0.65	0.82		0.49	0.43	0.44
Avail Cap(c_a), veh/h	379	0	526	464	0	646	639	1730		222	573	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	34.5	41.1	0.0	27.4	18.8	25.9	0.0	20.7	27.5	27.6
Incr Delay (d2), s/veh	0.3	0.0	17.7	2.8	0.0	0.8	1.4	2.8	0.0	1.2	0.6	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	11.5	2.9	0.0	5.3	5.2	12.0	0.0	1.4	4.1	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.0	0.0	52.2	43.9	0.0	28.2	20.2	28.7	0.0	22.0	28.0	28.2
LnGrp LOS	C		D	D		C	C	C		C	C	C
Approach Vol, veh/h		518			525			1513			543	
Approach Delay, s/veh		46.4			35.4			26.8			26.9	
Approach LOS		D			D			C			C	

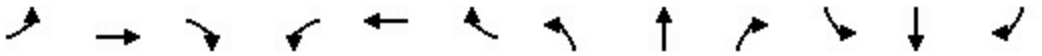
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	42.7	14.5	28.7	19.5	32.7	9.7	33.5
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5
Max Green Setting (Gmax), s	5.2	46.1	12.7	27.5	20.5	30.8	5.9	34.3
Max Q Clear Time (g_c+I1), s	5.3	29.9	8.4	23.2	14.6	11.9	5.6	14.4
Green Ext Time (p_c), s	0.0	7.8	0.4	1.0	0.4	2.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	31.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1090	204	128	350	5	134	0	118	5	0	15
Future Volume (veh/h)	25	1090	204	128	350	5	134	0	118	5	0	15
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	0.99		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1900	1900	1900
Adj Flow Rate, veh/h	28	1239	232	145	398	6	152	0	134	6	0	17
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	2	2	2	2	2	2	0	0	0
Cap, veh/h	607	1332	247	288	1769	27	346	0	201	202	0	35
Arrive On Green	0.03	0.45	0.45	0.08	0.49	0.49	0.11	0.00	0.13	0.01	0.00	0.02
Sat Flow, veh/h	1781	2991	555	1781	3583	54	1781	0	1581	1810	0	1605
Grp Volume(v), veh/h	28	732	739	145	197	207	152	0	134	6	0	17
Grp Sat Flow(s),veh/h/ln	1781	1777	1769	1781	1777	1861	1781	0	1581	1810	0	1605
Q Serve(g_s), s	0.4	21.7	22.3	2.4	3.5	3.5	4.5	0.0	4.5	0.2	0.0	0.6
Cycle Q Clear(g_c), s	0.4	21.7	22.3	2.4	3.5	3.5	4.5	0.0	4.5	0.2	0.0	0.6
Prop In Lane	1.00		0.31	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	607	791	788	288	877	919	346	0	201	202	0	35
V/C Ratio(X)	0.05	0.93	0.94	0.50	0.22	0.23	0.44	0.00	0.67	0.03	0.00	0.49
Avail Cap(c_a), veh/h	710	794	791	305	877	919	638	0	353	527	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)	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	6.5	14.6	14.8	12.3	8.1	8.1	22.9	0.0	23.3	21.2	0.0	27.1
Incr Delay (d2), s/veh	0.0	16.6	18.8	1.4	0.2	0.1	0.9	0.0	3.8	0.1	0.0	10.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	10.8	11.4	0.8	1.1	1.2	1.8	0.0	1.8	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.5	31.3	33.5	13.6	8.2	8.2	23.8	0.0	27.1	21.2	0.0	37.3
LnGrp LOS	A	C	C	B	A	A	C		C	C		D
Approach Vol, veh/h		1499			549			286			23	
Approach Delay, s/veh		31.9			9.6			25.3			33.1	
Approach LOS		C			A			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	11.6	9.5	29.9	10.8	5.7	6.8	32.6
Change Period (Y+Rc), s	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0
Max Green Setting (Gmax), s	10.5	12.5	5.0	25.0	15.5	7.5	5.0	25.0
Max Q Clear Time (g_c+I1), s	2.2	6.5	4.4	24.3	6.5	2.6	2.4	5.5
Green Ext Time (p_c), s	0.0	0.3	0.0	0.6	0.2	0.0	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	25.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	62	2265	22	0	602
Future Vol, veh/h	0	62	2265	22	0	602
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	67	2462	24	0	654

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1243	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	166	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	166	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	40.8	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	166	-
HCM Lane V/C Ratio	-	-	0.406	-
HCM Control Delay (s/veh)	-	-	40.8	-
HCM Lane LOS	-	-	E	-
HCM 95th %tile Q (veh)	-	-	1.8	-

Appendix D: Trip Generation Worksheets

Marysville Waterfront Analysis - Phase 1

Proposed Use

Land Use	Setting	Size	Units	Model	Equation	Rate	Units	Inbound %	Gross Trips Inbound	Gross Trips Outbound	Gross Trips Subtotal	Land Use Type	Interntal Trips In	Interntal Trips Out	Interntal Trips Total	Interntal Trips %	Extnernal trips In	Extnernal trips Out	Extnernal trips Total	Pass-By %	Pass-By In	Pass-By Out	Pass-By Total	Total Net New Inbound	Total Net New Outbound	Total Net New Total
Multifamily (Mid-Rise) (LU 221)		**450**	du									Residential														
Daily	General Urban/Suburban			Rate	-	4.54	per du	50%	1,022	1,022	2,044		57	57	114	6%	965	965	1930		-	-	-	965	965	1,930
AM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.44x - 11.61	-	-	23%	43	143	186	Residential_AM	1	7	8	4%	42	136	178		-	-	-	42	136	178
PM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.39x + 0.34	-	-	61%	107	69	176	Residential_PM	5	7	12	7%	102	62	164		-	-	-	102	62	164
Sport Complex (Programmatic)												l Other Land Uses2														
Daily					-	-	-		0	0	0		-	-	-	-	-	-	-		-	-	-	-	-	-
AM Peak Hour					-	-	-		0	0	0	)ther Land Uses2	0	0	0	-	0	0	0		-	-	-	0	0	0
PM Peak Hour					-	-	-		78	65	143	)ther Land Uses2	0	0	0	-	78	65	143		-	-	-	78	65	143
Hotel (LU 330)		**160**	rooms									Hotel														
Daily	General Urban/Suburban			Rate	-	7.99	per room	50%	639	639	1,278		34	34	68	5%	605	605	1210		-	-	-	605	605	1,210
AM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.50x - 7.45	-	-	56%	41	32	73	Hotel_AM	1	2	3	4%	40	30	70		-	-	-	40	30	70
PM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.74x - 27.89	-	-	51%	46	45	91	Hotel_PM	4	2	6	7%	42	43	85		-	-	-	42	43	85
High-Turnover (Sit-Down) Restaurant (LU#932)		**7,000**	sf									Restaurant														
Daily	General Urban/Suburban			Rate	-	107.20	per ksf	50%	375	375	750		72	72	144	19%	303	303	606		-	-	-	303	303	606
AM Peak Hour	General Urban/Suburban			Rate	-	9.57	per ksf	55%	37	30	67	Restaurant_AM	9	2	11	16%	28	28	56		-	-	-	28	28	56
PM Peak Hour	General Urban/Suburban			Rate	-	9.05	per ksf	61%	38	25	63	Restaurant_PM	7	7	14	22%	31	18	49	43%	11	11	22	20	7	27
Daily	General Urban/Suburban			Rate	-	-	-		0	0	0		-	-	-	-	-	-	-		-	-	-	-	-	-
AM Peak Hour	General Urban/Suburban			Rate	-	-	-		0	0	0	_AM	0	0	0	-	0	0	0		-	-	-	0	0	0
PM Peak Hour	General Urban/Suburban			Rate	-	-	-		0	0	0	_PM	0	0	0	-	0	0	0		-	-	-	0	0	0
Subtotal																										
Daily									2,036	2,036	4,072		163	163	326	-	1,873	1,873	3,746					1,873	1,873	3,746
AM Peak Hour									121	205	326		11	11	22	-	110	194	304					110	194	304
PM Peak Hour									269	204	473		16	16	32	-	253	188	441					242	177	419

Net New Trips

Daily	1873	1873	3746
AM Peak Hour	110	194	304
PM Peak Hour	242	177	419

Notes:

1. Trip rates based on Institute of Transportation Engineers' (ITE) *Trip Generation* 10th Edition equation and average trip rate as shown above.
2. AVO = average vehicle occupancy. Retail and Residential AVO based on NCHRP 365 for urban areas with populations over 1 million people. No AVO rate if trips calculated based on person trip rate

Marysville Waterfront Analysis - Phase 2

Proposed Use

									Gross Trips				Internal Trips				External trips			Pass-By				Total Net New		
Land Use	**Setting**	**Size**	**Units**	**Model**	**Equation**	**Rate**	**Units**	**Inbound %**	**Inbound**	**Outbound**	**Subtotal**	**Land Use Type**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Total**	**Inbound**	**Outbound**	**Total**
Multifamily (Mid-Rise) (LU 221)		**450**	du									Residential														
Daily	General Urban/Suburban			Rate	-	4.54	per du	50%	1,022	1,022	2,044		68	68	136	7%	954	954	1908		-	-	-	954	954	1,908
AM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.44x - 11.61	-	-	23%	43	143	186	Residential_AM	1	7	8	4%	42	136	178		-	-	-	42	136	178
PM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.39x + 0.34	-	-	61%	107	69	176	Residential_PM	9	7	16	9%	98	62	160		-	-	-	98	62	160
Sport Complex (Programmatic)												All Other Land Uses2														
Daily					-	-	-		700	700	1,400		0	0	0	0%	700	700	1400		-	-	-	700	700	1,400
AM Peak Hour					-	-	-		13	2	15	All Other Land Uses2_AM	0	0	0	-	13	2	15		-	-	-	13	2	15
PM Peak Hour					-	-	-		78	62	140	All Other Land Uses2_PM	0	0	0	-	78	62	140		-	-	-	78	62	140
Hotel		**160**	rooms									Hotel														
Daily	General Urban/Suburban			Rate	-	7.99	per room	50%	639	639	1,278		34	34	68	5%	605	605	1210		-	-	-	605	605	1,210
AM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.50x - 7.45	-	-	56%	41	32	73	Hotel_AM	1	2	3	4%	40	30	70		-	-	-	40	30	70
PM Peak Hour	General Urban/Suburban			Equation (lin)	T = 0.74x - 27.89	-	-	51%	46	45	91	Hotel_PM	4	2	6	7%	42	43	85		-	-	-	42	43	85
High-Turnover (Sit-Down) Restaurant (LU#932)		**7,000**	sf									Restaurant														
Daily	General Urban/Suburban			Rate	-	107.20	per ksf	50%	375	375	750		81	81	162	22%	294	294	588		-	-	-	294	294	588
AM Peak Hour	General Urban/Suburban			Rate	-	9.57	per ksf	55%	37	30	67	Restaurant_AM	9	2	11	16%	28	28	56		-	-	-	28	28	56
PM Peak Hour	General Urban/Suburban			Rate	-	9.05	per ksf	61%	38	25	63	Restaurant_PM	8	9	17	27%	30	16	46	43%	10	10	20	20	6	26
Multipurpose Recreational Facility (LU 435)		**50,000**	sf									Cinema/Entertainment														
Daily	General Urban/Suburban			Rate	-	-	-		895	895	1,790		18	18	36	2%	877	877	1754		-	-	-	877	877	1,754
AM Peak Hour	General Urban/Suburban			Rate	-	-	-		0	0	0	Cinema/Entertainment_AM	0	0	0	0%	0	0	0		-	-	-	0	0	0
PM Peak Hour	General Urban/Suburban			Rate	-	3.58	-	55%	98	81	179	Cinema/Entertainment_PM	2	5	7	4%	96	76	172		-	-	-	96	76	172
Subtotal																										
Daily									3,631	3,631	7,262		201	201	402	-	3,430	3,430	6,860					3,430	3,430	6,860
AM Peak Hour									134	207	341		11	11	22	-	123	196	319					123	196	319
PM Peak Hour									367	282	649		23	23	46	-	344	259	603					334	249	583

Net New Trips

Daily	3430	3430	6860
AM Peak Hour	123	196	319
PM Peak Hour	334	249	583

Notes:

1. Trip rates based on Institute of Transportation Engineers' (ITE) *Trip Generation* 11th Edition equation and average trip rate as shown above.
2. AVO = average vehicle occupancy. Retail and Residential AVO based on NCHRP 365 for urban areas with populations over 1 million people. No AVO rate if trips calculated based on person trip rate

Trip Generator Type	Independent Variable	Units	People/Team	Coaches/Team	Trips In	Trips Out	Total	Notes
Staff								
5 to 9 PM	12	People			12		12	
8 AM to 5 PM	5	People				5	5	
Sports Medicine	3000	Square Feet			3	6	9	ITE LU 720
Volleyball	3	Teams	12	2	42	34	76	
Basketball	3	Teams	10	2	36	29	65	
Futsal	2	Teams	10	2	24	19	43	

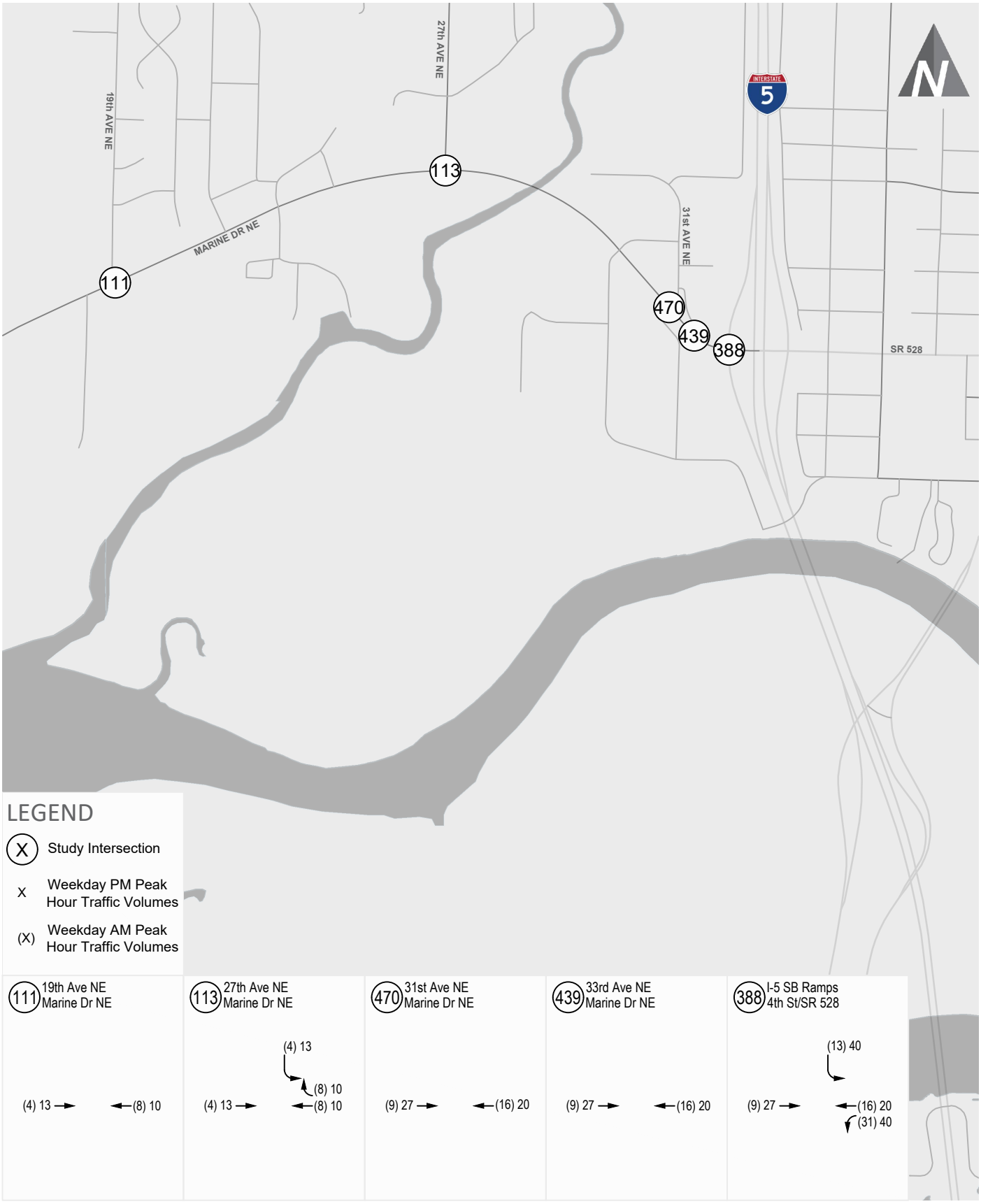
Fitted Curve: T = 4.07(x) + 3.17 / 30% inbound

AM Peak Hour		
In	Out	
8	2	Medical Office
5	0	Staff
13	2	Total

Assumed Practice Length	>1 Hour							
Assumed % Dropped Off	80%							
Subtotal					117	93	210	
AVO	1.5				***78***	***62***	***140***	***Total Vehicle Trips***

Assumed peak hour: 5-6

Appendix E: Snohomish County Key Intersections



Snohomish County Key Intersections (2027 & 2033)

APPENDIX **E**

Marysville Waterfront Analysis

transpogroup