TERMINAL 91
2022 TRAFFIC MONITORING STUDY

Prepared for:
Port of Seattle

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Prepared by:

12131 113th Avenue NE, Suite 203
Kirkland, WA 98034-7120
Phone: 425-821-3665
www.transpogroup.com

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Introduction

The purpose of this report is to summarize the 2022 traffic monitoring study conducted for the Port of Seattle at Terminal 91. This study has been conducted annually, as originally outlined in the Terminal 91 Short Fill Redevelopment Agreement (SFRA) between the neighborhood community councils of Magnolia and Queen Anne and the Port of Seattle. However, due to the COVID-19 pandemic, the study was not conducted for the years 2020 or 2021. The 2022 study was conducted over an eleven-day period from Thursday, September 1 through Sunday, September 11, 2022. As part of this study, traffic counts at and around Terminal 91 are conducted and an evaluation is performed on the transportation system based on the performance measures and thresholds identified in the SFRA. The results of this study are compared to each of the annual reports dating back to 2017.

Short Fill Redevelopment Agreement and the Monitoring Process

The SFRA was established as a method of resolving disputes surrounding the Port's short fill redevelopment of Terminal 91. There were concerns from local residents and neighborhood community councils that the Port's redevelopment would cause significant adverse impacts to the surrounding roadway network. The SFRA outlines an annual monitoring program and a set of thresholds for traffic volumes and intersection level of service that were agreed upon by the Port and the neighborhood community councils. If these thresholds are exceeded, the SFRA states that further intensive review by the Port will be required as well as mitigation measures, if deemed necessary.

Key steps within the monitoring program stated in the SFRA are as follows:

- ***Gates:*** The Port will obtain daily (24 hour), AM and PM peak period gate counts of trucks and autos entering or leaving all Terminal 91 gates for one week each year. Gate counts will be reported as trip ends. A trip end is an arrival or a departure. As such, a single vehicle which enters and then leaves the terminal will generate two trip ends.

- ***Intersections:*** Congestion and delay at intersections are measured in terms of Level of Service (LOS) under a system described in the Highway Capacity Manual. Levels of service range from A through F, with LOS A representing congestion-free service and LOS F representing jammed conditions. The Port will obtain LOS determinations for the peak hours at the following intersections once a year:

    - Elliott Avenue West and West Galer Street (now the Galer Street flyover)
    - Elliott Avenue West/15th Avenue West and West Garfield Street
    - Elliott Avenue West and West Mercer Place
    - 15th Avenue West and West Dravus Street
    - 20th Avenue West and West Dravus Street

According to industry standard, the methodology to determine level of service has been updated many times since the original SFRA agreement was drafted. The original methodology for determining level of service was via hand-calculations. Software now allows more accurate measurement of intersection operations and vehicle delays, and was used to perform the analysis in this report. Intersection LOS is based on the average delay per vehicle traveling through that intersection. Appendix B provides a breakdown of how much delay equates to each LOS. For this report, Trafficware's Synchro software (version 11) was used to perform LOS calculations.

Another change that has occurred since the SFRA was created is construction of the Galer Street Flyover. The Galer Street Flyover/Elliott Avenue West intersection was evaluated instead of the West Galer Street/Elliott Avenue West intersection because the Galer Street Flyover is the new access roadway for Terminal 91, and the West Galer Street railroad crossing is closed to vehicle traffic.

Additionally, because the Center Gate to Terminal 91 is currently closed, no analysis was performed along the Magnolia Bridge.

The SFRA established thresholds for both automobile and truck traffic volumes over three specific time periods. The time periods and volume thresholds are summarized in Table 1. The SFRA defines a 75-minute period for the AM peak and a 105-minute period for the PM peak. This differs from a typical traffic analysis, where a 60-minute peak period is used.

Table 1. SFRA Traffic Volume Threshold Criteria

	Time Period	Automobiles	Trucks
AM Peak	7:15 – 8:30 A.M.	395	25
PM Peak	3:45 – 5:30 P.M.	612	48
Daily	24 hours	3,500	325

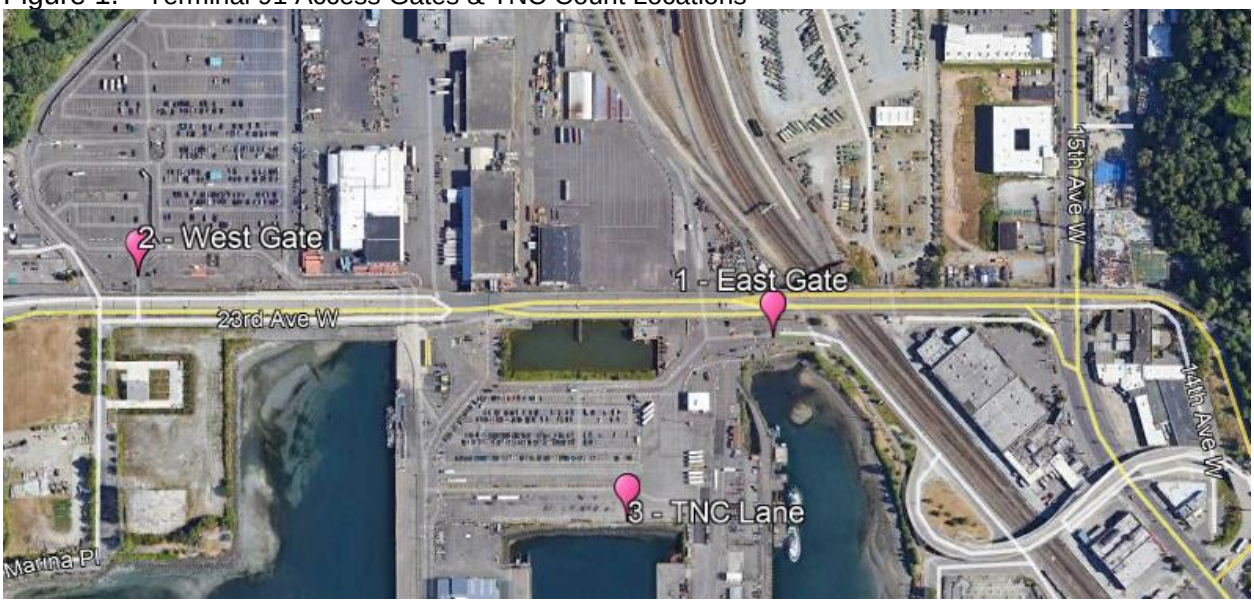
Traffic Counts

Vehicle Classification Count Locations

During the study period there were two locations where vehicular traffic could enter and exit Terminal 91; these are shown in Figure 1.

1. **East Gate** – This gate is located off Alaskan Way West and is accessed by the Galer Street Flyover.
2. **West Gate** – On days with cruise activity, or event activity at SCCT, a double leaf gate at the west end of the Magnolia Bridge is open. Vehicles can enter or exit through this gate to access parking Lot D, or to travel the area beneath the Magnolia Bridge to access Pier 91 south of the bridge. When cruise vessels are at sea, the gate is locked to the public in order to secure the cruise parking lot. Vehicles use the on/off ramps at the west end of the Magnolia Bridge to access the parking lot, as do general public vehicles traveling to Elliott Bay Marina (which are not included in this count).
3. **TNC Lane –** tube counts were conducted at a lane dedicated for Transportation Network Company (TNCs, such as Uber and Lyft) pickup up and drop offs during cruise ship times.

Figure 1. Terminal 91 Access Gates & TNC Count Locations

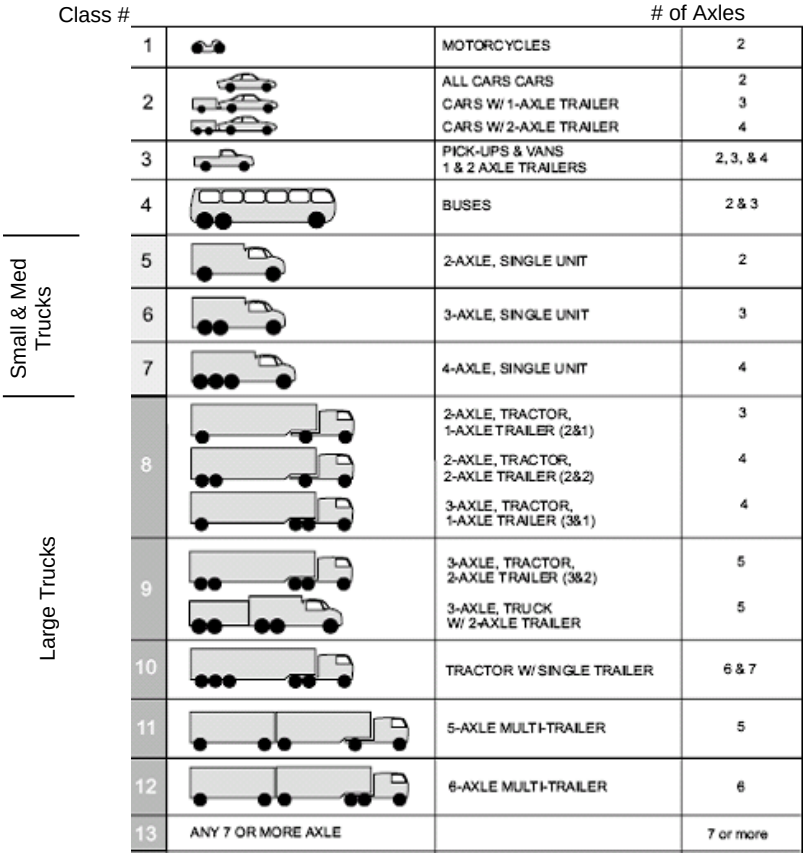


Vehicle classification counts (classification breakdown shown in Figure 2) were performed at both Terminal 91 gates, and the TNC access lane in early September 2019. The TNC access lane count was added in 2019 after questions were asked by NAC members during the 2018 study about the impact of TNC traffic on cruise ship days. The classification counts (performed by pneumatic tube counters) track the types of vehicles entering and exiting the terminals for each hour of the day. These tube counters are thin tubes, laid across the study roadway in pairs a set distance apart, that use pressure measurements to record when a vehicle passes over them. The tubes can count the number of axles per vehicle to determine the classification of the vehicle. These data were collected over an eleven-day period from Thursday, September 1, 2022 through Sunday, September 11, 2022.

To complement the tube counts, camera counts were performed at both gates for four days: Thursday, September 1; Friday, September 2; Saturday, September 3; and Sunday, September 4. Three of these days, Friday, Saturday, and Sunday were cruise days and Thursday was a non-cruise day. These counts

were performed during the peak hours for disembarkation (7:30 to 9:45 A.M.) and embarkation (11:00 A.M. to 12:45 P.M.). The cameras were mounted upon existing light or maintenance poles to record video of a specific location. Software systems and manual observations of the camera footage are used to count the number and type of vehicles. The vehicle types were categorized: passenger vehicle (non-commercial, including TNCs), taxi, limo/towncar, shuttle van/bus, charter bus, school bus, small truck, medium truck and large truck. Figure 2 provides a breakdown of each of the vehicle classifications.

Figure 2. Vehicle Classification Breakdown



The tube counts classify vehicles based on the number and spacing of axles; however, the accuracy of the classification counts can be affected by travel speed. A vehicle that travels faster or slower than expected could be registered as a different type of vehicle. The camera counts were used to validate the tube counts and determine if adjustments were needed. Discrepancies between the vehicle classification counts and the pneumatic tube counts were discovered, especially for buses, small to medium trucks and large trucks. These discrepancies are common for locations with low speeds, and this is likely the cause of the discrepancy for this count due to the tube counts being placed at the gates.

- Small/medium trucks were over-counted by pneumatic tube counters for all days by approximately a factor of two. To correct for this, all small and medium truck values were divided by two.
- Buses were found to have been under-counted by the tube counters by an approximate factor of two, so all bus values recorded by tube counters were multiplied by two.
- Large trucks were also undercounted, and had their counts increased by the same number of small and medium trucks that were decreased (i.e. for every small and medium truck count reduced, the number of large trucks was increased by one).

2022 Cruise Schedule

Cruise vessels were present at Terminal 91 on eight of the eleven days surveyed in 2022. Table 2 provides a summary of the cruise schedule and the number of passengers per cruise ship during the eleven-day study period (September 1 through September 11, 2022). Passenger volumes were highest on the two Fridays, when two ships were present at Terminal 91. Port staff notes that many ships were sailing at lower load factors this year than prior years. The average capacity was about 77 percent. On Wednesday and Thursday there were no cruise ships present.

Table 2. Cruise Passengers at Terminal 91 During 2022 Monitoring Survey

		Number of Passengers		
Date	**Cruise Line**	**Embark**	**Disembark**	**Total Passengers**
Thu, 9/1/22	-	-	-	-
Fri, 9/2/22	OVATION OF THE SEAS	2,616	2,404	5,020
	CELEBRITY SOLSTICE	4,007	4,055	8,062
Sat, 9/3/22	EURODAM	1,878	1,873	3,751
	RUBY PRINCESS	1,524	1,380	2,904
Sun, 9/4/22	STAR PRINCESS	3,176	3,174	6,350
	OOSTERDAM	1,624	1,094	2,718
Mon, 9/5/22	QUANTUM OF THE SEAS	3,942	3,930	7,872
Tues, 9/6/22	CARNIVAL SPIRIT[1]	2,022	2,014	4,036
	CARNIVAL SPLENDOR	2,313	2,691	5,004
Wed, 9/7/22	-	-	-	-
Thurs, 9/8/22				
Fri, 9/9/22	OVATION OF THE SEAS	3,765	3,991	7,756
	CELEBRITY SOLSTICE	2,265	2,613	4,878
Sat, 9/10/22	CROWN PRINCESS	1,880	1,883	3,763
	EURODAM	1,409	1,517	2,926
Sun, 9/11/22	DISCOVERY PRINCESS	3,168	3,181	6,349
	WESTERDAM	1,230	1,567	2,797

Source: *Port of Seattle and Cruise Terminals of America*, 2022.

1. The Carnival Spirit is typically a Wednesday/Thursday ship. It sailed on a Tuesday during the study period because it was at the end of its sailing season.

Automobile Traffic

Automobile traffic that entered or exited Terminal 91 was added for both access locations (east and west gate) to determine the total number of automobiles accessing Terminal 91. In addition to passenger cars, vans and small shuttles (i.e. 10-person passenger vans) were also classified as an automobile. Table 3 summarizes the automobile trip ends (a trip to and from T-91 counts as two trips) and compares them to the thresholds established in the SFRA.

Figure 3 through Figure 5 summarize the AM, PM and daily volumes as compared to their respective thresholds. As shown, the AM peak period exceeded the thresholds on all days when cruise ships were present. Daily automobile thresholds were also exceeded on all the days when a cruise ship was present at T-91. The PM peak period threshold was never exceeded as cruise ship arrivals and departures do not coincide with the PM peak period.

Table 3. Automobile Traffic to and from Terminal 91

Date	AM Peak (7:15 – 8:30 AM) Threshold = 395	PM Peak (3:45 – 5:30 PM) Threshold = 612	Daily (24-Hour) Threshold = 3,500
Friday, September 2, 2022	**1,040**	216	**8,565**
Saturday, September 3, 2022	**570**	56	**4,743**
Sunday, September 4, 2022	**693**	58	**5,388**
Monday, September 5, 2022	**871**	135	**5,587**
Tuesday, September 6, 2022	**648**	332	**7,061**
Wednesday, September 7, 2022	104	138	1,439
Thursday, September 8, 2022	105	154	1,638
Friday, September 9, 2022	**993**	237	**8,975**
Saturday, September 10, 2022	**666**	72	**4,958**
Sunday, September 11, 2022	**673**	68	**5,528**

Source: *Ten-day tube counts conducted by IDAX, Friday, September 1 to Sunday, September 11, 2022. Combined volumes at both East Gate and West Gate for entry to and from Terminal 91.*
Volumes in bold identify time periods where the SFRA threshold limit is met or exceeded.

Figure 3. Automobile Traffic – AM Peak Period (7:15 – 8:30 AM)

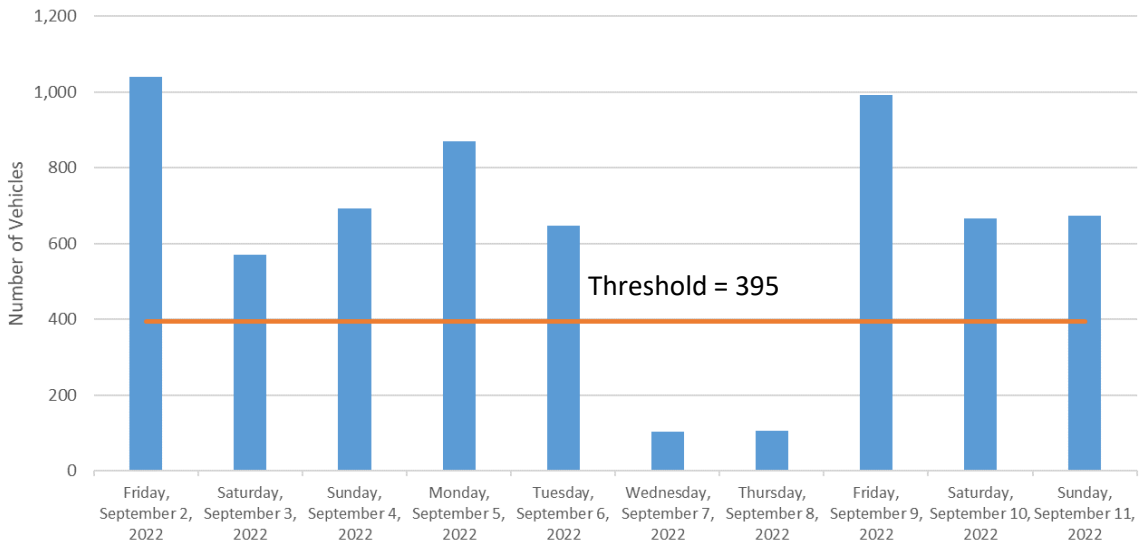


Figure 4. Automobile Traffic – PM Peak Period (3:45 – 5:30 PM)

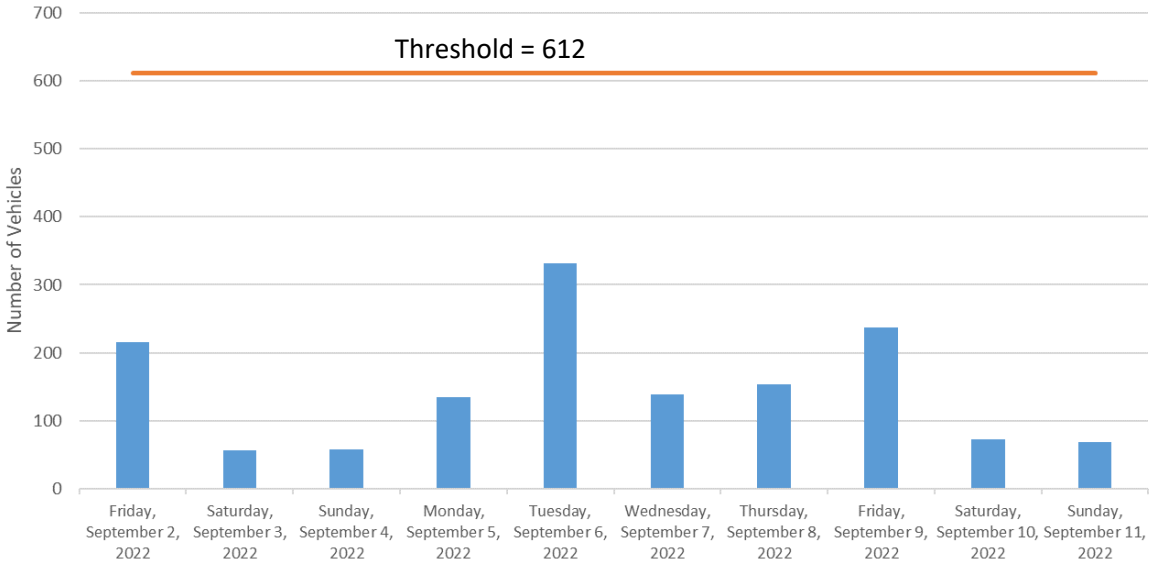


Figure 5. Automobile Traffic – Daily (24-Hour Period)

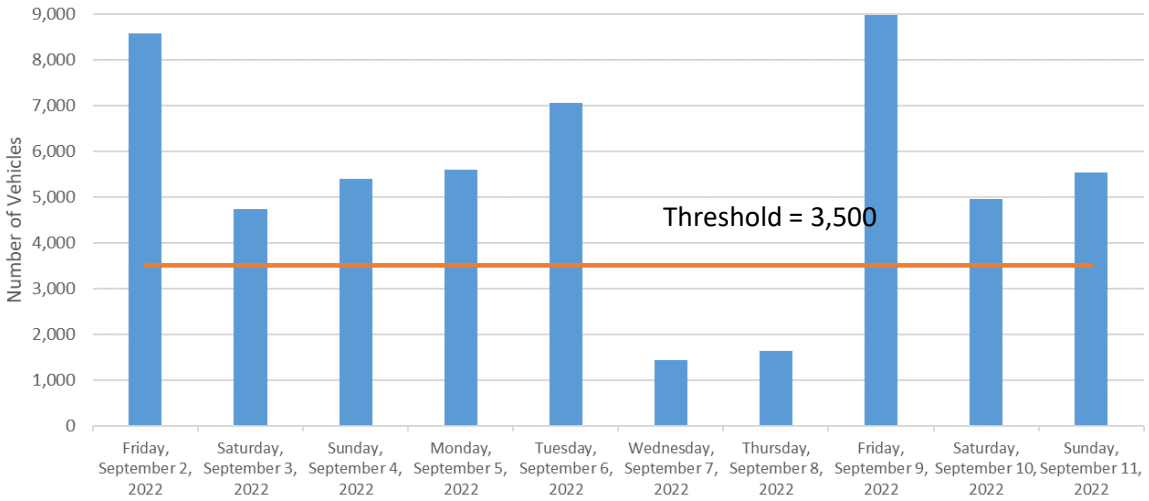


Figure 6 shows the Daily Automobile Volume by Access Location. On days without a cruise ship call, the parking lot at the West Gate is typically locked. In prior years, a small number of trips that entered or exited the terminal at the West Gate were likely related to security or maintenance personnel. Days with the largest number of vehicles accessing Terminal 91 correspond to days with cruise ship activity.

Figure 6. Daily Automobile Trips by Access Location

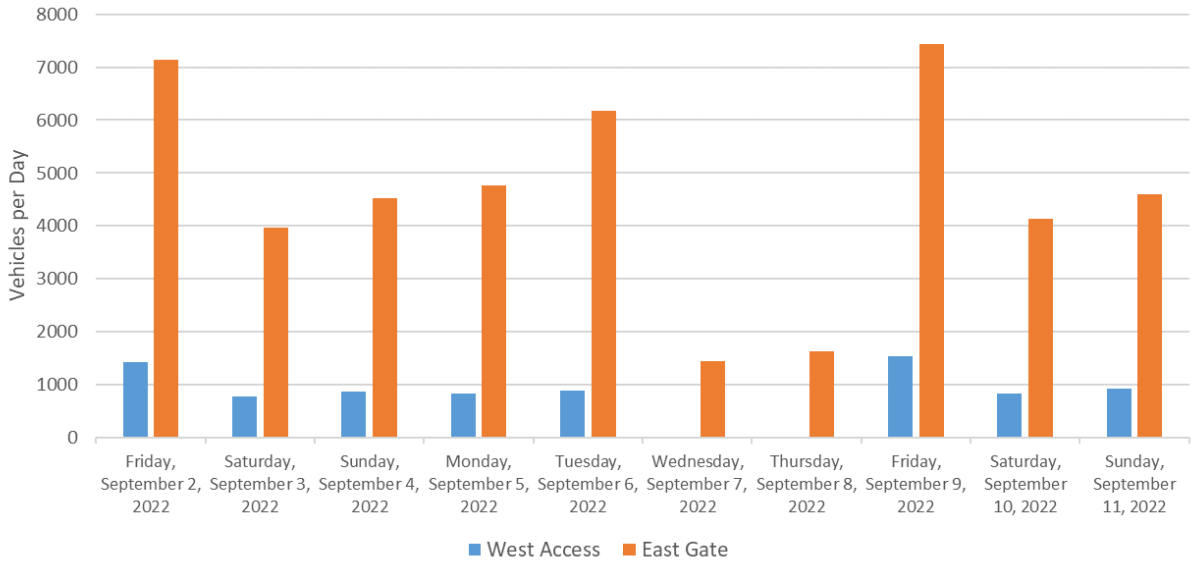


Table 4 shows the number of vehicles recorded during the AM peak, PM peak and daily at the TNC access lane. While this lane is primarily used for TNCs during cruise ship passenger pickup and drop off, the lane may be used for other vehicle access during non-cruise times. The number of vehicles in this lane on cruise days is representative of the number of TNCs carrying passengers to and from T-91. This access lane has been monitored since 2019 to estimate how many passengers are arriving by TNC vs passenger car.

Table 4. Vehicles in TNC Lane at Terminal 91

Date	**AM Peak (7:15 – 8:30 AM)**	**PM Peak (3:45 – 5:30 PM)**	**Daily (24-Hour)**
Friday, September 2, 2022	165	1	730
Saturday, September 3, 2022	89	0	309
Sunday, September 4, 2022	119	1	291
Monday, September 5, 2022	154	0	383
Tuesday, September 6, 2022	66	2	307
Wednesday, September 7, 2022	0	1	16
Thursday, September 8, 2022	1	2	12
Friday, September 9, 2022	159	4	776
Saturday, September 10, 2022	94	2	342
Sunday, September 11, 2022	90	3	357

Source: *Ten-day tube counts conducted by IDAX, Friday, September 2 to Sunday, September 11, 2022.*

Truck Traffic

Truck traffic volumes were counted for large vehicles (trucks and buses) entering at both gates to Terminal 91 and compared to SFRA thresholds. Almost all large vehicles access Terminal 91 through the East Gate, although some smaller trucks and shuttles may use the West Gate. The total number of truck trip ends for both access locations is summarized in Table 5. As shown, the volume of trucks, shuttles and buses exceeded the AM peak and daily thresholds on all days of the week. The PM peak threshold was never exceeded.

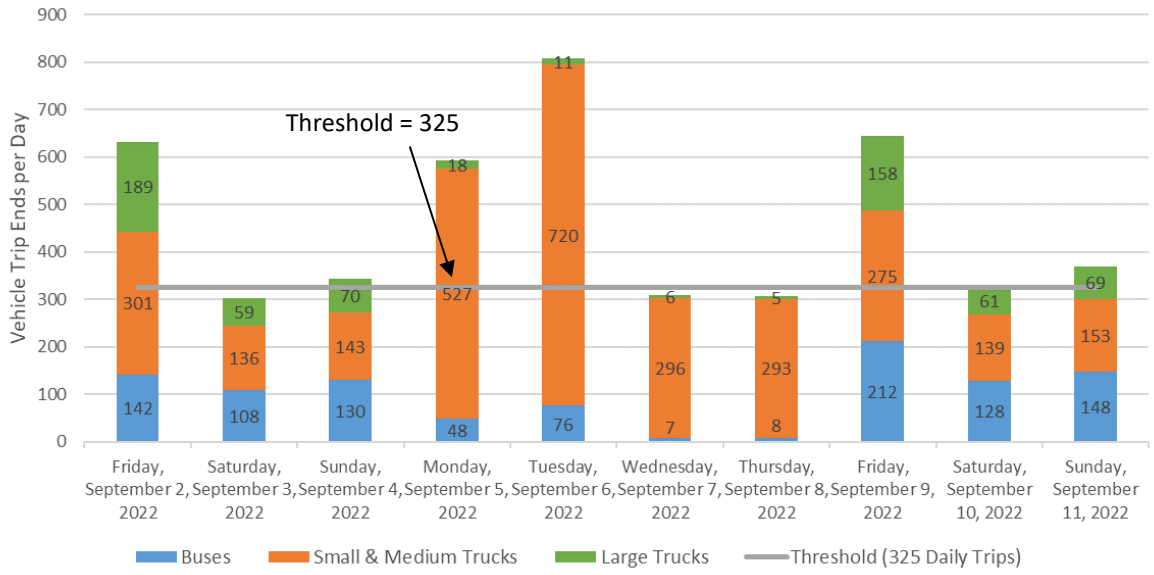
Table 5. Truck, Bus and Shuttle Volumes to and from Terminal 91

Date	AM Peak (7:15 – 8:30 AM) Threshold = 25	PM Peak (3:45 – 5:30 PM) Threshold = 48	Daily (24-Hour) Threshold = 325
Friday, September 2, 2022	**80**	8	**632**
Saturday, September 3, 2022	**47**	0	303
Sunday, September 4, 2022	**45**	0	**343**
Monday, September 5, 2022	**83**	9	593
Tuesday, September 6, 2022[1]	**101**	21	**807**
Wednesday, September 7, 2022	**38**	19	**309**
Thursday, September 8, 2022	**32**	15	**306**
Friday, September 9, 2022	**93**	10	**645**
Saturday, September 10, 2022	**46**	3	**328**
Sunday, September 11, 2022	**54**	0	**370**

Source: *Ten-day tube counts conducted by IDAX, Friday, September 2 to Sunday, September 11, 2022. Combined volumes at both East Gate and West Gate for entry to and from Terminal 91.*
Volumes in bold identify time periods where the Short-Fill Redevelopment Agreement threshold limit is met or exceeded.
1. Tuesday, September 6 has two cruises calls at T-91 which is atypical for Tuesday cruise operations. There is generally one cruise ship on Tuesdays.

The types of vehicles were compiled for each day to show the proportion of each type of large vehicle: buses, small and medium trucks and large trucks (see Figure 2 for classification breakdown). Figure 7 summarizes the daily truck and bus volumes entering Terminal 91.

Figure 7. Large Vehicles by Day of Week



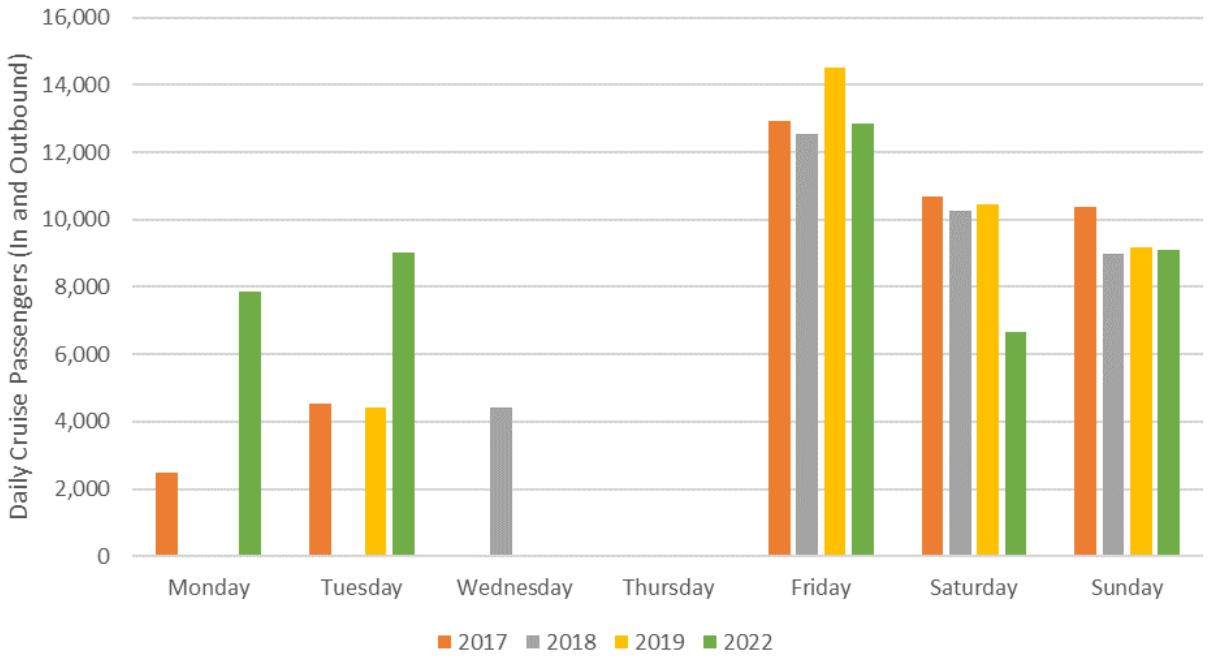
Historic Trends

This section compares results from the four most recent traffic monitoring studies—September 2017, 2018, 2019 and 2022.

Passenger Trends

Traffic volumes at Terminal 91 fluctuate from day to day. The largest changes result from cruise activities. Figure 8 shows the number of passengers that embark and disembark cruise ships at the terminal by day of week for the past four monitoring years. Typical 2022 cruise ship schedules included cruise ship calls at T-91 on Mondays, Tuesdays, Fridays, Saturdays and Sundays and every other Wednesday. The study period in 2022 did not include a cruise ship call on Wednesday as the Carnival Spirit (typically at T-91 every other Wednesday throughout summer 2022) was at T-91 on Tuesday. No cruise activity has occurred on Thursday in recent years. Cruise ship passenger volumes decreased in 2022 compared to 2019 passenger volumes on Fridays, Saturdays and Sundays. However, cruise ships passenger volumes increased on Monday and Tuesday in 2022 compared to previous years. Cruise ship passenger volumes on Friday, Saturday and Sunday represent averages across the two study weekends.

Figure 8. Cruise Ship Passenger Volume Trends



Automobile Traffic Trends

Figures 9, 10, and 11 compare historic automobile traffic monitoring results for the AM peak, PM peak and 24-hour periods, respectively. Traffic volumes remain similar with cruise ship passenger trends during the last four years of traffic monitoring. The AM peak period automobile traffic volumes continue to exceed the threshold on Friday, Saturday and Sunday. AM traffic volumes were larger than previous years, as passenger volumes also increased on Monday and Tuesday in 2022. The PM peak period automobile traffic volumes remain similar to volumes from previous years. Volumes during the PM are well below the established threshold. Daily automobile traffic volumes exceed the threshold on all cruise days.

Figure 9. Automobile Trends – AM Peak Period (7:15 – 8:30 AM)

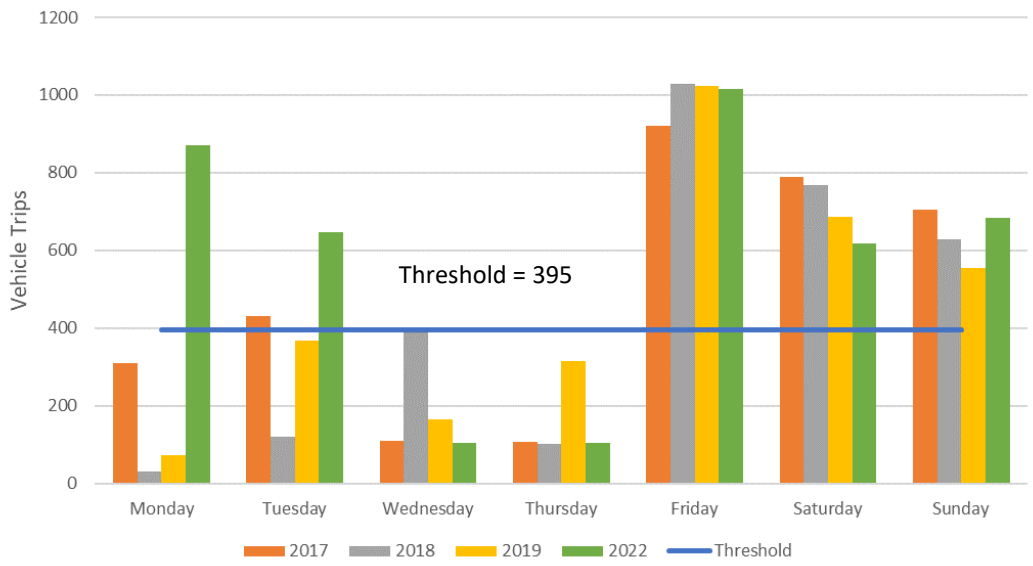


Figure 10. Automobile Trends – PM Peak Period (3:45 – 5:30 PM)

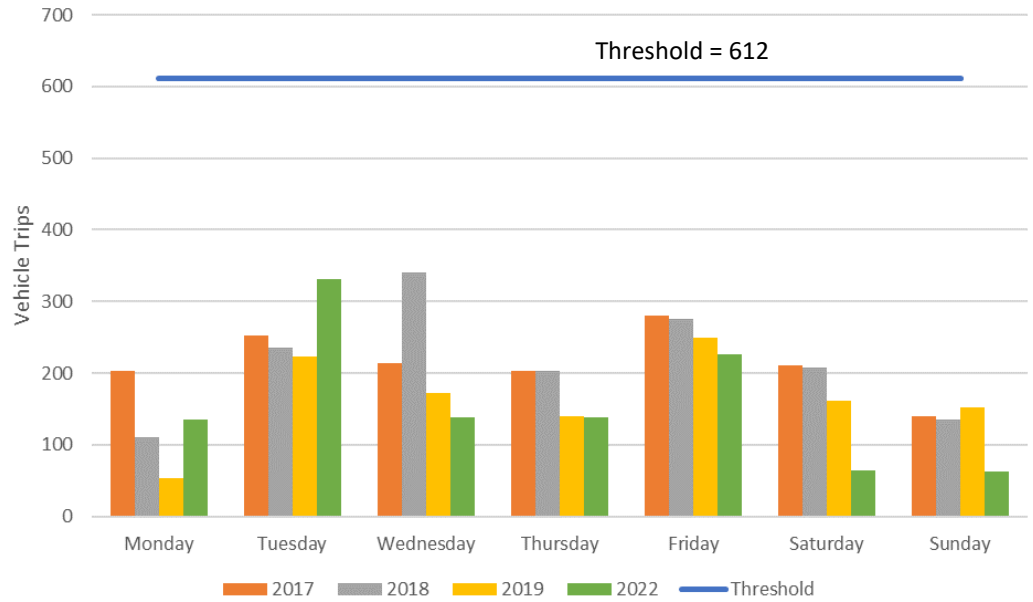
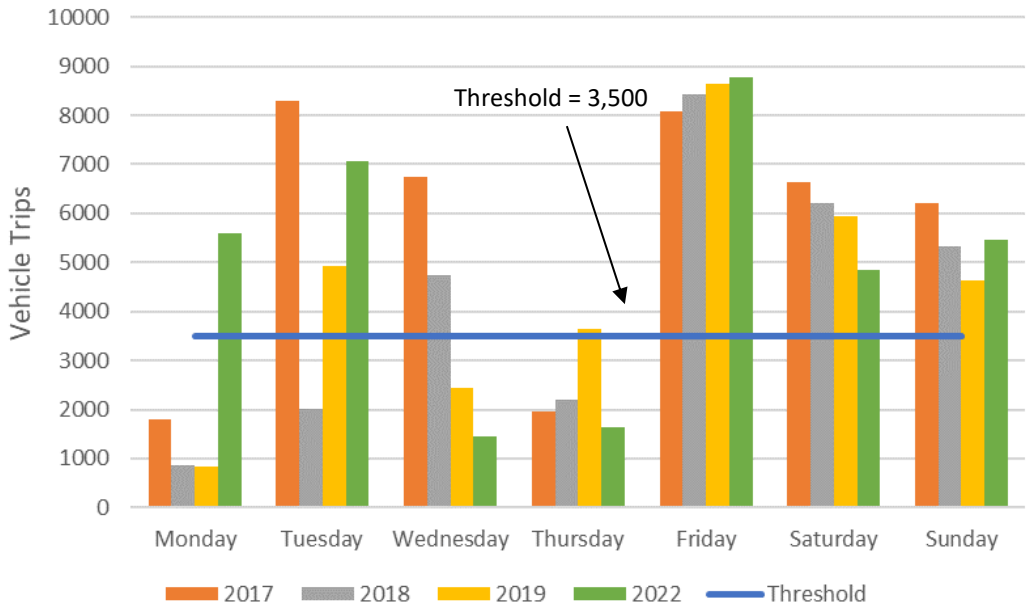


Figure 11. Automobile Trends – Daily (24-Hour Period)



Truck and Bus Traffic Trends

Figures 12, 13, and 14 compare truck volumes to prior monitoring results for the AM peak, PM peak, and 24-hour periods, respectively. These volumes include buses and trucks. The AM peak period and daily volumes of trucks have fluctuated during the weekdays (apart from Wednesday in 2018, where AM truck volumes were high). AM truck and bus volumes in 2022 were higher than previous years at the start of the week, while PM and daily counts were on average lower than previous years. Truck volume thresholds were met or exceeded every day during the AM peak period while the daily (24-hour) thresholds were exceeded on all cruise days except 9/3, as shown in Table 5. The PM peak period threshold was not met on any day.

Figure 12. Truck and Bus Trends – AM Peak Period (7:15 – 8:30 AM)

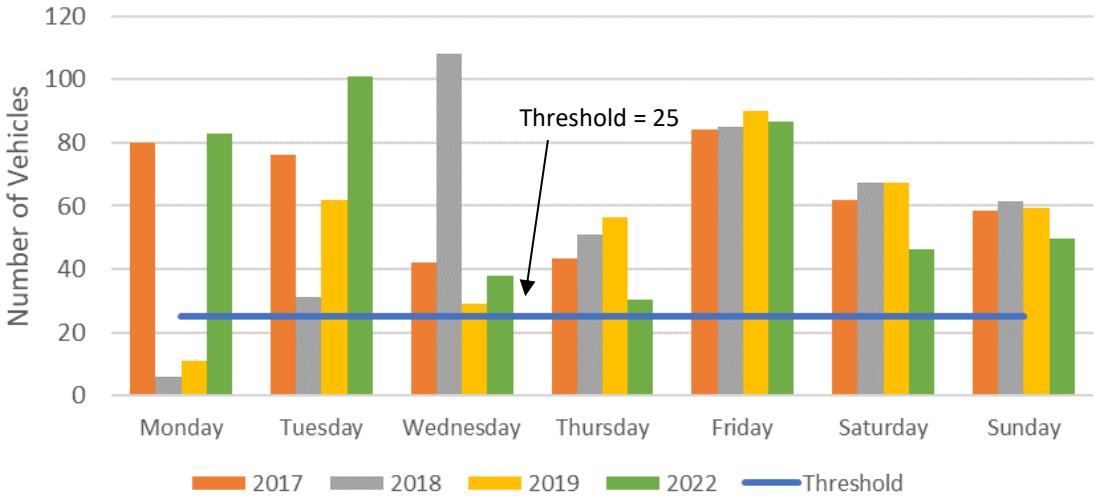


Figure 13. Truck and Bus Trends – PM Peak Period (3:45 – 5:30 PM)

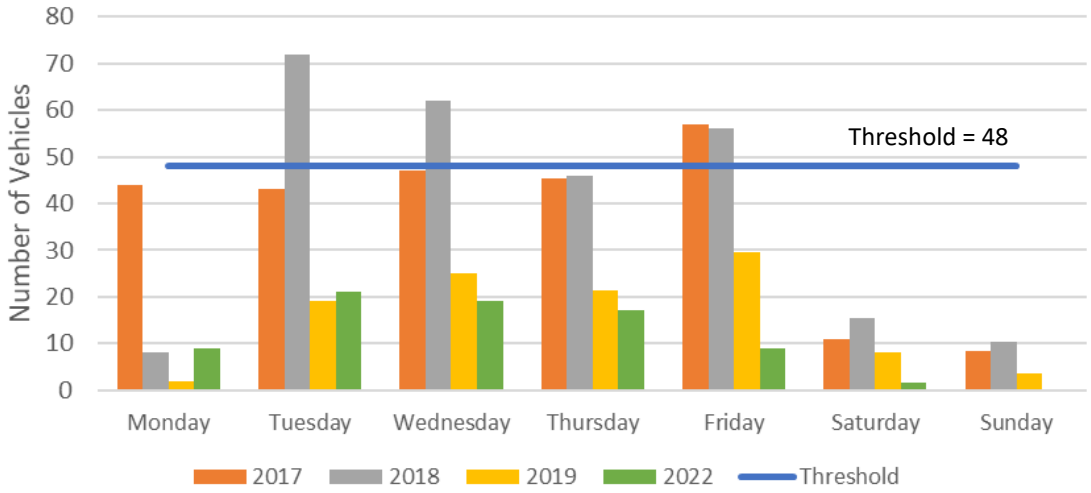
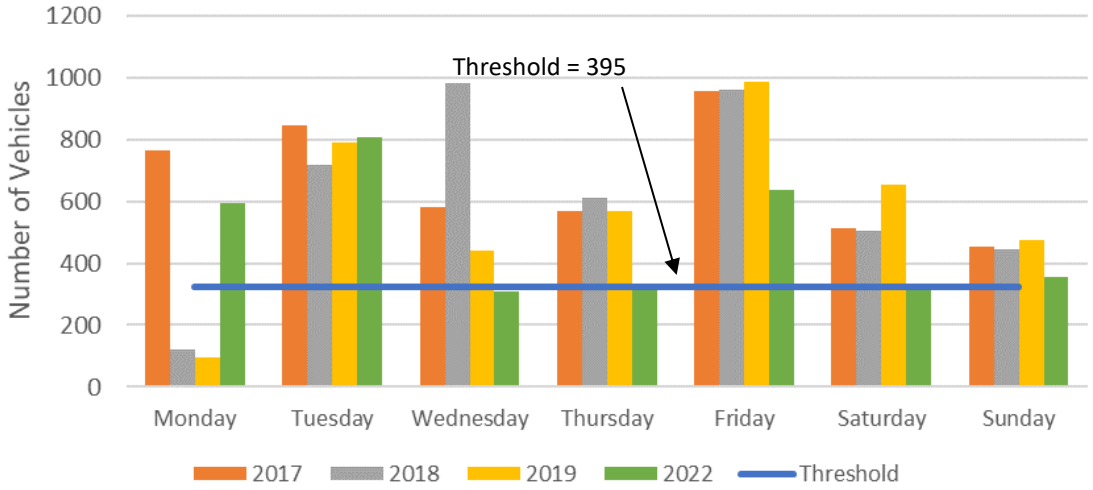


Figure 14. Truck and Bus Trends – Daily (24-Hour Period)



Intersection Level of Service

Trigger Levels

The SFRA established level of service trigger levels for five off-site intersections. Level of service is a qualitative measure used to characterize traffic operating conditions. Six letter designations, "A" through "F," are used to define level of service. LOS A is the best and represents good traffic operations with little or no delay to motorists. LOS F is the worst and indicates poor traffic operations with long delays. The trigger levels are summarized in Table 6. It is noted that the SFRA included the West Galer Street intersection on Elliott Avenue West, which was the primary access to Terminal 91 when the SFRA was created. That access has been replaced with the Galer Street Flyover. Therefore, the trigger level previously established for Galer Street was applied to the Elliott Avenue West/West Galer Street Flyover intersection.

Table 6. Level of Service Trigger Levels from SFRA

Intersection	Trigger Level
Elliott Avenue W / Galer Street Flyover	**LOS E**
Elliott Avenue W / W Garfield Street	**LOS C**
Elliott Avenue W / W Mercer Place	**LOS E**
15th Avenue W / W Dravus Street	**LOS D**
20th Avenue W / W Dravus Street	**LOS D**

Source: Terminal 91 Short Fill Redevelopment Agreement (as amended 1985 and 1998).
SFRA included the Elliott Avenue West / West Galer Street Intersection, which was the primary access to Terminal 91. That access has been replaced with the Galer Street Flyover. Intersections at Dravus are now included.

As previously discussed, the level of service methodology prescribed by the SFRA (Critical Lane Analysis) is outdated. Computers now allow more complex calculations to occur, which have resulted in more accurate analyses of intersection operations. For this study, intersection levels of service were determined using the methodologies in the Highway Capacity Manual (Transportation Research Board, 2000). Levels of service for study area intersections were calculated using Trafficware's Synchro 11 traffic operations analysis software, which is also the latest version of software. Current level of service criteria for signalized intersections can be found in Appendix B.

The levels of service models developed by Seattle Department of Transportation (SDOT) for the Elliott Avenue/15th Avenue corridor were used for all analyses; these models reflect the current configuration (with the BAT lanes) and the volume-responsive traffic signal timing. However, these models use phasing plans that are not compatible with the stricter HCM 2010 phasing requirements (such as dedicated pedestrian phases). As a result, HCM 2000 was used to evaluate the intersection level of service since 2016. It is noted that HCM methodology was not used to calculate intersection level of service in years prior to 2016. This change, along with slight alterations to the traffic signal timing and phasings implemented by the City of Seattle, result in more variation in average vehicle delay when comparing results before and after 2016.

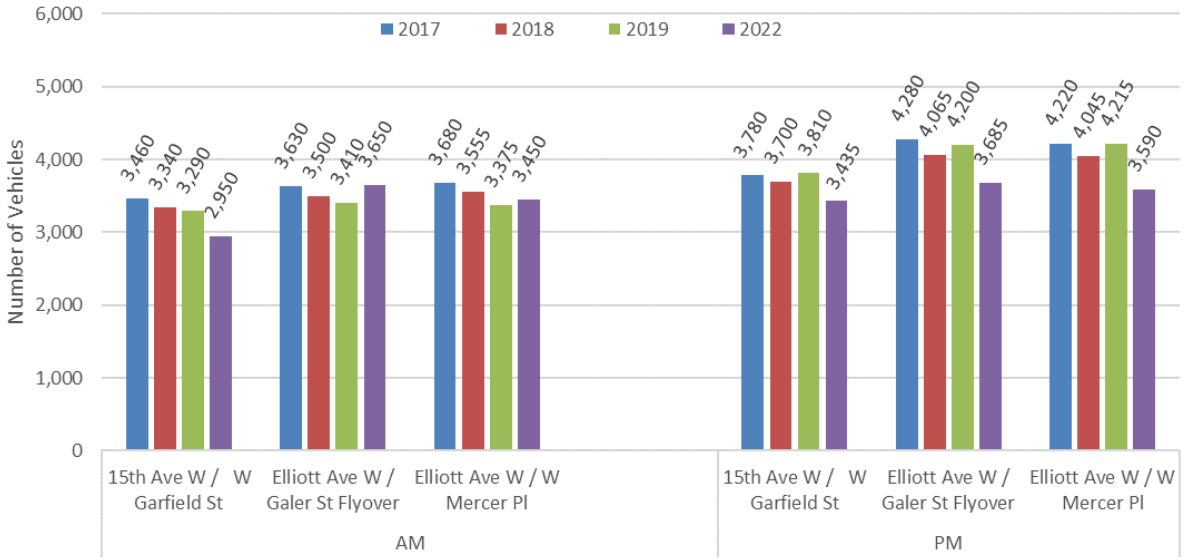
Year 2022 Traffic Volumes

Without Cruise Activity

New intersection counts were performed at all three study intersections on Thursday September 1, 2022, for two hours during the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak periods. These counts were performed when no cruise activity was occurring at the Port. The peak one hour during each of the count periods was identified and used for the intersection analysis. These peak one-hour traffic volumes are reported from 7:45 to 8:45 A.M. and from 4:30 to 5:30 P.M. It is noted that these peak hours differ from the longer-than-60-minute periods prescribed by the SFRA. The peak hours were selected to meet industry standard for traffic analysis and level of service definitions and are consistent with other traffic studies performed within the City of Seattle. Traffic volumes without cruise activity are shown on Figure 16 for the AM and PM peak hours, respectively. Additionally, the raw intersection turning movement counts are shown in Appendix A.

The study found that intersection traffic volumes have generally decreased in 2022 compared to previous years. For each year since 2017, the total number of vehicles entering each of the intersections during the peak hours is compared on Figure 15. All sets of counts reflect late August or September conditions without cruise activity at Terminal 91. During the AM peak hour, the intersection of Elliott Ave West / West Mercer Place and Elliott Ave West / Galer Street Flyover saw volume increases while the intersection of 15th Avenue West / Garfield Street saw volume decreases in 2022 compared to previous years. PM peak hour volumes decreased at all study intersections in 2022. This volume change may be due to both The Expedia Group now occupying the former Amgen site south of Terminal 91 for their Expedia Campus since the 2019 study and general travel trends change due to COVID-19.

Figure 15. Total Traffic Entering Intersection – Without Cruise Activity



Source: Intersection turning movement counts performed for the respective Terminal 91 Monitoring Studies. All sets of counts reflect Q3 conditions without cruise activity at Terminal 91.

With Cruise Activity

The gate counts described in the prior sections were used to determine the net change in AM and PM peak hour traffic associated with cruise activity at Terminal 91. Two conditions with cruise activity were evaluated: a typical weekday with one ship call at the terminal (Monday) and a peak weekday with two large ship calls (Friday). These were compared to a day with no cruise (Wednesday) to determine the traffic associated with cruise activity. The trip generation estimates are summarized in Table 7. As shown, cruise related trips are highest during the AM peak hour with 872 trips generated on the peak Friday. During the PM peak hour, on the same day, there were 30 more trips on a peak cruise ship day than on a non-cruise ship day accessing Terminal 91, highlighting that PM peak hour traffic is largely unaffected by cruise ship activity. The raw intersection turning movement counts are shown in Appendix A.

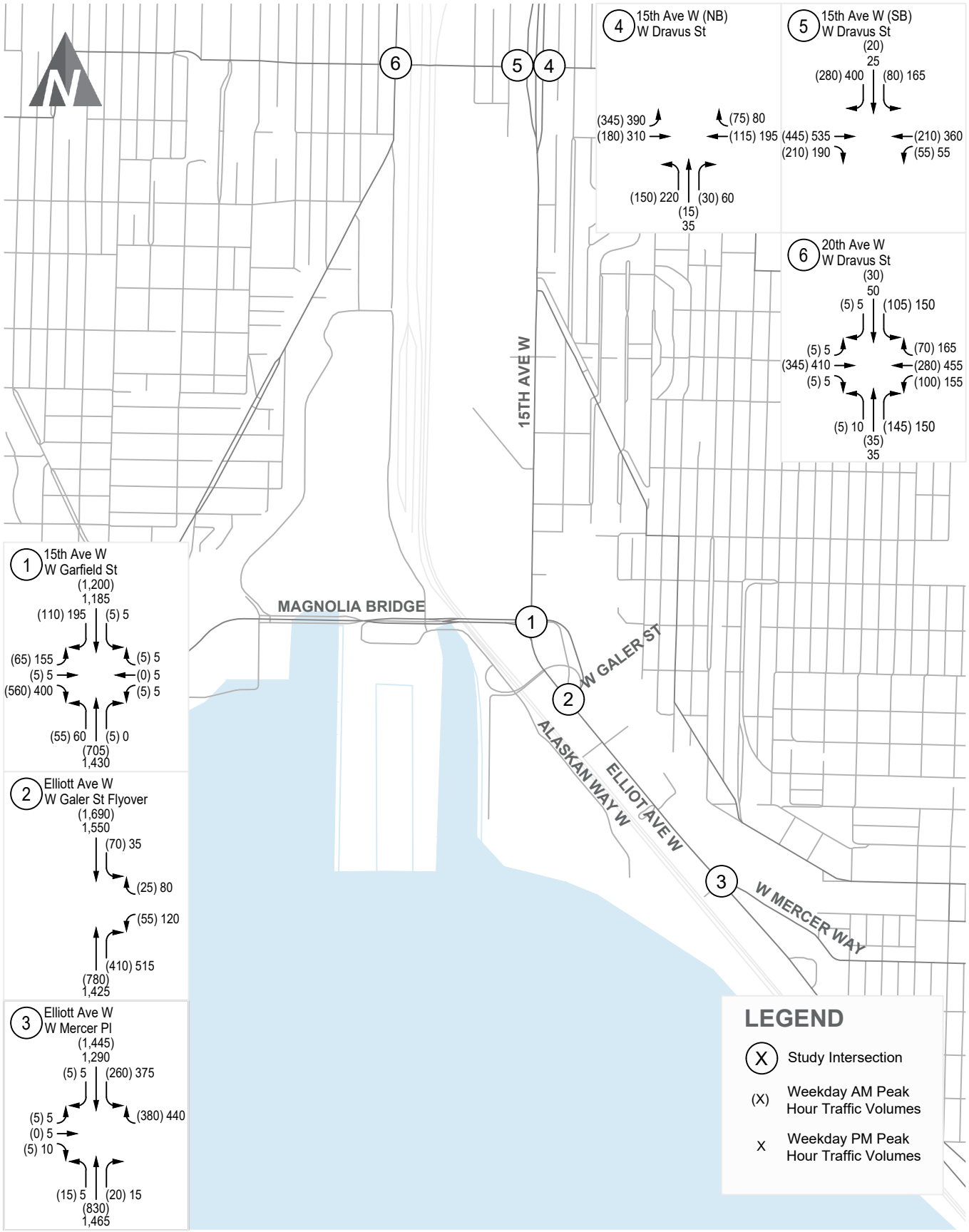
Due to low traffic volumes during the PM peak hour at both gates, the small number of vehicles generated in the PM peak hour and the relatively low number of vehicles that use the west gate, a small change in daily traffic volumes can result in a net negative number of vehicles when comparing a cruise day to a non-cruise day.

Table 7. Weekday Peak Hour Traffic: Cruise Day vs. Non-Cruise Day -- 2019

	East Gate		West Gate		Total Terminal 91		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
AM Peak Hour (7:45 to 8:45 AM)							
Non-Cruise Day (Wed 9/7/2022)	47	51	0	0	47	51	98
Typical Weekday Cruise Day (Mon 9/5/2022)	243	294	59	149	302	443	745
Peak Weekday Cruise Day (Fri 9/9/2022)	449	315	52	154	501	469	970
Net Change with Typical Weekday Cruise	**196**	**243**	**59**	**149**	**255**	**392**	**647**
Net Change with Peak Weekday Cruise	**402**	**264**	**52**	**154**	**454**	**418**	**872**
PM Peak Hour (4:30 to 5:30 PM)							
Non-Cruise Day (Wed 9/7/2022)	25	61	0	0	25	61	86
Typical Weekday Cruise Day (Mon 9/5/2022)	8	37	0	0	8	37	45
Peak Weekday Cruise Day (Fri 9/9/2022)	31	84	0	1	31	85	116
Net Change with Typical Weekday Cruise	**-17**	**-24**	**0**	**0**	**-17**	**-24**	**-41**
Net Change with Peak Weekday Cruise	**6**	**23**	**0**	**1**	**6**	**24**	**30**

Source: *Ten-day tube counts conducted by IDAX, Friday, September 2 to Sunday, September 11, 2022. Combined volumes at both East Gate and West Gate for entry to and from Terminal 91.*

The additional peak hour traffic generated by the cruise terminal on an average weekday (with one ship call) and the peak weekday (two ship calls) was distributed to the roadway network and assigned to the study-area intersections according to defined travel patterns established in the 2010 monitoring study. The AM and PM cruise terminal trips for one and two cruise ship conditions are shown in Figure 17 and Figure 18, respectively.

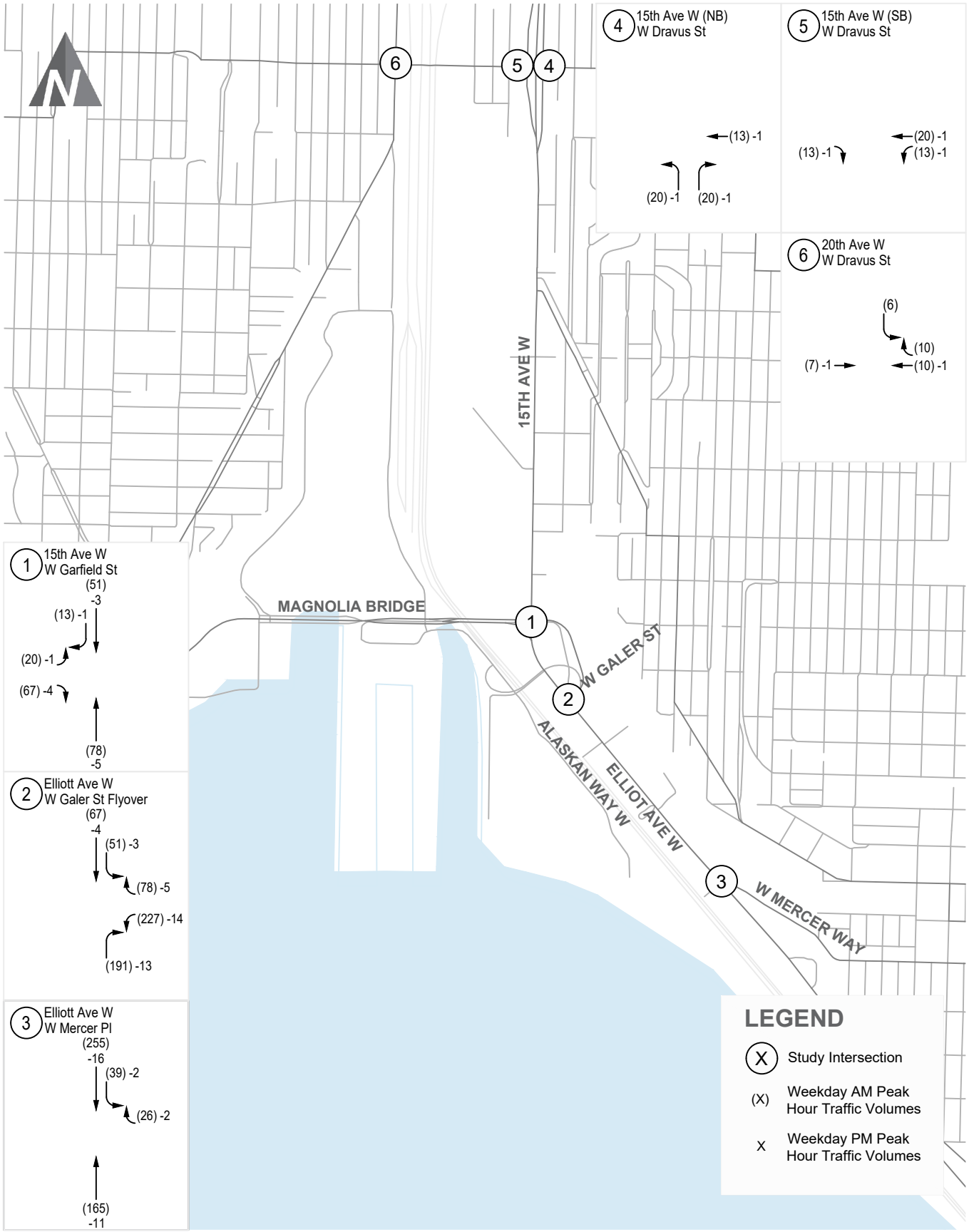


Existing (2022) Peak Hour Traffic Volumes Without Cruise Activity at T91

FIGURE 16

Terminal 91 - Annual Traffic Monitoring - 2022

transpogroup

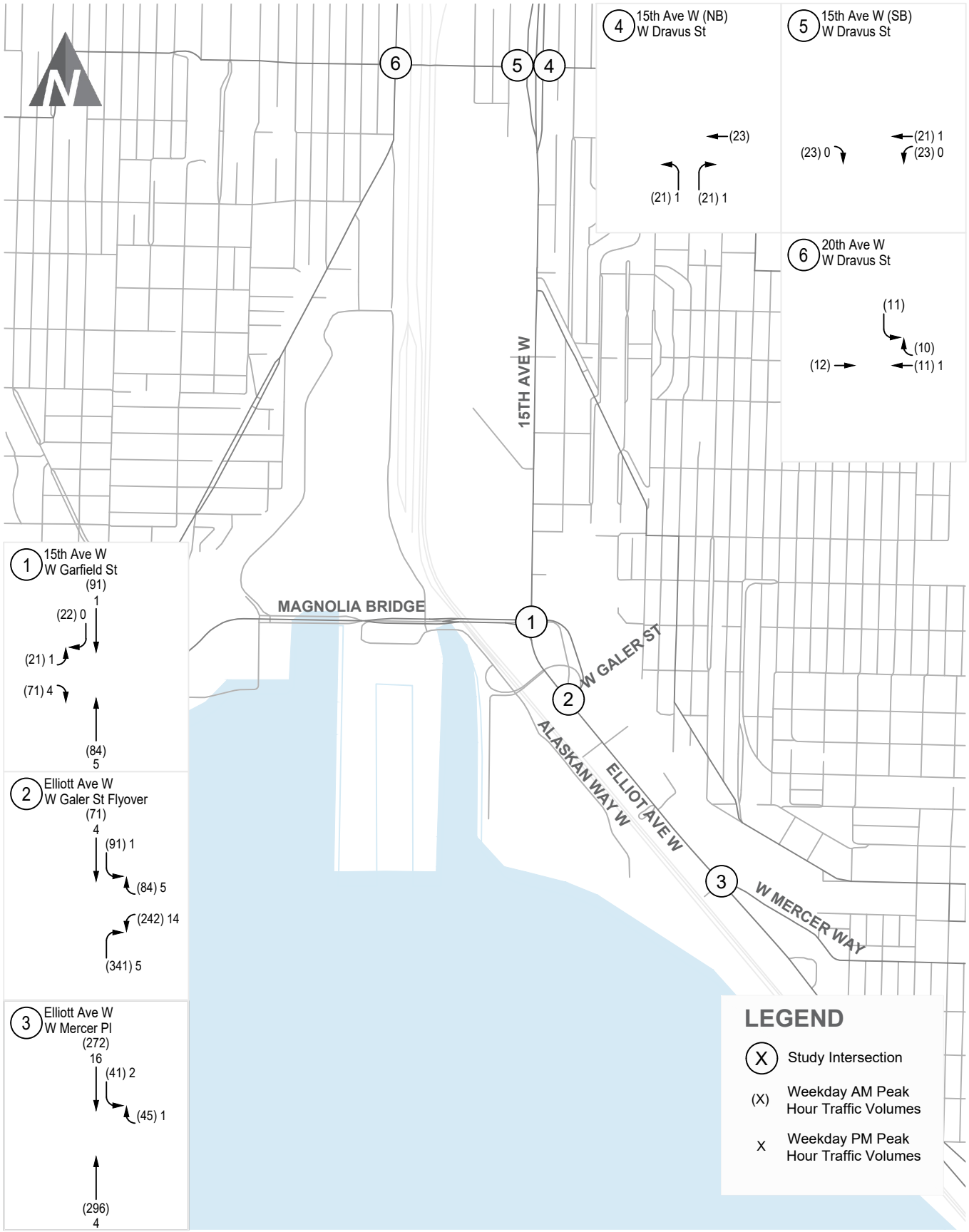


Additional Peak Hour Traffic due to One Cruise

Terminal 91 - Annual Traffic Monitoring - 2022

FIGURE **17**

transpogroup

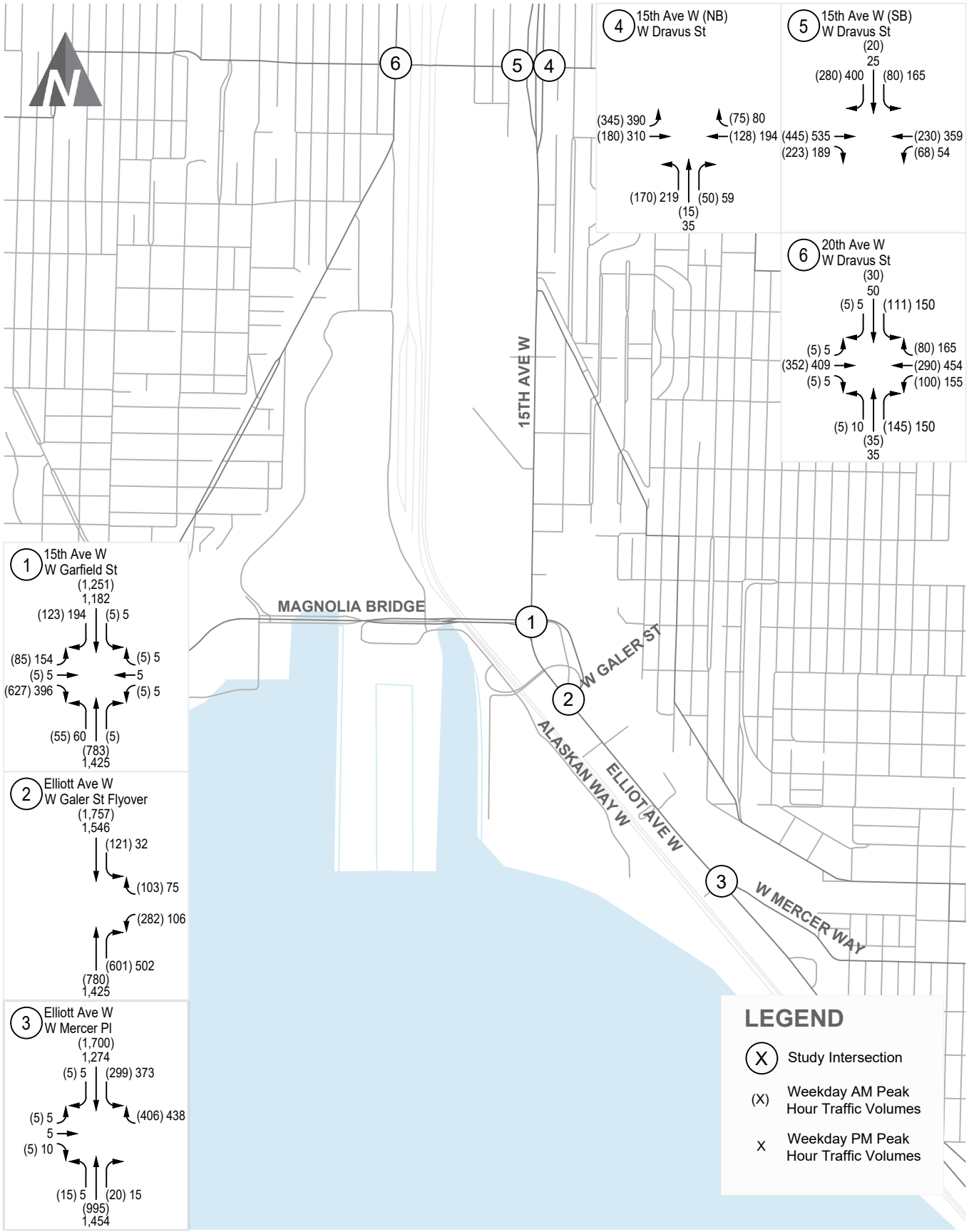


Additional Peak Hour Traffic due to Two Cruises

Terminal 91 - Annual Traffic Monitoring - 2022

FIGURE
18

transpogroup

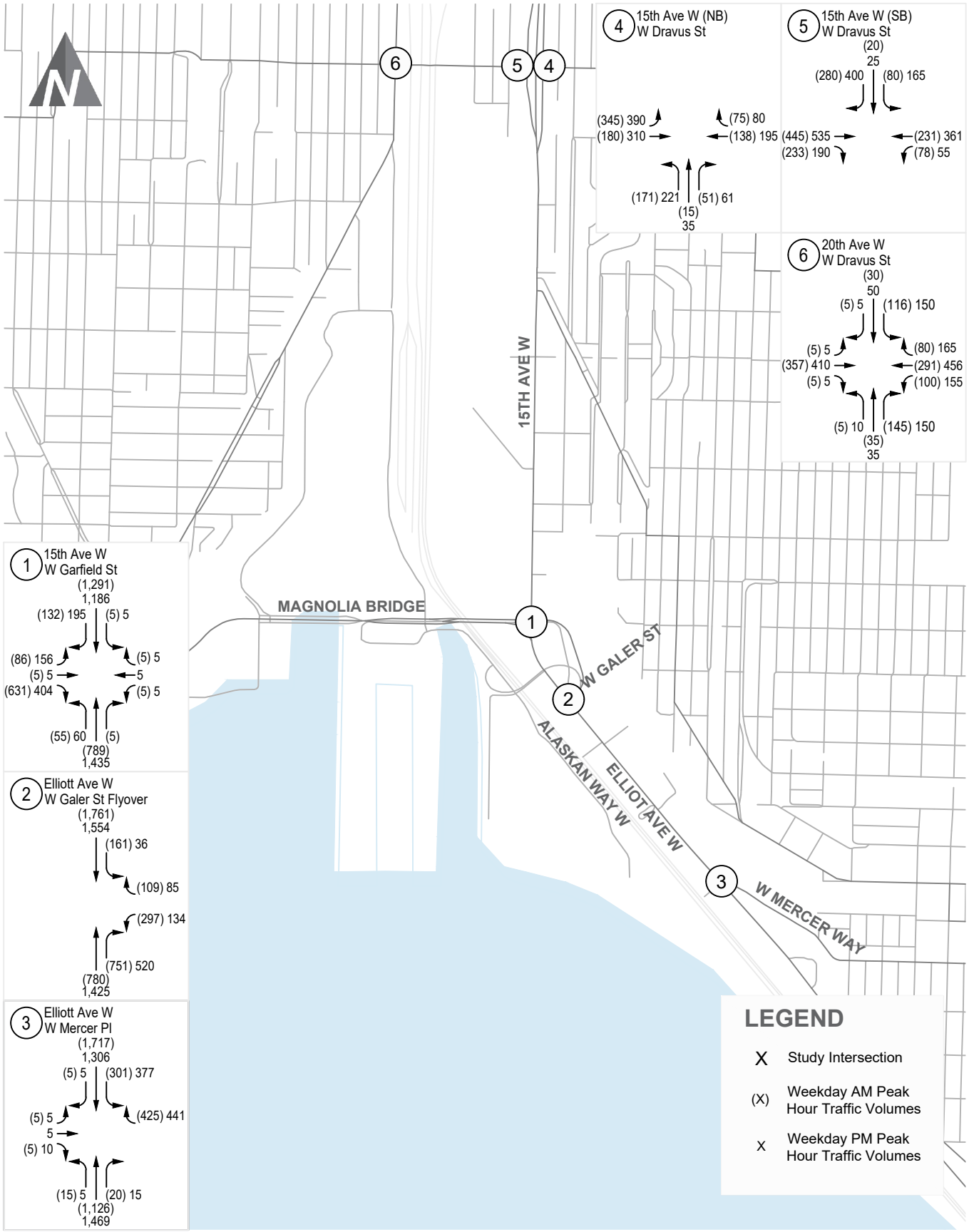


Peak Hour Traffic Volumes With One Cruise at T91

FIGURE
19

Terminal 91 - Annual Traffic Monitoring - 2022

transpogroup



Peak Hour Traffic Volumes With Two Cruises at T91

Terminal 91 - Annual Traffic Monitoring - 2022

FIGURE **20**

transpogroup

Level of Service Analysis

Peak hour traffic volumes shown on Figures 16 through 20 were used to determine the level of service for study-area intersections. The analysis reflects existing conditions on a normal day (without cruise operations at Terminal 91), on a weekday with one ship call, and on a weekday with two ship calls. The methodology used to determine level of service was previously described in the *Trigger Levels* section. The results are summarized in Table 8 and the detailed level of service reports can be found in Appendix C.

The study found that the level of service results for the 'without cruise conditions' at each study intersection all operate below the SFRA threshold level. The addition of the traffic resulting from a typical one-ship day does not significantly impact operations at any of the study intersections. On two-cruise ship days, intersection LOS results also operate below the SFRA threshold level.

Table 8. Weekday Peak Hour Traffic: Cruise Day vs. Non-Cruise Day – 2022

	SFRA Trigger Level[A]	Average Weekday Without Cruise		Average Weekday With One Ship		Peak Weekday With Two Ships	
		LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
AM Peak Hour							
15th Ave / Garfield Street	LOS C	A	4.2	A	4.7	A	4.8
Elliott Ave / Galer Flyover	LOS E	A	7.7	C	21.9	D	37.8
Elliott Ave / W Mercer Place	LOS E	B	16.6	C	21.4	C	22.1
15th Ave / Dravus Street NB	LOS D	C	23.0	C	25.1	C	25.5
15th Ave / Dravus Street SB	LOS D	C	24.0	C	24.4	C	24.4
20th Ave / Dravus Street	LOS D	B	16.4	B	16.7	B	17.0
PM Peak Hour							
15th Ave / Garfield Street	LOS C	A	7.0	A	7.0	B	12.6
Elliott Ave / Galer Flyover	LOS E	A	8.3	A	7.9	A	8.7
Elliott Ave / W Mercer Place	LOS E	B	19.9	B	19.8	B	19.9
15th Ave / Dravus Street NB	LOS D	D	36.8	D	36.3	D	37.0
15th Ave / Dravus Street SB	LOS D	C	27.1	C	27.1	C	27.1
20th Ave / Dravus Street	LOS D	C	20.4	C	20.4	C	20.5

Source: Levels of service were calculated using traffic operations models developed by SDOT for the Elliott Avenue corridor. They reflect existing signal timing and lane geometry. All analysis was performed using the Synchro 11.0 model and analysis methodology.

A. Level of service threshold established by Short-Fill Redevelopment Agreement, January 2000. The SFRA included the Elliott Avenue W / W Galer Street intersection which was the primary access to Terminal 91. That access has been replaced with the Galer Street Flyover. The intersections of 15th / Dravus and 20th / Dravus were removed from annual monitoring after the North Gate was closed but are now included. Table 7 shows the historic SFRA trigger levels for these intersections.

Level of service results from Terminal 91 Monitoring Reports dating back to 2017 are compared on Figure 21 for the Elliott Avenue West / Galer Street Flyover intersection and on Figure 22 for the Elliott Avenue West / West Mercer Place intersection. The intersection of 15th Avenue West / West Garfield Street has operated well (LOS A) throughout the course of the annual T-91 studies, and therefore no figure has been provided below. The graphs compare the average vehicle delay with and without cruise traffic. At the Elliott Avenue West / Galer Street Flyover intersection, traffic operations during the AM peak period were worse in 2022 compared to previous years while PM traffic operations were similar. The Elliott Avenue West / West Mercer Place intersection operated similarly in 2022 compared to previous years. Figures 21 and 22 show that both intersections continue to operate within the delay associated with the LOS E threshold established by the SFRA.

Figure 21. Traffic Operations at Elliott Avenue West / Galer Street Flyover Intersection

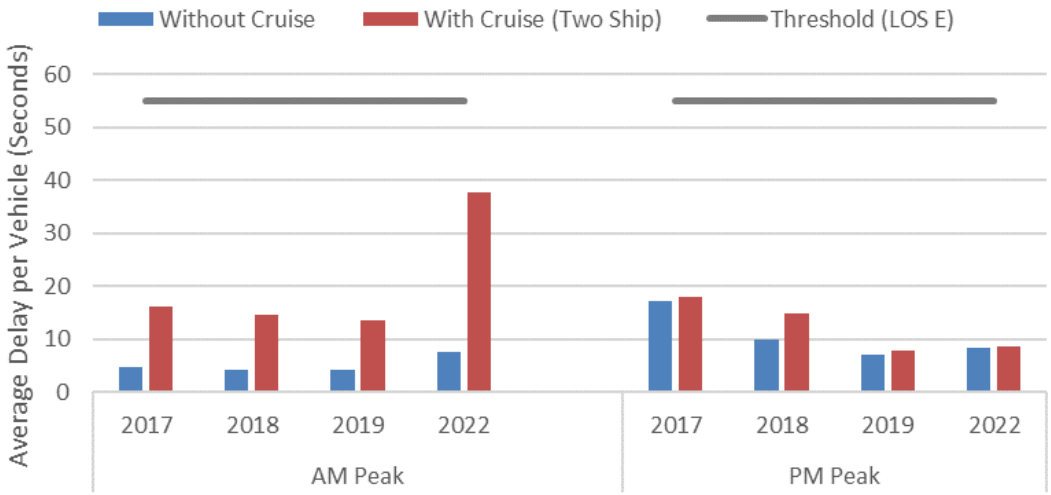
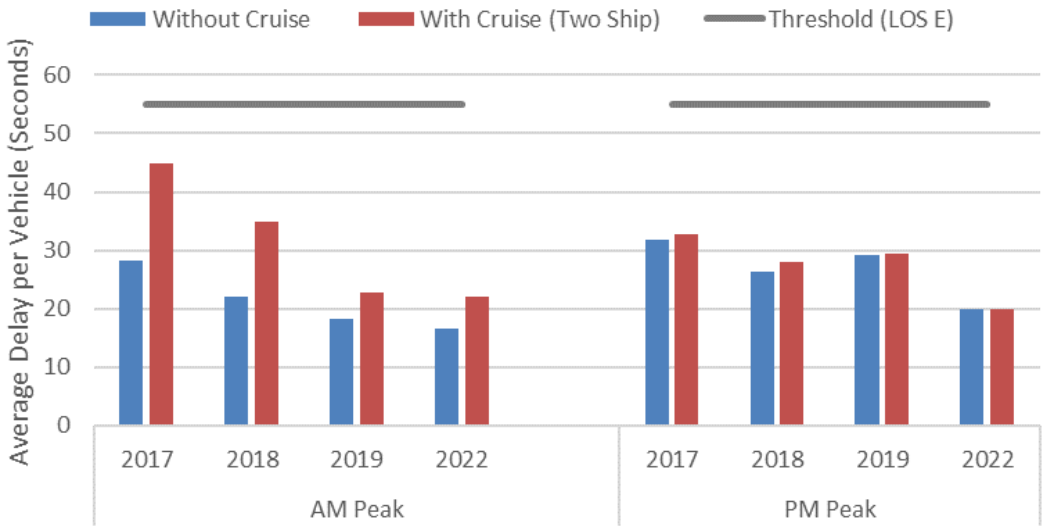


Figure 22. Traffic Operations at Elliott Avenue West / West Mercer Place Intersection



Elliott Avenue West / 15th Avenue West Corridor Travel Speeds

The 2019 monitoring study included travel speeds. This was the first time the study has ever included travel speed as part of the review. Speeds were collected along Elliott Avenue West and 15th Avenue West Corridor between Market Street on the north and West Mercer Place on the south. This provides an additional measurement of traffic flow in the T-91 area beyond the SFRA, as a complement to intersection LOS based on NAC feedback from prior annual reports. Corridor travel speeds are related to intersection LOS because intersection delays are usually the biggest contributor to the decrease in corridor speed. These speeds were captured via INRIX, a company that purchases GPS data from vehicle fleets and uses it to measure minute by minute roadway travel speeds. These GPS data points are pulled from a sample of the total traffic stream and based on previous studies that compare INRIX to other methods of travel speed capture, represent a statistically significant portion of the traffic. This results in INRIX producing statistically accurate estimates for roadway travel speeds.

Figure 23 and Figure 24 show the average northbound and southbound travel speeds for the Elliott Avenue West / 15th Avenue West Corridor for an average weekday in September 2017, 2018, 2019 and 2022.

Travel speeds in the northbound direction are relatively consistent throughout the day, but slow during the PM peak period. Southbound travel speeds decrease during the AM peak, and then remain relatively consistent for the rest of the day. Both northbound and southbound travel speeds were higher in 2022 during the peak periods than in previous monitoring years suggested that there is less overall peak period roadway congestion compared to previous years.

This method of travel speed measurement is much newer than the original SFRA, and as such there is no SFRA threshold for travel speed. It has been included since the 2019 report to provide another method of measuring traffic flow in the T-91 area, that can be compared year to year. This method of collecting roadway travel speeds is becoming increasingly common, and data availability will continue to increase in the coming years.

Figure 23. Elliott Ave W / 15th Ave W Corridor: Northbound Travel Speed Comparison

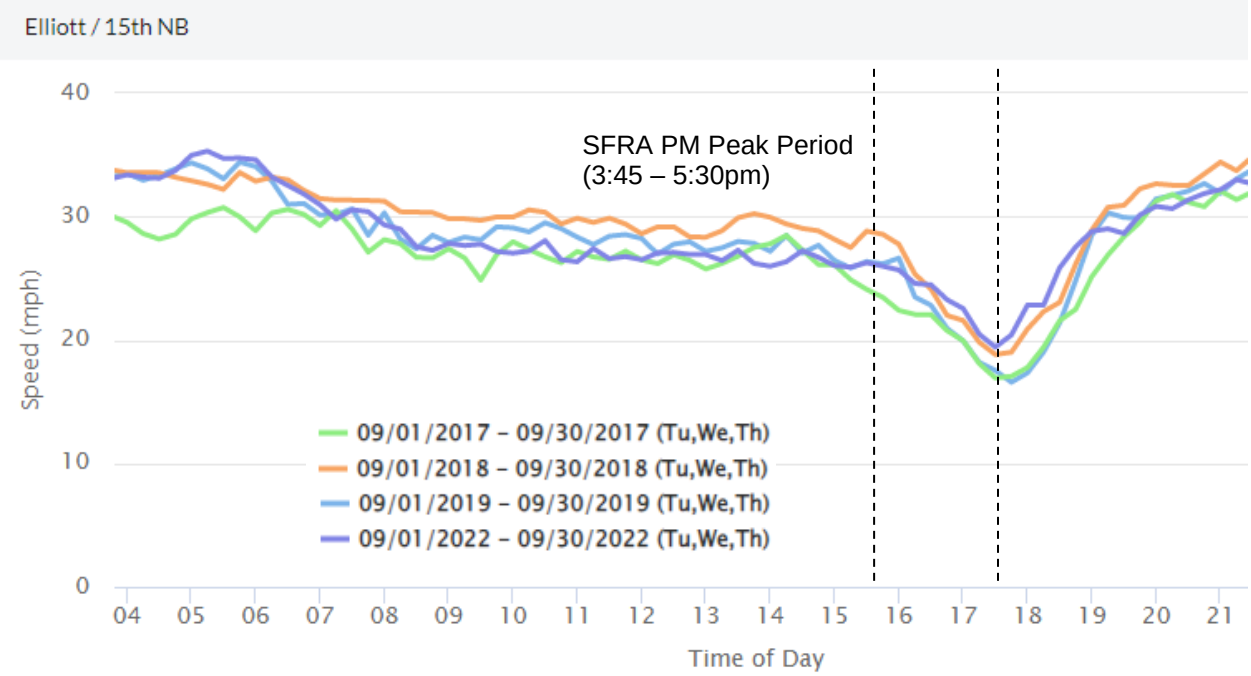
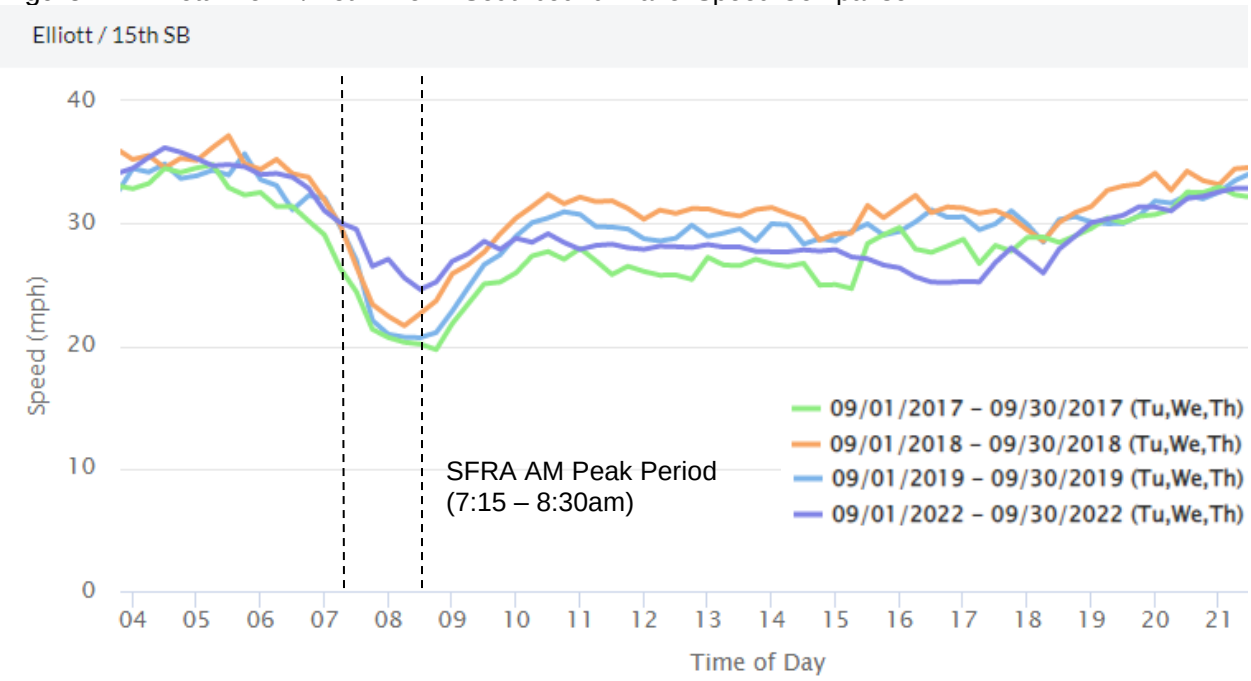


Figure 24. Elliott Ave W / 15th Ave W Southbound Travel Speed Comparison



Conclusions

The 2022 Terminal 91 Traffic Monitoring Study shows that truck trips continue to exceed the volume thresholds for AM and daily periods. Automobile trips exceed the thresholds during the AM and daily periods on days with cruise operations. However, despite the traffic volume thresholds being exceeded,

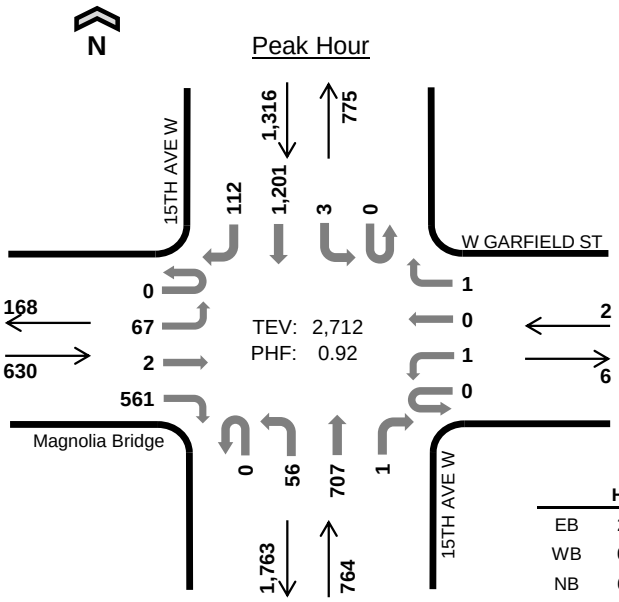
traffic operations along the Elliott Avenue West / 15th Avenue West corridor still operate below the intersection trigger levels listed in the Short Fill Redevelopment Agreement (SFRA) at each of the study intersections during both the AM and PM peak hours.

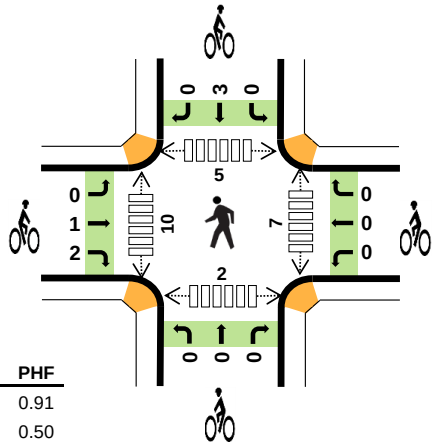
Appendix A:Intersection Traffic Counts

AM Counts

15TH AVE W
Magnolia Bridge

Date: 09/01/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	2.1%	0.91
WB	0.0%	0.50
NB	6.7%	0.92
SB	4.0%	0.85
TOTAL	4.3%	0.92

Two-Hour Count Summaries

Interval Start		Magnolia Bridge Eastbound				W GARFIELD ST Westbound				15TH AVE W Northbound				15TH AVE W Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	14	0	109	0	0	1	0	0	10	136	0	0	0	194	11	475	0
7:15 AM		0	10	0	118	0	0	0	0	0	12	171	0	0	0	229	17	557	0
7:30 AM		**0**	**11**	**0**	**162**	**0**	**0**	**0**	**0**	**0**	**11**	**168**	**1**	**0**	**0**	**298**	**19**	**670**	0
7:45 AM		**0**	**20**	**0**	**149**	**0**	**0**	**0**	**0**	**0**	**18**	**189**	**0**	**0**	**0**	**283**	**27**	**686**	2,388
8:00 AM		**0**	**15**	**0**	**105**	**0**	**1**	**0**	**0**	**0**	**19**	**174**	**0**	**0**	**2**	**272**	**29**	**617**	2,530
8:15 AM		**0**	**21**	**2**	**145**	**0**	**0**	**0**	**1**	**0**	**8**	**176**	**0**	**0**	**1**	**348**	**37**	**739**	**2,712**
8:30 AM		0	26	0	136	0	0	0	0	0	14	187	0	0	2	271	31	667	2,709
8:45 AM		0	18	0	121	0	1	1	0	0	28	183	1	0	1	284	36	674	2,697
Count Total		0	135	2	1,045	0	2	2	1	0	120	1,384	2	0	6	2,179	207	5,085	0
Peak Hour	**All**	**0**	**67**	**2**	**561**	**0**	**1**	**0**	**1**	**0**	**56**	**707**	**1**	**0**	**3**	**1,201**	**112**	**2,712**	**0**
	HV	**0**	**2**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**5**	**46**	**0**	**0**	**0**	**44**	**8**	**116**	**0**
	HV%	**-**	**3%**	**0%**	**2%**	**-**	**0%**	**-**	**0%**	**-**	**9%**	**7%**	**0%**	**-**	**0%**	**4%**	**7%**	**4%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	0	10	10	*23*	1	0	1	1	*3*	1	2	0	0	*3*
7:15 AM	4	0	8	10	*22*	1	0	1	1	*3*	2	0	0	0	*2*
7:30 AM	**2**	**0**	**11**	**8**	***21***	**1**	**0**	**0**	**0**	***1***	**2**	**4**	**2**	**1**	*9*
7:45 AM	**4**	**0**	**10**	**14**	***28***	**0**	**0**	**0**	**0**	***0***	**4**	**0**	**1**	**0**	*5*
8:00 AM	**4**	**0**	**17**	**10**	***31***	**1**	**0**	**0**	**3**	***4***	**1**	**4**	**2**	**0**	*7*
8:15 AM	**3**	**0**	**13**	**20**	***36***	**1**	**0**	**0**	**0**	***1***	**0**	**2**	**0**	**1**	***3***
8:30 AM	3	0	8	18	*29*	0	0	1	1	*2*	1	2	1	1	*5*
8:45 AM	7	0	15	12	*34*	2	0	0	3	*5*	5	1	2	1	*9*
Count Total	30	0	92	102	*224*	7	0	3	9	*19*	16	15	8	4	*43*
Peak Hour	**13**	**0**	**51**	**52**	***116***	**3**	**0**	**0**	**3**	***6***	**7**	**10**	**5**	**2**	***24***

project.manager.wa@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Magnolia Bridge				W GARFIELD ST				15TH AVE W				15TH AVE W				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	2	0	0	0	0	0	1	9	0	0	0	10	0	23	0
7:15 AM	0	0	0	4	0	0	0	0	0	0	8	0	0	0	9	1	22	0
7:30 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**8**	**0**	**21**	0
7:45 AM	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**13**	**1**	**28**	94
8:00 AM	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**4**	**13**	**0**	**0**	**0**	**7**	**3**	**31**	102
8:15 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**12**	**0**	**0**	**0**	**16**	**4**	**36**	**116**
8:30 AM	0	0	0	3	0	0	0	0	0	0	8	0	0	0	18	0	29	124
8:45 AM	0	1	0	6	0	0	0	0	0	3	12	0	0	0	11	1	34	130
Count Total	0	4	0	26	0	0	0	0	0	9	83	0	0	0	92	10	224	0
Peak Hour	**0**	**2**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**5**	**46**	**0**	**0**	**0**	**44**	**8**	**116**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Magnolia Bridge			W GARFIELD ST			15TH AVE W			15TH AVE W			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	1	0	0	1	0	3	0
7:15 AM	0	0	1	0	0	0	0	1	0	0	1	0	3	0
7:30 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	7
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**4**	8
8:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**
8:30 AM	0	0	0	0	0	0	1	0	0	0	1	0	2	7
8:45 AM	0	0	2	0	0	0	0	0	0	0	3	0	5	12
Count Total	0	1	6	0	0	0	1	2	0	0	9	0	19	0
Peak Hour	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**6**	**0**

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

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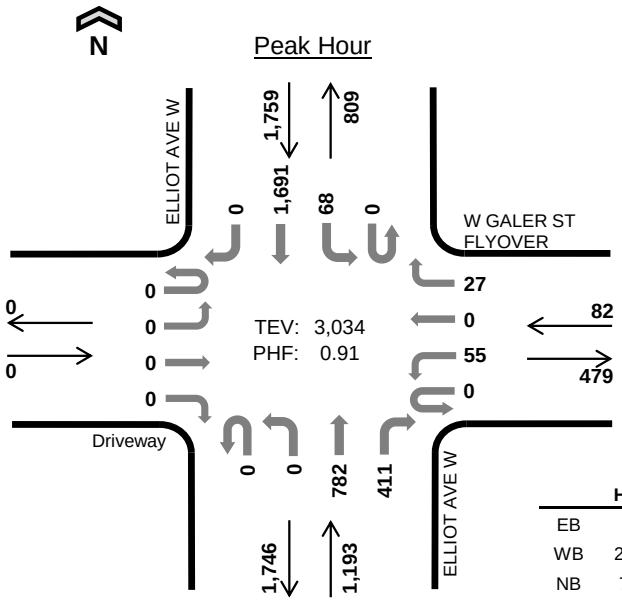
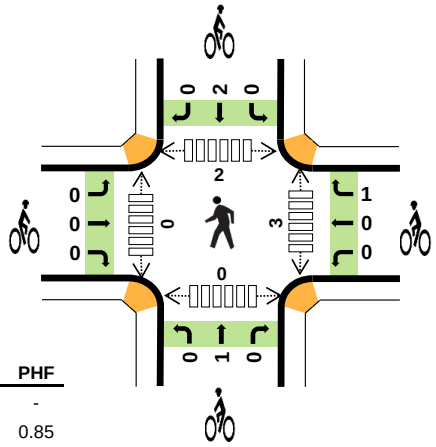
ELLIOT AVE W
W GALER ST FLYOVER



Date: 09/01/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	-	-
WB	20.7%	0.85
NB	7.0%	0.97
SB	3.1%	0.87
TOTAL	5.1%	0.91

Two-Hour Count Summaries

Interval Start		Driveway Eastbound				W GALER ST FLYOVER Westbound				ELLIOT AVE W Northbound				ELLIOT AVE W Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	17	0	8	0	0	144	64	0	9	282	0	524	0
7:15 AM		0	0	0	0	0	9	0	7	0	0	191	90	0	15	312	0	624	0
7:30 AM		**0**	**0**	**0**	**0**	**0**	**11**	**0**	**5**	**0**	**0**	**179**	**106**	**0**	**15**	**440**	**0**	**756**	0
7:45 AM		**0**	**0**	**0**	**0**	**0**	**14**	**0**	**10**	**0**	**0**	**214**	**93**	**0**	**21**	**405**	**0**	**757**	2,661
8:00 AM		**0**	**0**	**0**	**0**	**0**	**16**	**0**	**4**	**0**	**0**	**204**	**94**	**0**	**13**	**361**	**0**	**692**	2,829
8:15 AM		**0**	**0**	**0**	**0**	**0**	**14**	**0**	**8**	**0**	**0**	**185**	**118**	**0**	**19**	**485**	**0**	**829**	**3,034**
8:30 AM		0	0	0	0	0	9	0	13	0	0	203	111	0	23	379	0	738	3,016
8:45 AM		0	0	0	0	0	19	0	7	0	0	213	105	0	18	387	0	749	3,008
Count Total		0	0	0	0	0	109	0	62	0	0	1,533	781	0	133	3,051	0	5,669	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**55**	**0**	**27**	**0**	**0**	**782**	**411**	**0**	**68**	**1,691**	**0**	**3,034**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**2**	**0**	**0**	**59**	**24**	**0**	**4**	**50**	**0**	**154**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**27%**	**-**	**7%**	**-**	**-**	**8%**	**6%**	**-**	**6%**	**3%**	**-**	**5%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	4	15	13	*32*	0	0	0	1	*1*	0	0	0	0	*0*
7:15 AM	0	3	14	11	*28*	0	0	0	0	*0*	2	0	0	0	*2*
7:30 AM	**0**	**4**	**21**	**9**	***34***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**9**	**16**	**15**	***40***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**0**	**0**	*1*
8:00 AM	**0**	**4**	**26**	**11**	***41***	**0**	**0**	**0**	**2**	***2***	**1**	**0**	**0**	**0**	*1*
8:15 AM	**0**	**0**	**20**	**19**	***39***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**0**	***3***
8:30 AM	0	1	19	20	*40*	0	0	0	1	*1*	0	0	0	0	*0*
8:45 AM	0	4	19	18	*41*	0	0	0	3	*3*	2	0	0	0	*2*
Count Total	0	29	150	116	*295*	0	1	1	7	*9*	7	0	2	0	*9*
Peak Hour	**0**	**17**	**83**	**54**	***154***	**0**	**1**	**1**	**2**	***4***	**3**	**0**	**2**	**0**	***5***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				W GALER ST FLYOVER				ELLIOT AVE W				ELLIOT AVE W				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	3	0	1	0	0	10	5	0	1	12	0	32	0
7:15 AM	0	0	0	0	0	2	0	1	0	0	8	6	0	2	9	0	28	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**13**	**8**	**0**	**1**	**8**	**0**	**34**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**2**	**0**	**0**	**10**	**6**	**0**	**2**	**13**	**0**	**40**	134
8:00 AM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**22**	**4**	**0**	**0**	**11**	**0**	**41**	143
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**6**	**0**	**1**	**18**	**0**	**39**	**154**
8:30 AM	0	0	0	0	0	1	0	0	0	0	10	9	0	3	17	0	40	160
8:45 AM	0	0	0	0	0	3	0	1	0	0	15	4	0	0	18	0	41	161
Count Total	0	0	0	0	0	24	0	5	0	0	102	48	0	10	106	0	295	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**2**	**0**	**0**	**59**	**24**	**0**	**4**	**50**	**0**	**154**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			W GALER ST FLYOVER			ELLIOT AVE W			ELLIOT AVE W			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3	6
Count Total	0	0	0	0	0	1	0	1	0	0	7	0	9	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**2**	**0**	**4**	**0**

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

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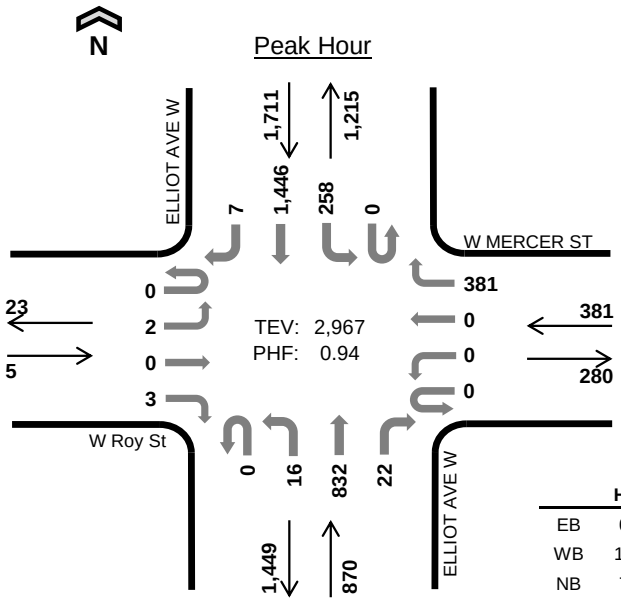
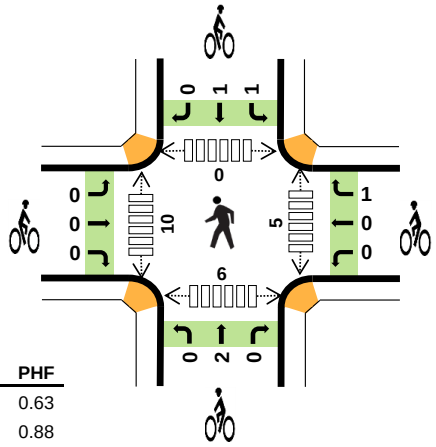
ELLIOT AVE W
W Roy St

Date: 09/01/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	0.0%	0.63
WB	10.2%	0.88
NB	7.4%	0.95
SB	4.7%	0.90
TOTAL	6.2%	0.94

Two-Hour Count Summaries

Interval Start		W Roy St Eastbound				W MERCER ST Westbound				ELLIOT AVE W Northbound				ELLIOT AVE W Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	0	0	71	0	6	165	5	0	40	240	1	528	0
7:15 AM		0	1	0	1	0	0	0	77	0	12	199	3	0	44	302	2	641	0
7:30 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**108**	**0**	**7**	**191**	**8**	**0**	**62**	**355**	**2**	**733**	0
7:45 AM		**0**	**1**	**0**	**0**	**0**	**0**	**0**	**97**	**0**	**2**	**206**	**3**	**0**	**67**	**365**	**2**	**743**	2,645
8:00 AM		**0**	**0**	**0**	**2**	**0**	**0**	**0**	**85**	**0**	**3**	**222**	**5**	**0**	**58**	**322**	**1**	**698**	2,815
8:15 AM		**0**	**1**	**0**	**1**	**0**	**0**	**0**	**91**	**0**	**4**	**213**	**6**	**0**	**71**	**404**	**2**	**793**	**2,967**
8:30 AM		0	1	0	0	0	0	0	95	0	5	218	5	0	69	332	0	725	2,959
8:45 AM		0	0	0	0	0	0	0	117	3	0	224	3	1	67	324	4	743	2,959
Count Total		0	4	0	4	0	0	0	741	3	39	1,638	38	1	478	2,644	14	5,604	0
Peak Hour	**All**	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**381**	**0**	**16**	**832**	**22**	**0**	**258**	**1,446**	**7**	**2,967**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**39**	**0**	**0**	**64**	**0**	**0**	**31**	**50**	**0**	**184**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**10%**	**-**	**0%**	**8%**	**0%**	**-**	**12%**	**3%**	**0%**	**6%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	15	6	14	*35*	0	0	2	0	*2*	1	0	0	1	*2*
7:15 AM	0	5	15	17	*37*	0	0	0	0	*0*	0	1	0	1	*2*
7:30 AM	**0**	**10**	**14**	**15**	***39***	**0**	**0**	**1**	**0**	***1***	**3**	**3**	**0**	**1**	*7*
7:45 AM	**0**	**9**	**12**	**24**	***45***	**0**	**0**	**1**	**0**	***1***	**0**	**5**	**0**	**2**	*7*
8:00 AM	**0**	**11**	**20**	**18**	***49***	**0**	**0**	**0**	**2**	***2***	**1**	**2**	**0**	**2**	*5*
8:15 AM	**0**	**9**	**18**	**24**	***51***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**0**	**1**	***2***
8:30 AM	0	10	13	20	*43*	0	1	0	0	*1*	4	2	0	2	*8*
8:45 AM	0	13	10	23	*46*	0	0	0	1	*1*	3	5	0	1	*9*
Count Total	0	82	108	155	*345*	0	2	4	3	*9*	13	18	0	11	*42*
Peak Hour	**0**	**39**	**64**	**81**	***184***	**0**	**1**	**2**	**2**	***5***	**5**	**10**	**0**	**6**	***21***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Roy St				W MERCER ST				ELLIOT AVE W				ELLIOT AVE W				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	15	0	0	6	0	0	3	11	0	35	0
7:15 AM	0	0	0	0	0	0	0	5	0	0	14	1	0	8	9	0	37	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**14**	**0**	**0**	**5**	**10**	**0**	**39**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**12**	**0**	**0**	**12**	**12**	**0**	**45**	156
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**20**	**0**	**0**	**4**	**14**	**0**	**49**	170
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**18**	**0**	**0**	**10**	**14**	**0**	**51**	**184**
8:30 AM	0	0	0	0	0	0	0	10	0	0	12	1	0	6	14	0	43	188
8:45 AM	0	0	0	0	0	0	0	13	0	0	10	0	0	11	12	0	46	189
Count Total	0	0	0	0	0	0	0	82	0	0	106	2	0	59	96	0	345	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**39**	**0**	**0**	**64**	**0**	**0**	**31**	**50**	**0**	**184**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W Roy St			W MERCER ST			ELLIOT AVE W			ELLIOT AVE W			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	4
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**2**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	5
Count Total	0	0	0	0	0	2	0	4	0	1	2	0	9	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**1**	**1**	**0**	**5**	**0**

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

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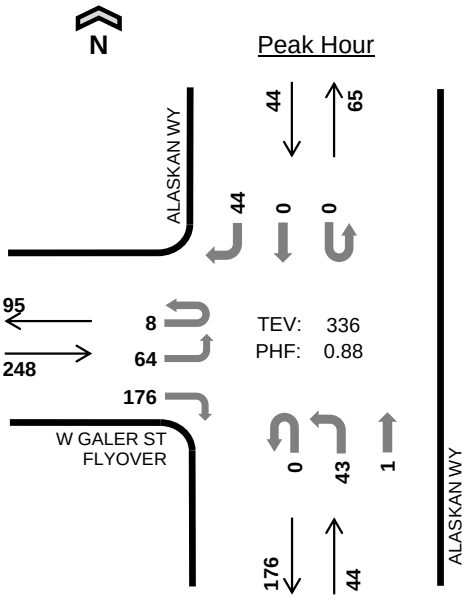
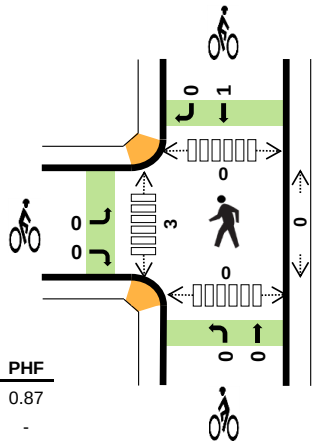
ALASKAN WY
W GALER ST FLYOVER



Date: 09/01/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	4.0%	0.87
WB	-	-
NB	4.5%	0.85
SB	13.6%	0.79
TOTAL	5.4%	0.88

Two-Hour Count Summaries

Interval Start	W GALER ST FLYOVER Eastbound				0 Westbound				ALASKAN WY Northbound				ALASKAN WY Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	4	16	0	21	0	0	0	0	0	8	0	0	0	0	0	13	62	0
7:15 AM	2	22	0	36	0	0	0	0	0	4	0	0	0	0	1	9	74	0
7:30 AM	3	13	0	43	0	0	0	0	0	7	0	0	0	0	0	9	75	0
7:45 AM	1	20	0	44	0	0	0	0	0	7	2	0	0	0	0	13	87	298
8:00 AM	**4**	**15**	**0**	**35**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**8**	**73**	309
8:15 AM	**1**	**13**	**0**	**47**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**10**	**80**	315
8:30 AM	**1**	**18**	**0**	**43**	**0**	**0**	**0**	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**0**	**14**	**87**	327
8:45 AM	**2**	**18**	**0**	**51**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**12**	**96**	**336**
Count Total	18	135	0	320	0	0	0	0	0	69	3	0	0	0	1	88	634	0
Peak Hour All	**8**	**64**	**0**	**176**	**0**	**0**	**0**	**0**	**0**	**43**	**1**	**0**	**0**	**0**	**0**	**44**	**336**	**0**
Peak Hour HV	**0**	**9**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**6**	**18**	**0**
Peak Hour HV%	**0%**	**14%**	**-**	**1%**	**-**	**-**	**-**	**-**	**-**	**5%**	**0%**	**-**	**-**	**-**	**-**	**14%**	**5%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	0	0	4	*7*	1	0	0	0	*1*	0	1	0	0	*1*
7:15 AM	5	0	0	3	*8*	2	0	0	0	*2*	0	0	0	0	*0*
7:30 AM	3	0	0	6	*9*	1	0	0	0	*1*	0	1	0	0	*1*
7:45 AM	5	0	0	7	*12*	1	0	1	0	*2*	0	1	0	0	*1*
8:00 AM	**1**	**0**	**2**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:15 AM	**2**	**0**	**0**	**1**	***3***	**0**	**0**	**0**	**1**	***1***	**0**	**1**	**0**	**0**	*1*
8:30 AM	**5**	**0**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:45 AM	**2**	**0**	**0**	**4**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	26	0	2	26	*54*	5	0	1	1	*7*	0	6	0	0	*6*
Peak Hr	**10**	**0**	**2**	**6**	***18***	**0**	**0**	**0**	**1**	***1***	**0**	**3**	**0**	**0**	***3***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W GALER ST FLYOVER				0				ALASKAN WY				ALASKAN WY				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	7	0
7:15 AM	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	3	8	0
7:30 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	9	0
7:45 AM	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	7	12	36
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	33
8:15 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	28
8:30 AM	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	24
8:45 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**6**	**18**
Count Total	0	22	0	4	0	0	0	0	0	2	0	0	0	0	0	26	54	0
Peak Hour	**0**	**9**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**6**	**18**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W GALER ST FLYOVER			0			ALASKAN WY			ALASKAN WY			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	2	0
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	1	0	0	0	0	0	0	1	0	0	0	0	2	6
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	4
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Count Total	1	0	4	0	0	0	0	1	0	0	1	0	7	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

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

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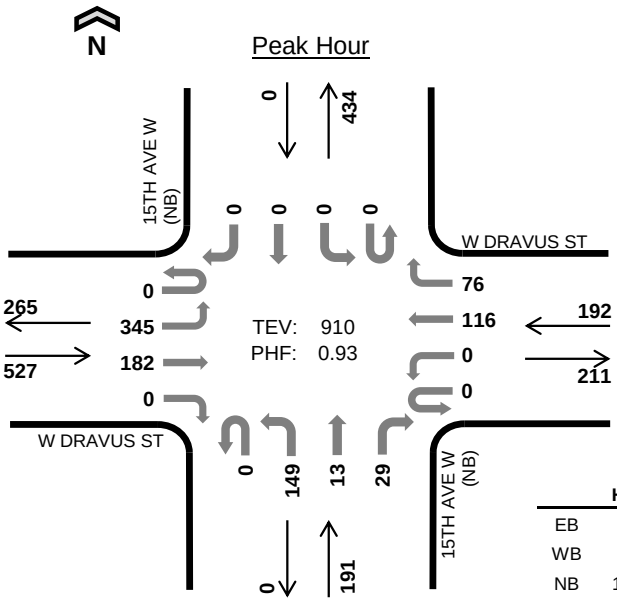
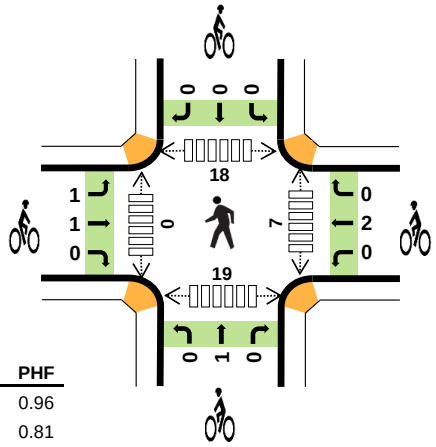
15TH AVE W (NB)
W DRAVUS ST

Date: 09/01/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	5.9%	0.96
WB	3.6%	0.81
NB	12.6%	0.81
SB	-	-
TOTAL	6.8%	0.93

Two-Hour Count Summaries

Interval Start	W DRAVUS ST Eastbound				W DRAVUS ST Westbound				15TH AVE W (NB) Northbound				15TH AVE W (NB) Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	47	26	0	0	0	13	12	0	26	4	3	0	0	0	0	131	0
7:15 AM	0	55	30	0	0	0	10	9	0	23	4	14	0	0	0	0	145	0
7:30 AM	0	61	33	0	0	0	26	12	0	28	3	5	0	0	0	0	168	0
7:45 AM	0	86	44	0	0	0	22	25	0	25	2	9	0	0	0	0	213	657
8:00 AM	**0**	**78**	**43**	**0**	**0**	**0**	**26**	**11**	**0**	**22**	**2**	**5**	**0**	**0**	**0**	**0**	**187**	713
8:15 AM	**0**	**90**	**44**	**0**	**0**	**0**	**39**	**20**	**0**	**41**	**3**	**6**	**0**	**0**	**0**	**0**	**243**	811
8:30 AM	**0**	**85**	**52**	**0**	**0**	**0**	**25**	**21**	**0**	**43**	**4**	**6**	**0**	**0**	**0**	**0**	**236**	879
8:45 AM	**0**	**92**	**43**	**0**	**0**	**0**	**26**	**24**	**0**	**43**	**4**	**12**	**0**	**0**	**0**	**0**	**244**	**910**
Count Total	0	594	315	0	0	0	187	134	0	251	26	60	0	0	0	0	1,567	0
Peak Hour All	**0**	**345**	**182**	**0**	**0**	**0**	**116**	**76**	**0**	**149**	**13**	**29**	**0**	**0**	**0**	**0**	**910**	**0**
Peak Hour HV	**0**	**24**	**7**	**0**	**0**	**0**	**5**	**2**	**0**	**14**	**9**	**1**	**0**	**0**	**0**	**0**	**62**	**0**
Peak Hour HV%	**-**	**7%**	**4%**	**-**	**-**	**-**	**4%**	**3%**	**-**	**9%**	**69%**	**3%**	**-**	**-**	**-**	**-**	**7%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	0	6	0	*9*	0	0	0	0	*0*	2	0	4	4	*10*
7:15 AM	2	0	5	0	*7*	3	1	0	0	*4*	3	0	6	4	*13*
7:30 AM	3	1	6	0	*10*	1	1	0	0	*2*	2	0	6	7	*15*
7:45 AM	8	1	7	0	*16*	1	3	2	0	*6*	0	0	4	4	*8*
8:00 AM	**8**	**0**	**4**	**0**	***12***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**5**	**6**	*13*
8:15 AM	**6**	**6**	**8**	**0**	***20***	**1**	**1**	**1**	**0**	***3***	**0**	**0**	**3**	**4**	*7*
8:30 AM	**10**	**0**	**10**	**0**	***20***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**6**	**4**	*13*
8:45 AM	**7**	**1**	**2**	**0**	***10***	**1**	**1**	**0**	**0**	***2***	**2**	**0**	**4**	**5**	***11***
Count Total	47	9	48	0	*104*	7	7	3	0	*17*	14	0	38	38	*90*
Peak Hour	**31**	**7**	**24**	**0**	***62***	**2**	**2**	**1**	**0**	***5***	**7**	**0**	**18**	**19**	***44***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W DRAVUS ST Eastbound				W DRAVUS ST Westbound				15TH AVE W (NB) Northbound				15TH AVE W (NB) Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	0	0	0	0	0	0	0	3	3	0	0	0	0	0	9	0
7:15 AM	0	1	1	0	0	0	0	0	0	2	2	1	0	0	0	0	7	0
7:30 AM	0	3	0	0	0	0	1	0	0	2	3	1	0	0	0	0	10	0
7:45 AM	0	7	1	0	0	0	1	0	0	1	2	4	0	0	0	0	16	42
8:00 AM	**0**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**12**	45
8:15 AM	**0**	**5**	**1**	**0**	**0**	**0**	**5**	**1**	**0**	**5**	**3**	**0**	**0**	**0**	**0**	**0**	**20**	58
8:30 AM	**0**	**7**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**2**	**1**	**0**	**0**	**0**	**0**	**20**	68
8:45 AM	**0**	**5**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**10**	**62**
Count Total	0	38	9	0	0	0	7	2	0	22	19	7	0	0	0	0	104	0
Peak Hour	**0**	**24**	**7**	**0**	**0**	**0**	**5**	**2**	**0**	**14**	**9**	**1**	**0**	**0**	**0**	**0**	**62**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W DRAVUS ST Eastbound			W DRAVUS ST Westbound			15TH AVE W (NB) Northbound			15TH AVE W (NB) Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	1	0	0	1	0	0	0	0	0	0	0	4	0
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0
7:45 AM	1	0	0	0	2	1	1	1	0	0	0	0	6	12
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	12
8:15 AM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	11
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	9
8:45 AM	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**
Count Total	4	3	0	0	6	1	1	2	0	0	0	0	17	0
Peak Hour	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**5**	**0**

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

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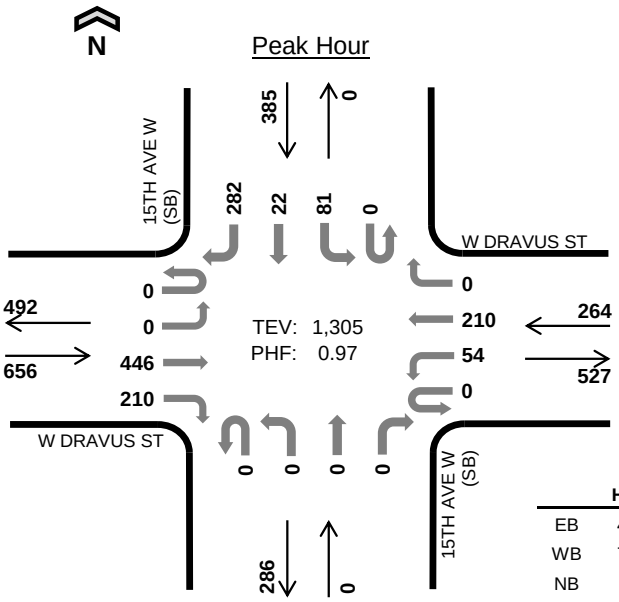
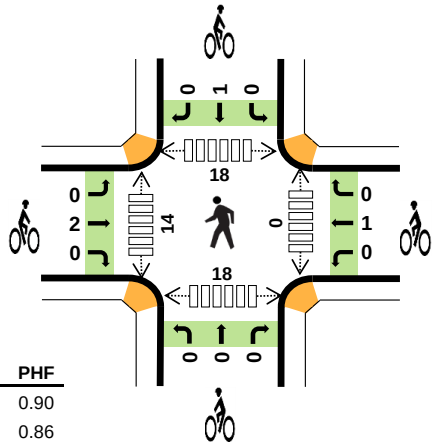
15TH AVE W (SB)
W DRAVUS ST

Date: 09/01/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	4.7%	0.90
WB	7.2%	0.86
NB	-	-
SB	7.3%	0.87
TOTAL	6.0%	0.97

Two-Hour Count Summaries

Interval Start	W DRAVUS ST Eastbound				W DRAVUS ST Westbound				15TH AVE W (SB) Northbound				15TH AVE W (SB) Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	59	42	0	8	31	0	0	0	0	0	0	14	3	38	195	0
7:15 AM	0	0	73	38	0	7	27	0	0	0	0	0	0	12	3	41	201	0
7:30 AM	0	0	76	46	0	12	41	0	0	0	0	0	0	18	1	37	231	0
7:45 AM	0	0	111	51	0	7	41	0	0	0	0	0	0	19	5	65	299	926
8:00 AM	**0**	**0**	**98**	**56**	**0**	**11**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**6**	**70**	**300**	1,031
8:15 AM	**0**	**0**	**114**	**49**	**0**	**17**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**7**	**66**	**333**	1,163
8:30 AM	**0**	**0**	**126**	**57**	**0**	**12**	**58**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**2**	**69**	**335**	1,267
8:45 AM	**0**	**0**	**108**	**48**	**0**	**14**	**56**	**0**	**0**	**0**	**0**	**0**	**0**	**27**	**7**	**77**	**337**	**1,305**
Count Total	0	0	765	387	0	88	350	0	0	0	0	0	0	144	34	463	2,231	0
Peak Hour All	**0**	**0**	**446**	**210**	**0**	**54**	**210**	**0**	**0**	**0**	**0**	**0**	**0**	**81**	**22**	**282**	**1,305**	**0**
Peak Hour HV	**0**	**0**	**24**	**7**	**0**	**1**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**10**	**11**	**78**	**0**
Peak Hour HV%	**-**	**-**	**5%**	**3%**	**-**	**2%**	**9%**	**-**	**-**	**-**	**-**	**-**	**-**	**9%**	**45%**	**4%**	**6%**	**0**

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	3	0	9	*16*	0	0	0	0	*0*	0	3	5	3	*11*
7:15 AM	2	2	0	5	*9*	3	2	0	1	*6*	0	6	6	4	*16*
7:30 AM	6	3	0	4	*13*	1	1	0	0	*2*	0	0	6	7	*13*
7:45 AM	8	2	0	9	*19*	2	4	0	1	*7*	0	4	7	5	*16*
8:00 AM	**9**	**2**	**0**	**6**	***17***	**0**	**0**	**0**	**1**	***1***	**0**	**3**	**6**	**6**	*15*
8:15 AM	**5**	**10**	**0**	**8**	***23***	**1**	**0**	**0**	**0**	***1***	**0**	**4**	**1**	**3**	*8*
8:30 AM	**11**	**7**	**0**	**5**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**5**	**4**	*13*
8:45 AM	**6**	**0**	**0**	**9**	***15***	**1**	**1**	**0**	**0**	***2***	**0**	**3**	**6**	**5**	***14***
Count Total	51	29	0	55	*135*	8	8	0	3	*19*	0	27	42	37	*106*
Peak Hour	**31**	**19**	**0**	**28**	***78***	**2**	**1**	**0**	**1**	***4***	**0**	**14**	**18**	**18**	***50***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W DRAVUS ST				W DRAVUS ST				15TH AVE W (SB)				15TH AVE W (SB)				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	1	0	1	2	0	0	0	0	0	0	0	2	7	16	0
7:15 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	3	9	0
7:30 AM	0	0	3	3	0	0	3	0	0	0	0	0	0	0	0	4	13	0
7:45 AM	0	0	5	3	0	0	2	0	0	0	0	0	0	3	3	3	19	57
8:00 AM	**0**	**0**	**7**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**3**	**17**	58
8:15 AM	**0**	**0**	**4**	**1**	**0**	**1**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**2**	**23**	72
8:30 AM	**0**	**0**	**10**	**1**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**23**	82
8:45 AM	**0**	**0**	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**3**	**2**	**15**	**78**
Count Total	0	0	37	14	0	2	27	0	0	0	0	0	0	10	17	28	135	0
Peak Hour	**0**	**0**	**24**	**7**	**0**	**1**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**10**	**11**	**78**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W DRAVUS ST			W DRAVUS ST			15TH AVE W (SB)			15TH AVE W (SB)			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	3	0	0	2	0	0	0	0	0	0	1	6	0
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0
7:45 AM	0	1	1	0	4	0	0	0	0	0	0	1	7	15
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	16
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	11
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	9
8:45 AM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**
Count Total	0	7	1	0	8	0	0	0	0	0	1	2	19	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**0**

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

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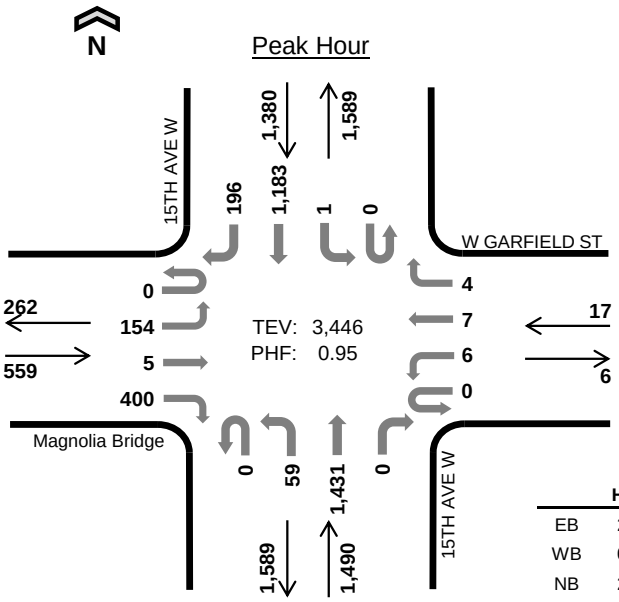
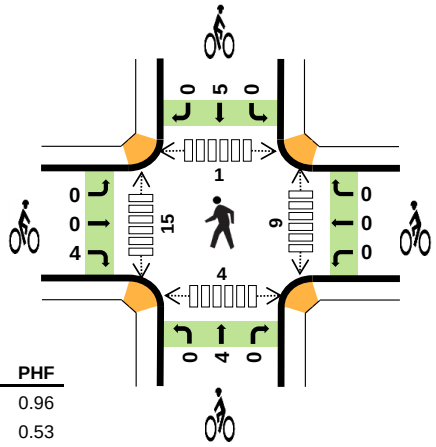
PM Counts

15TH AVE W
Magnolia Bridge

Date: 09/01/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	2.0%	0.96
WB	0.0%	0.53
NB	2.1%	0.95
SB	3.0%	0.90
TOTAL	2.4%	0.95

Two-Hour Count Summaries

Interval Start		Magnolia Bridge Eastbound				W GARFIELD ST Westbound				15TH AVE W Northbound				15TH AVE W 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	45	0	83	0	3	1	0	0	13	325	0	0	0	290	49	809	0
4:15 PM		0	40	0	93	0	0	1	1	0	15	335	0	0	1	292	42	820	0
4:30 PM		0	31	0	88	0	3	0	0	0	9	336	0	0	0	273	43	783	0
4:45 PM		**0**	**32**	**2**	**112**	**0**	**2**	**2**	**0**	**0**	**15**	**357**	**0**	**0**	**1**	**335**	**47**	**905**	3,317
5:00 PM		**0**	**44**	**0**	**101**	**0**	**0**	**3**	**0**	**0**	**12**	**382**	**0**	**0**	**0**	**313**	**47**	**902**	3,410
5:15 PM		**0**	**37**	**1**	**95**	**0**	**2**	**0**	**0**	**0**	**23**	**355**	**0**	**0**	**0**	**247**	**48**	**808**	3,398
5:30 PM		**0**	**41**	**2**	**92**	**0**	**2**	**2**	**4**	**0**	**9**	**337**	**0**	**0**	**0**	**288**	**54**	**831**	**3,446**
5:45 PM		0	31	1	66	0	0	1	0	0	21	348	0	0	0	203	37	708	3,249
Count Total		0	301	6	730	0	12	10	5	0	117	2,775	0	0	2	2,241	367	6,566	0
Peak Hour	**All**	**0**	**154**	**5**	**400**	**0**	**6**	**7**	**4**	**0**	**59**	**1,431**	**0**	**0**	**1**	**1,183**	**196**	**3,446**	**0**
	HV	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**42**	**0**	**84**	**0**
	HV%	**-**	**0%**	**0%**	**3%**	**-**	**0%**	**0%**	**0%**	**-**	**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	6	0	6	13	*25*	1	0	0	0	*1*	1	5	0	1	*7*
4:15 PM	2	0	8	9	*19*	2	0	1	0	*3*	2	4	0	0	*6*
4:30 PM	5	0	6	9	*20*	1	0	0	0	*1*	3	5	1	0	*9*
4:45 PM	**5**	**0**	**7**	**11**	***23***	**2**	**0**	**0**	**0**	***2***	**3**	**3**	**1**	**3**	*10*
5:00 PM	**3**	**0**	**7**	**11**	***21***	**1**	**0**	**2**	**0**	***3***	**0**	**5**	**0**	**0**	*5*
5:15 PM	**1**	**0**	**10**	**10**	***21***	**0**	**0**	**2**	**5**	***7***	**2**	**2**	**0**	**0**	*4*
5:30 PM	**2**	**0**	**7**	**10**	***19***	**1**	**0**	**0**	**0**	***1***	**4**	**5**	**0**	**1**	***10***
5:45 PM	4	0	5	8	*17*	1	0	0	0	*1*	5	1	1	2	*9*
Count Total	28	0	56	81	*165*	9	0	5	5	*19*	20	30	3	7	*60*
Peak Hour	**11**	**0**	**31**	**42**	***84***	**4**	**0**	**4**	**5**	***13***	**9**	**15**	**1**	**4**	***29***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Magnolia Bridge				W GARFIELD ST				15TH AVE W				15TH AVE W				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	2	0	4	0	0	0	0	0	1	5	0	0	0	12	1	25	0
4:15 PM	0	0	0	2	0	0	0	0	0	0	8	0	0	0	9	0	19	0
4:30 PM	0	0	0	5	0	0	0	0	0	0	6	0	0	0	9	0	20	0
4:45 PM	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**11**	**0**	**23**	87
5:00 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**11**	**0**	**21**	83
5:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	**0**	**0**	**0**	**10**	**0**	**21**	85
5:30 PM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**10**	**0**	**19**	**84**
5:45 PM	0	0	0	4	0	0	0	0	0	0	5	0	0	0	8	0	17	78
Count Total	0	2	0	26	0	0	0	0	0	2	54	0	0	0	80	1	165	0
Peak Hour	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**42**	**0**	**84**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Magnolia Bridge			W GARFIELD ST			15TH AVE W			15TH AVE W			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	1	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	2	0	0	0	0	1	0	0	0	0	3	0
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	7
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	9
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**5**	**0**	**7**	13
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**13**
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	12
Count Total	0	0	9	0	0	0	0	5	0	0	5	0	19	0
Peak Hour	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**5**	**0**	**13**	**0**

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

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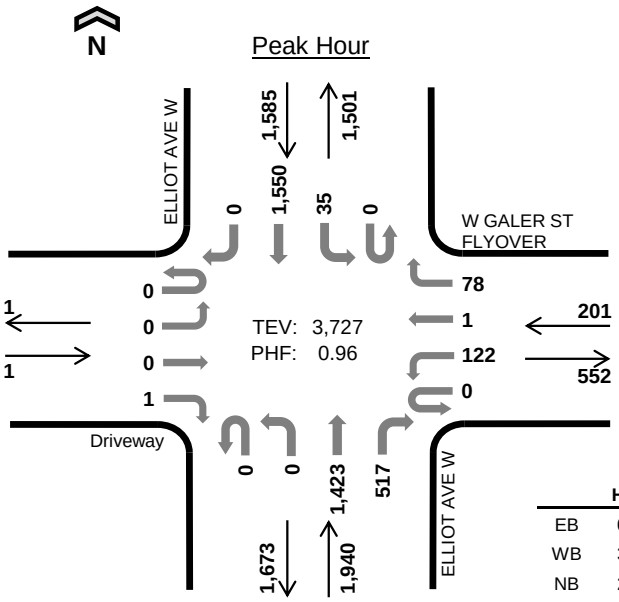
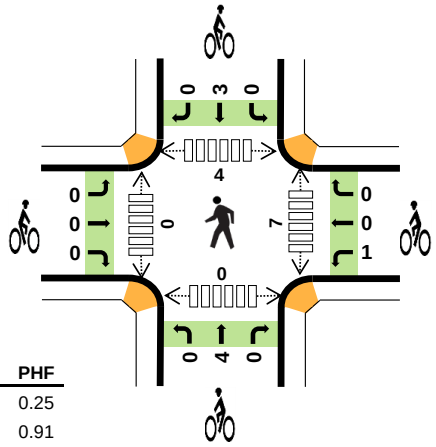
ELLIOT AVE W
W GALER ST FLYOVER



Date: 09/01/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.0%	0.25
WB	3.5%	0.91
NB	2.3%	0.96
SB	3.2%	0.89
TOTAL	2.7%	0.96

Two-Hour Count Summaries

Interval Start		Driveway Eastbound				W GALER ST FLYOVER Westbound				ELLIOT AVE W Northbound				ELLIOT AVE W 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	39	0	22	0	0	332	123	0	11	364	0	891	0
4:15 PM		0	0	0	0	0	36	0	24	0	0	321	130	0	12	381	0	904	0
4:30 PM		0	0	0	1	0	53	0	23	0	1	312	114	0	5	350	0	859	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**29**	**0**	**20**	**0**	**0**	**351**	**131**	**0**	**12**	**431**	**0**	**974**	3,628
5:00 PM		**0**	**0**	**0**	**0**	**0**	**26**	**1**	**20**	**0**	**0**	**379**	**113**	**0**	**5**	**405**	**0**	**949**	3,686
5:15 PM		**0**	**0**	**0**	**1**	**0**	**27**	**0**	**23**	**0**	**0**	**372**	**131**	**0**	**11**	**330**	**0**	**895**	3,677
5:30 PM		**0**	**0**	**0**	**0**	**0**	**40**	**0**	**15**	**0**	**0**	**321**	**142**	**0**	**7**	**384**	**0**	**909**	**3,727**
5:45 PM		0	0	0	0	0	26	0	17	0	0	364	132	0	6	275	0	820	3,573
Count Total		0	0	0	2	0	276	1	164	0	1	2,752	1,016	0	69	2,920	0	7,201	0
Peak Hour	**All**	**0**	**0**	**0**	**1**	**0**	**122**	**1**	**78**	**0**	**0**	**1,423**	**517**	**0**	**35**	**1,550**	**0**	**3,727**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**4**	**0**	**0**	**31**	**13**	**0**	**2**	**49**	**0**	**102**	**0**
	HV%	**-**	**-**	**-**	**0%**	**-**	**2%**	**0%**	**5%**	**-**	**-**	**2%**	**3%**	**-**	**6%**	**3%**	**-**	**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	0	0	8	17	*25*	0	0	0	0	*0*	0	0	1	0	*1*
4:15 PM	0	1	12	11	*24*	0	0	2	0	*2*	2	0	1	0	*3*
4:30 PM	0	1	11	14	*26*	0	0	0	0	*0*	1	0	0	0	*1*
4:45 PM	**0**	**0**	**13**	**14**	***27***	**0**	**1**	**0**	**1**	***2***	**2**	**0**	**1**	**0**	*3*
5:00 PM	**0**	**1**	**10**	**14**	***25***	**0**	**0**	**2**	**1**	***3***	**1**	**0**	**1**	**0**	*2*
5:15 PM	**0**	**4**	**12**	**12**	***28***	**0**	**0**	**2**	**1**	***3***	**2**	**0**	**1**	**0**	*3*
5:30 PM	**0**	**2**	**9**	**11**	***22***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**0**	***3***
5:45 PM	0	0	6	12	*18*	0	0	0	0	*0*	4	0	0	0	*4*
Count Total	0	9	81	105	*195*	0	1	6	3	*10*	14	0	6	0	*20*
Peak Hour	**0**	**7**	**44**	**51**	***102***	**0**	**1**	**4**	**3**	***8***	**7**	**0**	**4**	**0**	***11***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				W GALER ST FLYOVER				ELLIOT AVE W				ELLIOT AVE W				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	0	0	0	0	0	0	0	0	0	5	3	0	1	16	0	25	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	8	4	0	1	10	0	24	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	9	2	0	1	13	0	26	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**5**	**0**	**1**	**13**	**0**	**27**	102
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**7**	**3**	**0**	**1**	**13**	**0**	**25**	102
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**8**	**4**	**0**	**0**	**12**	**0**	**28**	106
5:30 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**8**	**1**	**0**	**0**	**11**	**0**	**22**	**102**
5:45 PM	0	0	0	0	0	0	0	0	0	0	4	2	0	0	12	0	18	93
Count Total	0	0	0	0	0	5	0	4	0	0	57	24	0	5	100	0	195	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**4**	**0**	**0**	**31**	**13**	**0**	**2**	**49**	**0**	**102**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			W GALER ST FLYOVER			ELLIOT AVE W			ELLIOT AVE W			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	2	0	0	0	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	4
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**3**	7
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**3**	8
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Count Total	0	0	0	1	0	0	0	6	0	0	3	0	10	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**0**	**0**	**3**	**0**	**8**	**0**

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

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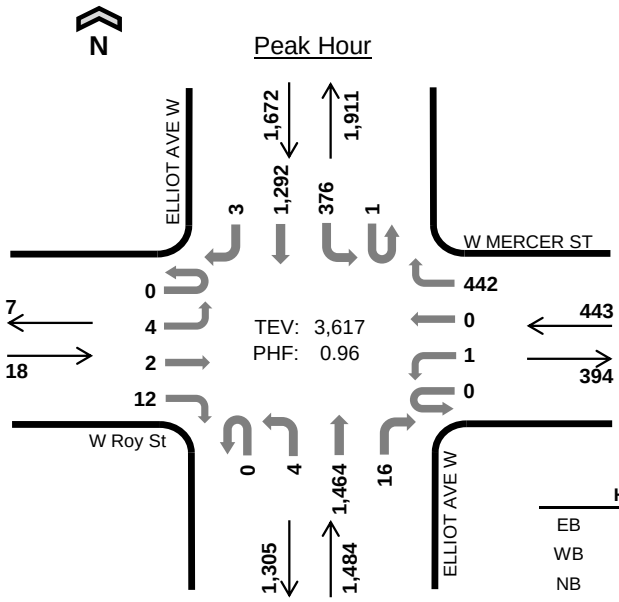
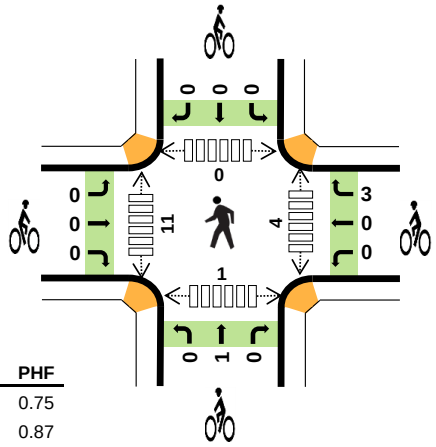
ELLIOT AVE W
W Roy St



Date: 09/01/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.0%	0.75
WB	5.9%	0.87
NB	2.0%	0.93
SB	4.0%	0.92
TOTAL	3.4%	0.96

Two-Hour Count Summaries

Interval Start	W Roy St Eastbound				W MERCER ST Westbound				ELLIOT AVE W Northbound				ELLIOT AVE W 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	92	0	3	358	10	0	110	291	0	871	0
4:15 PM	0	1	4	3	0	0	0	121	0	0	313	2	0	101	293	1	839	0
4:30 PM	0	2	1	4	0	0	0	93	0	2	340	7	1	88	346	0	884	0
4:45 PM	**0**	**2**	**1**	**3**	**0**	**0**	**0**	**120**	**0**	**0**	**353**	**7**	**1**	**95**	**354**	**2**	**938**	3,532
5:00 PM	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**128**	**0**	**2**	**345**	**5**	**0**	**75**	**340**	**0**	**900**	3,561
5:15 PM	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**109**	**0**	**1**	**394**	**3**	**0**	**97**	**281**	**1**	**891**	3,613
5:30 PM	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**85**	**0**	**1**	**372**	**1**	**0**	**109**	**317**	**0**	**888**	**3,617**
5:45 PM	0	0	3	1	0	0	0	105	0	0	371	7	1	74	240	1	803	3,482
Count Total	0	7	10	27	0	1	0	853	0	9	2,846	42	3	749	2,462	5	7,014	0
Peak Hour All	**0**	**4**	**2**	**12**	**0**	**1**	**0**	**442**	**0**	**4**	**1,464**	**16**	**1**	**376**	**1,292**	**3**	**3,617**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**0**	**29**	**0**	**0**	**24**	**43**	**0**	**122**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**-**	**6%**	**-**	**0%**	**2%**	**0%**	**0%**	**6%**	**3%**	**0%**	**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	0	7	5	17	*29*	0	0	0	0	*0*	2	0	0	0	*2*
4:15 PM	1	8	7	13	*29*	0	1	1	0	*2*	0	7	0	0	*7*
4:30 PM	0	9	8	19	*36*	0	0	0	0	*0*	0	5	0	1	*6*
4:45 PM	**0**	**10**	**7**	**17**	***34***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
5:00 PM	**0**	**4**	**7**	**20**	***31***	**0**	**2**	**0**	**0**	***2***	**1**	**3**	**0**	**1**	*5*
5:15 PM	**0**	**6**	**11**	**12**	***29***	**0**	**1**	**1**	**0**	***2***	**3**	**4**	**0**	**0**	*7*
5:30 PM	**0**	**6**	**4**	**18**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
5:45 PM	0	3	6	14	*23*	0	0	0	0	*0*	2	4	0	2	*8*
Count Total	1	53	55	130	*239*	0	4	2	0	*6*	8	27	0	4	*39*
Peak Hour	**0**	**26**	**29**	**67**	***122***	**0**	**3**	**1**	**0**	***4***	**4**	**11**	**0**	**1**	***16***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Roy St				W MERCER ST				ELLIOT AVE W				ELLIOT AVE W				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	0	0	0	0	0	0	7	0	0	5	0	0	6	11	0	29	0
4:15 PM	0	0	0	1	0	0	0	8	0	0	7	0	0	8	5	0	29	0
4:30 PM	0	0	0	0	0	0	0	9	0	0	7	1	0	8	11	0	36	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**7**	**0**	**0**	**5**	**12**	**0**	**34**	128
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**7**	**0**	**0**	**7**	**13**	**0**	**31**	130
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**11**	**0**	**0**	**4**	**8**	**0**	**29**	130
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**4**	**0**	**0**	**8**	**10**	**0**	**28**	**122**
5:45 PM	0	0	0	0	0	0	0	3	0	0	6	0	0	2	12	0	23	111
Count Total	0	0	0	1	0	0	0	53	0	0	54	1	0	48	82	0	239	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**0**	**29**	**0**	**0**	**24**	**43**	**0**	**122**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W Roy St			W MERCER ST			ELLIOT AVE W			ELLIOT AVE W			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	1	0	1	0	0	0	0	2	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**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	4
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	0	0	0	4	0	2	0	0	0	0	6	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**

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

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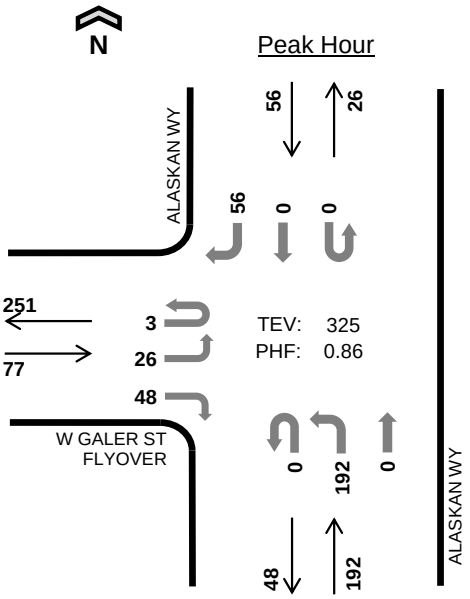
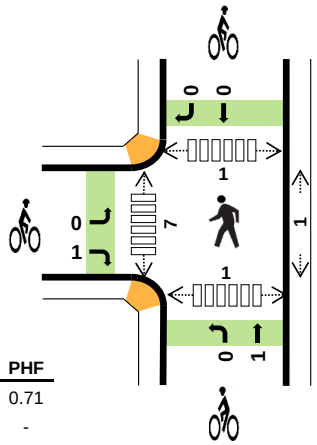
ALASKAN WY
W GALER ST FLYOVER



Date: 09/01/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	11.7%	0.71
WB	-	-
NB	0.0%	0.91
SB	3.6%	0.82
TOTAL	3.4%	0.86

Two-Hour Count Summaries

Interval Start	W GALER ST FLYOVER Eastbound				0 Westbound				ALASKAN WY Northbound				ALASKAN WY 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**	**9**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**49**	**0**	**0**	**0**	**0**	**0**	**16**	**85**	0
4:15 PM	**1**	**11**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**50**	**0**	**0**	**0**	**0**	**0**	**17**	**94**	0
4:30 PM	**0**	**1**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**53**	**0**	**0**	**0**	**0**	**0**	**16**	**85**	0
4:45 PM	**2**	**5**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**7**	**61**	**325**
5:00 PM	0	3	0	8	0	0	0	0	0	35	0	0	0	0	0	12	58	298
5:15 PM	0	3	0	11	0	0	0	0	0	33	0	0	0	0	0	14	61	265
5:30 PM	0	5	0	5	0	0	0	0	0	34	0	0	0	0	0	22	66	246
5:45 PM	2	2	0	12	0	0	0	0	0	24	1	0	0	0	0	13	54	239
Count Total	5	39	0	84	0	0	0	0	0	318	1	0	0	0	0	117	564	0
Peak Hour All	**3**	**26**	**0**	**48**	**0**	**0**	**0**	**0**	**0**	**192**	**0**	**0**	**0**	**0**	**0**	**56**	**325**	**0**
Peak Hour HV	**0**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**11**	**0**
Peak Hour HV%	**0%**	**27%**	**-**	**4%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**4%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	**3**	**0**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
4:15 PM	**2**	**0**	**0**	**1**	***3***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	*1*
4:30 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**1**	**0**	***1***	**1**	**1**	**1**	**1**	*4*
4:45 PM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**0**	***3***
5:00 PM	3	0	0	1	*4*	0	0	0	0	*0*	0	1	0	0	*1*
5:15 PM	1	0	4	0	*5*	0	0	0	0	*0*	0	5	0	0	*5*
5:30 PM	0	0	0	2	*2*	0	0	0	0	*0*	0	3	0	0	*3*
5:45 PM	0	0	0	0	*0*	0	0	2	0	*2*	0	0	0	0	*0*
Count Total	13	0	4	5	*22*	1	0	3	0	*4*	1	16	1	1	*19*
Peak Hr	**9**	**0**	**0**	**2**	***11***	**1**	**0**	**1**	**0**	***2***	**1**	**7**	**1**	**1**	***10***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W GALER ST FLYOVER				0				ALASKAN WY				ALASKAN WY				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**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	0
4:15 PM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
4:45 PM	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**11**
5:00 PM	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	4	12
5:15 PM	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	5	14
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	15
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Count Total	0	9	0	4	0	0	0	0	0	4	0	0	0	0	0	5	22	0
Peak Hour	**0**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**11**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W GALER ST FLYOVER			0			ALASKAN WY			ALASKAN WY			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**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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	0
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Count Total	0	0	1	0	0	0	0	3	0	0	0	0	4	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**

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

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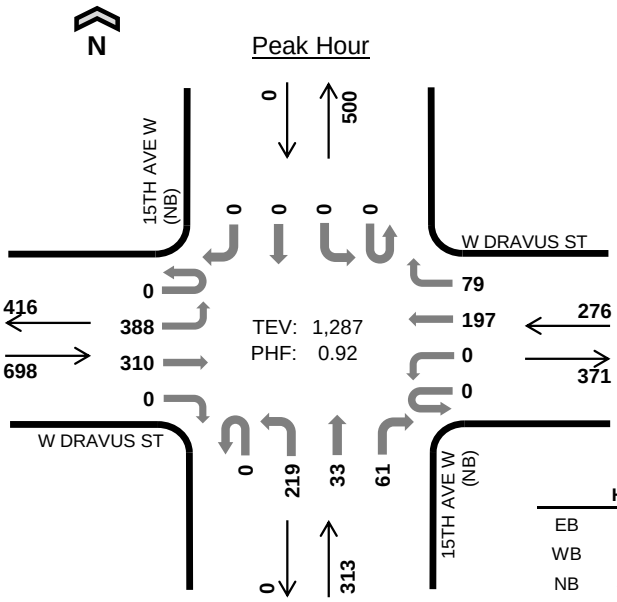
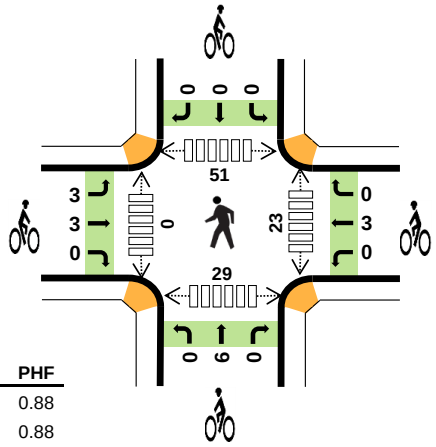
15TH AVE W (NB)
W DRAVUS ST

Date: 09/01/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	0.9%	0.88
WB	1.1%	0.88
NB	4.2%	0.97
SB	-	-
TOTAL	1.7%	0.92

Two-Hour Count Summaries

Interval Start		W DRAVUS ST Eastbound				W DRAVUS ST Westbound				15TH AVE W (NB) Northbound				15TH AVE W (NB) 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	92	65	0	0	0	26	24	0	43	4	14	0	0	0	0	268	0
4:15 PM		0	86	74	0	0	0	43	21	0	49	6	15	0	0	0	0	294	0
4:30 PM		0	100	90	0	0	0	31	26	0	49	4	14	0	0	0	0	314	0
4:45 PM		**0**	**92**	**64**	**0**	**0**	**0**	**53**	**21**	**0**	**55**	**9**	**17**	**0**	**0**	**0**	**0**	**311**	1,187
5:00 PM		**0**	**98**	**76**	**0**	**0**	**0**	**48**	**13**	**0**	**54**	**10**	**15**	**0**	**0**	**0**	**0**	**314**	1,233
5:15 PM		**0**	**93**	**77**	**0**	**0**	**0**	**42**	**21**	**0**	**58**	**8**	**13**	**0**	**0**	**0**	**0**	**312**	1,251
5:30 PM		**0**	**105**	**93**	**0**	**0**	**0**	**54**	**24**	**0**	**52**	**6**	**16**	**0**	**0**	**0**	**0**	**350**	**1,287**
5:45 PM		0	99	63	0	0	0	44	31	0	47	11	8	0	0	0	0	303	1,279
Count Total		0	765	602	0	0	0	341	181	0	407	58	112	0	0	0	0	2,466	0
Peak Hour	**All**	**0**	**388**	**310**	**0**	**0**	**0**	**197**	**79**	**0**	**219**	**33**	**61**	**0**	**0**	**0**	**0**	**1,287**	**0**
	HV	**0**	**5**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**2**	**11**	**0**	**0**	**0**	**0**	**0**	**22**	**0**
	HV%	**-**	**1%**	**0%**	**-**	**-**	**-**	**1%**	**1%**	**-**	**1%**	**33%**	**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	2	2	3	0	*7*	0	0	0	0	*0*	8	0	4	9	*21*
4:15 PM	3	1	5	0	*9*	2	1	0	0	*3*	2	0	6	0	*8*
4:30 PM	1	1	3	0	*5*	0	1	0	0	*1*	1	0	9	3	*13*
4:45 PM	**2**	**0**	**4**	**0**	***6***	**2**	**0**	**0**	**0**	***2***	**2**	**0**	**5**	**4**	*11*
5:00 PM	**2**	**1**	**2**	**0**	***5***	**2**	**1**	**2**	**0**	***5***	**5**	**0**	**16**	**5**	*26*
5:15 PM	**2**	**0**	**3**	**0**	***5***	**1**	**1**	**1**	**0**	***3***	**10**	**0**	**16**	**13**	*39*
5:30 PM	**0**	**2**	**4**	**0**	***6***	**1**	**1**	**3**	**0**	***5***	**6**	**0**	**14**	**7**	***27***
5:45 PM	2	0	5	0	*7*	3	0	0	0	*3*	4	0	12	9	*25*
Count Total	14	7	29	0	*50*	11	5	6	0	*22*	38	0	82	50	*170*
Peak Hour	**6**	**3**	**13**	**0**	***22***	**6**	**3**	**6**	**0**	***15***	**23**	**0**	**51**	**29**	***103***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W DRAVUS ST				W DRAVUS ST				15TH AVE W (NB)				15TH AVE W (NB)				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	1	0	0	0	0	2	0	0	2	1	0	0	0	0	7	0
4:15 PM	0	2	1	0	0	0	1	0	0	2	3	0	0	0	0	0	9	0
4:30 PM	0	1	0	0	0	0	1	0	0	1	2	0	0	0	0	0	5	0
4:45 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**6**	27
5:00 PM	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**5**	25
5:15 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**5**	21
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**6**	**22**
5:45 PM	0	1	1	0	0	0	0	0	0	1	4	0	0	0	0	0	7	23
Count Total	0	10	4	0	0	0	4	3	0	6	22	1	0	0	0	0	50	0
Peak Hour	**0**	**5**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**2**	**11**	**0**	**0**	**0**	**0**	**0**	**22**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W DRAVUS ST			W DRAVUS ST			15TH AVE W (NB)			15TH AVE W (NB)			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	2	0	0	0	1	0	0	0	0	0	0	0	3	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:45 PM	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	6
5:00 PM	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	11
5:15 PM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	11
5:30 PM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**5**	**15**
5:45 PM	1	2	0	0	0	0	0	0	0	0	0	0	3	16
Count Total	6	5	0	0	5	0	0	6	0	0	0	0	22	0
Peak Hour	**3**	**3**	**0**	**0**	**3**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**15**	**0**

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

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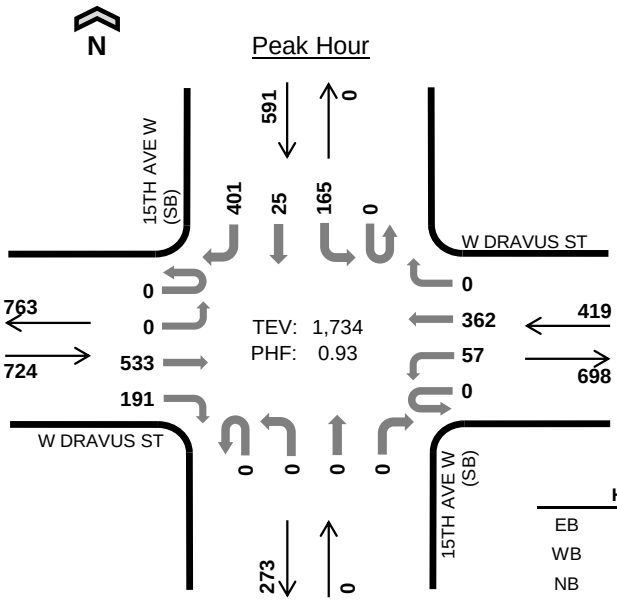
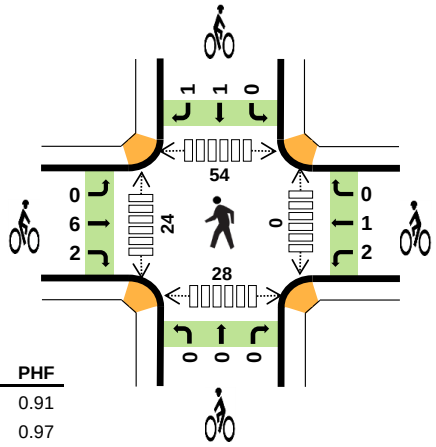
15TH AVE W (SB)
W DRAVUS ST

Date: 09/01/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	1.0%	0.91
WB	1.0%	0.97
NB	-	-
SB	2.4%	0.92
TOTAL	1.4%	0.93

Two-Hour Count Summaries

Interval Start		W DRAVUS ST Eastbound				W DRAVUS ST Westbound				15TH AVE W (SB) Northbound				15TH AVE W (SB) 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	115	40	0	8	60	0	0	0	0	0	0	42	7	97	369	0
4:15 PM		0	0	125	48	0	12	79	0	0	0	0	0	0	35	6	84	389	0
4:30 PM		0	0	140	51	0	9	71	0	0	0	0	0	0	50	3	99	423	0
4:45 PM		**0**	**0**	**122**	**50**	**0**	**15**	**93**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**7**	**85**	**406**	1,587
5:00 PM		**0**	**0**	**135**	**55**	**0**	**15**	**88**	**0**	**0**	**0**	**0**	**0**	**0**	**39**	**6**	**112**	**450**	1,668
5:15 PM		**0**	**0**	**126**	**36**	**0**	**12**	**89**	**0**	**0**	**0**	**0**	**0**	**0**	**44**	**5**	**99**	**411**	1,690
5:30 PM		**0**	**0**	**150**	**50**	**0**	**15**	**92**	**0**	**0**	**0**	**0**	**0**	**0**	**48**	**7**	**105**	**467**	**1,734**
5:45 PM		0	0	129	43	0	9	81	0	0	0	0	0	0	33	3	100	398	1,726
Count Total		0	0	1,042	373	0	95	653	0	0	0	0	0	0	325	44	781	3,313	0
Peak Hour	**All**	**0**	**0**	**533**	**191**	**0**	**57**	**362**	**0**	**0**	**0**	**0**	**0**	**0**	**165**	**25**	**401**	**1,734**	**0**
	HV	**0**	**0**	**2**	**5**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**10**	**0**	**25**	**0**
	HV%	**-**	**-**	**0%**	**3%**	**-**	**4%**	**1%**	**-**	**-**	**-**	**-**	**-**	**-**	**2%**	**40%**	**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	2	0	0	7	*9*	0	0	0	0	*0*	0	5	4	8	*17*
4:15 PM	3	3	0	4	*10*	2	1	0	0	*3*	0	2	9	0	*11*
4:30 PM	1	2	0	2	*5*	0	1	0	0	*1*	0	4	9	3	*16*
4:45 PM	**3**	**1**	**0**	**3**	***7***	**2**	**0**	**0**	**0**	***2***	**0**	**6**	**6**	**3**	*15*
5:00 PM	**3**	**1**	**0**	**3**	***7***	**3**	**1**	**0**	**2**	***6***	**0**	**11**	**19**	**6**	*36*
5:15 PM	**0**	**1**	**0**	**6**	***7***	**2**	**1**	**0**	**0**	***3***	**0**	**4**	**15**	**13**	*32*
5:30 PM	**1**	**1**	**0**	**2**	***4***	**1**	**1**	**0**	**0**	***2***	**0**	**3**	**14**	**6**	***23***
5:45 PM	2	1	0	3	*6*	3	0	0	1	*4*	0	4	14	9	*27*
Count Total	15	10	0	30	*55*	13	5	0	3	*21*	0	39	90	48	*177*
Peak Hour	**7**	**4**	**0**	**14**	***25***	**8**	**3**	**0**	**2**	***13***	**0**	**24**	**54**	**28**	***106***

project.manager.wa@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W DRAVUS ST				W DRAVUS ST				15TH AVE W (SB)				15TH AVE W (SB)				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	0	2	0	0	0	0	0	0	0	0	0	0	0	5	2	9	0
4:15 PM	0	0	3	0	0	1	2	0	0	0	0	0	0	0	3	1	10	0
4:30 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	0	5	0
4:45 PM	**0**	**0**	**1**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**7**	31
5:00 PM	**0**	**0**	**1**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**7**	29
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**0**	**7**	26
5:30 PM	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**4**	**25**
5:45 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	2	1	6	24
Count Total	0	0	10	5	0	3	7	0	0	0	0	0	0	4	22	4	55	0
Peak Hour	**0**	**0**	**2**	**5**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**10**	**0**	**25**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W DRAVUS ST			W DRAVUS ST			15TH AVE W (SB)			15TH AVE W (SB)			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	2	0	0	1	0	0	0	0	0	0	0	3	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	6
5:00 PM	**0**	**2**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**6**	12
5:15 PM	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	12
5:30 PM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**13**
5:45 PM	0	3	0	0	0	0	0	0	0	0	0	1	4	15
Count Total	0	11	2	2	3	0	0	0	0	0	1	2	21	0
Peak Hour	**0**	**6**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**13**	**0**

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

project.manager.wa@idaxdata.com

Appendix B: Level of Service 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. The Table below shows LOS criteria for signalized intersections, as described in the *Highway Capacity Manual* (Transportation Research Board, Special Report 209, 2000).

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).

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.

Appendix C: Intersection Level of Service Reports

Intersection List:

1. 1: 15th Ave W / W Garfield St
2. Elliott Ave W / Galer Street Flyover
3. Elliot Ave W / W Mercer Place
4. Alaskan Way N / W Galer Street Flyover
5. 15th Avenue W NB Off-Ramp / W Dravus Street
6. 15th Avenue W SB On-Ramp / W Dravus Street
7. 20th Ave W / W Dravus Street
8. Thorndyke Ave W / 20th Ave W

2022 No Cruise Day – Starts on Appendix PDF Page 31

2022 One Cruise Day – Starts on Appendix PDF Page 62

2022 Two Cruise Day – Starts on Appendix PDF Page 93

2022 – No Cruise Day

Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	609	10	60	766	5	5	1304	120
v/c Ratio	0.50	0.38	0.05	0.22	0.30	0.00	0.01	0.49	0.10
Control Delay	66.9	0.7	21.1	2.2	0.7	0.0	3.6	5.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	0.7	21.1	2.2	0.7	0.0	3.6	5.2	1.0
Queue Length 50th (ft)	63	0	0	2	34	0	1	199	2
Queue Length 95th (ft)	116	0	16	2	8	m0	4	238	16
Internal Link Dist (ft)	1302		1011		745			1253	
Turn Bay Length (ft)				120		150	250		150
Base Capacity (vph)	303	1603	371	269	2589	1168	503	2650	1189
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.38	0.03	0.22	0.30	0.00	0.01	0.49	0.10

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	5	560	5	0	5	55	705	5	5	1200	110
Future Volume (vph)	65	5	560	5	0	5	55	705	5	5	1200	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12	11	10	12	11	10	12
Grade (%)		-7%			0%			-1%			0%	
Total Lost time (s)		4.5	4.0		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	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00	0.94	1.00	1.00	0.92
Flpb, ped/bikes		0.99	1.00		1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt		1.00	0.85		0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1704	1603		1705		1631	3165	1426	1657	3240	1431
Flt Permitted		0.73	1.00		0.89		0.19	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)		1307	1603		1563		327	3165	1426	614	3240	1431
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)	71	5	609	5	0	5	60	766	5	5	1304	120
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	1	0	0	19
Lane Group Flow (vph)	0	76	609	0	1	0	60	766	4	5	1304	101
Confl. Peds. (#/hr)	5		2	2		5	10		7	7		10
Confl. Bikes (#/hr)			3									3
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	7%	7%	7%	4%	4%	4%
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		Free	4			2		2	2		2
Actuated Green, G (s)		16.5	140.0		16.5		114.5	114.5	114.5	114.5	114.5	114.5
Effective Green, g (s)		16.5	140.0		16.5		114.5	114.5	114.5	114.5	114.5	114.5
Actuated g/C Ratio		0.12	1.00		0.12		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)		154	1603		184		267	2588	1166	502	2649	1170
v/s Ratio Prot								0.24			c0.40	
v/s Ratio Perm		c0.06	0.38		0.00		0.18		0.00	0.01		0.07
v/c Ratio		0.49	0.38		0.01		0.22	0.30	0.00	0.01	0.49	0.09
Uniform Delay, d1		57.8	0.0		54.5		2.8	3.1	2.3	2.3	3.9	2.5
Progression Factor		1.00	1.00		1.00		0.10	0.11	0.04	1.00	1.00	1.00
Incremental Delay, d2		0.9	0.7		0.0		1.8	0.3	0.0	0.0	0.7	0.1
Delay (s)		58.7	0.7		54.5		2.1	0.6	0.1	2.4	4.5	2.6
Level of Service		E	A		D		A	A	A	A	A	A
Approach Delay (s)		7.1			54.5			0.7			4.4	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	27	857	451	77	1857
v/c Ratio	0.19	0.16	0.38	0.31	0.69	0.69
Control Delay	56.1	18.8	6.0	0.5	87.7	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.1	18.8	6.0	0.5	87.7	6.0
Queue Length 50th (ft)	27	0	75	1	70	197
Queue Length 95th (ft)	46	28	104	0	#149	254
Internal Link Dist (ft)	459		2075			745
Turn Bay Length (ft)				210	150	
Base Capacity (vph)	793	402	2258	1475	112	2696
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.07	0.38	0.31	0.69	0.69

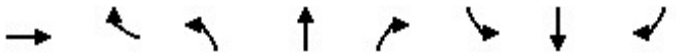
Intersection Summary

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	25	780	410	70	1690
Future Volume (vph)	55	25	780	410	70	1690
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	14	16	10	13	9	10
Total Lost time (s)	5.0	5.0	5.5	5.0	5.0	5.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3087	1486	3149	1558	1577	3271
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3087	1486	3149	1558	1577	3271
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	60	27	857	451	77	1857
RTOR Reduction (vph)	0	24	0	31	0	0
Lane Group Flow (vph)	60	3	857	420	77	1857
Confl. Peds. (#/hr)		2		3	3	
Confl. Bikes (#/hr)		1		1		
Heavy Vehicles (%)	21%	21%	7%	7%	3%	3%
Turn Type	Prot	Perm	NA	custom	Prot	NA
Protected Phases	4		1	4 7	2	1 2
Permitted Phases		4		2		
Actuated Green, G (s)	14.1	14.1	100.4	129.5	10.0	115.9
Effective Green, g (s)	14.1	14.1	100.4	129.5	10.0	115.9
Actuated g/C Ratio	0.10	0.10	0.72	0.92	0.07	0.83
Clearance Time (s)	5.0	5.0	5.5		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	310	149	2258	1496	112	2707
v/s Ratio Prot	0.02		0.27	c0.24	0.05	c0.57
v/s Ratio Perm		0.00		0.03		
v/c Ratio	0.19	0.02	0.38	0.28	0.69	0.69
Uniform Delay, d1	57.7	56.7	7.7	0.5	63.5	4.8
Progression Factor	1.00	1.00	0.64	0.69	0.95	0.74
Incremental Delay, d2	0.3	0.0	0.5	0.1	26.9	1.3
Delay (s)	58.0	56.8	5.4	0.5	87.3	4.9
Level of Service	E	E	A	A	F	A
Approach Delay (s)	57.6		3.7			8.2
Approach LOS	E		A			A

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

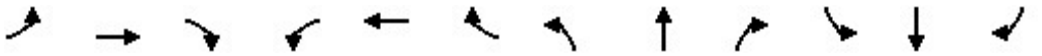
c Critical Lane Group



Lane Group	EBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	404	16	883	21	277	1537	5
v/c Ratio	0.07	0.28	0.26	0.39	0.02	0.46	0.67	0.00
Control Delay	0.9	0.5	75.9	9.5	0.1	43.8	17.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.9	0.5	75.9	9.5	0.1	43.8	17.8	0.0
Queue Length 50th (ft)	0	0	15	131	0	103	426	0
Queue Length 95th (ft)	0	0	40	289	0	131	632	m0
Internal Link Dist (ft)	335			498			2075	
Turn Bay Length (ft)			60		150	230		150
Base Capacity (vph)	154	1464	61	2260	1082	669	2301	1136
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.28	0.26	0.39	0.02	0.41	0.67	0.00

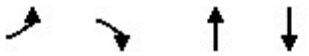
Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	380	15	830	20	260	1445	5
Future Volume (vph)	5	0	5	0	0	380	15	830	20	260	1445	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	10	12	10	10	12
Grade (%)		5%			0%			1%			0%	
Total Lost time (s)		4.5				4.0	5.5	4.5	4.5	5.5	4.5	4.5
Lane Util. Factor		1.00				1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		0.88				0.98	1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes		1.00				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.93				0.86	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98				1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1486				1464	1678	3133	1469	3113	3008	1460
Flt Permitted		0.98				1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1486				1464	1678	3133	1469	3113	3008	1460
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)	5	0	5	0	0	404	16	883	21	277	1537	5
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	6	0	0	1
Lane Group Flow (vph)	0	0	0	0	0	404	16	883	15	277	1537	4
Confl. Peds. (#/hr)			6	6			10		5	5		10
Confl. Bikes (#/hr)						1			2			2
Heavy Vehicles (%)	0%	0%	0%	10%	10%	10%	7%	7%	7%	5%	5%	5%
Parking (#/hr)											5	
Turn Type	custom	NA				Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	3					5	2		1 4	6	
Permitted Phases	3					Free			2			6
Actuated Green, G (s)		1.1				140.0	2.2	97.4	97.4	27.0	100.2	100.2
Effective Green, g (s)		1.1				140.0	2.2	97.4	97.4	23.5	100.2	100.2
Actuated g/C Ratio		0.01				1.00	0.02	0.70	0.70	0.17	0.72	0.72
Clearance Time (s)		4.5					5.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0					0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)		11				1464	26	2179	1022	522	2152	1044
v/s Ratio Prot		0.00					0.01	0.28		c0.09	c0.51	
v/s Ratio Perm						c0.28			0.01			0.00
v/c Ratio		0.01				0.28	0.62	0.41	0.01	0.53	0.71	0.00
Uniform Delay, d1		68.9				0.0	68.5	9.0	6.5	53.2	11.6	5.7
Progression Factor		1.00				1.00	1.00	1.00	1.00	0.85	1.47	1.00
Incremental Delay, d2		0.3				0.5	26.7	0.6	0.0	0.4	1.5	0.0
Delay (s)		69.2				0.5	95.2	9.6	6.6	45.8	18.5	5.7
Level of Service		E				A	F	A	A	D	B	A
Approach Delay (s)		69.2			0.5			11.0			22.6	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

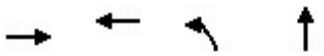


Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	93	215	41	76
v/c Ratio	0.15	0.18	0.12	0.07
Control Delay	11.6	1.3	12.9	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.6	1.3	12.9	0.1
Queue Length 50th (ft)	15	0	6	0
Queue Length 95th (ft)	37	13	21	0
Internal Link Dist (ft)	591		591	285
Turn Bay Length (ft)		100		
Base Capacity (vph)	838	1479	1709	1285
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.15	0.02	0.06

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	185	30	5	0	65
Future Volume (vph)	80	185	30	5	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.86	
Flt Protected	0.95	1.00		0.96	1.00	
Satd. Flow (prot)	1703	1524		1769	1287	
Flt Permitted	0.95	1.00		0.96	1.00	
Satd. Flow (perm)	1703	1524		1769	1287	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	93	215	35	6	0	76
RTOR Reduction (vph)	0	75	0	0	67	0
Lane Group Flow (vph)	93	140	0	41	9	0
Confl. Peds. (#/hr)			2			2
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	6%	6%	3%	3%	25%	25%
Turn Type	Prot	pt+ov	Split	NA	NA	
Protected Phases	3	3 2	2	2	1	
Permitted Phases						
Actuated Green, G (s)	13.4	25.0		7.1	4.3	
Effective Green, g (s)	13.4	25.0		7.1	4.3	
Actuated g/C Ratio	0.35	0.65		0.19	0.11	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	595	994		327	144	
v/s Ratio Prot	0.05	c0.09		0.02	c0.01	
v/s Ratio Perm						
v/c Ratio	0.16	0.14		0.13	0.06	
Uniform Delay, d1	8.6	2.5		13.0	15.2	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1		0.2	0.2	
Delay (s)	8.7	2.6		13.2	15.4	
Level of Service	A	A		B	B	
Approach Delay (s)	4.4			13.2	15.4	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	38.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBT	NBL	NBT
Lane Group Flow (vph)	565	205	161	48
v/c Ratio	5.71dl	0.46	0.55	0.16
Control Delay	7.6	30.0	51.0	21.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.7	30.0	51.0	21.8
Queue Length 50th (ft)	26	42	108	10
Queue Length 95th (ft)	66	78	#205	45
Internal Link Dist (ft)	315	1205		1349
Turn Bay Length (ft)				
Base Capacity (vph)	1243	510	293	298
Starvation Cap Reductn	17	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.40	0.55	0.16

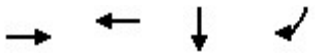
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	345	180	0	0	115	75	150	15	30	0	0	0
Future Volume (vph)	345	180	0	0	115	75	150	15	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5				
Lane Util. Factor		0.95			0.95		1.00	1.00				
Frpb, ped/bikes		1.00			0.96		1.00	0.98				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.94		1.00	0.90				
Flt Protected		0.97			1.00		0.95	1.00				
Satd. Flow (prot)		3297			3128		1597	1486				
Flt Permitted		0.64			1.00		0.95	1.00				
Satd. Flow (perm)		2166			3128		1597	1486				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	371	194	0	0	124	81	161	16	32	0	0	0
RTOR Reduction (vph)	0	0	0	0	71	0	0	26	0	0	0	0
Lane Group Flow (vph)	0	565	0	0	134	0	161	22	0	0	0	0
Confl. Peds. (#/hr)	18		19	19		18			7	7		
Confl. Bikes (#/hr)			2			2			1			
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	13%	13%	13%	0%	0%	0%
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4 3			7			2				
Permitted Phases	4 3						2					
Actuated Green, G (s)		63.3			13.0		20.2	20.2				
Effective Green, g (s)		63.3			13.0		20.2	20.2				
Actuated g/C Ratio		0.58			0.12		0.18	0.18				
Clearance Time (s)					4.5		4.5	4.5				
Vehicle Extension (s)					2.0		2.0	2.0				
Lane Grp Cap (vph)		1246			369		293	272				
v/s Ratio Prot					c0.04			0.01				
v/s Ratio Perm		c0.26					c0.10					
v/c Ratio		5.71dl			0.36		0.55	0.08				
Uniform Delay, d1		13.4			44.7		40.8	37.2				
Progression Factor		0.50			1.00		1.00	1.00				
Incremental Delay, d2		0.1			0.2		7.2	0.6				
Delay (s)		6.7			44.9		48.0	37.8				
Level of Service		A			D		D	D				
Approach Delay (s)		6.7			44.9			45.7			0.0	
Approach LOS		A			D			D			A	

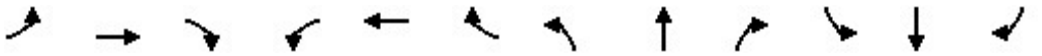
Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

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



Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	675	273	103	289
v/c Ratio	0.61	0.32	0.10	0.31
Control Delay	30.5	20.4	10.3	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.5	20.4	10.3	2.1
Queue Length 50th (ft)	179	27	29	0
Queue Length 95th (ft)	270	63	54	33
Internal Link Dist (ft)	2827	315	1347	
Turn Bay Length (ft)				
Base Capacity (vph)	1106	831	980	926
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.33	0.11	0.31

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	445	210	55	210	0	0	0	0	80	20	280
Future Volume (vph)	0	445	210	55	210	0	0	0	0	80	20	280
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
Lane Util. Factor		0.95			0.95						1.00	1.00
Frpb, ped/bikes		0.97			1.00						1.00	0.98
Flpb, ped/bikes		1.00			0.99						1.00	1.00
Frt		0.95			1.00						1.00	0.85
Flt Protected		1.00			0.99						0.96	1.00
Satd. Flow (prot)		3165			3316						1708	1481
Flt Permitted		1.00			0.74						0.96	1.00
Satd. Flow (perm)		3165			2468						1708	1481
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)	0	459	216	57	216	0	0	0	0	82	21	289
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	630	0	0	273	0	0	0	0	0	103	154
Confl. Peds. (#/hr)	18		18	18		18	14					14
Confl. Bikes (#/hr)			2			1						1
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	0%	0%	0%	7%	7%	7%
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		4!			7 2						3 4!	4
Permitted Phases				7 2						3 4!		3
Actuated Green, G (s)		36.9			37.7						63.3	58.8
Effective Green, g (s)		36.9			37.7						63.3	58.8
Actuated g/C Ratio		0.34			0.34						0.58	0.53
Clearance Time (s)		4.5										4.5
Vehicle Extension (s)		2.0										2.0
Lane Grp Cap (vph)		1061			845						982	852
v/s Ratio Prot		c0.20										c0.06
v/s Ratio Perm					c0.11						0.06	0.04
v/c Ratio		0.59			0.32						0.10	0.18
Uniform Delay, d1		30.3			26.7						10.5	13.2
Progression Factor		1.00			0.70						1.00	1.00
Incremental Delay, d2		2.4			0.1						0.0	0.0
Delay (s)		32.8			18.8						10.6	13.2
Level of Service		C			B						B	B
Approach Delay (s)		32.8			18.8			0.0			12.5	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	385	489	43	158	114	38
v/c Ratio	0.38	0.44	0.07	0.23	0.51	0.05
Control Delay	18.5	12.7	16.7	3.3	32.6	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	12.7	16.7	3.3	32.6	7.9
Queue Length 50th (ft)	59	55	11	0	39	6
Queue Length 95th (ft)	94	87	32	29	82	19
Internal Link Dist (ft)	1013	2827	1056			1223
Turn Bay Length (ft)				100	150	
Base Capacity (vph)	1022	1110	575	697	243	840
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.44	0.07	0.23	0.47	0.05

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	345	5	100	280	70	5	35	145	105	30	5
Future Volume (vph)	5	345	5	100	280	70	5	35	145	105	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00	0.98	1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.98			1.00	0.85	1.00	0.98	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3563			3329			1833	1533	1719	1765	
Flt Permitted		0.95			0.75			0.98	1.00	0.95	1.00	
Satd. Flow (perm)		3386			2540			1813	1533	1719	1765	
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)	5	375	5	109	304	76	5	38	158	114	33	5
RTOR Reduction (vph)	0	1	0	0	25	0	0	0	100	0	3	0
Lane Group Flow (vph)	0	384	0	0	464	0	0	43	58	114	35	0
Confl. Peds. (#/hr)	9		4	4		9	3		3	3		3
Confl. Bikes (#/hr)			2			5			18			50
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	3%	3%	3%	5%	5%	5%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6			4	1	3	8	
Permitted Phases	2			6			4		4			
Actuated Green, G (s)		18.1			25.2			19.0	22.6	6.7	29.2	
Effective Green, g (s)		18.1			25.2			19.0	22.6	6.7	29.2	
Actuated g/C Ratio		0.29			0.41			0.31	0.37	0.11	0.48	
Clearance Time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		998			1088			561	651	187	839	
v/s Ratio Prot					c0.02				c0.01	c0.07	0.02	
v/s Ratio Perm		0.11			c0.15			0.02	0.03			
v/c Ratio		0.38			0.43			0.08	0.09	0.61	0.04	
Uniform Delay, d1		17.2			12.9			15.0	12.7	26.1	8.6	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1			0.3			0.3	0.1	5.5	0.1	
Delay (s)		18.3			13.2			15.3	12.7	31.6	8.7	
Level of Service		B			B			B	B	C	A	
Approach Delay (s)		18.3			13.2			13.3			25.9	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	20	165	5	15	115
Future Vol, veh/h	5	20	165	5	15	115
Conflicting Peds, #/hr	2	6	0	2	6	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	89	89	89	89	89	89
Heavy Vehicles, %	10	10	2	2	3	3
Mvmt Flow	6	22	185	6	17	129

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	200	0	0	197	0
Stage 1	194	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.13	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.227	-
Pot Cap-1 Maneuver	624	821	-	-	1370	-
Stage 1	820	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	612	813	-	-	1363	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	832	-	-	-	-	-

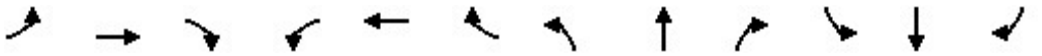
Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	763	1363	-
HCM Lane V/C Ratio	-	-	0.037	0.012	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	421	15	63	1505	5	1247	205
v/c Ratio	0.81	0.26	0.06	0.23	0.59	0.03	0.49	0.18
Control Delay	83.5	0.4	34.9	2.1	1.7	5.6	7.2	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	83.5	0.4	34.9	2.1	1.9	5.6	7.2	1.3
Queue Length 50th (ft)	149	0	8	1	7	1	188	3
Queue Length 95th (ft)	219	0	27	m3	25	6	303	26
Internal Link Dist (ft)	1302		1011		745		1253	
Turn Bay Length (ft)				120		250		150
Base Capacity (vph)	299	1603	387	274	2571	193	2534	1110
Starvation Cap Reductn	0	0	0	0	279	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.26	0.04	0.23	0.66	0.03	0.49	0.18

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	5	400	5	5	5	60	1430	0	5	1185	195
Future Volume (vph)	155	5	400	5	5	5	60	1430	0	5	1185	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12	11	10	12	11	10	12
Grade (%)		-7%			0%			-1%			0%	
Total Lost time (s)		4.5	4.0		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00		1.00	1.00	0.88
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1707	1603		1772		1719	3320		1694	3271	1379
Flt Permitted		0.72	1.00		0.92		0.20	1.00		0.14	1.00	1.00
Satd. Flow (perm)		1292	1603		1654		354	3320		250	3271	1379
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)	163	5	421	5	5	5	63	1505	0	5	1247	205
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	43
Lane Group Flow (vph)	0	168	421	0	11	0	63	1505	0	5	1247	162
Confl. Peds. (#/hr)	3		2	2		3	17		2	2		17
Confl. Bikes (#/hr)			3						8			8
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		Free	4			2		2	2		2
Actuated Green, G (s)		22.5	140.0		22.5		108.5	108.5		108.5	108.5	108.5
Effective Green, g (s)		22.5	140.0		22.5		108.5	108.5		108.5	108.5	108.5
Actuated g/C Ratio		0.16	1.00		0.16		0.78	0.78		0.78	0.78	0.78
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)		207	1603		265		274	2573		193	2535	1068
v/s Ratio Prot								c0.45			0.38	
v/s Ratio Perm		c0.13	0.26		0.01		0.18			0.02		0.12
v/c Ratio		0.81	0.26		0.04		0.23	0.58		0.03	0.49	0.15
Uniform Delay, d1		56.7	0.0		49.6		4.3	6.5		3.6	5.7	4.0
Progression Factor		1.00	1.00		1.00		0.10	0.13		1.00	1.00	1.00
Incremental Delay, d2		20.0	0.4		0.0		1.6	0.8		0.2	0.7	0.3
Delay (s)		76.7	0.4		49.7		2.0	1.6		3.9	6.4	4.3
Level of Service		E	A		D		A	A		A	A	A
Approach Delay (s)		22.2			49.7			1.6			6.1	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	125	83	1484	536	36	1615
v/c Ratio	0.32	0.32	0.64	0.35	0.32	0.61
Control Delay	58.0	13.4	7.3	0.6	64.4	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	13.4	7.3	0.6	64.4	5.5
Queue Length 50th (ft)	55	0	134	0	32	175
Queue Length 95th (ft)	81	48	196	0	m67	209
Internal Link Dist (ft)	459		2075			745
Turn Bay Length (ft)				210	150	
Base Capacity (vph)	923	505	2337	1536	112	2665
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.16	0.64	0.35	0.32	0.61

Intersection Summary

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	120	80	1425	515	35	1550
Future Volume (vph)	120	80	1425	515	35	1550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	14	16	10	13	9	10
Total Lost time (s)	5.0	5.0	5.5	5.0	5.0	5.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3591	1723	3303	1633	1577	3271
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3591	1723	3303	1633	1577	3271
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	125	83	1484	536	36	1615
RTOR Reduction (vph)	0	74	0	21	0	0
Lane Group Flow (vph)	125	9	1484	515	36	1615
Confl. Peds. (#/hr)		4		7	7	
Confl. Bikes (#/hr)		1		4		
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type	Prot	Perm	NA	custom	Prot	NA
Protected Phases	4		1	4 7	2	1 2
Permitted Phases		4		2		
Actuated Green, G (s)	15.4	15.4	99.1	129.5	10.0	114.6
Effective Green, g (s)	15.4	15.4	99.1	129.5	10.0	114.6
Actuated g/C Ratio	0.11	0.11	0.71	0.92	0.07	0.82
Clearance Time (s)	5.0	5.0	5.5		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	395	189	2338	1568	112	2677
v/s Ratio Prot	0.03		c0.45	c0.28	0.02	c0.49
v/s Ratio Perm		0.01		0.04		
v/c Ratio	0.32	0.05	0.63	0.33	0.32	0.60
Uniform Delay, d1	57.4	55.7	10.8	0.6	61.8	4.6
Progression Factor	1.00	1.00	0.53	1.16	0.92	0.82
Incremental Delay, d2	0.5	0.1	1.1	0.1	6.8	0.9
Delay (s)	57.9	55.8	6.8	0.8	63.8	4.7
Level of Service	E	E	A	A	E	A
Approach Delay (s)	57.1		5.2			6.0
Approach LOS	E		A			A

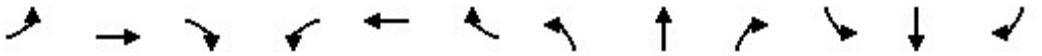
Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	5	458	5	1526	16	391	1344	5
v/c Ratio	0.24	no cap	0.30	0.08	0.70	0.02	0.57	0.61	0.00
Control Delay	49.1		0.5	68.2	18.8	0.0	44.1	19.0	0.0
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	Error	0.5	68.2	18.8	0.0	44.1	19.0	0.0
Queue Length 50th (ft)	9	0	0	5	464	0	169	442	0
Queue Length 95th (ft)	37	0	0	20	662	0	171	577	m0
Internal Link Dist (ft)	335	1014			498			2075	
Turn Bay Length (ft)				60		150	230		150
Base Capacity (vph)	88	1	1518	62	2182	1053	702	2199	1087
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	5.00	0.30	0.08	0.70	0.02	0.56	0.61	0.00

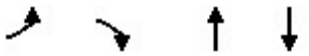
Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	5	10	5	0	440	5	1465	15	375	1290	5
Future Volume (vph)	5	5	10	5	0	440	5	1465	15	375	1290	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	10	12	10	10	12
Grade (%)		5%			0%			1%			0%	
Total Lost time (s)		4.5			4.0	4.0	5.5	4.5	4.5	5.5	4.5	4.5
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes		1.00			0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.93			1.00	0.86	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1687			0	1518	1761	3287	1545	3143	3037	1471
Flt Permitted		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1687			0	1518	1761	3287	1545	3143	3037	1471
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	5	5	10	5	0	458	5	1526	16	391	1344	5
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	6	0	0	2
Lane Group Flow (vph)	0	10	0	0	5	458	5	1526	10	391	1344	3
Confl. Peds. (#/hr)			1	1			11		4	4		11
Confl. Bikes (#/hr)						3			1			
Heavy Vehicles (%)	0%	0%	0%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Parking (#/hr)											5	
Turn Type	custom	NA		custom		Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	3					5	2		1 4	6	
Permitted Phases	3					Free			2			6
Actuated Green, G (s)		3.9			0.0	140.0	1.0	91.1	91.1	30.5	95.1	95.1
Effective Green, g (s)		3.9			0.0	140.0	1.0	91.1	91.1	27.0	95.1	95.1
Actuated g/C Ratio		0.03			0.00	1.00	0.01	0.65	0.65	0.19	0.68	0.68
Clearance Time (s)		4.5					5.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0					0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)		46			0	1518	12	2138	1005	606	2062	999
v/s Ratio Prot		0.01					0.00	c0.46		c0.12	0.44	
v/s Ratio Perm						c0.30			0.01			0.00
v/c Ratio		0.22			no cap	0.30	0.42	0.71	0.01	0.65	0.65	0.00
Uniform Delay, d1		66.6			Error	0.0	69.2	15.9	8.6	52.1	12.9	7.2
Progression Factor		1.00				1.00	1.00	1.00	1.00	0.85	1.47	1.00
Incremental Delay, d2		2.5			Error	0.5	8.3	2.1	0.0	1.5	1.3	0.0
Delay (s)		69.0			Error	0.5	77.5	18.0	8.6	45.8	20.3	7.2
Level of Service		E			F	A	E	B	A	D	C	A
Approach Delay (s)		69.0			Error			18.1			26.0	
Approach LOS		E			F			B			C	

Intersection Summary			
HCM 2000 Control Delay	Error	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

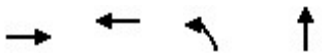


Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	33	39	228	72
v/c Ratio	0.08	0.04	0.43	0.09
Control Delay	14.1	1.6	13.6	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.1	1.6	13.6	0.2
Queue Length 50th (ft)	6	0	39	0
Queue Length 95th (ft)	23	6	83	0
Internal Link Dist (ft)	591		591	285
Turn Bay Length (ft)		100		
Base Capacity (vph)	762	1377	1696	1463
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.03	0.13	0.05

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	35	200	5	0	65
Future Volume (vph)	30	35	200	5	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	1455		1794	1487	
Flt Permitted	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1626	1455		1794	1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	39	222	6	0	72
RTOR Reduction (vph)	0	14	0	0	65	0
Lane Group Flow (vph)	33	25	0	228	7	0
Confl. Peds. (#/hr)		4	6			6
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	11%	11%	1%	1%	8%	8%
Turn Type	Prot	pt+ov	Split	NA	NA	
Protected Phases	3	3 2	2	2	1	
Permitted Phases						
Actuated Green, G (s)	8.8	23.4		10.1	3.7	
Effective Green, g (s)	8.8	23.4		10.1	3.7	
Actuated g/C Ratio	0.24	0.65		0.28	0.10	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	396	943		501	152	
v/s Ratio Prot	c0.02	0.02		c0.13	c0.00	
v/s Ratio Perm						
v/c Ratio	0.08	0.03		0.46	0.05	
Uniform Delay, d1	10.5	2.3		10.7	14.6	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.0		0.7	0.1	
Delay (s)	10.6	2.3		11.4	14.7	
Level of Service	B	A		B	B	
Approach Delay (s)	6.1			11.4	14.7	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	36.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBT	NBL	NBT
Lane Group Flow (vph)	761	299	239	103
v/c Ratio	6.24dl	0.63	0.95	0.36
Control Delay	16.1	44.0	93.7	22.4
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	16.2	44.0	93.7	22.4
Queue Length 50th (ft)	76	88	170	24
Queue Length 95th (ft)	195	136	#330	76
Internal Link Dist (ft)	315	1205		1349
Turn Bay Length (ft)				
Base Capacity (vph)	1292	486	251	284
Starvation Cap Reductn	76	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.63	0.62	0.95	0.36

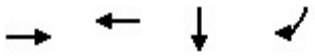
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	310	0	0	195	80	220	35	60	0	0	0
Future Volume (vph)	390	310	0	0	195	80	220	35	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5				
Lane Util. Factor		0.95			0.95		1.00	1.00				
Frpb, ped/bikes		1.00			0.93		1.00	0.96				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.96		1.00	0.91				
Flt Protected		0.97			1.00		0.95	1.00				
Satd. Flow (prot)		3477			3164		1736	1584				
Flt Permitted		0.61			1.00		0.95	1.00				
Satd. Flow (perm)		2181			3164		1736	1584				
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)	424	337	0	0	212	87	239	38	65	0	0	0
RTOR Reduction (vph)	0	0	0	0	41	0	0	56	0	0	0	0
Lane Group Flow (vph)	0	761	0	0	258	0	239	47	0	0	0	0
Confl. Peds. (#/hr)	51		29	29		51			23	23		
Confl. Bikes (#/hr)			6			3			6			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	0%	0%	0%
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4 3			7			2				
Permitted Phases	4 3						2					
Actuated Green, G (s)		65.5			15.1		15.9	15.9				
Effective Green, g (s)		65.5			15.1		15.9	15.9				
Actuated g/C Ratio		0.60			0.14		0.14	0.14				
Clearance Time (s)					4.5		4.5	4.5				
Vehicle Extension (s)					2.0		2.0	2.0				
Lane Grp Cap (vph)		1298			434		250	228				
v/s Ratio Prot					c0.08			0.03				
v/s Ratio Perm		c0.35					c0.14					
v/c Ratio		6.24dl			0.60		0.96	0.21				
Uniform Delay, d1		13.8			44.6		46.7	41.5				
Progression Factor		1.03			1.00		1.00	1.00				
Incremental Delay, d2		0.3			1.5		46.6	2.1				
Delay (s)		14.5			46.0		93.3	43.6				
Level of Service		B			D		F	D				
Approach Delay (s)		14.5			46.0			78.3			0.0	
Approach LOS		B			D			E			A	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

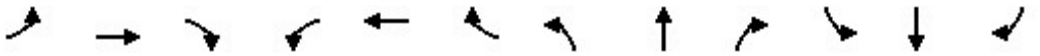
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	779	446	204	430
v/c Ratio	0.79	0.51	0.19	0.47
Control Delay	41.6	22.6	10.7	9.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	41.6	22.6	10.7	9.8
Queue Length 50th (ft)	257	63	62	96
Queue Length 95th (ft)	#383	m72	98	164
Internal Link Dist (ft)	2827	315	1347	
Turn Bay Length (ft)				
Base Capacity (vph)	990	860	1058	910
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.79	0.52	0.19	0.47

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	535	190	55	360	0	0	0	0	165	25	400
Future Volume (vph)	0	535	190	55	360	0	0	0	0	165	25	400
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
Lane Util. Factor		0.95			0.95						1.00	1.00
Frpb, ped/bikes		0.96			1.00						1.00	0.96
Flpb, ped/bikes		1.00			0.99						1.00	1.00
Frt		0.96			1.00						1.00	0.85
Flt Protected		1.00			0.99						0.96	1.00
Satd. Flow (prot)		3295			3530						1785	1525
Flt Permitted		1.00			0.76						0.96	1.00
Satd. Flow (perm)		3295			2701						1785	1525
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	575	204	59	387	0	0	0	0	177	27	430
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	0	65
Lane Group Flow (vph)	0	749	0	0	446	0	0	0	0	0	204	365
Confl. Peds. (#/hr)	54		28	28		54	24					24
Confl. Bikes (#/hr)			8			3						2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	2%	2%	2%
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		4!			7 2						3 4!	4
Permitted Phases				7 2						3 4!		3
Actuated Green, G (s)		32.1			35.5						65.5	61.0
Effective Green, g (s)		32.1			35.5						65.5	61.0
Actuated g/C Ratio		0.29			0.32						0.60	0.55
Clearance Time (s)		4.5										4.5
Vehicle Extension (s)		2.0										2.0
Lane Grp Cap (vph)		961			871						1062	908
v/s Ratio Prot		c0.23										c0.12
v/s Ratio Perm					c0.17						0.11	0.12
v/c Ratio		0.78			0.51						0.19	0.40
Uniform Delay, d1		35.7			30.2						10.2	14.0
Progression Factor		1.00			0.70						1.00	1.00
Incremental Delay, d2		6.2			0.1						0.0	0.1
Delay (s)		41.9			21.2						10.2	14.2
Level of Service		D			C						B	B
Approach Delay (s)		41.9			21.2			0.0			12.9	
Approach LOS		D			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	437	807	46	156	156	57
v/c Ratio	0.43	0.77	0.08	0.23	0.64	0.06
Control Delay	19.1	19.5	16.8	3.4	38.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	19.5	16.8	3.4	38.5	8.3
Queue Length 50th (ft)	68	102	12	0	54	10
Queue Length 95th (ft)	106	152	33	29	#123	25
Internal Link Dist (ft)	1013	2827	1056			1223
Turn Bay Length (ft)				100	150	
Base Capacity (vph)	1019	1045	573	672	253	881
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.77	0.08	0.23	0.62	0.06

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	410	5	155	455	165	10	35	150	150	50	5
Future Volume (vph)	5	410	5	155	455	165	10	35	150	150	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00	0.92	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.97			1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3563			3367			1875	1479	1787	1850	
Flt Permitted		0.95			0.68			0.96	1.00	0.95	1.00	
Satd. Flow (perm)		3375			2306			1821	1479	1787	1850	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	5	427	5	161	474	172	10	36	156	156	52	5
RTOR Reduction (vph)	0	1	0	0	41	0	0	0	99	0	3	0
Lane Group Flow (vph)	0	436	0	0	766	0	0	46	57	156	54	0
Confl. Peds. (#/hr)	20		29	29		20	11		10	10		11
Confl. Bikes (#/hr)						9			130			38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6			4	1	3	8	
Permitted Phases	2			6			4		4			
Actuated Green, G (s)		18.1			25.2			18.9	22.5	6.8	29.2	
Effective Green, g (s)		18.1			25.2			18.9	22.5	6.8	29.2	
Actuated g/C Ratio		0.29			0.41			0.31	0.37	0.11	0.48	
Clearance Time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		994			1008			560	626	197	879	
v/s Ratio Prot					c0.04				c0.01	c0.09	0.03	
v/s Ratio Perm		0.13			c0.27			0.03	0.03			
v/c Ratio		0.44			0.76			0.08	0.09	0.79	0.06	
Uniform Delay, d1		17.5			15.5			15.1	12.7	26.6	8.7	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4			3.4			0.3	0.1	19.2	0.1	
Delay (s)		18.9			18.9			15.4	12.8	45.8	8.8	
Level of Service		B			B			B	B	D	A	
Approach Delay (s)		18.9			18.9			13.4			35.9	
Approach LOS		B			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	15	175	5	5	200
Future Vol, veh/h	5	15	175	5	5	200
Conflicting Peds, #/hr	6	11	0	6	11	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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	1
Mvmt Flow	5	16	182	5	5	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	420	207	0	0	198	0
Stage 1	196	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	594	839	-	-	1381	-
Stage 1	842	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	583	824	-	-	1368	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	747	1368	-
HCM Lane V/C Ratio	-	-	0.028	0.004	-
HCM Control Delay (s)	-	-	10	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

2022 – One Cruise Ship Day

Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	97	682	10	60	851	5	5	1360	134
v/c Ratio	0.66	0.43	0.05	0.24	0.33	0.00	0.01	0.51	0.11
Control Delay	79.6	0.8	21.1	2.7	0.8	0.0	3.4	5.1	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	0.9	21.1	2.7	0.8	0.0	3.4	5.1	1.0
Queue Length 50th (ft)	87	0	0	1	6	0	1	152	3
Queue Length 95th (ft)	143	0	16	6	26	m0	4	255	18
Internal Link Dist (ft)	1302		1011		745			1253	
Turn Bay Length (ft)				120		150	250		150
Base Capacity (vph)	302	1603	368	254	2605	1175	463	2667	1198
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	61	0	0	0	0	0	124	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.44	0.03	0.24	0.33	0.00	0.01	0.53	0.11

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	5	627	5	0	5	55	783	5	5	1251	123
Future Volume (vph)	85	5	627	5	0	5	55	783	5	5	1251	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12	11	10	12	11	10	12
Grade (%)		-7%			0%			-1%			0%	
Total Lost time (s)		4.5	4.0		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	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00	0.94	1.00	1.00	0.92
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt		1.00	0.85		0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1703	1603		1706		1632	3165	1426	1660	3240	1431
Flt Permitted		0.73	1.00		0.89		0.18	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)		1302	1603		1549		308	3165	1426	562	3240	1431
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)	92	5	682	5	0	5	60	851	5	5	1360	134
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	1	0	0	20
Lane Group Flow (vph)	0	97	682	0	1	0	60	851	4	5	1360	114
Confl. Peds. (#/hr)	5		2	2		5	10		7	7		10
Confl. Bikes (#/hr)			3									3
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	7%	7%	7%	4%	4%	4%
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		Free	4			2		2	2		2
Actuated Green, G (s)		15.8	140.0		15.8		115.2	115.2	115.2	115.2	115.2	115.2
Effective Green, g (s)		15.8	140.0		15.8		115.2	115.2	115.2	115.2	115.2	115.2
Actuated g/C Ratio		0.11	1.00		0.11		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)		146	1603		174		253	2604	1173	462	2666	1177
v/s Ratio Prot								0.27			c0.42	
v/s Ratio Perm		c0.07	0.43		0.00		0.19		0.00	0.01		0.08
v/c Ratio		0.66	0.43		0.01		0.24	0.33	0.00	0.01	0.51	0.10
Uniform Delay, d1		59.6	0.0		55.1		2.7	3.0	2.2	2.2	3.8	2.4
Progression Factor		1.00	1.00		1.00		0.16	0.15	0.04	1.00	1.00	1.00
Incremental Delay, d2		8.5	0.8		0.0		2.0	0.3	0.0	0.0	0.7	0.2
Delay (s)		68.1	0.8		55.1		2.5	0.8	0.1	2.3	4.5	2.6
Level of Service		E	A		E		A	A	A	A	A	A
Approach Delay (s)		9.2			55.1			0.9			4.3	
Approach LOS		A			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	310	113	857	660	133	1931
v/c Ratio	0.47	0.28	0.45	0.44	1.19	0.83
Control Delay	49.8	8.6	10.7	1.2	191.1	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	8.6	10.7	1.2	191.1	16.4
Queue Length 50th (ft)	125	0	186	0	~145	628
Queue Length 95th (ft)	166	49	117	7	#285	834
Internal Link Dist (ft)	459		2075			745
Turn Bay Length (ft)				210	150	
Base Capacity (vph)	793	466	1907	1488	112	2331
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.24	0.45	0.44	1.19	0.83

Intersection Summary

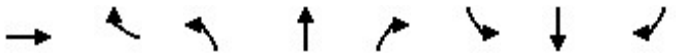
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	282	103	780	601	121	1757
Future Volume (vph)	282	103	780	601	121	1757
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	14	16	10	13	9	10
Total Lost time (s)	5.0	5.0	5.5	5.0	5.0	5.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3087	1488	3149	1558	1577	3271
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3087	1488	3149	1558	1577	3271
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	310	113	857	660	133	1931
RTOR Reduction (vph)	0	89	0	45	0	0
Lane Group Flow (vph)	310	24	857	615	133	1931
Confl. Peds. (#/hr)		2		3	3	
Confl. Bikes (#/hr)		1		1		
Heavy Vehicles (%)	21%	21%	7%	7%	3%	3%
Turn Type	Prot	Perm	NA	custom	Prot	NA
Protected Phases	4		1	4 7	2	1 2
Permitted Phases		4		2		
Actuated Green, G (s)	29.7	29.7	84.8	129.5	10.0	100.3
Effective Green, g (s)	29.7	29.7	84.8	129.5	10.0	100.3
Actuated g/C Ratio	0.21	0.21	0.61	0.92	0.07	0.72
Clearance Time (s)	5.0	5.0	5.5		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	654	315	1907	1496	112	2343
v/s Ratio Prot	0.10		0.27	c0.35	c0.08	c0.59
v/s Ratio Perm		0.02		0.04		
v/c Ratio	0.47	0.08	0.45	0.41	1.19	0.82
Uniform Delay, d1	48.3	44.2	15.0	0.6	65.0	13.7
Progression Factor	1.00	1.00	0.62	10.10	0.96	0.82
Incremental Delay, d2	0.5	0.1	0.7	0.2	139.4	3.1
Delay (s)	48.9	44.3	10.0	6.6	201.7	14.4
Level of Service	D	D	A	A	F	B
Approach Delay (s)	47.6		8.5			26.5
Approach LOS	D		A			C

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

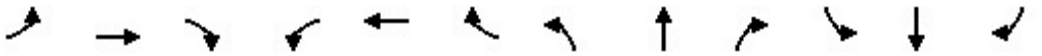
c Critical Lane Group



Lane Group	EBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	432	16	1059	21	318	1809	5
v/c Ratio	0.07	0.30	0.26	0.47	0.02	0.51	0.80	0.00
Control Delay	0.9	0.5	75.9	10.9	0.1	46.9	22.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.9	0.5	75.9	10.9	0.1	46.9	22.6	0.0
Queue Length 50th (ft)	0	0	15	181	0	123	608	0
Queue Length 95th (ft)	0	0	40	371	0	m137	#1073	m0
Internal Link Dist (ft)	335			498			2075	
Turn Bay Length (ft)			60		150	230		150
Base Capacity (vph)	154	1464	61	2231	1069	673	2273	1123
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.30	0.26	0.47	0.02	0.47	0.80	0.00

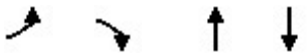
Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	406	15	995	20	299	1700	5
Future Volume (vph)	5	0	5	0	0	406	15	995	20	299	1700	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	10	12	10	10	12
Grade (%)		5%			0%			1%			0%	
Total Lost time (s)		4.5				4.0	5.5	4.5	4.5	5.5	4.5	4.5
Lane Util. Factor		1.00				1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		0.88				0.98	1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes		1.00				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.93				0.86	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98				1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1486				1464	1678	3133	1469	3113	3008	1460
Flt Permitted		0.98				1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1486				1464	1678	3133	1469	3113	3008	1460
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)	5	0	5	0	0	432	16	1059	21	318	1809	5
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	7	0	0	1
Lane Group Flow (vph)	0	0	0	0	0	432	16	1059	14	318	1809	4
Confl. Peds. (#/hr)			6	6			10		5	5		10
Confl. Bikes (#/hr)						1			2			2
Heavy Vehicles (%)	0%	0%	0%	10%	10%	10%	7%	7%	7%	5%	5%	5%
Parking (#/hr)											5	
Turn Type	custom	NA				Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	3					5	2		1 4	6	
Permitted Phases	3					Free			2			6
Actuated Green, G (s)		1.1				140.0	2.2	96.1	96.1	28.3	98.9	98.9
Effective Green, g (s)		1.1				140.0	2.2	96.1	96.1	24.8	98.9	98.9
Actuated g/C Ratio		0.01				1.00	0.02	0.69	0.69	0.18	0.71	0.71
Clearance Time (s)		4.5					5.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0					0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)		11				1464	26	2150	1008	551	2124	1031
v/s Ratio Prot		0.00					0.01	0.34		c0.10	c0.60	
v/s Ratio Perm						c0.30			0.01			0.00
v/c Ratio		0.01				0.30	0.62	0.49	0.01	0.58	0.85	0.00
Uniform Delay, d1		68.9				0.0	68.5	10.4	7.0	52.8	15.1	6.0
Progression Factor		1.00				1.00	1.00	1.00	1.00	0.92	1.58	1.00
Incremental Delay, d2		0.3				0.5	26.7	0.8	0.0	0.6	2.9	0.0
Delay (s)		69.2				0.5	95.2	11.2	7.0	49.3	26.8	6.1
Level of Service		E				A	F	B	A	D	C	A
Approach Delay (s)		69.2			0.5			12.4			30.1	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

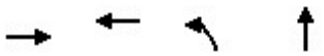


Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	374	215	41	430
v/c Ratio	0.61	0.21	0.14	0.41
Control Delay	16.6	1.2	16.7	1.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.6	1.2	16.7	1.2
Queue Length 50th (ft)	72	0	9	0
Queue Length 95th (ft)	131	12	26	0
Internal Link Dist (ft)	591		591	285
Turn Bay Length (ft)		100		
Base Capacity (vph)	612	1293	1457	1250
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.17	0.03	0.34

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	322	185	30	5	0	370
Future Volume (vph)	322	185	30	5	0	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.86	
Flt Protected	0.95	1.00		0.96	1.00	
Satd. Flow (prot)	1703	1524		1769	1287	
Flt Permitted	0.95	1.00		0.96	1.00	
Satd. Flow (perm)	1703	1524		1769	1287	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	374	215	35	6	0	430
RTOR Reduction (vph)	0	80	0	0	360	0
Lane Group Flow (vph)	374	135	0	41	70	0
Confl. Peds. (#/hr)			2			2
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	6%	6%	3%	3%	25%	25%
Turn Type	Prot	pt+ov	Split	NA	NA	
Protected Phases	3	3 2	2	2	1	
Permitted Phases						
Actuated Green, G (s)	15.5	27.1		7.1	7.0	
Effective Green, g (s)	15.5	27.1		7.1	7.0	
Actuated g/C Ratio	0.36	0.63		0.16	0.16	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	612	958		291	209	
v/s Ratio Prot	c0.22	c0.09		0.02	c0.05	
v/s Ratio Perm						
v/c Ratio	0.61	0.14		0.14	0.33	
Uniform Delay, d1	11.3	3.3		15.4	16.0	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	0.1		0.2	0.9	
Delay (s)	13.1	3.3		15.6	16.9	
Level of Service	B	A		B	B	
Approach Delay (s)	9.6			15.6	16.9	
Approach LOS	A			B	B	

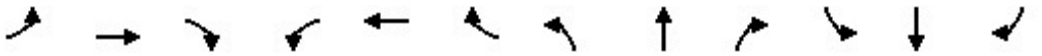
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBT	NBL	NBT
Lane Group Flow (vph)	565	219	183	70
v/c Ratio	5.71dl	0.47	0.66	0.24
Control Delay	7.5	30.8	56.9	18.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.5	30.8	56.9	18.1
Queue Length 50th (ft)	27	46	127	10
Queue Length 95th (ft)	66	84	#245	52
Internal Link Dist (ft)	315	1205		1349
Turn Bay Length (ft)				
Base Capacity (vph)	1247	513	278	297
Starvation Cap Reductn	17	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.43	0.66	0.24

Intersection Summary

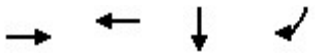
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	345	180	0	0	128	75	170	15	50	0	0	0
Future Volume (vph)	345	180	0	0	128	75	170	15	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5				
Lane Util. Factor		0.95			0.95		1.00	1.00				
Frpb, ped/bikes		1.00			0.96		1.00	0.98				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.94		1.00	0.88				
Flt Protected		0.97			1.00		0.95	1.00				
Satd. Flow (prot)		3297			3150		1597	1455				
Flt Permitted		0.64			1.00		0.95	1.00				
Satd. Flow (perm)		2166			3150		1597	1455				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	371	194	0	0	138	81	183	16	54	0	0	0
RTOR Reduction (vph)	0	0	0	0	71	0	0	45	0	0	0	0
Lane Group Flow (vph)	0	565	0	0	148	0	183	25	0	0	0	0
Confl. Peds. (#/hr)	18		19	19		18			7	7		
Confl. Bikes (#/hr)			2			2			1			
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	13%	13%	13%	0%	0%	0%
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4 3			7			2				
Permitted Phases	4 3						2					
Actuated Green, G (s)		63.5			13.9		19.1	19.1				
Effective Green, g (s)		63.5			13.9		19.1	19.1				
Actuated g/C Ratio		0.58			0.13		0.17	0.17				
Clearance Time (s)					4.5		4.5	4.5				
Vehicle Extension (s)					2.0		2.0	2.0				
Lane Grp Cap (vph)		1250			398		277	252				
v/s Ratio Prot					c0.05			0.02				
v/s Ratio Perm		c0.26					c0.11					
v/c Ratio		5.71dl			0.37		0.66	0.10				
Uniform Delay, d1		13.3			44.1		42.4	38.2				
Progression Factor		0.49			1.00		1.00	1.00				
Incremental Delay, d2		0.1			0.2		11.7	0.8				
Delay (s)		6.6			44.3		54.2	39.0				
Level of Service		A			D		D	D				
Approach Delay (s)		6.6			44.3			50.0			0.0	
Approach LOS		A			D			D			A	

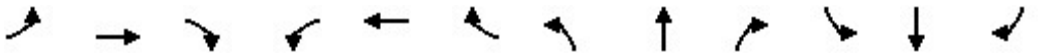
Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

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



Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	689	307	103	289
v/c Ratio	0.62	0.38	0.10	0.31
Control Delay	30.3	22.9	10.3	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.3	22.9	10.3	2.1
Queue Length 50th (ft)	182	47	29	0
Queue Length 95th (ft)	275	68	54	33
Internal Link Dist (ft)	2827	315	1347	
Turn Bay Length (ft)				
Base Capacity (vph)	1114	798	983	927
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.62	0.38	0.10	0.31

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	445	223	68	230	0	0	0	0	80	20	280
Future Volume (vph)	0	445	223	68	230	0	0	0	0	80	20	280
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
Lane Util. Factor		0.95			0.95						1.00	1.00
Frpb, ped/bikes		0.97			1.00						1.00	0.98
Flpb, ped/bikes		1.00			0.99						1.00	1.00
Frt		0.95			1.00						1.00	0.85
Flt Protected		1.00			0.99						0.96	1.00
Satd. Flow (prot)		3154			3312						1708	1481
Flt Permitted		1.00			0.71						0.96	1.00
Satd. Flow (perm)		3154			2365						1708	1481
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)	0	459	230	70	237	0	0	0	0	82	21	289
RTOR Reduction (vph)	0	50	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	639	0	0	307	0	0	0	0	0	103	155
Confl. Peds. (#/hr)	18		18	18		18	14					14
Confl. Bikes (#/hr)			2			1						1
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	0%	0%	0%	7%	7%	7%
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		4!			7 2						3 4!	4
Permitted Phases				7 2						3 4!		3
Actuated Green, G (s)		37.2			37.5						63.5	59.0
Effective Green, g (s)		37.2			37.5						63.5	59.0
Actuated g/C Ratio		0.34			0.34						0.58	0.54
Clearance Time (s)		4.5										4.5
Vehicle Extension (s)		2.0										2.0
Lane Grp Cap (vph)		1066			806						985	854
v/s Ratio Prot		c0.20										c0.06
v/s Ratio Perm					c0.13						0.06	0.04
v/c Ratio		0.60			0.38						0.10	0.18
Uniform Delay, d1		30.2			27.5						10.5	13.1
Progression Factor		1.00			0.77						1.00	1.00
Incremental Delay, d2		2.5			0.1						0.0	0.0
Delay (s)		32.7			21.1						10.5	13.1
Level of Service		C			C						B	B
Approach Delay (s)		32.7			21.1			0.0			12.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	393	511	43	158	121	38
v/c Ratio	0.38	0.46	0.07	0.23	0.54	0.05
Control Delay	18.6	12.8	16.7	3.3	33.5	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	12.8	16.7	3.3	33.5	7.9
Queue Length 50th (ft)	60	57	11	0	41	6
Queue Length 95th (ft)	95	91	32	29	86	19
Internal Link Dist (ft)	1013	2827	1056			1223
Turn Bay Length (ft)				100	150	
Base Capacity (vph)	1022	1109	574	696	243	840
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.46	0.07	0.23	0.50	0.05

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	352	5	100	290	80	5	35	145	111	30	5
Future Volume (vph)	5	352	5	100	290	80	5	35	145	111	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00	0.98	1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.97			1.00	0.85	1.00	0.98	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3563			3321			1833	1533	1719	1765	
Flt Permitted		0.95			0.75			0.98	1.00	0.95	1.00	
Satd. Flow (perm)		3385			2533			1813	1533	1719	1765	
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)	5	383	5	109	315	87	5	38	158	121	33	5
RTOR Reduction (vph)	0	1	0	0	28	0	0	0	100	0	3	0
Lane Group Flow (vph)	0	392	0	0	483	0	0	43	58	121	35	0
Confl. Peds. (#/hr)	9		4	4		9	3		3	3		3
Confl. Bikes (#/hr)			2			5			18			50
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	3%	3%	3%	5%	5%	5%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6			4	1	3	8	
Permitted Phases	2			6			4		4			
Actuated Green, G (s)		18.1			25.2			19.0	22.6	6.7	29.2	
Effective Green, g (s)		18.1			25.2			19.0	22.6	6.7	29.2	
Actuated g/C Ratio		0.29			0.41			0.31	0.37	0.11	0.48	
Clearance Time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		997			1085			561	651	187	839	
v/s Ratio Prot					c0.03				c0.01	c0.07	0.02	
v/s Ratio Perm		0.12			c0.16			0.02	0.03			
v/c Ratio		0.39			0.44			0.08	0.09	0.65	0.04	
Uniform Delay, d1		17.3			13.1			15.0	12.7	26.2	8.6	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.2			0.3			0.3	0.1	7.5	0.1	
Delay (s)		18.4			13.3			15.3	12.7	33.7	8.7	
Level of Service		B			B			B	B	C	A	
Approach Delay (s)		18.4			13.3			13.3			27.7	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	20	165	5	15	115
Future Vol, veh/h	5	20	165	5	15	115
Conflicting Peds, #/hr	2	6	0	2	6	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	89	89	89	89	89	89
Heavy Vehicles, %	10	10	2	2	3	3
Mvmt Flow	6	22	185	6	17	129

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	200	0	0	197	0
Stage 1	194	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.13	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.227	-
Pot Cap-1 Maneuver	624	821	-	-	1370	-
Stage 1	820	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	612	813	-	-	1363	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	832	-	-	-	-	-

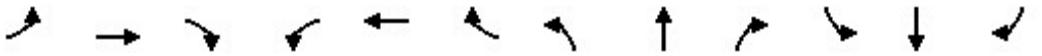
Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	763	1363	-
HCM Lane V/C Ratio	-	-	0.037	0.012	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	167	417	15	63	1500	5	1244	204
v/c Ratio	0.81	0.26	0.06	0.23	0.58	0.03	0.49	0.18
Control Delay	83.5	0.4	35.0	2.2	1.8	5.6	7.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	83.5	0.4	35.0	2.2	1.9	5.6	7.1	1.3
Queue Length 50th (ft)	149	0	8	1	7	1	187	3
Queue Length 95th (ft)	219	0	27	m3	24	6	301	26
Internal Link Dist (ft)	1302		1011		745		1253	
Turn Bay Length (ft)				120		250		150
Base Capacity (vph)	299	1603	387	276	2574	194	2536	1110
Starvation Cap Reductn	0	0	0	0	279	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.26	0.04	0.23	0.65	0.03	0.49	0.18

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	5	396	5	5	5	60	1425	0	5	1182	194
Future Volume (vph)	154	5	396	5	5	5	60	1425	0	5	1182	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12	11	10	12	11	10	12
Grade (%)		-7%			0%			-1%			0%	
Total Lost time (s)		4.5	4.0		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00		1.00	1.00	0.88
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1707	1603		1772		1719	3320		1694	3271	1379
Flt Permitted		0.72	1.00		0.92		0.20	1.00		0.14	1.00	1.00
Satd. Flow (perm)		1292	1603		1654		356	3320		252	3271	1379
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)	162	5	417	5	5	5	63	1500	0	5	1244	204
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	42
Lane Group Flow (vph)	0	167	417	0	11	0	63	1500	0	5	1244	162
Confl. Peds. (#/hr)	3		2	2		3	17		2	2		17
Confl. Bikes (#/hr)			3						8			8
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		Free	4			2		2	2		2
Actuated Green, G (s)		22.4	140.0		22.4		108.6	108.6		108.6	108.6	108.6
Effective Green, g (s)		22.4	140.0		22.4		108.6	108.6		108.6	108.6	108.6
Actuated g/C Ratio		0.16	1.00		0.16		0.78	0.78		0.78	0.78	0.78
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)		206	1603		264		276	2575		195	2537	1069
v/s Ratio Prot								c0.45			0.38	
v/s Ratio Perm		c0.13	0.26		0.01		0.18			0.02		0.12
v/c Ratio		0.81	0.26		0.04		0.23	0.58		0.03	0.49	0.15
Uniform Delay, d1		56.8	0.0		49.7		4.3	6.4		3.6	5.7	4.0
Progression Factor		1.00	1.00		1.00		0.11	0.14		1.00	1.00	1.00
Incremental Delay, d2		19.9	0.4		0.0		1.5	0.8		0.2	0.7	0.3
Delay (s)		76.7	0.4		49.7		2.0	1.7		3.8	6.4	4.3
Level of Service		E	A		D		A	A		A	A	A
Approach Delay (s)		22.2			49.7			1.7			6.1	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	110	78	1484	523	33	1610
v/c Ratio	0.29	0.31	0.63	0.34	0.29	0.60
Control Delay	58.2	14.0	7.1	0.6	63.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.2	14.0	7.1	0.6	63.1	5.2
Queue Length 50th (ft)	48	0	132	0	29	172
Queue Length 95th (ft)	74	47	191	0	m61	206
Internal Link Dist (ft)	459		2075			745
Turn Bay Length (ft)				210	150	
Base Capacity (vph)	923	501	2354	1535	112	2682
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.16	0.63	0.34	0.29	0.60

Intersection Summary

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	106	75	1425	502	32	1546
Future Volume (vph)	106	75	1425	502	32	1546
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	14	16	10	13	9	10
Total Lost time (s)	5.0	5.0	5.5	5.0	5.0	5.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3591	1723	3303	1633	1577	3271
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3591	1723	3303	1633	1577	3271
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	110	78	1484	523	33	1610
RTOR Reduction (vph)	0	70	0	21	0	0
Lane Group Flow (vph)	110	8	1484	502	33	1610
Confl. Peds. (#/hr)		4		7	7	
Confl. Bikes (#/hr)		1		4		
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type	Prot	Perm	NA	custom	Prot	NA
Protected Phases	4		1	4 7	2	1 2
Permitted Phases		4		2		
Actuated Green, G (s)	14.7	14.7	99.8	129.5	10.0	115.3
Effective Green, g (s)	14.7	14.7	99.8	129.5	10.0	115.3
Actuated g/C Ratio	0.10	0.10	0.71	0.92	0.07	0.82
Clearance Time (s)	5.0	5.0	5.5		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	377	180	2354	1568	112	2693
v/s Ratio Prot	0.03		c0.45	c0.27	0.02	c0.49
v/s Ratio Perm		0.00		0.03		
v/c Ratio	0.29	0.05	0.63	0.32	0.29	0.60
Uniform Delay, d1	57.8	56.3	10.5	0.6	61.7	4.3
Progression Factor	1.00	1.00	0.53	1.13	0.91	0.84
Incremental Delay, d2	0.4	0.1	1.0	0.1	6.1	0.9
Delay (s)	58.3	56.4	6.6	0.7	62.5	4.5
Level of Service	E	E	A	A	E	A
Approach Delay (s)	57.5		5.1			5.7
Approach LOS	E		A			A

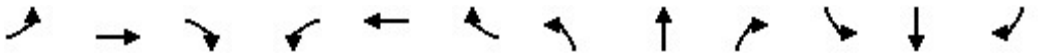
Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	5	456	5	1515	16	389	1327	5
v/c Ratio	0.24	no cap	0.30	0.08	0.69	0.02	0.57	0.60	0.00
Control Delay	49.1		0.5	68.2	18.6	0.0	44.0	19.1	0.0
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	Error	0.5	68.2	18.6	0.0	44.0	19.1	0.0
Queue Length 50th (ft)	9	0	0	5	457	0	168	438	0
Queue Length 95th (ft)	37	0	0	20	653	0	169	569	m0
Internal Link Dist (ft)	335	1014			498			2075	
Turn Bay Length (ft)				60		150	230		150
Base Capacity (vph)	88	1	1518	62	2183	1054	702	2200	1088
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	5.00	0.30	0.08	0.69	0.02	0.55	0.60	0.00

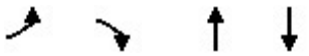
Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	5	10	5	0	438	5	1454	15	373	1274	5
Future Volume (vph)	5	5	10	5	0	438	5	1454	15	373	1274	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	10	12	10	10	12
Grade (%)		5%			0%			1%			0%	
Total Lost time (s)		4.5			4.0	4.0	5.5	4.5	4.5	5.5	4.5	4.5
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes		1.00			0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.93			1.00	0.86	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1687			0	1518	1761	3287	1545	3143	3037	1471
Flt Permitted		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1687			0	1518	1761	3287	1545	3143	3037	1471
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	5	5	10	5	0	456	5	1515	16	389	1327	5
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	6	0	0	2
Lane Group Flow (vph)	0	10	0	0	5	456	5	1515	10	389	1327	3
Confl. Peds. (#/hr)			1	1			11		4	4		11
Confl. Bikes (#/hr)						3			1			
Heavy Vehicles (%)	0%	0%	0%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Parking (#/hr)											5	
Turn Type	custom	NA		custom		Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	3					5	2		1 4	6	
Permitted Phases	3					Free			2			6
Actuated Green, G (s)		3.9			0.0	140.0	1.0	91.2	91.2	30.4	95.2	95.2
Effective Green, g (s)		3.9			0.0	140.0	1.0	91.2	91.2	26.9	95.2	95.2
Actuated g/C Ratio		0.03			0.00	1.00	0.01	0.65	0.65	0.19	0.68	0.68
Clearance Time (s)		4.5					5.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0					0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)		46			0	1518	12	2141	1006	603	2065	1000
v/s Ratio Prot		0.01					0.00	c0.46		c0.12	0.44	
v/s Ratio Perm						c0.30			0.01			0.00
v/c Ratio		0.22			no cap	0.30	0.42	0.71	0.01	0.65	0.64	0.00
Uniform Delay, d1		66.6			Error	0.0	69.2	15.8	8.6	52.1	12.7	7.2
Progression Factor		1.00				1.00	1.00	1.00	1.00	0.85	1.49	1.00
Incremental Delay, d2		2.5			Error	0.5	8.3	2.0	0.0	1.5	1.3	0.0
Delay (s)		69.0			Error	0.5	77.5	17.8	8.6	45.9	20.3	7.2
Level of Service		E			F	A	E	B	A	D	C	A
Approach Delay (s)		69.0			Error			17.9			26.0	
Approach LOS		E			F			B			C	

Intersection Summary			
HCM 2000 Control Delay	Error	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

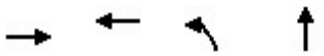


Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	16	39	228	51
v/c Ratio	0.04	0.03	0.42	0.06
Control Delay	13.1	1.6	12.1	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.1	1.6	12.1	0.1
Queue Length 50th (ft)	1	0	18	0
Queue Length 95th (ft)	14	6	81	0
Internal Link Dist (ft)	591		591	285
Turn Bay Length (ft)		100		
Base Capacity (vph)	827	1400	1725	1468
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.02	0.03	0.13	0.03

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	35	200	5	0	46
Future Volume (vph)	14	35	200	5	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	1455		1794	1487	
Flt Permitted	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1626	1455		1794	1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	39	222	6	0	51
RTOR Reduction (vph)	0	13	0	0	48	0
Lane Group Flow (vph)	16	26	0	228	3	0
Confl. Peds. (#/hr)		4	6			6
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	11%	11%	1%	1%	8%	8%
Turn Type	Prot	pt+ov	Split	NA	NA	
Protected Phases	3	3 2	2	2	1	
Permitted Phases						
Actuated Green, G (s)	9.0	23.3		9.8	2.3	
Effective Green, g (s)	9.0	23.3		9.8	2.3	
Actuated g/C Ratio	0.26	0.67		0.28	0.07	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	422	979		508	98	
v/s Ratio Prot	c0.01	0.02		c0.13	c0.00	
v/s Ratio Perm						
v/c Ratio	0.04	0.03		0.45	0.03	
Uniform Delay, d1	9.6	1.9		10.2	15.1	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.6	0.1	
Delay (s)	9.6	1.9		10.8	15.3	
Level of Service	A	A		B	B	
Approach Delay (s)	4.1			10.8	15.3	
Approach LOS	A			B	B	

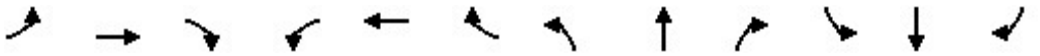
Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	34.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBT	NBL	NBT
Lane Group Flow (vph)	761	298	238	102
v/c Ratio	6.24dl	0.63	0.94	0.36
Control Delay	16.1	44.0	92.2	22.5
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	16.2	44.0	92.2	22.5
Queue Length 50th (ft)	76	88	170	24
Queue Length 95th (ft)	195	135	#328	75
Internal Link Dist (ft)	315	1205		1349
Turn Bay Length (ft)				
Base Capacity (vph)	1292	485	252	285
Starvation Cap Reductn	76	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.63	0.61	0.94	0.36

Intersection Summary

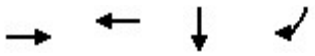
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	310	0	0	194	80	219	35	59	0	0	0
Future Volume (vph)	390	310	0	0	194	80	219	35	59	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5				
Lane Util. Factor		0.95			0.95		1.00	1.00				
Frpb, ped/bikes		1.00			0.93		1.00	0.96				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.96		1.00	0.91				
Flt Protected		0.97			1.00		0.95	1.00				
Satd. Flow (prot)		3477			3163		1736	1585				
Flt Permitted		0.61			1.00		0.95	1.00				
Satd. Flow (perm)		2181			3163		1736	1585				
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)	424	337	0	0	211	87	238	38	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	41	0	0	55	0	0	0	0
Lane Group Flow (vph)	0	761	0	0	257	0	238	47	0	0	0	0
Confl. Peds. (#/hr)	51		29	29		51			23	23		
Confl. Bikes (#/hr)			6			3			6			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	0%	0%	0%
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4 3			7			2				
Permitted Phases	4 3						2					
Actuated Green, G (s)		65.4			15.1		16.0	16.0				
Effective Green, g (s)		65.4			15.1		16.0	16.0				
Actuated g/C Ratio		0.59			0.14		0.15	0.15				
Clearance Time (s)					4.5		4.5	4.5				
Vehicle Extension (s)					2.0		2.0	2.0				
Lane Grp Cap (vph)		1296			434		252	230				
v/s Ratio Prot					c0.08			0.03				
v/s Ratio Perm		c0.35					c0.14					
v/c Ratio		6.24dl			0.59		0.94	0.21				
Uniform Delay, d1		13.9			44.6		46.6	41.4				
Progression Factor		1.02			1.00		1.00	1.00				
Incremental Delay, d2		0.3			1.5		44.0	2.0				
Delay (s)		14.6			46.0		90.6	43.4				
Level of Service		B			D		F	D				
Approach Delay (s)		14.6			46.0			76.4			0.0	
Approach LOS		B			D			E			A	

Intersection Summary			
HCM 2000 Control Delay	36.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

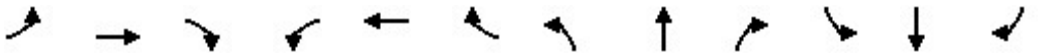
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	778	444	204	430
v/c Ratio	0.79	0.51	0.19	0.47
Control Delay	41.6	22.6	10.8	9.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	41.6	22.6	10.8	9.8
Queue Length 50th (ft)	256	63	62	96
Queue Length 95th (ft)	#382	m72	98	164
Internal Link Dist (ft)	2827	315	1347	
Turn Bay Length (ft)				
Base Capacity (vph)	989	865	1057	910
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.79	0.51	0.19	0.47

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	535	189	54	359	0	0	0	0	165	25	400
Future Volume (vph)	0	535	189	54	359	0	0	0	0	165	25	400
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
Lane Util. Factor		0.95			0.95						1.00	1.00
Frpb, ped/bikes		0.96			1.00						1.00	0.96
Flpb, ped/bikes		1.00			0.99						1.00	1.00
Frt		0.96			1.00						1.00	0.85
Flt Protected		1.00			0.99						0.96	1.00
Satd. Flow (prot)		3296			3531						1785	1525
Flt Permitted		1.00			0.76						0.96	1.00
Satd. Flow (perm)		3296			2711						1785	1525
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	575	203	58	386	0	0	0	0	177	27	430
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	0	65
Lane Group Flow (vph)	0	748	0	0	444	0	0	0	0	0	204	365
Confl. Peds. (#/hr)	54		28	28		54	24					24
Confl. Bikes (#/hr)			8			3						2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	2%	2%	2%
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		4!			7 2						3 4!	4
Permitted Phases				7 2						3 4!		3
Actuated Green, G (s)		32.0			35.6						65.4	60.9
Effective Green, g (s)		32.0			35.6						65.4	60.9
Actuated g/C Ratio		0.29			0.32						0.59	0.55
Clearance Time (s)		4.5										4.5
Vehicle Extension (s)		2.0										2.0
Lane Grp Cap (vph)		958			877						1061	906
v/s Ratio Prot		c0.23										c0.12
v/s Ratio Perm					c0.16						0.11	0.12
v/c Ratio		0.78			0.51						0.19	0.40
Uniform Delay, d1		35.8			30.1						10.2	14.1
Progression Factor		1.00			0.70						1.00	1.00
Incremental Delay, d2		6.3			0.1						0.0	0.1
Delay (s)		42.0			21.1						10.2	14.2
Level of Service		D			C						B	B
Approach Delay (s)		42.0			21.1			0.0			12.9	
Approach LOS		D			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	436	806	46	156	156	57
v/c Ratio	0.43	0.77	0.08	0.23	0.64	0.06
Control Delay	19.1	19.4	16.8	3.4	38.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	19.4	16.8	3.4	38.5	8.3
Queue Length 50th (ft)	68	102	12	0	54	10
Queue Length 95th (ft)	106	151	33	29	#123	25
Internal Link Dist (ft)	1013	2827	1056			1223
Turn Bay Length (ft)				100	150	
Base Capacity (vph)	1019	1045	573	672	253	881
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.77	0.08	0.23	0.62	0.06

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	409	5	155	454	165	10	35	150	150	50	5
Future Volume (vph)	5	409	5	155	454	165	10	35	150	150	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00	0.92	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.97			1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3563			3367			1875	1479	1787	1850	
Flt Permitted		0.95			0.68			0.96	1.00	0.95	1.00	
Satd. Flow (perm)		3375			2307			1821	1479	1787	1850	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	5	426	5	161	473	172	10	36	156	156	52	5
RTOR Reduction (vph)	0	1	0	0	41	0	0	0	99	0	3	0
Lane Group Flow (vph)	0	435	0	0	765	0	0	46	57	156	54	0
Confl. Peds. (#/hr)	20		29	29		20	11		10	10		11
Confl. Bikes (#/hr)						9			130			38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6			4	1	3	8	
Permitted Phases	2			6			4		4			
Actuated Green, G (s)		18.1			25.2			18.9	22.5	6.8	29.2	
Effective Green, g (s)		18.1			25.2			18.9	22.5	6.8	29.2	
Actuated g/C Ratio		0.29			0.41			0.31	0.37	0.11	0.48	
Clearance Time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		994			1008			560	626	197	879	
v/s Ratio Prot					c0.04				c0.01	c0.09	0.03	
v/s Ratio Perm		0.13			c0.27			0.03	0.03			
v/c Ratio		0.44			0.76			0.08	0.09	0.79	0.06	
Uniform Delay, d1		17.5			15.5			15.1	12.7	26.6	8.7	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4			3.3			0.3	0.1	19.2	0.1	
Delay (s)		18.9			18.8			15.4	12.8	45.8	8.8	
Level of Service		B			B			B	B	D	A	
Approach Delay (s)		18.9			18.8			13.4			35.9	
Approach LOS		B			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	15	175	5	5	200
Future Vol, veh/h	5	15	175	5	5	200
Conflicting Peds, #/hr	6	11	0	6	11	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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	1
Mvmt Flow	5	16	182	5	5	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	420	207	0	0	198	0
Stage 1	196	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	594	839	-	-	1381	-
Stage 1	842	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	583	824	-	-	1368	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.2
HCM LOS	B		

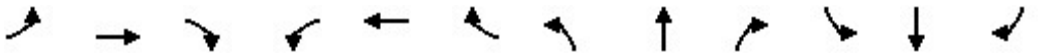
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	747	1368	-
HCM Lane V/C Ratio	-	-	0.028	0.004	-
HCM Control Delay (s)	-	-	10	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

2022 – Two Cruise Ship Day

Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	686	10	60	858	5	5	1403	143
v/c Ratio	0.67	0.43	0.05	0.25	0.33	0.00	0.01	0.53	0.12
Control Delay	79.9	0.8	21.1	2.9	0.8	0.0	3.4	5.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	0.9	21.1	2.9	0.8	0.0	3.4	5.3	1.1
Queue Length 50th (ft)	88	0	0	1	7	0	1	161	3
Queue Length 95th (ft)	145	0	16	6	27	m0	4	270	19
Internal Link Dist (ft)	1302		1011		745			1253	
Turn Bay Length (ft)				120		150	250		150
Base Capacity (vph)	302	1603	368	241	2603	1175	459	2665	1198
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	80	0	0	0	0	0	162	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.45	0.03	0.25	0.33	0.00	0.01	0.56	0.12

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	5	631	5	0	5	55	789	5	5	1291	132
Future Volume (vph)	86	5	631	5	0	5	55	789	5	5	1291	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12	11	10	12	11	10	12
Grade (%)		-7%			0%			-1%			0%	
Total Lost time (s)		4.5	4.0		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	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00	0.94	1.00	1.00	0.92
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt		1.00	0.85		0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1703	1603		1706		1639	3165	1426	1660	3240	1431
Flt Permitted		0.73	1.00		0.89		0.17	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)		1302	1603		1548		293	3165	1426	558	3240	1431
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)	93	5	686	5	0	5	60	858	5	5	1403	143
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	1	0	0	21
Lane Group Flow (vph)	0	98	686	0	1	0	60	858	4	5	1403	122
Confl. Peds. (#/hr)	5		2	2		5	10		7	7		10
Confl. Bikes (#/hr)			3									3
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	7%	7%	7%	4%	4%	4%
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		Free	4			2		2	2		2
Actuated Green, G (s)		15.8	140.0		15.8		115.2	115.2	115.2	115.2	115.2	115.2
Effective Green, g (s)		15.8	140.0		15.8		115.2	115.2	115.2	115.2	115.2	115.2
Actuated g/C Ratio		0.11	1.00		0.11		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)		146	1603		174		241	2604	1173	459	2666	1177
v/s Ratio Prot								0.27			c0.43	
v/s Ratio Perm		c0.08	0.43		0.00		0.20		0.00	0.01		0.09
v/c Ratio		0.67	0.43		0.01		0.25	0.33	0.00	0.01	0.53	0.10
Uniform Delay, d1		59.6	0.0		55.1		2.8	3.0	2.2	2.2	3.9	2.4
Progression Factor		1.00	1.00		1.00		0.17	0.15	0.04	1.00	1.00	1.00
Incremental Delay, d2		9.2	0.8		0.0		2.3	0.3	0.0	0.0	0.7	0.2
Delay (s)		68.8	0.8		55.1		2.7	0.8	0.1	2.3	4.6	2.6
Level of Service		E	A		E		A	A	A	A	A	A
Approach Delay (s)		9.3			55.1			0.9			4.4	
Approach LOS		A			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	326	120	857	825	177	1935
v/c Ratio	0.46	0.28	0.46	0.55	1.58	0.85
Control Delay	47.7	8.3	11.5	2.9	334.3	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	8.3	11.5	2.9	334.3	18.6
Queue Length 50th (ft)	127	0	224	30	~230	701
Queue Length 95th (ft)	174	50	114	90	#387	837
Internal Link Dist (ft)	459		2075			745
Turn Bay Length (ft)				210	150	
Base Capacity (vph)	793	471	1846	1499	112	2268
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.25	0.46	0.55	1.58	0.85

Intersection Summary

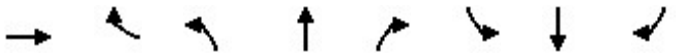
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	297	109	780	751	161	1761
Future Volume (vph)	297	109	780	751	161	1761
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	14	16	10	13	9	10
Total Lost time (s)	5.0	5.0	5.5	5.0	5.0	5.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3087	1488	3149	1558	1577	3271
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3087	1488	3149	1558	1577	3271
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	326	120	857	825	177	1935
RTOR Reduction (vph)	0	92	0	56	0	0
Lane Group Flow (vph)	326	28	857	769	177	1935
Confl. Peds. (#/hr)		2		3	3	
Confl. Bikes (#/hr)		1		1		
Heavy Vehicles (%)	21%	21%	7%	7%	3%	3%
Turn Type	Prot	Perm	NA	custom	Prot	NA
Protected Phases	4		1	4 7	2	1 2
Permitted Phases		4		2		
Actuated Green, G (s)	32.4	32.4	82.1	129.5	10.0	97.6
Effective Green, g (s)	32.4	32.4	82.1	129.5	10.0	97.6
Actuated g/C Ratio	0.23	0.23	0.59	0.92	0.07	0.70
Clearance Time (s)	5.0	5.0	5.5		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	714	344	1846	1496	112	2280
v/s Ratio Prot	0.11		0.27	c0.44	c0.11	c0.59
v/s Ratio Perm		0.02		0.06		
v/c Ratio	0.46	0.08	0.46	0.51	1.58	0.85
Uniform Delay, d1	46.2	42.1	16.5	0.8	65.0	15.7
Progression Factor	1.00	1.00	0.62	55.99	0.96	0.83
Incremental Delay, d2	0.5	0.1	0.8	0.3	295.4	3.7
Delay (s)	46.7	42.2	11.0	42.3	357.9	16.8
Level of Service	D	D	B	D	F	B
Approach Delay (s)	45.5		26.4			45.4
Approach LOS	D		C			D

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

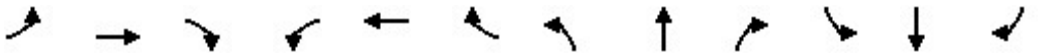
c Critical Lane Group



Lane Group	EBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	452	16	1198	21	320	1827	5
v/c Ratio	0.07	0.31	0.26	0.54	0.02	0.51	0.80	0.00
Control Delay	0.9	0.5	75.9	11.9	0.1	47.4	23.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.9	0.5	75.9	11.9	0.1	47.4	23.7	0.0
Queue Length 50th (ft)	0	0	15	220	0	124	679	0
Queue Length 95th (ft)	0	0	40	448	0	m135	#1091	m0
Internal Link Dist (ft)	335			498			2075	
Turn Bay Length (ft)			60		150	230		150
Base Capacity (vph)	154	1464	61	2230	1069	674	2272	1123
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.31	0.26	0.54	0.02	0.47	0.80	0.00

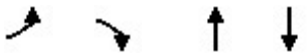
Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	425	15	1126	20	301	1717	5
Future Volume (vph)	5	0	5	0	0	425	15	1126	20	301	1717	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	10	12	10	10	12
Grade (%)		5%			0%			1%			0%	
Total Lost time (s)		4.5				4.0	5.5	4.5	4.5	5.5	4.5	4.5
Lane Util. Factor		1.00				1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		0.88				0.98	1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes		1.00				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.93				0.86	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98				1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1486				1464	1678	3133	1469	3113	3008	1460
Flt Permitted		0.98				1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1486				1464	1678	3133	1469	3113	3008	1460
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)	5	0	5	0	0	452	16	1198	21	320	1827	5
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	7	0	0	1
Lane Group Flow (vph)	0	0	0	0	0	452	16	1198	14	320	1827	4
Confl. Peds. (#/hr)			6	6			10		5	5		10
Confl. Bikes (#/hr)						1			2			2
Heavy Vehicles (%)	0%	0%	0%	10%	10%	10%	7%	7%	7%	5%	5%	5%
Parking (#/hr)											5	
Turn Type	custom	NA				Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	3					5	2		1 4	6	
Permitted Phases	3					Free			2			6
Actuated Green, G (s)		1.1				140.0	2.2	96.1	96.1	28.3	98.9	98.9
Effective Green, g (s)		1.1				140.0	2.2	96.1	96.1	24.8	98.9	98.9
Actuated g/C Ratio		0.01				1.00	0.02	0.69	0.69	0.18	0.71	0.71
Clearance Time (s)		4.5					5.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0					0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)		11				1464	26	2150	1008	551	2124	1031
v/s Ratio Prot		0.00					0.01	0.38		c0.10	c0.61	
v/s Ratio Perm						c0.31			0.01			0.00
v/c Ratio		0.01				0.31	0.62	0.56	0.01	0.58	0.86	0.00
Uniform Delay, d1		68.9				0.0	68.5	11.1	7.0	52.8	15.4	6.0
Progression Factor		1.00				1.00	1.00	1.00	1.00	0.94	1.66	1.00
Incremental Delay, d2		0.3				0.5	26.7	1.0	0.0	0.6	2.9	0.0
Delay (s)		69.2				0.5	95.2	12.2	7.0	50.0	28.4	6.1
Level of Service		E				A	F	B	A	D	C	A
Approach Delay (s)		69.2			0.5			13.2			31.6	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		



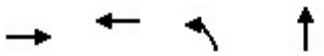
Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	595	215	41	455
v/c Ratio	0.98	0.21	0.14	0.43
Control Delay	49.9	2.0	16.6	1.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.9	2.0	16.6	1.3
Queue Length 50th (ft)	137	6	9	0
Queue Length 95th (ft)	#292	19	26	0
Internal Link Dist (ft)	591		591	285
Turn Bay Length (ft)		100		
Base Capacity (vph)	610	1277	1453	1250
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.98	0.17	0.03	0.36

Intersection Summary

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	512	185	30	5	0	391
Future Volume (vph)	512	185	30	5	0	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.86	
Flt Protected	0.95	1.00		0.96	1.00	
Satd. Flow (prot)	1703	1524		1769	1287	
Flt Permitted	0.95	1.00		0.96	1.00	
Satd. Flow (perm)	1703	1524		1769	1287	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	595	215	35	6	0	455
RTOR Reduction (vph)	0	51	0	0	381	0
Lane Group Flow (vph)	595	164	0	41	74	0
Confl. Peds. (#/hr)			2			2
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	6%	6%	3%	3%	25%	25%
Turn Type	Prot	pt+ov	Split	NA	NA	
Protected Phases	3	3 2	2	2	1	
Permitted Phases						
Actuated Green, G (s)	15.5	27.2		7.2	7.0	
Effective Green, g (s)	15.5	27.2		7.2	7.0	
Actuated g/C Ratio	0.36	0.63		0.17	0.16	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	611	959		294	208	
v/s Ratio Prot	c0.35	c0.11		0.02	c0.06	
v/s Ratio Perm						
v/c Ratio	0.97	0.17		0.14	0.35	
Uniform Delay, d1	13.6	3.3		15.4	16.1	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	29.7	0.1		0.2	1.0	
Delay (s)	43.3	3.4		15.6	17.1	
Level of Service	D	A		B	B	
Approach Delay (s)	32.7			15.6	17.1	
Approach LOS	C			B	B	

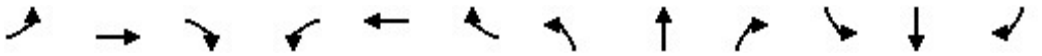
Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	43.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBT	NBL	NBT
Lane Group Flow (vph)	565	229	184	71
v/c Ratio	5.71dl	0.48	0.67	0.24
Control Delay	7.4	32.5	58.1	18.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.4	32.5	58.1	18.0
Queue Length 50th (ft)	27	51	128	10
Queue Length 95th (ft)	65	91	#248	52
Internal Link Dist (ft)	315	1205		1349
Turn Bay Length (ft)				
Base Capacity (vph)	1248	511	273	294
Starvation Cap Reductn	17	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.45	0.67	0.24

Intersection Summary

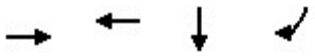
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	345	180	0	0	138	75	171	15	51	0	0	0
Future Volume (vph)	345	180	0	0	138	75	171	15	51	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5				
Lane Util. Factor		0.95			0.95		1.00	1.00				
Frpb, ped/bikes		1.00			0.96		1.00	0.98				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.95		1.00	0.88				
Flt Protected		0.97			1.00		0.95	1.00				
Satd. Flow (prot)		3297			3164		1597	1454				
Flt Permitted		0.64			1.00		0.95	1.00				
Satd. Flow (perm)		2166			3164		1597	1454				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	371	194	0	0	148	81	184	16	55	0	0	0
RTOR Reduction (vph)	0	0	0	0	67	0	0	46	0	0	0	0
Lane Group Flow (vph)	0	565	0	0	162	0	184	25	0	0	0	0
Confl. Peds. (#/hr)	18		19	19		18			7	7		
Confl. Bikes (#/hr)			2			2			1			
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	13%	13%	13%	0%	0%	0%
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4 3			7			2				
Permitted Phases	4 3						2					
Actuated Green, G (s)		63.5			14.2		18.8	18.8				
Effective Green, g (s)		63.5			14.2		18.8	18.8				
Actuated g/C Ratio		0.58			0.13		0.17	0.17				
Clearance Time (s)					4.5		4.5	4.5				
Vehicle Extension (s)					2.0		2.0	2.0				
Lane Grp Cap (vph)		1250			408		272	248				
v/s Ratio Prot					c0.05			0.02				
v/s Ratio Perm		c0.26					c0.12					
v/c Ratio		5.71dl			0.40		0.68	0.10				
Uniform Delay, d1		13.3			44.0		42.7	38.5				
Progression Factor		0.48			1.00		1.00	1.00				
Incremental Delay, d2		0.1			0.2		12.7	0.8				
Delay (s)		6.5			44.2		55.5	39.3				
Level of Service		A			D		E	D				
Approach Delay (s)		6.5			44.2			51.0			0.0	
Approach LOS		A			D			D			A	

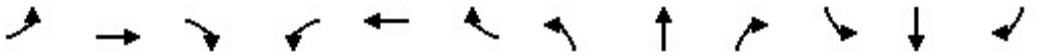
Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

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



Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	699	318	103	289
v/c Ratio	0.63	0.41	0.10	0.31
Control Delay	30.1	22.4	10.2	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.1	22.4	10.2	2.1
Queue Length 50th (ft)	184	47	29	0
Queue Length 95th (ft)	277	68	54	33
Internal Link Dist (ft)	2827	315	1347	
Turn Bay Length (ft)				
Base Capacity (vph)	1117	764	985	928
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.63	0.42	0.10	0.31

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	445	233	78	231	0	0	0	0	80	20	280
Future Volume (vph)	0	445	233	78	231	0	0	0	0	80	20	280
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
Lane Util. Factor		0.95			0.95						1.00	1.00
Frpb, ped/bikes		0.96			1.00						1.00	0.98
Flpb, ped/bikes		1.00			0.99						1.00	1.00
Frt		0.95			1.00						1.00	0.85
Flt Protected		1.00			0.99						0.96	1.00
Satd. Flow (prot)		3146			3306						1708	1481
Flt Permitted		1.00			0.68						0.96	1.00
Satd. Flow (perm)		3146			2279						1708	1481
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)	0	459	240	80	238	0	0	0	0	82	21	289
RTOR Reduction (vph)	0	54	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	645	0	0	318	0	0	0	0	0	103	155
Confl. Peds. (#/hr)	18		18	18		18	14					14
Confl. Bikes (#/hr)			2			1						1
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	0%	0%	0%	7%	7%	7%
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		4!			7 2						3 4!	4
Permitted Phases				7 2						3 4!		3
Actuated Green, G (s)		37.2			37.5						63.5	59.0
Effective Green, g (s)		37.2			37.5						63.5	59.0
Actuated g/C Ratio		0.34			0.34						0.58	0.54
Clearance Time (s)		4.5										4.5
Vehicle Extension (s)		2.0										2.0
Lane Grp Cap (vph)		1063			776						985	854
v/s Ratio Prot		c0.20										c0.06
v/s Ratio Perm					c0.14						0.06	0.04
v/c Ratio		0.61			0.41						0.10	0.18
Uniform Delay, d1		30.3			27.8						10.5	13.1
Progression Factor		1.00			0.73						1.00	1.00
Incremental Delay, d2		2.6			0.1						0.0	0.0
Delay (s)		32.9			20.4						10.5	13.1
Level of Service		C			C						B	B
Approach Delay (s)		32.9			20.4			0.0			12.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	398	512	43	158	126	38
v/c Ratio	0.39	0.46	0.08	0.23	0.56	0.05
Control Delay	18.6	12.9	16.7	3.3	34.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	12.9	16.7	3.3	34.2	7.9
Queue Length 50th (ft)	61	58	11	0	43	6
Queue Length 95th (ft)	96	91	32	29	89	19
Internal Link Dist (ft)	1013	2827	1056			1223
Turn Bay Length (ft)				100	150	
Base Capacity (vph)	1022	1108	573	696	243	840
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.46	0.08	0.23	0.52	0.05

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	357	5	100	291	80	5	35	145	116	30	5
Future Volume (vph)	5	357	5	100	291	80	5	35	145	116	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00	0.98	1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.97			1.00	0.85	1.00	0.98	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3564			3322			1833	1533	1719	1765	
Flt Permitted		0.95			0.75			0.98	1.00	0.95	1.00	
Satd. Flow (perm)		3386			2526			1813	1533	1719	1765	
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)	5	388	5	109	316	87	5	38	158	126	33	5
RTOR Reduction (vph)	0	1	0	0	28	0	0	0	100	0	3	0
Lane Group Flow (vph)	0	397	0	0	484	0	0	43	58	126	35	0
Confl. Peds. (#/hr)	9		4	4		9	3		3	3		3
Confl. Bikes (#/hr)			2			5			18			50
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	3%	3%	3%	5%	5%	5%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6			4	1	3	8	
Permitted Phases	2			6			4		4			
Actuated Green, G (s)		18.1			25.2			19.0	22.6	6.7	29.2	
Effective Green, g (s)		18.1			25.2			19.0	22.6	6.7	29.2	
Actuated g/C Ratio		0.29			0.41			0.31	0.37	0.11	0.48	
Clearance Time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		998			1083			561	651	187	839	
v/s Ratio Prot					c0.03				c0.01	c0.07	0.02	
v/s Ratio Perm		0.12			c0.16			0.02	0.03			
v/c Ratio		0.40			0.45			0.08	0.09	0.67	0.04	
Uniform Delay, d1		17.3			13.1			15.0	12.7	26.3	8.6	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.2			0.3			0.3	0.1	9.2	0.1	
Delay (s)		18.5			13.4			15.3	12.7	35.5	8.7	
Level of Service		B			B			B	B	D	A	
Approach Delay (s)		18.5			13.4			13.3			29.3	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	20	165	5	15	115
Future Vol, veh/h	5	20	165	5	15	115
Conflicting Peds, #/hr	2	6	0	2	6	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	89	89	89	89	89	89
Heavy Vehicles, %	10	10	2	2	3	3
Mvmt Flow	6	22	185	6	17	129

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	200	0	0	197	0
Stage 1	194	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.13	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.227	-
Pot Cap-1 Maneuver	624	821	-	-	1370	-
Stage 1	820	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	612	813	-	-	1363	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	832	-	-	-	-	-

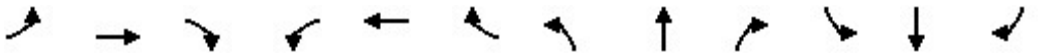
Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	763	1363	-
HCM Lane V/C Ratio	-	-	0.037	0.012	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	169	425	15	63	1511	5	1248	205
v/c Ratio	0.81	0.27	0.06	0.23	0.59	0.03	0.49	0.18
Control Delay	83.4	0.4	34.8	2.1	1.6	5.8	7.3	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	83.4	0.4	34.8	2.1	1.8	5.8	7.3	1.4
Queue Length 50th (ft)	150	0	8	1	8	1	189	3
Queue Length 95th (ft)	219	0	27	m3	27	6	305	27
Internal Link Dist (ft)	1302		1011		745		1253	
Turn Bay Length (ft)				120		250		150
Base Capacity (vph)	299	1603	387	273	2569	192	2531	1109
Starvation Cap Reductn	0	0	0	0	277	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.27	0.04	0.23	0.66	0.03	0.49	0.18

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	5	404	5	5	5	60	1435	0	5	1186	195
Future Volume (vph)	156	5	404	5	5	5	60	1435	0	5	1186	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12	11	10	12	11	10	12
Grade (%)		-7%			0%			-1%			0%	
Total Lost time (s)		4.5	4.0		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00		1.00	1.00	0.88
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1707	1603		1772		1719	3320		1694	3271	1379
Flt Permitted		0.72	1.00		0.92		0.20	1.00		0.14	1.00	1.00
Satd. Flow (perm)		1292	1603		1654		354	3320		248	3271	1379
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)	164	5	425	5	5	5	63	1511	0	5	1248	205
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	43
Lane Group Flow (vph)	0	169	425	0	11	0	63	1511	0	5	1248	162
Confl. Peds. (#/hr)	3		2	2		3	17		2	2		17
Confl. Bikes (#/hr)			3						8			8
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		Free	4			2		2	2		2
Actuated Green, G (s)		22.6	140.0		22.6		108.4	108.4		108.4	108.4	108.4
Effective Green, g (s)		22.6	140.0		22.6		108.4	108.4		108.4	108.4	108.4
Actuated g/C Ratio		0.16	1.00		0.16		0.77	0.77		0.77	0.77	0.77
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		2.0			2.0		1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)		208	1603		267		274	2570		192	2532	1067
v/s Ratio Prot								c0.46			0.38	
v/s Ratio Perm		c0.13	0.27		0.01		0.18			0.02		0.12
v/c Ratio		0.81	0.27		0.04		0.23	0.59		0.03	0.49	0.15
Uniform Delay, d1		56.7	0.0		49.5		4.3	6.5		3.6	5.8	4.0
Progression Factor		1.00	1.00		1.00		0.09	0.11		1.00	1.00	1.00
Incremental Delay, d2		20.0	0.4		0.0		1.5	0.8		0.3	0.7	0.3
Delay (s)		76.6	0.4		49.6		2.0	1.5		3.9	6.5	4.3
Level of Service		E	A		D		A	A		A	A	A
Approach Delay (s)		22.1			49.6			1.5			6.2	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	140	89	1484	542	38	1619
v/c Ratio	0.33	0.32	0.64	0.35	0.34	0.61
Control Delay	57.4	12.6	7.6	0.6	64.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	12.6	7.6	0.6	64.3	5.7
Queue Length 50th (ft)	61	0	135	0	34	176
Queue Length 95th (ft)	88	49	201	0	m70	213
Internal Link Dist (ft)	459		2075			745
Turn Bay Length (ft)				210	150	
Base Capacity (vph)	923	509	2316	1536	112	2644
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.17	0.64	0.35	0.34	0.61

Intersection Summary

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	134	85	1425	520	36	1554
Future Volume (vph)	134	85	1425	520	36	1554
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	14	16	10	13	9	10
Total Lost time (s)	5.0	5.0	5.5	5.0	5.0	5.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3591	1723	3303	1633	1577	3271
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3591	1723	3303	1633	1577	3271
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	140	89	1484	542	38	1619
RTOR Reduction (vph)	0	79	0	21	0	0
Lane Group Flow (vph)	140	10	1484	521	38	1619
Confl. Peds. (#/hr)		4		7	7	
Confl. Bikes (#/hr)		1		4		
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type	Prot	Perm	NA	custom	Prot	NA
Protected Phases	4		1	4 7	2	1 2
Permitted Phases		4		2		
Actuated Green, G (s)	16.3	16.3	98.2	129.5	10.0	113.7
Effective Green, g (s)	16.3	16.3	98.2	129.5	10.0	113.7
Actuated g/C Ratio	0.12	0.12	0.70	0.92	0.07	0.81
Clearance Time (s)	5.0	5.0	5.5		5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	418	200	2316	1568	112	2656
v/s Ratio Prot	0.04		c0.45	c0.28	0.02	c0.49
v/s Ratio Perm		0.01		0.04		
v/c Ratio	0.33	0.05	0.64	0.33	0.34	0.61
Uniform Delay, d1	56.9	55.0	11.3	0.6	61.9	4.9
Progression Factor	1.00	1.00	0.52	1.18	0.91	0.80
Incremental Delay, d2	0.5	0.1	1.1	0.1	7.4	1.0
Delay (s)	57.3	55.1	7.0	0.8	63.6	4.9
Level of Service	E	E	A	A	E	A
Approach Delay (s)	56.5		5.3			6.2
Approach LOS	E		A			A

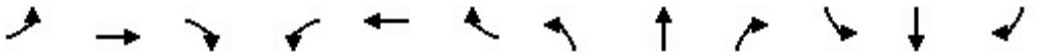
Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	5	459	5	1530	16	393	1360	5
v/c Ratio	0.24	no cap	0.30	0.08	0.70	0.02	0.57	0.62	0.00
Control Delay	49.1		0.5	68.2	18.9	0.0	44.1	19.0	0.0
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	Error	0.5	68.2	18.9	0.0	44.1	19.0	0.0
Queue Length 50th (ft)	9	0	0	5	467	0	170	445	0
Queue Length 95th (ft)	37	0	0	20	664	0	172	583	m0
Internal Link Dist (ft)	335	1014			498			2075	
Turn Bay Length (ft)				60		150	230		150
Base Capacity (vph)	88	1	1518	62	2181	1053	703	2198	1087
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	5.00	0.30	0.08	0.70	0.02	0.56	0.62	0.00

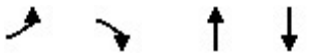
Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	5	10	5	0	441	5	1469	15	377	1306	5
Future Volume (vph)	5	5	10	5	0	441	5	1469	15	377	1306	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	10	12	10	10	12
Grade (%)		5%			0%			1%			0%	
Total Lost time (s)		4.5			4.0	4.0	5.5	4.5	4.5	5.5	4.5	4.5
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes		1.00			0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.93			1.00	0.86	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1687			0	1518	1761	3287	1545	3143	3037	1471
Flt Permitted		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1687			0	1518	1761	3287	1545	3143	3037	1471
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	5	5	10	5	0	459	5	1530	16	393	1360	5
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	6	0	0	2
Lane Group Flow (vph)	0	10	0	0	5	459	5	1530	10	393	1360	3
Confl. Peds. (#/hr)			1	1			11		4	4		11
Confl. Bikes (#/hr)						3			1			
Heavy Vehicles (%)	0%	0%	0%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Parking (#/hr)											5	
Turn Type	custom	NA		custom		Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	3					5	2		1 4	6	
Permitted Phases	3					Free			2			6
Actuated Green, G (s)		3.9			0.0	140.0	1.0	91.1	91.1	30.5	95.1	95.1
Effective Green, g (s)		3.9			0.0	140.0	1.0	91.1	91.1	27.0	95.1	95.1
Actuated g/C Ratio		0.03			0.00	1.00	0.01	0.65	0.65	0.19	0.68	0.68
Clearance Time (s)		4.5					5.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0					0.2	0.2	0.2		0.2	0.2
Lane Grp Cap (vph)		46			0	1518	12	2138	1005	606	2062	999
v/s Ratio Prot		0.01					0.00	c0.47		c0.13	0.45	
v/s Ratio Perm						c0.30			0.01			0.00
v/c Ratio		0.22			no cap	0.30	0.42	0.72	0.01	0.65	0.66	0.00
Uniform Delay, d1		66.6			Error	0.0	69.2	16.0	8.6	52.1	13.0	7.2
Progression Factor		1.00				1.00	1.00	1.00	1.00	0.85	1.44	1.00
Incremental Delay, d2		2.5			Error	0.5	8.3	2.1	0.0	1.5	1.4	0.0
Delay (s)		69.0			Error	0.5	77.5	18.1	8.6	45.9	20.2	7.2
Level of Service		E			F	A	E	B	A	D	C	A
Approach Delay (s)		69.0			Error			18.2			25.9	
Approach LOS		E			F			B			C	

Intersection Summary			
HCM 2000 Control Delay	Error	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

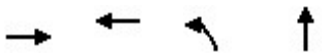


Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	40	39	228	93
v/c Ratio	0.07	0.04	0.41	0.11
Control Delay	13.9	1.5	13.1	0.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	1.5	13.1	0.3
Queue Length 50th (ft)	7	0	39	0
Queue Length 95th (ft)	26	6	84	0
Internal Link Dist (ft)	591		591	285
Turn Bay Length (ft)		100		
Base Capacity (vph)	913	1374	1692	1461
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.03	0.13	0.06

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	36	35	200	5	0	84
Future Volume (vph)	36	35	200	5	0	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	1455		1794	1487	
Flt Permitted	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1626	1455		1794	1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	39	222	6	0	93
RTOR Reduction (vph)	0	14	0	0	84	0
Lane Group Flow (vph)	40	25	0	228	9	0
Confl. Peds. (#/hr)		4	6			6
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	11%	11%	1%	1%	8%	8%
Turn Type	Prot	pt+ov	Split	NA	NA	
Protected Phases	3	3 2	2	2	1	
Permitted Phases						
Actuated Green, G (s)	10.6	23.1		8.0	3.5	
Effective Green, g (s)	10.6	23.1		8.0	3.5	
Actuated g/C Ratio	0.30	0.65		0.22	0.10	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	484	944		403	146	
v/s Ratio Prot	c0.02	0.02		c0.13	c0.01	
v/s Ratio Perm						
v/c Ratio	0.08	0.03		0.57	0.06	
Uniform Delay, d1	9.0	2.2		12.3	14.6	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.0		1.8	0.2	
Delay (s)	9.1	2.2		14.1	14.7	
Level of Service	A	A		B	B	
Approach Delay (s)	5.7			14.1	14.7	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	35.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBT	NBL	NBT
Lane Group Flow (vph)	761	299	240	104
v/c Ratio	6.24dl	0.63	0.96	0.36
Control Delay	16.1	44.0	94.9	22.4
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	16.2	44.0	94.9	22.4
Queue Length 50th (ft)	76	88	171	24
Queue Length 95th (ft)	195	136	#331	76
Internal Link Dist (ft)	315	1205		1349
Turn Bay Length (ft)				
Base Capacity (vph)	1292	486	251	285
Starvation Cap Reductn	76	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.63	0.62	0.96	0.36

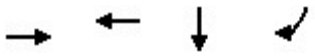
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	310	0	0	195	80	221	35	61	0	0	0
Future Volume (vph)	390	310	0	0	195	80	221	35	61	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5				
Lane Util. Factor		0.95			0.95		1.00	1.00				
Frpb, ped/bikes		1.00			0.93		1.00	0.96				
Flpb, ped/bikes		1.00			1.00		1.00	1.00				
Frt		1.00			0.96		1.00	0.90				
Flt Protected		0.97			1.00		0.95	1.00				
Satd. Flow (prot)		3477			3164		1736	1583				
Flt Permitted		0.61			1.00		0.95	1.00				
Satd. Flow (perm)		2181			3164		1736	1583				
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)	424	337	0	0	212	87	240	38	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	41	0	0	56	0	0	0	0
Lane Group Flow (vph)	0	761	0	0	258	0	240	48	0	0	0	0
Confl. Peds. (#/hr)	51		29	29		51			23	23		
Confl. Bikes (#/hr)			6			3			6			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	0%	0%	0%
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4 3			7			2				
Permitted Phases	4 3						2					
Actuated Green, G (s)		65.5			15.1		15.9	15.9				
Effective Green, g (s)		65.5			15.1		15.9	15.9				
Actuated g/C Ratio		0.60			0.14		0.14	0.14				
Clearance Time (s)					4.5		4.5	4.5				
Vehicle Extension (s)					2.0		2.0	2.0				
Lane Grp Cap (vph)		1298			434		250	228				
v/s Ratio Prot					c0.08			0.03				
v/s Ratio Perm		c0.35					c0.14					
v/c Ratio		6.24dl			0.60		0.96	0.21				
Uniform Delay, d1		13.8			44.6		46.7	41.5				
Progression Factor		1.03			1.00		1.00	1.00				
Incremental Delay, d2		0.3			1.5		47.5	2.1				
Delay (s)		14.5			46.0		94.2	43.6				
Level of Service		B			D		F	D				
Approach Delay (s)		14.5			46.0			78.9			0.0	
Approach LOS		B			D			E			A	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

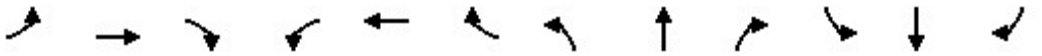
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	779	447	204	430
v/c Ratio	0.79	0.51	0.19	0.47
Control Delay	41.6	22.7	10.7	9.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	41.6	22.7	10.7	9.8
Queue Length 50th (ft)	257	63	62	97
Queue Length 95th (ft)	#383	m72	98	165
Internal Link Dist (ft)	2827	315	1347	
Turn Bay Length (ft)				
Base Capacity (vph)	990	859	1058	909
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.79	0.52	0.19	0.47

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	535	190	55	361	0	0	0	0	165	25	400
Future Volume (vph)	0	535	190	55	361	0	0	0	0	165	25	400
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
Lane Util. Factor		0.95			0.95						1.00	1.00
Frpb, ped/bikes		0.96			1.00						1.00	0.96
Flpb, ped/bikes		1.00			0.99						1.00	1.00
Frt		0.96			1.00						1.00	0.85
Flt Protected		1.00			0.99						0.96	1.00
Satd. Flow (prot)		3295			3530						1785	1525
Flt Permitted		1.00			0.76						0.96	1.00
Satd. Flow (perm)		3295			2702						1785	1525
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	575	204	59	388	0	0	0	0	177	27	430
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	0	64
Lane Group Flow (vph)	0	749	0	0	447	0	0	0	0	0	204	366
Confl. Peds. (#/hr)	54		28	28		54	24					24
Confl. Bikes (#/hr)			8			3						2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	2%	2%	2%
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		4!			7 2						3 4!	4
Permitted Phases				7 2						3 4!		3
Actuated Green, G (s)		32.1			35.5						65.5	61.0
Effective Green, g (s)		32.1			35.5						65.5	61.0
Actuated g/C Ratio		0.29			0.32						0.60	0.55
Clearance Time (s)		4.5										4.5
Vehicle Extension (s)		2.0										2.0
Lane Grp Cap (vph)		961			872						1062	908
v/s Ratio Prot		c0.23										c0.12
v/s Ratio Perm					c0.17						0.11	0.12
v/c Ratio		0.78			0.51						0.19	0.40
Uniform Delay, d1		35.7			30.2						10.2	14.1
Progression Factor		1.00			0.70						1.00	1.00
Incremental Delay, d2		6.2			0.1						0.0	0.1
Delay (s)		41.9			21.3						10.2	14.2
Level of Service		D			C						B	B
Approach Delay (s)		41.9			21.3			0.0			12.9	
Approach LOS		D			C			A			B	

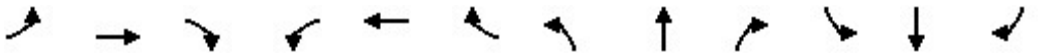
Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	437	808	46	156	156	57
v/c Ratio	0.43	0.77	0.08	0.23	0.64	0.06
Control Delay	19.1	19.5	16.8	3.4	38.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	19.5	16.8	3.4	38.5	8.3
Queue Length 50th (ft)	68	102	12	0	54	10
Queue Length 95th (ft)	106	152	33	29	#123	25
Internal Link Dist (ft)	1013	2827	1056			1223
Turn Bay Length (ft)				100	150	
Base Capacity (vph)	1019	1045	573	672	253	881
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.77	0.08	0.23	0.62	0.06

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	410	5	155	456	165	10	35	150	150	50	5
Future Volume (vph)	5	410	5	155	456	165	10	35	150	150	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00	0.92	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		1.00			0.97			1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3563			3367			1875	1479	1787	1850	
Flt Permitted		0.95			0.68			0.96	1.00	0.95	1.00	
Satd. Flow (perm)		3375			2306			1821	1479	1787	1850	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	5	427	5	161	475	172	10	36	156	156	52	5
RTOR Reduction (vph)	0	1	0	0	41	0	0	0	99	0	3	0
Lane Group Flow (vph)	0	436	0	0	767	0	0	46	57	156	54	0
Confl. Peds. (#/hr)	20		29	29		20	11		10	10		11
Confl. Bikes (#/hr)						9			130			38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6			4	1	3	8	
Permitted Phases	2			6			4		4			
Actuated Green, G (s)		18.1			25.2			18.9	22.5	6.8	29.2	
Effective Green, g (s)		18.1			25.2			18.9	22.5	6.8	29.2	
Actuated g/C Ratio		0.29			0.41			0.31	0.37	0.11	0.48	
Clearance Time (s)		3.5			3.5			3.5	3.5	3.5	3.5	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		994			1008			560	626	197	879	
v/s Ratio Prot					c0.04				c0.01	c0.09	0.03	
v/s Ratio Perm		0.13			c0.27			0.03	0.03			
v/c Ratio		0.44			0.76			0.08	0.09	0.79	0.06	
Uniform Delay, d1		17.5			15.5			15.1	12.7	26.6	8.7	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4			3.4			0.3	0.1	19.2	0.1	
Delay (s)		18.9			19.0			15.4	12.8	45.8	8.8	
Level of Service		B			B			B	B	D	A	
Approach Delay (s)		18.9			19.0			13.4			35.9	
Approach LOS		B			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	15	175	5	5	200
Future Vol, veh/h	5	15	175	5	5	200
Conflicting Peds, #/hr	6	11	0	6	11	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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	1	1
Mvmt Flow	5	16	182	5	5	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	420	207	0	0	198	0
Stage 1	196	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	594	839	-	-	1381	-
Stage 1	842	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	583	824	-	-	1368	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	747	1368	-
HCM Lane V/C Ratio	-	-	0.028	0.004	-
HCM Control Delay (s)	-	-	10	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-