Portland General Electric
Integrated Operations Center

Transportation Impact Study

Tualatin, Oregon

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RENEWS: 12/31/2020

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Executive Summary

Two properties located at the southeast corner of the intersection of SW Tualatin-Sherwood Road at SW 124th Avenue are proposed for construction of the Portland General Electric (PGE) Integrated Operations Center (IOC). The project will include the IOC building, a secure entrance, approximately 300 parking stalls, and various other components necessary for the Operations Center. Along with development of the site, SW Blake Street will be constructed from SW 124th Avenue eastward to the driveway to the site. The projected occupancy date of the site is December 2021, and this report conservatively assumes a buildout year of 2022.

Offsite Impacts

The PGE IOC facility is expected to generate 210 trips during the morning peak hour and 228 trips during the evening peak hour. Operational analysis of the five study intersections, all under Washington County jurisdiction, indicated that four of the five are projected to operate acceptably according to County standards through the 2022 buildout year, with or without the addition of site trips related to the proposed development. The intersection of SW Tualatin-Sherwood Road at SW 124th Avenue is projected to operate with a v/c ratio greater than the maximum allowed by the County under 2022 buildout conditions during the morning peak hour. Washington County plans to widen SW Tualatin-Sherwood Road to a five-lane cross-section in the vicinity of the site, which will add capacity to the roadway and improve operation at the intersection with SW 124th Avenue. The analysis in this report was completed under the assumption that these roadway improvements would not be in place by 2022, the buildout year for the PGE project.

Recommended Improvements

It is recommended that the existing two-way left-turn lane striping on SW 124th Avenue north of the new Blake Street intersection be reconfigured to proivde a dedicated left-turn lane for the southbound left turn movement. Preliminary traffic signal warrants were evaluated for the unsignalized study intersections and indicated that signal warrants are not projected to be met at any of these intersections. No new traffic signals are recommended in conjunction with the proposed project.

It is recommended that SW Blake Street be constructed to the proposed cross-section of two 12-foot travel lanes and a 14-foot center two-way left-turn lane, with the exception that no on-street parking is recommended. Left-turn lane warrants were not projected to be met for left turns into the project site from SW Blake Street under planning horizon traffic volume conditions.

The intersection of SW Blake Street at SW 124th Avenue was analyzed for the planning horizon assuming that a signal would eventually be constructed. To accommodate for the future signal, separate westbound left- and right-turn lanes should be constructed on SW Blake Street at SW 124th Avenue.

Introduction

Two properties located south of SW Tualatin-Sherwood Road and east of SW 124th Avenue in Tualatin, Oregon are proposed for development of the Portland General Electric (PGE) Integrated Operations Center (IOC). The proposed development will include an office building, 300 parking stalls, and various other components. Along with development of the site, SW Blake Street will be constructed from SW 124th Avenue to the site access location. Right-of-way for the continuation of SW Blake Street will extend to the south property line.

The purpose of this report is to examine the potential traffic impacts of the proposed development. The report will include analysis that addresses the operation of each of the study intersections in order to ensure that the transportation system is capable of safely and efficiently supporting the existing land uses in the area in addition to the proposed development.

Project Location and Description

The project site is located along the south side of SW Tualatin-Sherwood Road and the east side of the newly constructed SW 124th Avenue, in Washington County, Oregon. The site is located adjacent to the western boundary of the Tualatin city limits. As part of the project, SW Blake Street will be constructed between SW 124th Avenue and the eastern property line. The site is currently undeveloped. The project location is shown in Figure 1.

The project site includes tax lots 500 and 701, which together comprise 43.73 acres. Access will be provided via a driveway onto SW Blake Street.

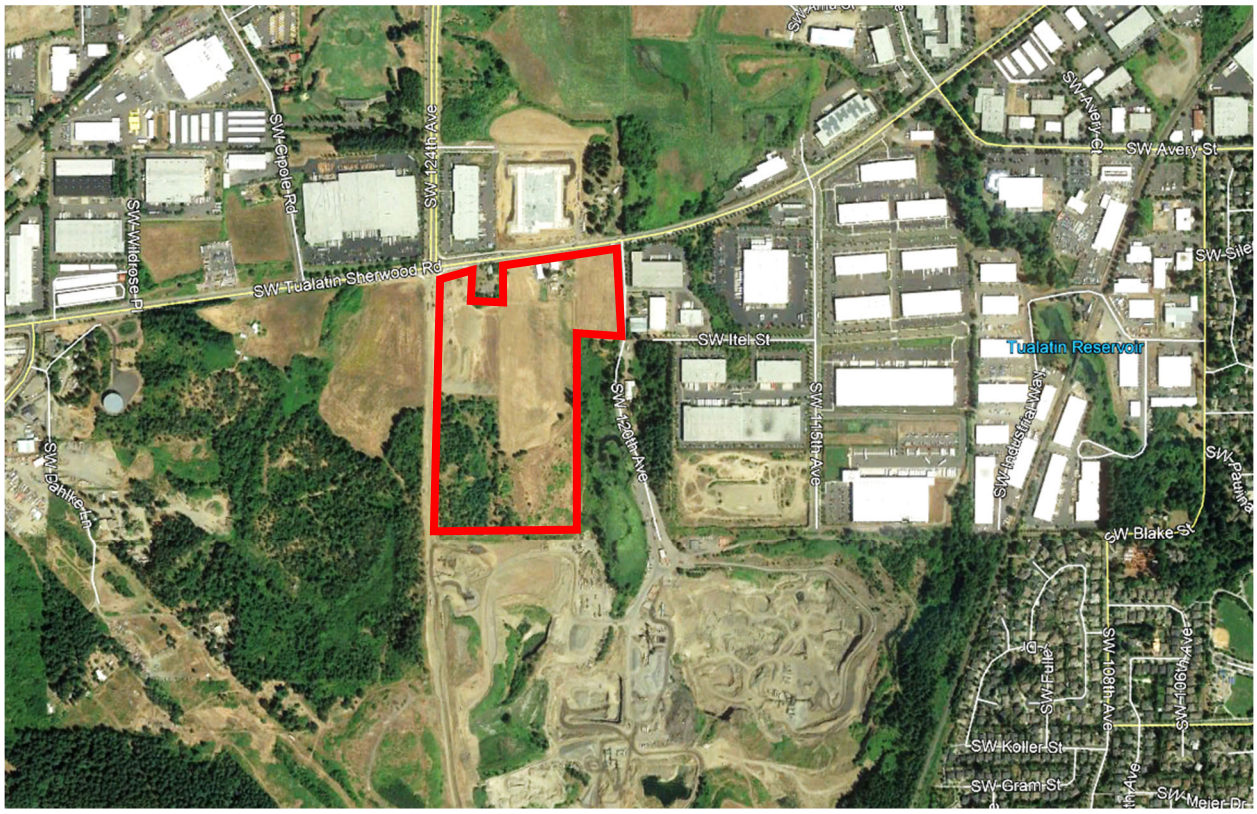


Figure 1 – Project Site (outlined in red)

Vicinity Streets

The characteristics of each roadway within the project study area are summarized in Table 1. The scope of work for this report and the project study area was confirmed by both Washington County and City of Tualatin staff.

Table 1 – Characteristics of Study Roadways[1,2]

Roadway	Jurisdiction	Functional Classification	Cross-Section	Speed (mph)	Sidewalks?	Bike Lanes?
SW Tualatin-Sherwood Road	Washington County	Arterial	3 lanes	45 posted	Both Sides	Both Sides
SW 124th Avenue	Washington County	Arterial	5 lanes	40 posted	Both Sides	Both Sides
SW 120th Avenue	City of Tualatin	Connector	2 lanes	25 Statutory	Both Sides	None
SW 115th Avenue	City of Tualatin	Major Collector	2 lanes	25 Statutory	Both Sides	Both Sides
SW Avery Street	City of Tualatin	Minor Arterial	2-3 lanes	35 posted	Both Sides	Both Sides

Study Intersections

Based on the size of the development and Washington County's 10 percent impact requirement outlined in Resolution and Order No. 86-95, the following intersections will be analyzed for the purposes of this study:

- Proposed SW Blake Street at Site Access
- SW 124th Avenue at Proposed SW Blake Street
- SW Tualatin-Sherwood Road at SW 124th Avenue
- SW Tualatin-Sherwood Road at SW 120th Avenue
- SW Tualatin-Sherwood Road at SW 115th Avenue
- SW Tualatin-Sherwood Road at SW Avery Street

Characteristics of the existing study intersections are summarized in Table 2. A vicinity map showing the project site, vicinity streets, and study intersections with their associated lane configurations is shown in Figure 2 on page 6.

[1] *Washington County Transportation System Plan*, 2018. https://s3.amazonaws.com/washcomultimedia/CMSBigFiles/TspReferenceGuide/mobile/index.html.

[2] *City of Tualatin Transportation System Plan Update*, 2014. https://www.tualatinoregon.gov/sites/default/files/fileattachments/community_development/page/4465/2-24-14_revised_adopted_tsp_volume_i.pdf.

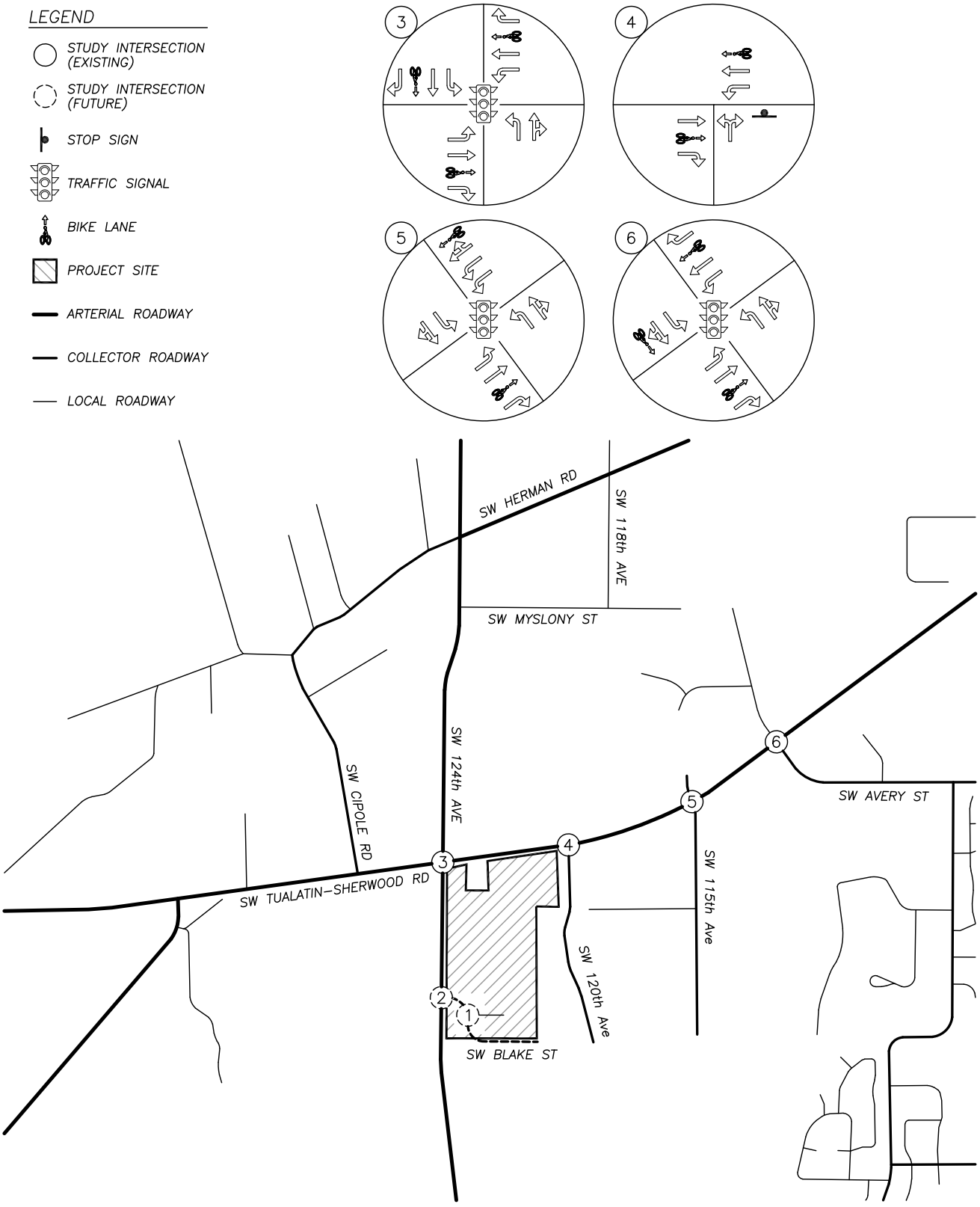
Table 2 – Characteristics of Existing Study Intersections

Name	Geometry	Traffic Control	Phasing/Stopped Approaches
SW Tualatin-Sherwood Road at SW 124th Avenue	Four-legged	Signal	Permitted-protected left-turn phasing for all approaches; right-turn overlap phasing on SB, EB, and WB approaches
SW Tualatin-Sherwood Road at SW 120th Avenue	Three-legged	Stop Control	Northbound
SW Tualatin-Sherwood Road at SW 115th Avenue	Four-legged	Signal	Protected EB and WB left turns, permitted-protected NB and SB left turns, NB right-turn overlap
SW Tualatin-Sherwood Road at SW Avery Street	Four-legged	Signal	All left turns protected

Traffic Counts

Traffic Counts were conducted at the study intersections on Wednesday, February 6, 2019, from 4:00 p.m. to 6:00 p.m. and Thursday, February 7, 2019, from 7:00 a.m. to 9:00 a.m. Data from each intersection's morning and evening peak hours were used for analysis.

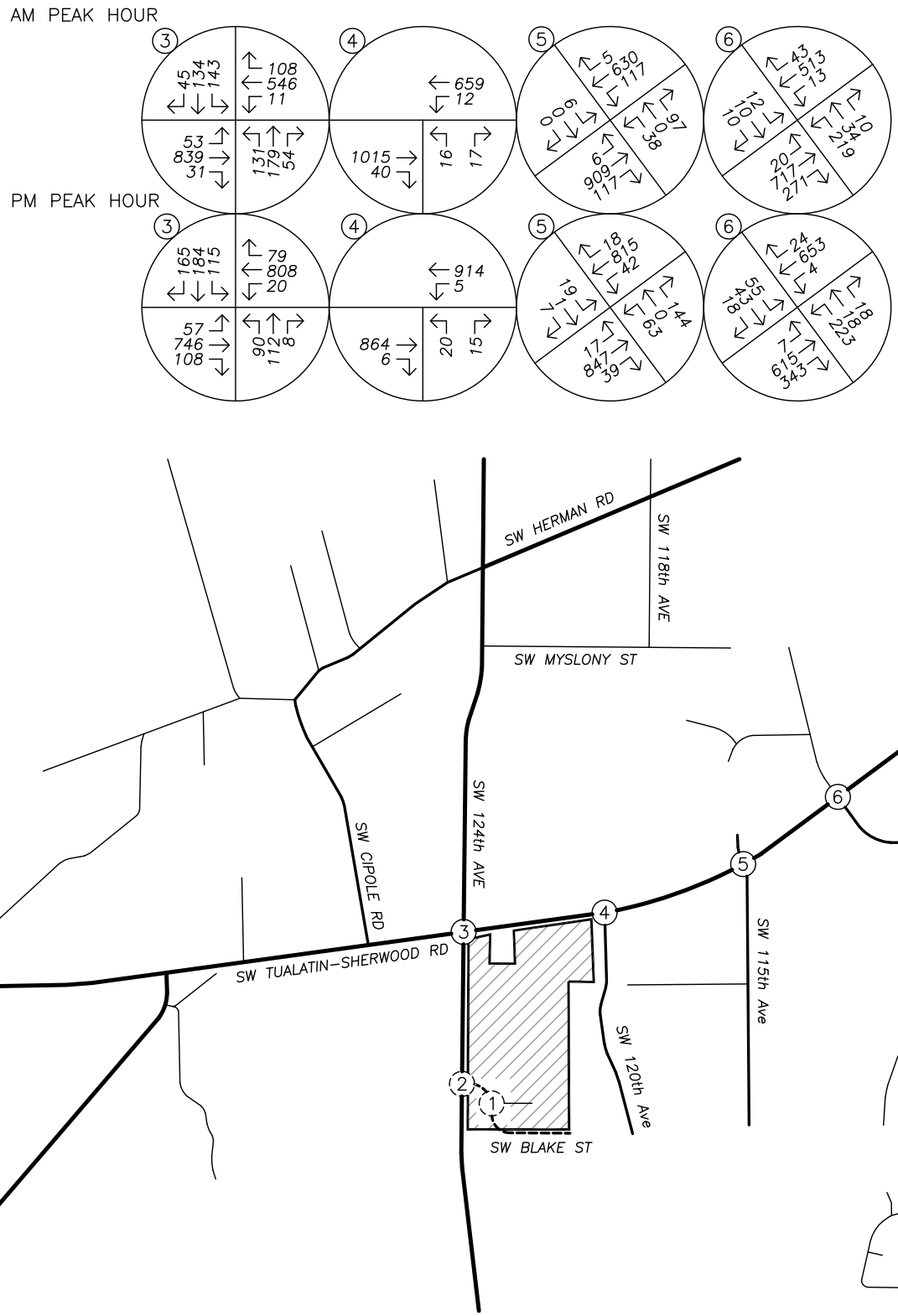
Figure 3 on page 7 shows the existing morning and evening peak hour traffic volumes at the existing study intersections. Detailed count data are included in the appendix to this report.



VICINITY MAP

no scale

FIGURE 2



TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hours

FIGURE 3

Site Trips

The projected trip generation and assumed trip distribution are presented in the following sections.

Trip Generation

The proposed PGE Integrated Operations Center will include office space and other program areas necessary for the operations center. Information from PGE about the number of employees and their working hours was used to estimate the number of trips that will be generated by the proposed development.

When the facility opens, there will be 250 employees, and an additional 50 will be phased in during the months following construction. Most will work a typical office schedule of approximately 8:00 a.m. to 5:00 p.m., Monday through Friday. 12 to 15 employees will work a 6:00 a.m. to 6:00 p.m. shift, and a smaller number will work night and weekend shifts. There will also be some employees working a 3:00 a.m. to 12:00 p.m. shift. Based on this information, it was estimated that approximately 200-220 employees will work a traditional office schedule, and that about 175 would arrive during the morning peak hour and leave during the evening peak hour.

For comparison, trip generation estimates were also calculated using trip rates from the *Trip Generation Manual*.[3] Data for land use code 170 – *Utility* were used to estimate the proposed development's trip generation based on the number of employees. The trip generation calculations showed that the proposed development is expected to generate 210 trips during the morning peak hour and 228 during the evening peak hour. Because the calculation results were similar to the trip generation estimated based on information from PGE, the manual-based trip generation was used for analysis.

Trip generation estimates are summarized in Table 3. Detailed calculations are included in the appendix to this report.

Table 3 – Trip Generation Summary

Land Use Code	Size	Morning Peak Hour			Evening Peak Hour			Weekday Total
		In	Out	Total	In	Out	Total	
170 – Utility	300 Employees	170	40	210	34	194	228	1,234

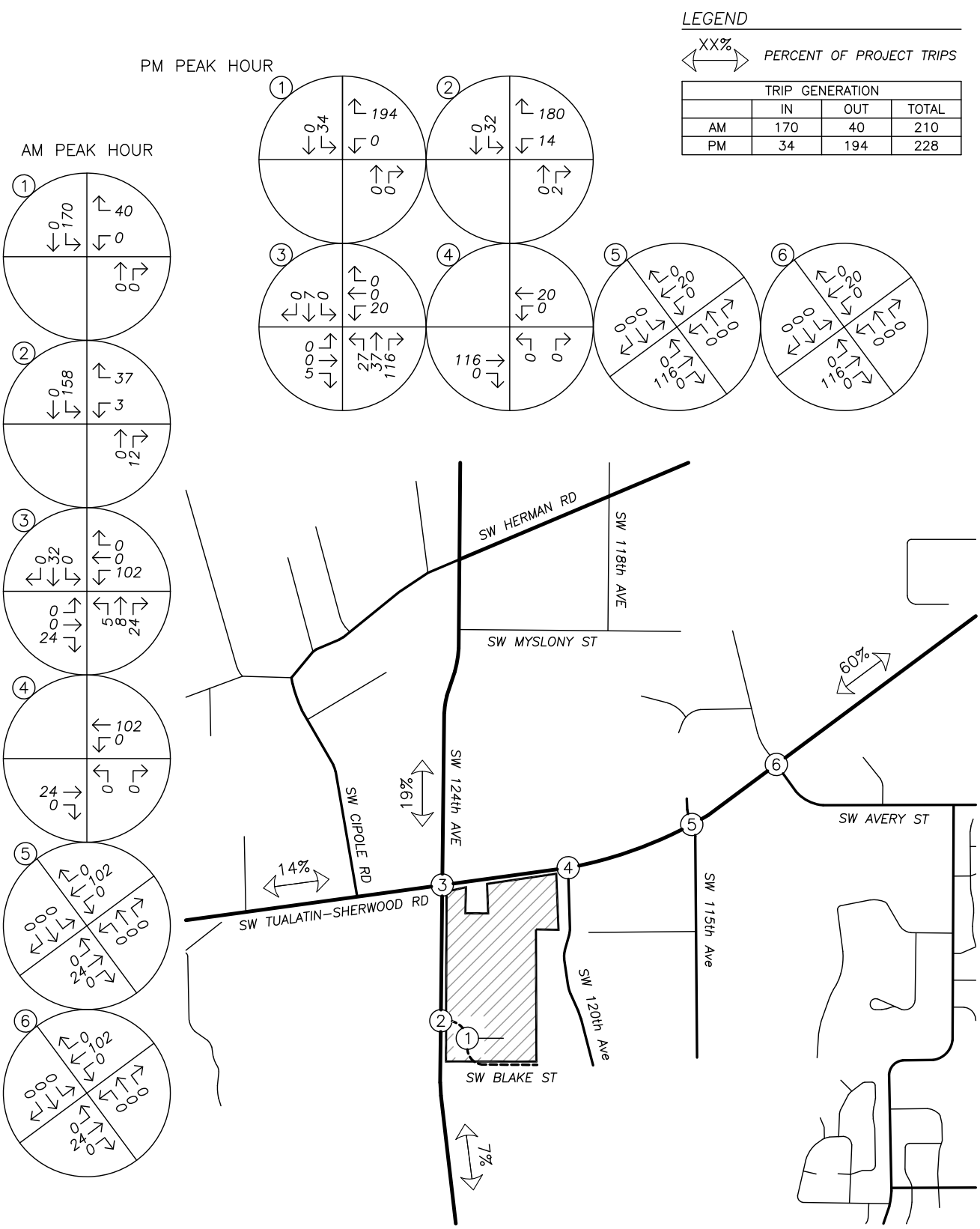
[3] Institute of Transportation Engineers, *Trip Generation Manual*, 10th Edition, 2017.

Trip Distribution

The directional distribution of site trips to and from the project site was estimated based on anonymous employee travel origin data from PGE. Using this data and likely routes that employees would take to and from the site during peak hours, the following trip distribution was estimated and used for analysis:

- 60 percent of site trips will travel to and from the east on SW Tualatin-Sherwood Road;
- 19 percent of site trips will travel to and from the north on SW 124th Avenue;
- 14 percent of site trips will travel to and from the west on SW Tualatin-Sherwood Road; and
- 7 percent of site trips will travel to and from the south on SW 124th Avenue.

The trip distribution and assignment of site trips generated by the proposed development are shown in Figure 4 on page 10 for the morning and evening peak hours.



TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Site Trips
AM & PM Peak Hours

no scale

FIGURE 4

Future Traffic Volumes

To analyze the impact of the proposed development on the transportation facilities in the site vicinity, an estimate of future traffic volumes is required. A compounded growth rate of two percent per year for an assumed buildout condition of three years was applied to the existing traffic volumes to approximate year 2022 background conditions. The year 2022 was selected because the projected occupancy date of the proposed building is December 2021.

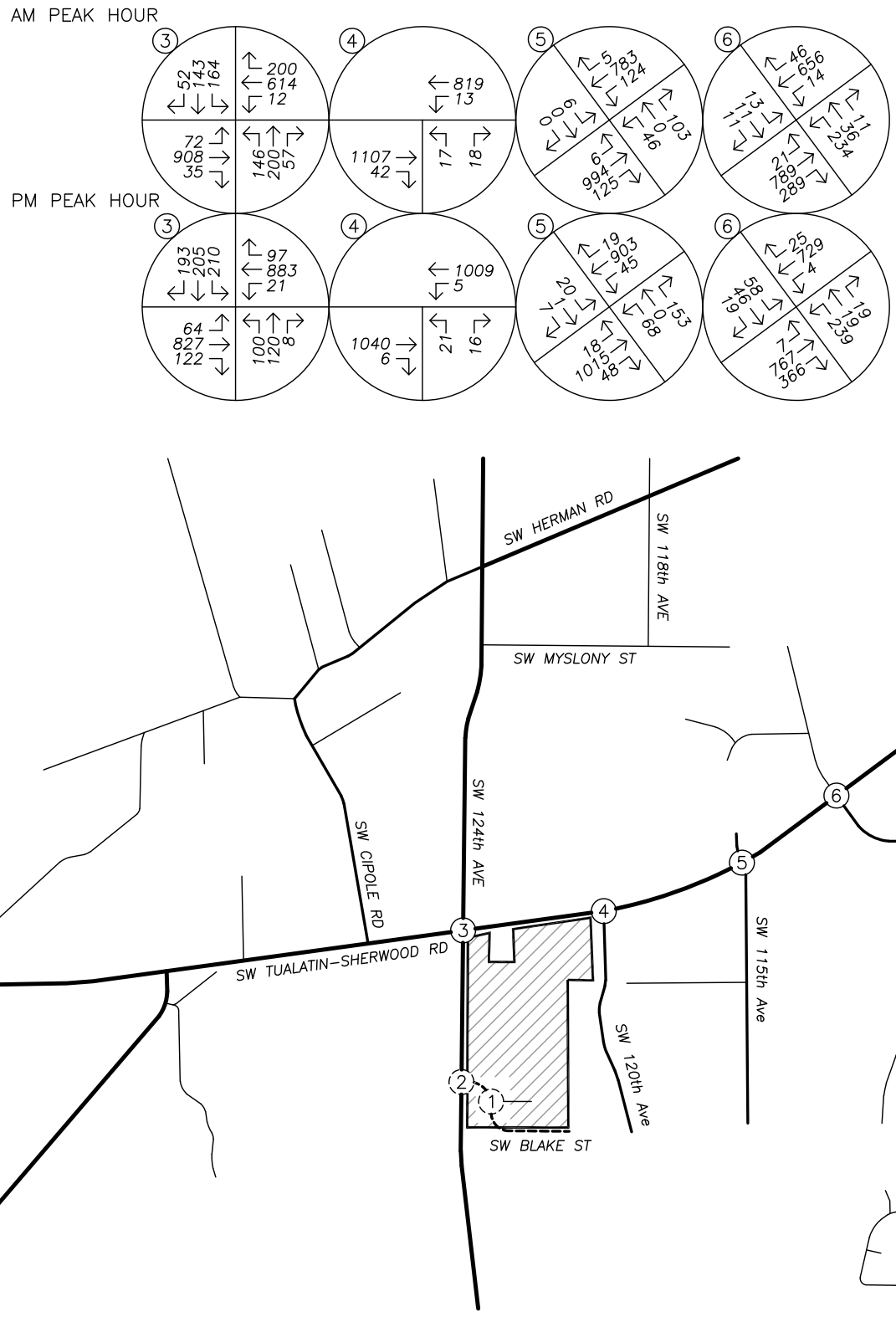
In addition to the expected background traffic growth in the site vicinity, there are four in-process developments that are expected to impact future volumes at the study intersections. In-process developments are projects that are approved but not yet constructed or occupied. These developments are:

- Parkway Village South Recreational/Commercial Development;
- Four S Corporation Distribution Center;
- IPT Development; and
- Cipole Road Industrial Park.

Since these developments will likely be contributing trips to the transportation system by 2022, the site trips they are projected to generate were included in 2022 background traffic volumes.

Peak hour trips calculated to be generated by the proposed development, as described in the Site Trips section, were added to the projected year 2022 background traffic volumes to obtain the expected 2022 buildout volumes.

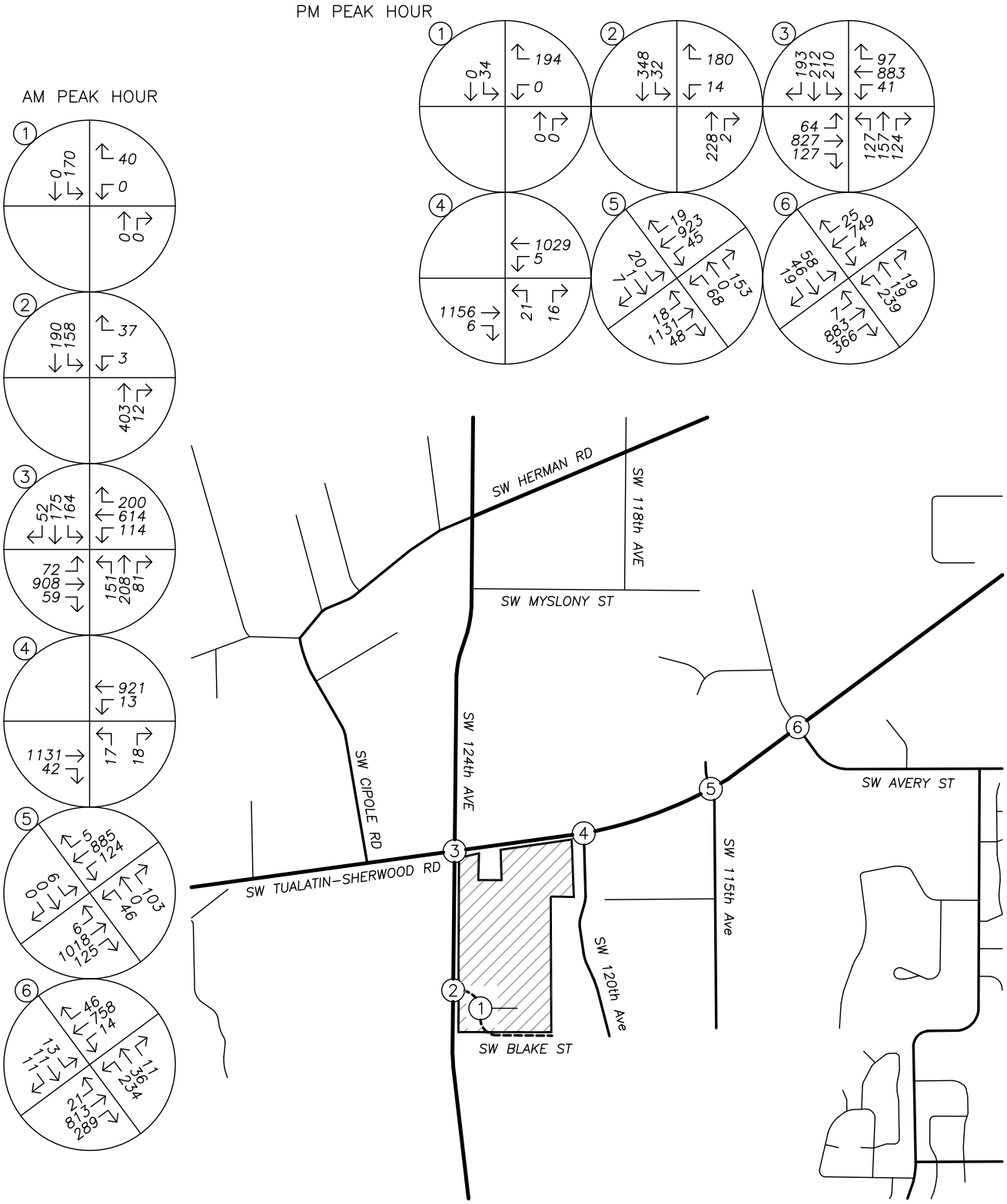
Figure 5 on page 12 shows the projected year 2022 background volumes at the existing study intersections for the morning and evening peak hours. Figure 6 on page 13 shows the projected year 2022 site buildout volumes at all study intersections for the morning and evening peak hours.



TRAFFIC VOLUMES
Year 2022 Background Conditions
AM & PM Peak Hours

no scale

FIGURE 5



TRAFFIC VOLUMES
Year 2022 Buildout Conditions
AM & PM Peak Hours

no scale

FIGURE 6

PAGE 13

Operational Analysis

A capacity and delay analysis was conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual*[4] (HCM). Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection.

For intersections under Washington County's jurisdiction, the County requires intersections operate with a v/c ratio of 0.99 or less.[5] All intersections along SW Tualatin-Sherwood Road and SW 124th Avenue are under County jurisdiction.

The v/c, delay, and LOS results of the capacity analysis are shown in Table 4 for the morning and evening peak hours. Overall intersection performance metrics are reported for signalized intersections, and results for the worst-performing approach are reported for stop-controlled intersections. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

[4] Transportation Research Board, *Highway Capacity Manual*, 6th Edition, 2016.

[5] Washington County, *Washington County Transportation System Plan*, 2015. https://s3.amazonaws.com/washcomultimedia/CMSBigFiles/TSP/mobile/index.html#p=1.

Table 4 – Intersection Capacity Analysis Summary

	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
SW 124th Avenue at SW Blake Street						
2022 Buildout Conditions	B	12	0.16	B	12	0.28
SW Tualatin-Sherwood Road at SW 124th Avenue						
2019 Existing Conditions	C	34	0.86	C	23	0.72
2022 Background Conditions	D	41	0.95	C	27	0.82
2022 Buildout Conditions	D	51	1.00	D	37	0.92
SW Tualatin-Sherwood Road at SW 120th Avenue						
2019 Existing Conditions	B	14	0.10	C	17	0.02
2022 Background Conditions	C	17	0.13	C	19	0.02
2022 Buildout Conditions	C	19	0.15	C	19	0.03
SW Tualatin-Sherwood Road at SW 115th Avenue						
2019 Existing Conditions	C	27	0.72	C	23	0.71
2022 Background Conditions	C	33	0.81	C	35	0.82
2022 Buildout Conditions	D	35	0.84	D	53	0.90
SW Tualatin-Sherwood Road at SW Avery Street						
2019 Existing Conditions	C	23	0.69	C	23	0.64
2022 Background Conditions	C	27	0.76	C	24	0.73
2022 Buildout Conditions	C	31	0.79	C	25	0.80

As shown in Table 4 above, the only scenario in which a study intersection is projected to operate outside Washington County standards is the intersection of SW Tualatin-Sherwood Road at SW 124th Avenue during the morning peak hour, when the v/c ratio is projected to be 1.00, which is greater than the maximum allowable 0.99. Washington County is currently in the design phase of a project that will widen SW Tualatin-Sherwood Road to a five-lane cross-section between SW Teton Avenue and SW Langer Farms Parkway. This area encompasses all of the intersections in this study, and will significantly increase the capacity of SW Tualatin-Sherwood Road. The project is funded by the County's Major Streets Transportation Improvement Program, and is scheduled to be under construction from June 2021 to October 2023.[6] Since the project will already be under construction when occupancy of the proposed PGE IOC begins, no operational mitigation is necessary or recommended in conjunction with the proposed development.

[6] Washington County Engineering and Construction Services, *Tualatin Sherwood Road (Teton Avenue to Langer Farms Parkway).* https://www.co.washington.or.us/LUT/TransportationProjects/tualatinsherwoodroad.cfm?page=About.

Safety Analysis

The following sections comprise a safety analysis for the study intersections, including an analysis of historical crash data and left-turn lane and signal warrants.

Crash Data Analysis

Using data obtained from ODOT's Online Crash Data System, a review was performed of the most recent five years of available crash data (January 2012 through December 2016) at the existing study intersections. The crash data were analyzed based on the type and severity of crashes. Crash severity is based on injuries sustained by people involved in the crash, and includes five categories:

1. PDO – property damage only
2. Injury C – possible injury or complain of pain
3. Injury B – non-incapacitating injury
4. Injury A – incapacitating injury (i.e. bleeding or broken bones)
5. Fatality

Crash rates were calculated under the common assumption that traffic counted during the evening peak hour represents ten percent of annual average daily traffic (AADT) at each intersection. Crash rates for each intersection are reported as crashes per million entering vehicles (CMEV). A crash rate higher than one to two CMEV may be indicative of design deficiencies or the need for mitigation Detailed crash data is provided in the appendix to this report.

The crash data are summarized in Table 5 by type of crash Table 6 by severity and modes involved.

Table 5 – Crash Data Summary by Type

Intersection*	Rear-End		Turning Movement		Angle		Fixed Object		Total Crashes
	Count	%	Count	%	Count	%	Count	%	
SW Tualatin-Sherwood Road at SW 124th Avenue	27	93	1	3.5	0	0	1	3.5	29
SW Tualatin-Sherwood Road at SW 120th Avenue	1	100	0	0	0	0	0	0	1
SW Tualatin-Sherwood Road at SW 115th Avenue	6	55	5	45	0	0	0	0	11
SW Tualatin-Sherwood Road at SW Avery Street	26	87	3	10	1	3	0	0	30

*Signalized intersections are set in **bold**; others are unsignalized

Table 6 – Crash Data Summary by Severity and Modes Involved

Intersection*	By Severity			By Modes Involved			Total Crashes	Crash Rate (CMEV)
	PDO†	Injury	Fatal	Ped	Bike	Car Only		
SW Tualatin-Sherwood Road at SW 124th Avenue	12	17	0	0	0	29	29	0.64
SW Tualatin-Sherwood Road at SW 120th Avenue	1	0	0	0	0	1	1	0.03
SW Tualatin-Sherwood Road at SW 115th Avenue	2	9	11	0	0	11	11	0.30
SW Tualatin-Sherwood Road at SW Avery Street	14	16	0	0	0	30	30	0.81

*Signalized intersections are set in **bold**; others are unsignalized

† "Property damage only," i.e. a crash in which no injury occurred

One of the rear-end crashes at the intersection of SW Tualatin-Sherwood Road at SW 124th Avenue resulted in an incapacitating injury (Injury A). The crash was a rear-end crash where the driver who collided with the stopped car was using a cell phone at the time of the crash. The rear-ended vehicle was pushed into a third vehicle. The driver of the initially struck vehicle suffered the injury.

Two of the crashes at the intersection of SW Tualatin-Sherwood Road at SW Avery Street resulted in incapacitating injuries (Injury A). One was a rear-end crash where the driver who struck the stopped car was

determined to have been following too closely. The driver of the stopped vehicle and a passenger in the vehicle both suffered incapacitating injuries. The second crash resulting in an incapacitating injury was a turning movement crash that occurred when a southbound 17-year-old driver using a cell phone while driving disregarded the traffic signal and struck an eastbound vehicle. A passenger in the southbound vehicle suffered the incapacitating injury.

Based on the analysis of the data, there are no apparent safety hazards or design deficiencies at the study intersections. No safety mitigation is recommended.

Left-Turn Lane Warrants

Left-turn lane warrants were examined for the intersection of SW 124th Avenue at SW Blake Street.

A left-turn refuge lane is primarily a safety consideration for the major-street, removing left-turning vehicles from the through traffic stream. The left-turn lane warrants were examined using methodologies provided within the *National Cooperative Highway Research Program's* (NCHRP) *Report 457*. Turn lane warrants were evaluated based on the number of advancing and opposing vehicles as well as the number of turning vehicles, the travel speed, and the number of through lanes.

Left-turn lane warrants are projected to be met for 2022 buildout conditions during the morning peak hour at the intersection of SW 124th Avenue at SW Blake Street. It is recommended that the existing two-way left-turn lane (TWLTL) striping on SW 124th Street be altered to provide a dedicated southbound left-turn lane onto the proposed SW Blake Street.

Signal Warrants

Preliminary traffic signal warrants were examined for the unsignalized study intersections of SW 124th Avenue at SW Blake Street and SW Tualatin-Sherwood Road at SW 120th Avenue to determine whether the installation of a new traffic signal will be warranted at these intersections upon completion of the proposed development.

Due to insufficient traffic volumes, traffic signal warrants are not project to be met at either of the above intersections.

SW Blake Street Configuration

In conjunction with the proposed development, SW Blake Street is to be constructed between SW 124th Avenue at the site access. In the future SW Blake Street is expected to be extended to the south and east of the project site and eventually connect to SW 115th Avenue. The following sections comprise a 2040 planning horizon analysis of the intersections of SW Blake Street at the site access and SW 124th Avenue at SW Blake Street, including volume estimates, capacity analysis, and proposed street configuration.

The City of Sherwood's Transportation System Plan shows SW Blake Street west of SW 124th Avenue on the map of motor vehicle projects, but it is listed as an "aspirational project" that is not expected to be funded by 2035. The TSP's table of fundable projects does not list SW Blake Street.[7] Therefore, for the purposes of this analysis, it was assumed that SW Blake Street will only be constructed east of SW 124th Avenue. It is recognized that development is planned on the west side of SW 124th Avenue, but no detailed information is available at this time. Additionally, primary access to the site west of SW 124th Avenue will be via the traffic signal at SW Tualatin-Sherwood Road at SW Cipole Road. The west leg of Blake Street is expected to be relatively low in volume.

Planning Horizon Traffic Volumes

An analysis of planning horizon conditions was conducted on SW Blake Street at the site access and at the intersection of SW Blake Street and SW 124th Avenue. This analysis was conducted to ensure adequate separation between the site access and SW 124th Avenue and to determine the necessary configuration of Blake Street.

To estimate 2040 planning horizon traffic volumes on SW 124th Avenue and the future SW Blake Street, through volumes on SW 124th Avenue were taken from the highest planning horizon estimate in the April 2013 *Traffic Impact Analysis Hybrid Scenario Report* completed for the SW 124th Avenue extension.[8] Turning movement volumes for traffic turning between SW Blake Street and SW 124th Avenue were determined by adding post-development volumes from the *Majestic SW 115th Avenue Industrial Project Transportation Impact Analysis*[9] to the trip generation projected in this study for the proposed project, as described in the *Site Trips* section above. These turning movement volumes were grown by a compounded rate of 1.5 percent per year for 15 years to estimate planning horizon volumes.

Figure 7 on page 20 shows the estimated 2040 planning horizon traffic volumes at the intersections of SW 124th Avenue at SW Blake Street and SW Blake Street at the site access.

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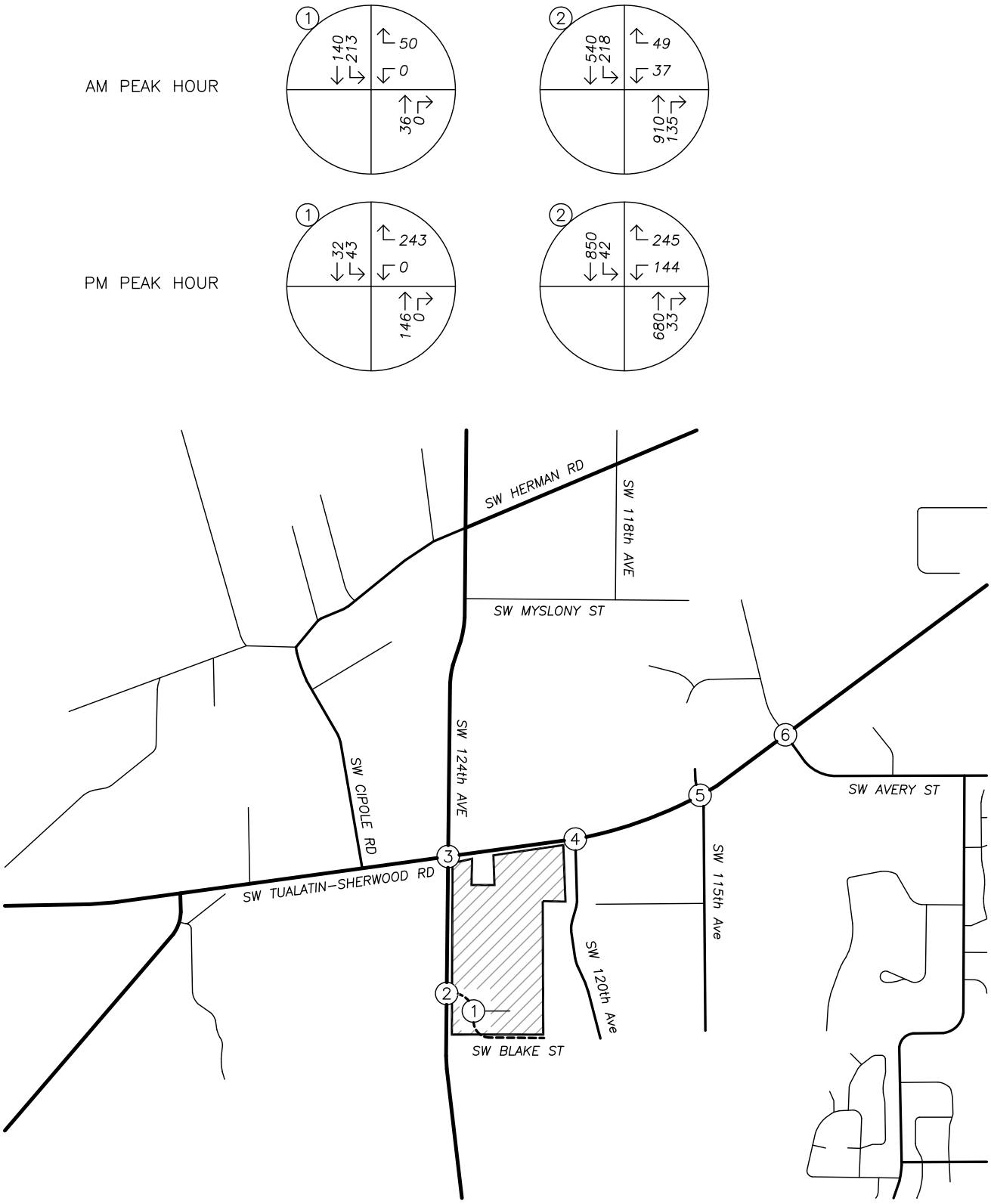
[7] *Sherwood Transportation System Plan*, June 2014. https://www.sherwoodoregon.gov/sites/default/files/fileattachments/Engineering/page/608/sherwood_tsp_final_tsp_volume_1_062714.pdf.

[8] David Evans and Associates and DKS Associates, *SW 124th Avenue Extension: Tualatin-Sherwood Road to Grahams Ferry Road Traffic Impact Analysis Hybrid Scenario Report*, April 2013.

[9] Mackenzie, *Majestic SW 115th Avenue Industrial Project Transportation Impact Analysis*, August 2016. (Revised April 2017). https://www.tualatinoregon.gov/planning/ar17-0002-majestic-building-1.



TRAFFIC VOLUMES
2040 SW Blake Street Estimated Volumes
AM & PM Peak Hours

no scale

FIGURE 7

Left-Turn Lane and Signal Warrants

Left-turn lane warrants were examined for the southbound left turn movement at the intersection of SW Blake Street at the site access using the estimated 2040 traffic volumes. A southbound left-turn lane was not warranted. Even during the morning peak hour, when a high number of left turns into the subject site are expected, opposing traffic volumes are expected to be relatively low, and the reverse is true during the evening peak hour. The analysis of this intersection was completed without a left-turn lane into the project site.

Preliminary signal warrants were examined for the intersection of SW 124th Avenue at SW Blake Street using the estimated 2040 traffic volumes. Signal warrants are projected to be met during the evening peak hour. The analysis of this intersection was completed under the assumption that a signal would be constructed by the year 2040.

Capacity Analysis

A capacity and delay analysis was completed for the intersections of SW 124th Avenue at SW Blake Street and SW Blake Street at the site access using the same methodology described in the *Operational Analysis* section above.

The following observations were noted based on the estimated planning horizon volumes and a capacity analysis at the intersections of SW 124th Avenue at SW Blake Street and SW Blake Street at the site access:

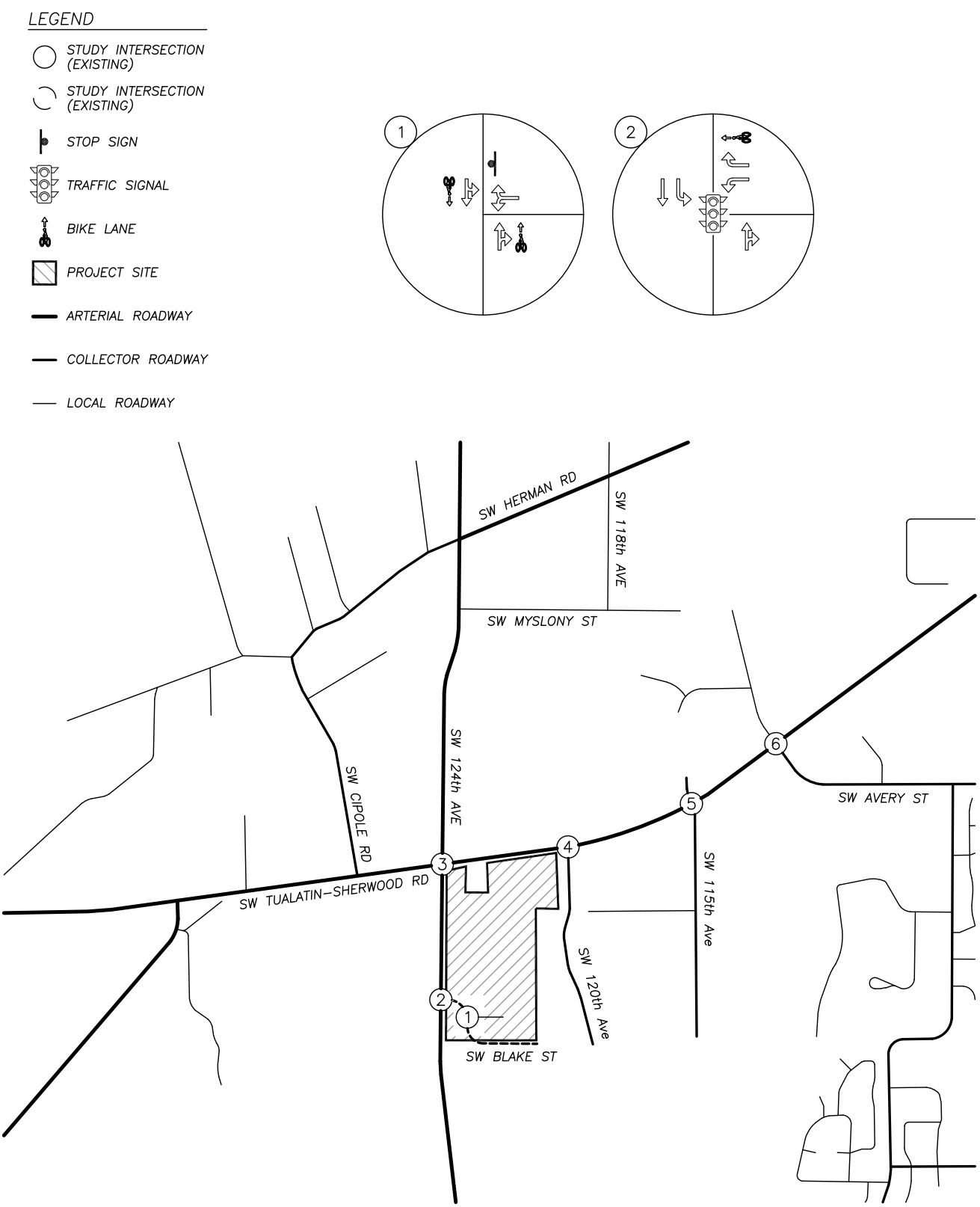
- With a signal in place, the intersection of SW 124th Avenue at SW Blake Street is projected to operate with a v/c ratio of 0.78 during the morning peak hour and 0.69 during the evening peak hour, within Washington County standards.
- The intersection of SW Blake Street at the site access is projected to operate at LOS A during the morning peak hour and LOS B during the evening peak hour. This operation is acceptable according to City of Tualatin standards, which require that unsignalized intersections operate at LOS E or better.[10]
- The maximum 95th percentile queue length for westbound turning movements at the intersection of SW 124th Avenue at SW Blake Street is projected to be 138 feet for left-turning vehicles and 62 feet for right-turning vehicles, with each movement in its own lane.
- Although a left-turn lane for traffic entering the subject site is not warranted, the queue length of westbound traffic on SW Blake Street means there would be space between the end of the westbound turn lane and the site access for a left-turn lane into the site.

[10] City of Tualatin, *Development Code*, Section 74.440(3)(e).

Recommendations

The proposed SW Blake Street should be constructed according to the City's Street Design Standards in the Transportation System Plan.[2] For minor collectors, the preferred standard is one 12-foot travel lane, a 6-foot bike lane, and an 8-foot parking lane in each direction, with a planter strip and sidewalk on both sides of the roadway. The proposed cross-section will include a 12-foot travel lane in each direction and a 14-foot center two-way left-turn lane. Due to the industrial character of the area, which lacks residential or commercial development that may generate foot traffic, and potential security needs of existing and future industrial developments, it is recommended that SW Blake Street be constructed without on-street parking lanes.

The proposed 2040 configuration of the intersections of SW 124th Avenue at SW Blake Street and SW Blake Street at the site access are shown in Figure 8 on page 23. Note that the traffic signal shown at the intersection on SW 124th Avenue at SW Blake Street is not recommended in conjunction with the proposed development, but will likely be constructed by 2040.



VICINITY MAP
SW Blake Street – Planning Horizon Intersection Configurations

no scale

FIGURE 8

Conclusions

Two properties located at the southeast corner of the intersection of SW Tualatin-Sherwood Road at SW 124th Avenue are proposed for construction of the Portland General Electric (PGE) Integrated Operations Center (IOC). The project will include the IOC building, a secure entrance, approximately 300 parking stalls, and various other components necessary for the Operations Center. Along with development of the site, SW Blake Street will be constructed from SW 124th Avenue eastward to the driveway to the site. The projected occupancy date of the site is December 2021, and this report conservatively assumes a buildout year of 2022.

Offsite Impacts

The PGE IOC facility is expected to generate 210 trips during the morning peak hour and 228 trips during the evening peak hour. Operational analysis of the five study intersections, all under Washington County jurisdiction, indicated that four of the five are projected to operate acceptably according to County standards through the 2022 buildout year, with or without the addition of site trips related to the proposed development. The intersection of SW Tualatin-Sherwood Road at SW 124th Avenue is projected to operate with a v/c ratio greater than the maximum allowed by the County under 2022 buildout conditions during the morning peak hour. Washington County plans to widen SW Tualatin-Sherwood Road to a five-lane cross-section in the vicinity of the site, which will add capacity to the roadway and improve operation at the intersection with SW 124th Avenue. The analysis in this report was completed under the assumption that these roadway improvements would not be in place by 2022, the buildout year for the PGE project.

Recommended Improvements

It is recommended that the existing two-way left-turn lane striping on SW 124th Avenue north of the new Blake Street intersection be reconfigured to proivde a dedicated left-turn lane for the southbound left turn movement. Preliminary traffic signal warrants were evaluated for the unsignalized study intersections and indicated that signal warrants are not projected to be met at any of these intersections. No new traffic signals are recommended in conjunction with the proposed project.

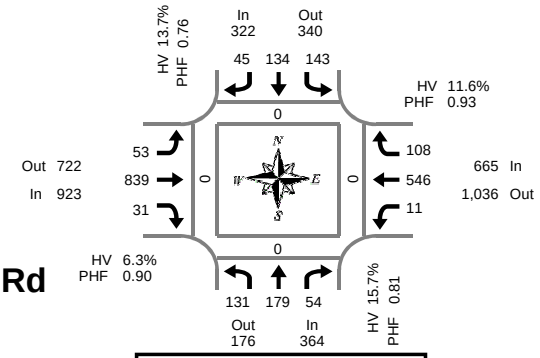
It is recommended that SW Blake Street be constructed to the proposed cross-section of two 12-foot travel lanes and a 14-foot center two-way left-turn lane, with the exception that no on-street parking is recommended. Left-turn lane warrants were not projected to be met for left turns into the project site from SW Blake Street under planning horizon traffic volume conditions.

The intersection of SW Blake Street at SW 124th Avenue was analyzed for the planning horizon assuming that a signal would eventually be constructed. To accommodate for the future signal, separate westbound left- and right-turn lanes should be constructed on SW Blake Street at SW 124th Avenue.

Appendix

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:20 AM to 8:20 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	5	8	2	0	5	7	4	0	5	87	5	0	0	40	7	0	175	0	0	0	0
7:05 AM	13	12	3	0	19	8	3	0	2	69	5	0	0	31	4	0	169	0	0	0	0
7:10 AM	5	10	5	0	3	5	3	0	9	75	1	0	0	39	4	0	159	0	0	0	0
7:15 AM	6	9	6	0	8	4	4	0	9	77	0	0	0	42	5	0	170	0	0	0	0
7:20 AM	15	11	6	0	8	9	0	0	6	71	3	0	1	38	6	0	174	0	0	0	0
7:25 AM	16	7	3	0	20	11	4	0	3	63	1	0	0	48	7	0	183	0	0	0	0
7:30 AM	6	15	2	0	4	3	3	0	4	85	2	1	0	51	10	0	185	0	0	0	0
7:35 AM	8	16	4	0	18	16	2	0	5	64	4	0	2	48	8	0	195	0	0	0	0
7:40 AM	14	15	7	0	11	20	2	0	4	65	4	0	1	47	6	0	196	0	0	0	0
7:45 AM	8	18	8	0	12	23	1	0	4	65	1	0	1	39	10	0	190	0	0	0	0
7:50 AM	9	19	8	0	13	20	4	0	4	67	1	0	0	48	9	0	202	0	0	0	0
7:55 AM	11	23	1	0	16	11	4	0	3	64	2	0	1	53	8	0	197	0	0	0	0
8:00 AM	18	15	8	0	14	9	10	0	6	62	3	0	2	42	16	0	205	0	0	0	0
8:05 AM	11	14	1	0	9	3	2	0	3	82	2	0	1	44	6	0	178	0	0	0	0
8:10 AM	8	14	4	0	10	5	5	0	6	75	5	0	0	43	11	0	186	0	0	0	0
8:15 AM	7	12	2	0	8	4	8	0	5	76	3	0	2	45	11	0	183	0	0	0	0
8:20 AM	3	5	2	0	14	6	5	0	9	91	2	0	0	29	4	0	170	0	0	0	0
8:25 AM	11	9	2	0	4	5	6	0	5	70	8	0	2	49	6	0	177	0	0	0	0
8:30 AM	15	14	2	0	5	5	4	0	3	59	7	0	1	45	7	0	167	0	0	0	0
8:35 AM	3	11	2	0	8	6	6	0	4	69	6	0	1	47	8	0	171	0	0	0	0
8:40 AM	7	8	3	0	7	7	4	0	12	84	8	0	0	59	4	0	203	0	0	0	0
8:45 AM	2	15	0	0	6	2	2	0	9	74	2	0	3	46	5	0	166	0	0	0	0
8:50 AM	6	10	1	0	7	13	3	0	5	73	3	0	0	51	7	0	179	0	0	0	0
8:55 AM	3	9	1	0	9	8	6	0	9	68	2	0	1	56	5	0	177	0	0	0	0
Total Survey	210	299	83	0	238	210	95	0	134	1,735	80	1	19	1,080	174	0	4,357	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	23	30	10	0	27	20	10	0	16	231	11	0	0	110	15	0	503	0	0	0	0
7:15 AM	37	27	15	0	36	24	8	0	18	211	4	0	1	128	18	0	527	0	0	0	0
7:30 AM	28	46	13	0	33	39	7	0	13	214	10	1	3	146	24	0	576	0	0	0	0
7:45 AM	28	60	17	0	41	54	9	0	11	196	4	0	2	140	27	0	589	0	0	0	0
8:00 AM	37	43	13	0	33	17	17	0	15	219	10	0	3	129	33	0	569	0	0	0	0
8:15 AM	21	26	6	0	26	15	19	0	19	237	13	0	4	123	21	0	530	0	0	0	0
8:30 AM	25	33	7	0	20	18	14	0	19	212	21	0	2	151	19	0	541	0	0	0	0
8:45 AM	11	34	2	0	22	23	11	0	23	215	7	0	4	153	17	0	522	0	0	0	0
Total Survey	210	299	83	0	238	210	95	0	134	1,735	80	1	19	1,080	174	0	4,357	0	0	0	0

Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	364	176	540	0	322	340	662	0	923	722	1,645	1	665	1,036	1,701	0	2,274	0	0	0	0
%HV	15.7%				13.7%				6.3%				11.6%				10.4%				
PHF	0.81				0.76				0.90				0.93				0.94				

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	131	179	54	364	143	134	45	322	53	839	31	923	11	546	108	665	2,274
%HV	16.8%	10.6%	29.6%	15.7%	13.3%	14.9%	11.1%	13.7%	7.5%	5.4%	29.0%	6.3%	36.4%	10.4%	14.8%	11.6%	10.4%
PHF	0.82	0.75	0.59	0.81	0.83	0.53	0.63	0.76	0.88	0.90	0.78	0.90	0.69	0.93	0.82	0.93	0.94

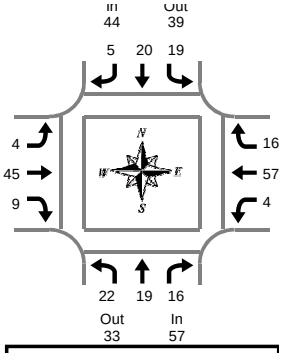
Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	116	163	55	0	137	137	34	0	58	852	29	1	6	524	84	0	2,195	0	0	0	0
7:15 AM	130	176	58	0	143	134	41	0	57	840	28	1	9	543	102	0	2,261	0	0	0	0
7:30 AM	114	175	49	0	133	125	52	0	58	866	37	1	12	538	105	0	2,264	0	0	0	0
7:45 AM	111	162	43	0	120	104	59	0	64	864	48	0	11	543	100	0	2,229	0	0	0	0
8:00 AM	94	136	28	0	101	73	61	0	76	883	51	0	13	556	90	0	2,162	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740

Out 84
In 58



SW 124th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:20 AM to 8:20 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	1	2	1	1	0	2	1	5	0	6	0	4	0	4	14
7:05 AM	1	1	2	4	1	0	0	1	0	2	0	2	0	2	0	2	9
7:10 AM	1	0	0	1	0	0	1	1	1	8	0	9	0	6	0	6	17
7:15 AM	0	1	2	3	0	1	0	1	0	5	0	5	0	1	3	4	13
7:20 AM	5	0	1	6	0	2	0	2	1	1	1	3	1	4	1	6	17
7:25 AM	0	1	1	2	1	0	1	2	0	7	0	7	0	4	1	5	16
7:30 AM	0	3	2	5	0	2	1	3	1	5	2	8	0	7	2	9	25
7:35 AM	0	4	1	5	3	3	0	6	0	5	2	7	0	4	1	5	23
7:40 AM	3	2	1	6	0	3	1	4	0	2	1	3	0	10	3	13	26
7:45 AM	3	2	1	6	1	2	0	3	1	6	0	7	0	5	0	5	21
7:50 AM	3	0	2	5	1	3	0	4	0	3	0	3	0	0	0	0	12
7:55 AM	1	1	0	2	1	2	0	3	0	5	0	5	0	3	3	6	16
8:00 AM	5	1	4	10	4	2	0	6	0	2	0	2	1	4	2	7	25
8:05 AM	0	0	0	0	2	0	0	2	1	2	0	3	1	7	1	9	14
8:10 AM	2	4	3	9	3	0	1	4	0	3	3	6	0	8	0	8	27
8:15 AM	0	1	0	1	3	1	1	5	0	4	0	4	1	1	2	4	14
8:20 AM	0	1	2	3	2	2	0	4	0	9	0	9	0	3	0	3	19
8:25 AM	0	0	2	2	1	1	1	3	0	4	2	6	1	7	0	8	19
8:30 AM	4	1	0	5	1	1	1	3	0	0	2	2	1	8	0	9	19
8:35 AM	2	0	0	2	3	1	0	4	1	11	1	13	0	3	2	5	24
8:40 AM	0	0	1	1	0	1	2	3	1	3	0	4	0	9	1	10	18
8:45 AM	2	3	0	5	1	1	1	3	0	6	1	7	1	6	0	7	22
8:50 AM	1	0	1	2	3	4	1	8	0	8	0	8	0	8	0	8	26
8:55 AM	0	3	1	4	2	3	0	5	1	8	0	9	0	7	1	8	26
Total Survey	33	30	28	91	34	36	12	82	9	114	15	138	7	121	23	151	462

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	2	3	7	2	1	1	4	2	15	0	17	0	12	0	12	40
7:15 AM	5	2	4	11	1	3	1	5	1	13	1	15	1	9	5	15	46
7:30 AM	3	9	4	16	3	8	2	13	1	12	5	18	0	21	6	27	74
7:45 AM	7	3	3	13	3	7	0	10	1	14	0	15	0	8	3	11	49
8:00 AM	7	5	7	19	9	2	1	12	1	7	3	11	2	19	3	24	66
8:15 AM	0	2	4	6	6	4	2	12	0	17	2	19	2	11	2	15	52
8:30 AM	6	1	1	8	4	3	3	10	2	14	3	19	1	20	3	24	61
8:45 AM	3	6	2	11	6	8	2	16	1	22	1	24	1	21	1	23	74
Total Survey	33	30	28	91	34	36	12	82	9	114	15	138	7	121	23	151	462

Heavy Vehicle Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	57	33	90	44	39	83	58	84	142	77	80	157	236
PHF	0.75			0.85			0.66			0.71			0.80

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	22	19	16	57	19	20	5	44	4	45	9	58	4	57	16	77	236
PHF	0.61	0.53	0.57	0.75	0.53	0.63	0.63	0.85	0.50	0.66	0.45	0.66	0.50	0.68	0.67	0.71	0.80

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

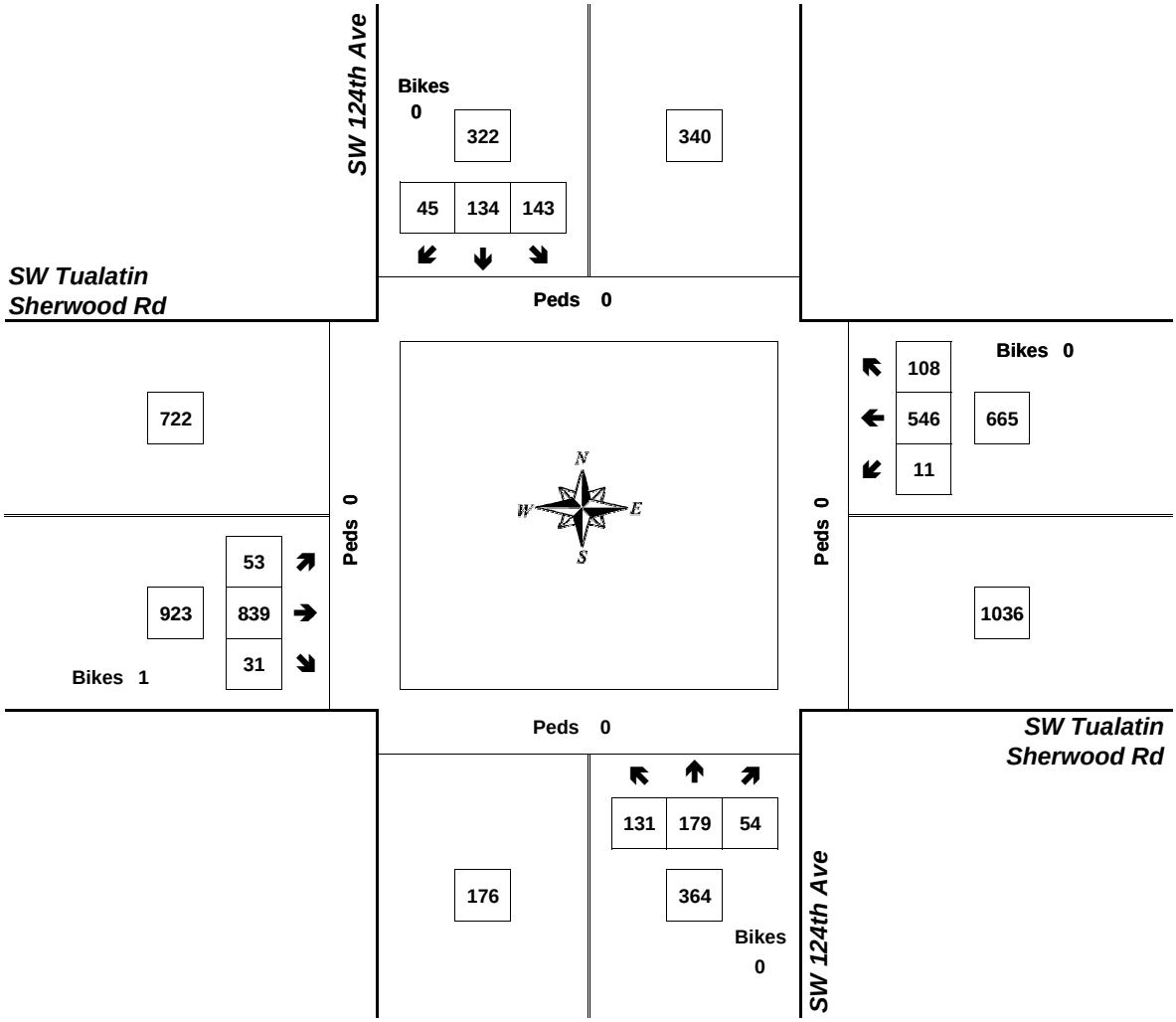
Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	17	16	14	47	9	19	4	32	5	54	6	65	1	50	14	65	209
7:15 AM	22	19	18	59	16	20	4	40	4	46	9	59	3	57	17	77	235
7:30 AM	17	19	18	54	21	21	5	47	3	50	10	63	4	59	14	77	241
7:45 AM	20	11	15	46	22	16	6	44	4	52	8	64	5	58	11	74	228
8:00 AM	16	14	14	44	25	17	8	50	4	60	9	73	6	71	9	86	253

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 124th Ave & SW Tualatin Sherwood Rd

7:20 AM to 8:20 AM
Thursday, February 07, 2019

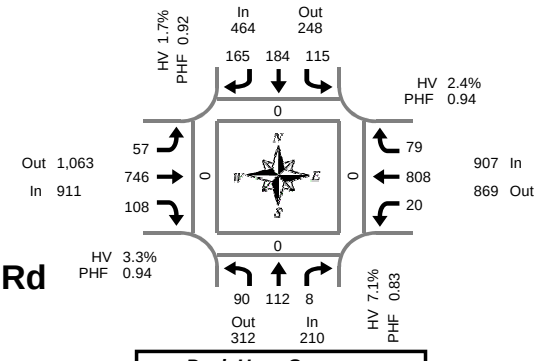


Approach	PHF	HV%	Volume
EB	0.90	6.3%	923
WB	0.93	11.6%	665
NB	0.81	15.7%	364
SB	0.76	13.7%	322
Intersection	0.94	10.4%	2,274

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:20 PM to 5:20 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	5	4	0	0	13	21	11	0	5	61	6	0	2	72	12	0	212	0	0	0	0
4:05 PM	4	10	2	0	1	20	9	0	6	67	17	0	6	60	7	0	209	0	0	0	0
4:10 PM	11	13	3	0	4	14	14	0	6	58	9	0	5	66	12	0	215	0	0	0	0
4:15 PM	5	10	0	0	2	11	18	0	1	56	8	0	3	74	6	0	194	0	0	0	0
4:20 PM	14	9	0	0	16	19	11	0	5	66	11	0	1	61	7	0	220	0	0	0	0
4:25 PM	7	7	0	0	7	7	9	0	1	55	9	0	2	70	5	0	179	0	0	0	0
4:30 PM	6	11	0	0	7	13	15	0	7	58	10	0	1	76	4	0	208	0	0	0	0
4:35 PM	5	11	0	0	9	17	16	0	6	62	8	0	1	70	13	0	218	0	0	0	0
4:40 PM	6	7	1	0	10	20	13	0	9	51	4	0	2	64	8	0	195	0	0	0	0
4:45 PM	7	7	1	0	13	16	12	0	2	69	12	0	2	70	6	0	217	0	0	0	0
4:50 PM	12	10	3	0	10	11	10	0	5	52	11	0	1	67	5	0	197	0	0	0	0
4:55 PM	8	15	0	0	6	17	17	0	6	61	7	0	0	56	5	0	198	0	0	0	0
5:00 PM	6	5	0	0	9	16	14	0	5	66	10	0	1	71	6	0	209	0	0	0	0
5:05 PM	5	9	1	0	5	14	17	0	3	60	4	0	6	66	5	0	195	0	0	0	0
5:10 PM	9	12	1	0	12	19	14	0	2	78	10	0	1	73	9	0	240	0	0	0	0
5:15 PM	5	9	1	0	11	15	17	0	6	68	12	0	2	64	6	0	216	0	0	0	0
5:20 PM	10	8	0	0	14	16	24	0	2	62	9	1	0	53	3	0	201	0	0	0	0
5:25 PM	6	5	0	0	1	7	14	0	4	60	6	0	2	82	8	0	195	0	0	0	0
5:30 PM	1	10	0	0	4	7	14	0	6	75	7	0	2	81	4	0	211	0	0	0	0
5:35 PM	8	13	0	0	11	10	15	0	3	48	10	0	1	68	12	1	199	0	0	0	0
5:40 PM	11	7	1	0	9	12	14	0	4	63	14	0	1	65	8	0	209	0	0	0	0
5:45 PM	3	4	2	0	4	5	16	0	2	64	4	0	1	97	6	0	208	0	0	0	0
5:50 PM	4	12	1	0	8	7	10	0	1	57	7	0	0	63	3	0	173	0	0	0	0
5:55 PM	3	7	0	0	9	10	5	0	3	69	4	0	2	69	7	0	188	0	0	0	0
Total Survey	161	215	17	0	195	324	329	0	100	1,486	209	1	45	1,658	167	1	4,906	0	0	0	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	20	27	5	0	18	55	34	0	17	186	32	0	13	198	31	0	636	0	0	0	0
4:15 PM	26	26	0	0	25	37	38	0	7	177	28	0	6	205	18	0	593	0	0	0	0
4:30 PM	17	29	1	0	26	50	44	0	22	171	22	0	4	210	25	0	621	0	0	0	0
4:45 PM	27	32	4	0	29	44	39	0	13	182	30	0	3	193	16	0	612	0	0	0	0
5:00 PM	20	26	2	0	26	49	45	0	10	204	24	0	8	210	20	0	644	0	0	0	0
5:15 PM	21	22	1	0	26	38	55	0	12	190	27	1	4	199	17	0	612	0	0	0	0
5:30 PM	20	30	1	0	24	29	43	0	13	186	31	0	4	214	24	1	619	0	0	0	0
5:45 PM	10	23	3	0	21	22	31	0	6	190	15	0	3	229	16	0	569	0	0	0	0
Total Survey	161	215	17	0	195	324	329	0	100	1,486	209	1	45	1,658	167	1	4,906	0	0	0	0

Peak Hour Summary
4:20 PM to 5:20 PM

By Approach	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	210	312	522	0	464	248	712	0	911	1,063	1,974	0	907	869	1,776	0	2,492	0	0	0	0
%HV	7.1%				1.7%				3.3%				2.4%				3.0%				
PHF	0.83				0.92				0.94				0.94				0.96				

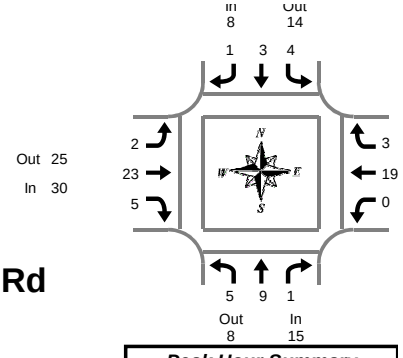
By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	90	112	8	210	115	184	165	464	57	746	108	911	20	808	79	907	2,492
%HV	5.6%	8.0%	12.5%	7.1%	3.5%	1.6%	0.6%	1.7%	3.5%	3.1%	4.6%	3.3%	0.0%	2.4%	3.8%	2.4%	3.0%
PHF	0.83	0.88	0.40	0.83	0.87	0.87	0.86	0.92	0.65	0.91	0.90	0.94	0.56	0.94	0.73	0.94	0.96

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	90	114	10	0	98	186	155	0	59	716	112	0	26	806	90	0	2,462	0	0	0	0
4:15 PM	90	113	7	0	106	180	166	0	52	734	104	0	21	818	79	0	2,470	0	0	0	0
4:30 PM	85	109	8	0	107	181	183	0	57	747	103	1	19	812	78	0	2,489	0	0	0	0
4:45 PM	88	110	8	0	105	160	182	0	48	762	112	1	19	816	77	1	2,487	0	0	0	0
5:00 PM	71	101	7	0	97	138	174	0	41	770	97	1	19	852	77	1	2,444	0	0	0	0

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW 124th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:20 PM to 5:20 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	1	3	0	4	0	2	1	3	0	0	2	2	9
4:05 PM	0	1	0	1	0	4	0	4	0	5	0	5	0	3	0	3	13
4:10 PM	2	1	1	4	0	0	0	0	0	3	1	4	0	3	1	4	12
4:15 PM	0	2	0	2	0	2	0	2	0	2	2	4	0	1	0	1	9
4:20 PM	0	1	0	1	1	0	0	1	0	3	0	3	0	3	0	3	8
4:25 PM	0	1	0	1	0	1	0	1	0	3	2	5	0	0	0	0	7
4:30 PM	1	1	0	2	1	0	0	1	0	1	1	2	0	2	1	3	8
4:35 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
4:40 PM	2	2	0	4	1	1	0	2	1	0	0	1	0	4	0	4	11
4:45 PM	1	0	0	1	0	1	0	1	0	2	0	2	0	0	1	1	5
4:50 PM	0	0	1	1	0	0	0	0	0	1	1	2	0	2	0	2	5
4:55 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	3	0	3	6
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
5:05 PM	1	0	0	1	0	0	0	0	0	3	0	3	0	2	0	2	6
5:10 PM	0	1	0	1	0	0	0	0	0	3	1	4	0	1	0	1	6
5:15 PM	0	0	0	0	0	0	0	0	1	5	0	6	0	1	0	1	7
5:20 PM	1	1	0	2	0	0	0	0	0	0	1	1	0	1	0	1	4
5:25 PM	0	0	0	0	0	0	0	0	1	3	1	5	0	0	0	0	5
5:30 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	3
5:35 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
5:40 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:45 PM	0	0	0	0	2	0	0	2	0	3	0	3	0	0	0	0	5
5:50 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
5:55 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	0	2	4
Total Survey	8	14	2	24	9	12	1	22	3	48	11	62	0	35	6	41	149

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	2	2	1	5	1	7	0	8	0	10	2	12	0	6	3	9	34
4:15 PM	0	4	0	4	1	3	0	4	0	8	4	12	0	4	0	4	24
4:30 PM	3	4	0	7	3	1	0	4	1	2	1	4	0	6	1	7	22
4:45 PM	1	2	1	4	0	1	1	2	0	3	1	4	0	5	1	6	16
5:00 PM	1	1	0	2	0	0	0	0	0	7	1	8	0	4	1	5	15
5:15 PM	1	1	0	2	0	0	0	0	2	8	2	12	0	2	0	2	16
5:30 PM	0	0	0	0	1	0	0	1	0	4	0	4	0	4	0	4	9
5:45 PM	0	0	0	0	3	0	0	3	0	6	0	6	0	4	0	4	13
Total Survey	8	14	2	24	9	12	1	22	3	48	11	62	0	35	6	41	149

Heavy Vehicle Peak Hour Summary
4:20 PM to 5:20 PM

By Approach	Northbound SW 124th Ave			Southbound SW 124th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	15	8	23	8	14	22	30	25	55	22	28	50	75
PHF	0.54			0.50			0.58			0.79			0.82

By Movement	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	5	9	1	15	4	3	1	8	2	23	5	30	0	19	3	22	75
PHF	0.42	0.56	0.25	0.54	0.33	0.38	0.25	0.50	0.50	0.52	0.42	0.58	0.00	0.79	0.75	0.79	0.82

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 124th Ave				Southbound SW 124th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	6	12	2	20	5	12	1	18	1	23	8	32	0	21	5	26	96
4:15 PM	5	11	1	17	4	5	1	10	1	20	7	28	0	19	3	22	77
4:30 PM	6	8	1	15	3	2	1	6	3	20	5	28	0	17	3	20	69
4:45 PM	3	4	1	8	1	1	1	3	2	22	4	28	0	15	2	17	56
5:00 PM	2	2	0	4	4	0	0	4	2	25	3	30	0	14	1	15	53

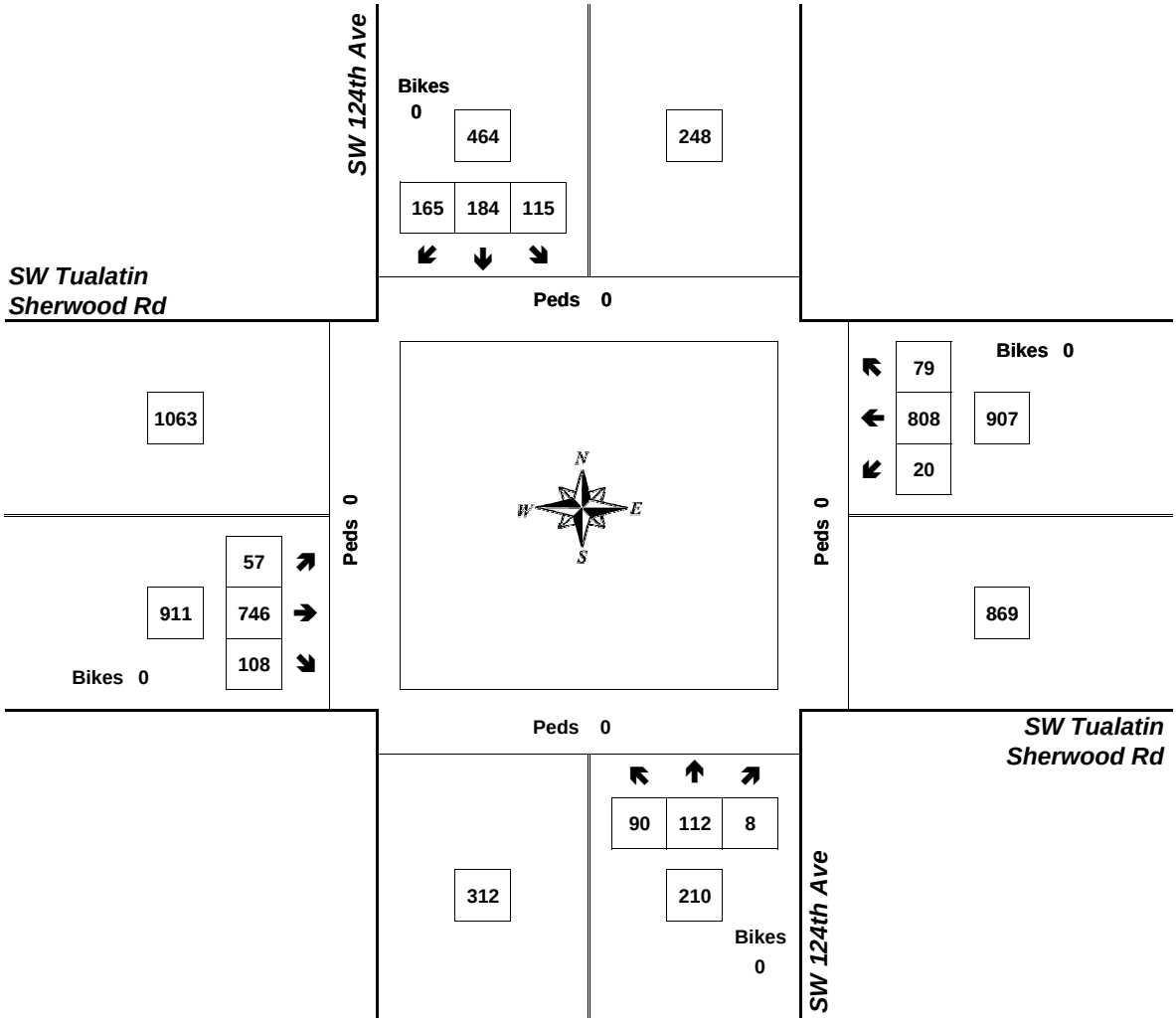
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

SW 124th Ave & SW Tualatin Sherwood Rd

4:20 PM to 5:20 PM
Wednesday, February 06, 2019

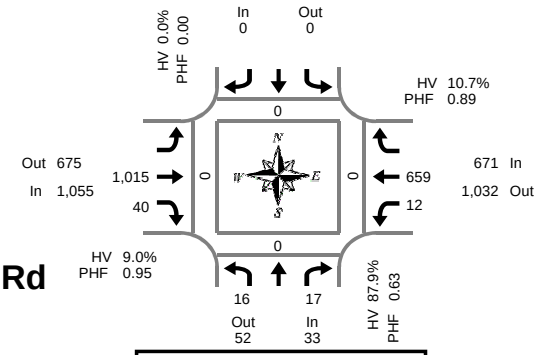


Approach	PHF	HV%	Volume
EB	0.94	3.3%	911
WB	0.94	2.4%	907
NB	0.83	7.1%	210
SB	0.92	1.7%	464
Intersection	0.96	3.0%	2,492

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
7:00 AM	0		1	0				0		93	1	0	2	32		0	129	0	0	0	0
7:05 AM	1		1	0				0		87	4	0	3	37		0	133	0	0	0	0
7:10 AM	0		0	0				0		83	1	0	2	48		0	134	0	0	0	0
7:15 AM	2		2	0				0		88	3	0	0	49		0	144	0	0	0	0
7:20 AM	2		1	0				0		83	1	0	2	35		0	124	0	0	0	0
7:25 AM	1		0	0				0		83	2	0	4	76		0	166	0	0	0	0
7:30 AM	4		2	0				0		84	3	0	1	48		0	142	0	0	0	0
7:35 AM	0		2	0				0		85	4	0	0	60		0	151	0	0	0	0
7:40 AM	3		2	0				0		79	1	0	0	51		0	136	0	0	0	0
7:45 AM	3		1	0				0		84	6	0	1	64		0	159	0	0	0	0
7:50 AM	0		2	0				0		83	3	0	0	52		0	140	0	0	0	0
7:55 AM	0		2	0				0		81	2	0	1	58		0	144	0	0	0	0
8:00 AM	1		3	0				0		72	9	0	0	62		0	147	0	0	0	0
8:05 AM	0		1	0				0		94	2	0	1	51		0	149	0	0	0	0
8:10 AM	1		0	0				0		86	3	0	1	46		0	137	0	0	0	0
8:15 AM	3		0	0				0		85	2	0	2	46		0	138	0	0	0	0
8:20 AM	0		2	0				0		99	3	0	1	45		0	150	0	0	0	0
8:25 AM	3		2	0				0		71	3	0	0	44		0	123	0	0	0	0
8:30 AM	1		3	0				0		64	2	0	2	59		0	131	0	0	0	0
8:35 AM	3		0	0				0		75	5	0	1	53		0	137	0	0	0	0
8:40 AM	2		0	0				0		92	2	0	2	64		0	162	0	0	0	0
8:45 AM	1		2	0				0		79	1	0	1	55		0	139	0	0	0	0
8:50 AM	3		1	0				0		75	4	0	5	52		0	140	0	0	0	0
8:55 AM	0		3	0				0		74	5	0	0	58		0	140	0	0	0	0
Total Survey	34		33	0				0		1,979	72	0	32	1,245		0	3,395	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
7:00 AM	1		2	0				0		263	6	0	7	117		0	396	0	0	0	0
7:15 AM	5		3	0				0		254	6	0	6	160		0	434	0	0	0	0
7:30 AM	7		6	0				0		248	8	0	1	159		0	429	0	0	0	0
7:45 AM	3		5	0				0		248	11	0	2	174		0	443	0	0	0	0
8:00 AM	2		4	0				0		252	14	0	2	159		0	433	0	0	0	0
8:15 AM	6		4	0				0		255	8	0	3	135		0	411	0	0	0	0
8:30 AM	6		3	0				0		231	9	0	5	176		0	430	0	0	0	0
8:45 AM	4		6	0				0		228	10	0	6	165		0	419	0	0	0	0
Total Survey	34		33	0				0		1,979	72	0	32	1,245		0	3,395	0	0	0	0

Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	33	52	85	0	0	0	0	0	1,055	675	1,730	0	671	1,032	1,703	0	1,759	0	0	0	0
%HV	87.9%				0.0%				9.0%				10.7%				11.1%				
PHF	0.63				0.00				0.95				0.89				0.96				

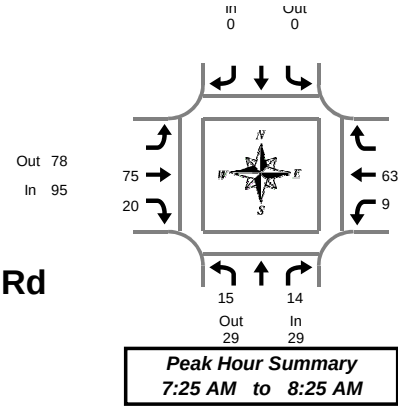
By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	16		17	33				0		1,015	40	1,055	12	659		671	1,759
%HV	93.8%	NA	82.4%	87.9%	NA	NA	NA	0.0%	NA	7.4%	50.0%	9.0%	75.0%	9.6%	NA	10.7%	11.1%
PHF	0.57		0.61	0.63				0.00		0.94	0.71	0.95	0.60	0.90		0.89	0.96

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
7:00 AM	16		16	0				0		1,013	31	0	16	610		0	1,702	0	0	0	0
7:15 AM	17		18	0				0		1,002	39	0	11	652		0	1,739	0	0	0	0
7:30 AM	18		19	0				0		1,003	41	0	8	627		0	1,716	0	0	0	0
7:45 AM	17		16	0				0		986	42	0	12	644		0	1,717	0	0	0	0
8:00 AM	18		17	0				0		966	41	0	16	635		0	1,693	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
7:00 AM	0		0	0				0		9	1	10	1	3		4	14
7:05 AM	1		0	1				0		3	2	5	2	2		4	10
7:10 AM	0		0	0				0		8	1	9	2	6		8	17
7:15 AM	2		2	4				0		5	1	6	0	4		4	14
7:20 AM	2		1	3				0		4	0	4	1	3		4	11
7:25 AM	1		0	1				0		6	2	8	3	7		10	19
7:30 AM	4		2	6				0		6	2	8	1	4		5	19
7:35 AM	0		2	2				0		9	2	11	0	5		5	18
7:40 AM	3		2	5				0		2	0	2	0	9		9	16
7:45 AM	2		1	3				0		8	2	10	1	4		5	18
7:50 AM	0		2	2				0		4	1	5	0	3		3	10
7:55 AM	0		1	1				0		7	0	7	1	10		11	19
8:00 AM	1		1	2				0		5	5	10	0	3		3	15
8:05 AM	0		1	1				0		3	1	4	1	7		8	13
8:10 AM	1		0	1				0		8	2	10	1	6		7	18
8:15 AM	3		0	3				0		7	1	8	0	2		2	13
8:20 AM	0		2	2				0		10	2	12	1	3		4	18
8:25 AM	3		2	5				0		4	3	7	0	4		4	16
8:30 AM	1		1	2				0		0	1	1	2	6		8	11
8:35 AM	2		0	2				0		10	4	14	0	6		6	22
8:40 AM	2		0	2				0		5	0	5	1	4		5	12
8:45 AM	1		2	3				0		7	0	7	1	5		6	16
8:50 AM	3		1	4				0		7	3	10	1	6		7	21
8:55 AM	0		1	1				0		7	3	10	0	5		5	16
Total Survey	32		24	56				0		144	39	183	20	117		137	376

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
7:00 AM	1		0	1				0		20	4	24	5	11		16	41
7:15 AM	5		3	8				0		15	3	18	4	14		18	44
7:30 AM	7		6	13				0		17	4	21	1	18		19	53
7:45 AM	2		4	6				0		19	3	22	2	17		19	47
8:00 AM	2		2	4				0		16	8	24	2	16		18	46
8:15 AM	6		4	10				0		21	6	27	1	9		10	47
8:30 AM	5		1	6				0		15	5	20	3	16		19	45
8:45 AM	4		4	8				0		21	6	27	2	16		18	53
Total Survey	32		24	56				0		144	39	183	20	117		137	376

Heavy Vehicle Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 120th Ave			Southbound SW 120th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	29	29	58	0	0	0	95	78	173	72	89	161	196
PHF	0.56			0.00			0.79			0.82			0.88

By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	15		14	29				0		75	20	95	9	63		72	196
PHF	0.54		0.58	0.56				0.00		0.75	0.63	0.79	0.56	0.79		0.82	0.88

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

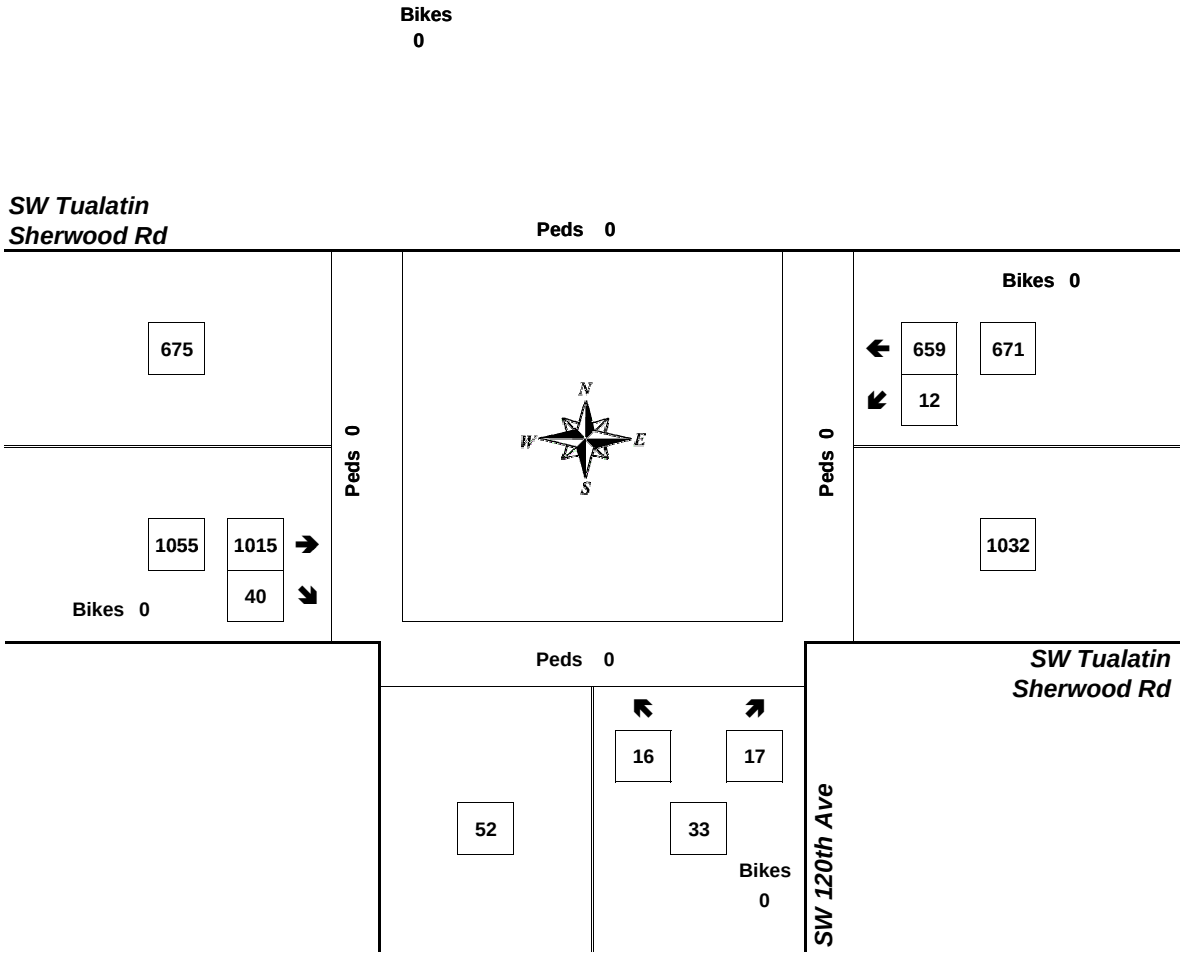
Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
7:00 AM	15		13	28				0		71	14	85	12	60		72	185
7:15 AM	16		15	31				0		67	18	85	9	65		74	190
7:30 AM	17		16	33				0		73	21	94	6	60		66	193
7:45 AM	15		11	26				0		71	22	93	8	58		66	185
8:00 AM	17		11	28				0		73	25	98	8	57		65	191

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 120th Ave & SW Tualatin Sherwood Rd

7:25 AM to 8:25 AM
Thursday, February 07, 2019

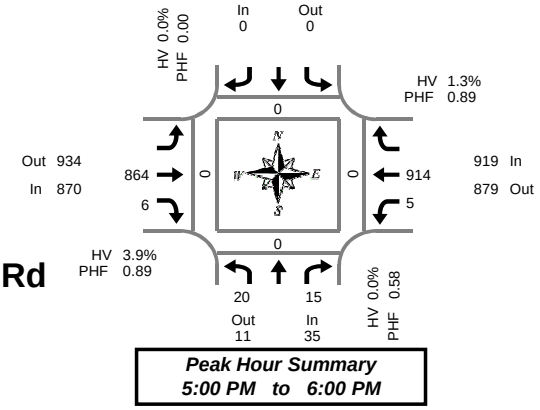


Approach	PHF	HV%	Volume
EB	0.95	9.0%	1,055
WB	0.89	10.7%	671
NB	0.63	87.9%	33
SB	0.00	0.0%	0
Intersection	0.96	11.1%	1,759

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	4		2	0				0		73	1	0	0	79		0	159	0	0	0	0
4:05 PM	3		1	0				0		67	2	0	0	68		0	141	0	0	0	0
4:10 PM	2		2	0				0		63	1	0	1	81		0	150	0	0	0	0
4:15 PM	1		1	0				0		61	0	0	0	86		0	149	0	0	0	0
4:20 PM	1		1	0				0		79	1	0	1	59		0	142	0	0	0	0
4:25 PM	2		2	0				0		63	1	0	0	81		0	149	0	0	0	0
4:30 PM	2		2	0				0		60	3	0	1	79		0	147	0	0	0	0
4:35 PM	1		1	0				0		70	0	0	3	84		0	159	0	0	0	0
4:40 PM	1		1	0				0		63	1	0	2	72		0	140	0	0	0	0
4:45 PM	1		3	0				0		84	0	0	1	72		0	161	0	0	0	0
4:50 PM	0		0	0				0		60	1	0	0	74		0	135	0	0	0	0
4:55 PM	1		2	0				0		67	1	0	1	67		0	139	0	0	0	0
5:00 PM	4		1	0				0		74	0	0	0	69		0	148	0	0	0	0
5:05 PM	1		1	0				0		65	1	0	0	75		0	143	0	0	0	0
5:10 PM	1		1	0				0		88	1	1	0	76		0	167	0	0	0	0
5:15 PM	5		2	0				0		80	0	0	0	70		0	157	0	0	0	0
5:20 PM	0		1	0				0		76	0	0	1	64		0	142	0	0	0	0
5:25 PM	0		0	0				0		63	0	0	0	78		0	141	0	0	0	0
5:30 PM	6		6	0				0		75	0	0	1	87		0	175	0	0	0	0
5:35 PM	1		2	0				0		63	0	0	0	86		0	152	0	0	0	0
5:40 PM	0		0	0				0		71	1	0	0	84		1	156	0	0	0	0
5:45 PM	0		0	0				0		66	1	0	0	87		0	154	0	0	0	0
5:50 PM	1		1	0				0		66	0	0	2	63		0	133	0	0	0	0
5:55 PM	1		0	0				0		77	2	0	1	75		2	156	0	0	0	0
Total Survey	39		33	0				0		1,674	18	1	15	1,816		3	3,595	0	0	0	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	9		5	0				0		203	4	0	1	228		0	450	0	0	0	0
4:15 PM	4		4	0				0		203	2	0	1	226		0	440	0	0	0	0
4:30 PM	4		4	0				0		193	4	0	6	235		0	446	0	0	0	0
4:45 PM	2		5	0				0		211	2	0	2	213		0	435	0	0	0	0
5:00 PM	6		3	0				0		227	2	1	0	220		0	458	0	0	0	0
5:15 PM	5		3	0				0		219	0	0	1	212		0	440	0	0	0	0
5:30 PM	7		8	0				0		209	1	0	1	257		1	483	0	0	0	0
5:45 PM	2		1	0				0		209	3	0	3	225		2	443	0	0	0	0
Total Survey	39		33	0				0		1,674	18	1	15	1,816		3	3,595	0	0	0	0

Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	35	11	46	0	0	0	0	0	870	934	1,804	1	919	879	1,798	3	1,824	0	0	0	0
%HV	0.0%				0.0%				3.9%				1.3%				2.5%				
PHF	0.58				0.00				0.89				0.89				0.94				

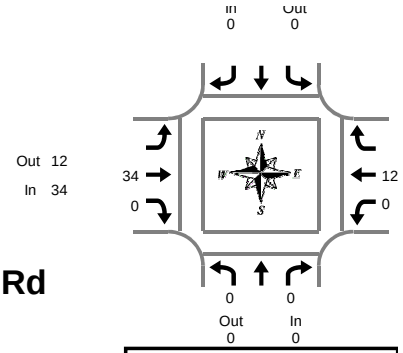
By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	20		15	35				0		864	6	870	5	914		919	1,824
%HV	0.0%	NA	0.0%	0.0%	NA	NA	NA	0.0%	NA	3.9%	0.0%	3.9%	0.0%	1.3%	NA	1.3%	2.5%
PHF	0.71		0.47	0.58				0.00		0.89	0.50	0.89	0.42	0.89		0.89	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L		R	Bikes				Bikes		T	R	Bikes	L	T		Bikes		North	South	East	West
4:00 PM	19		18	0				0		810	12	0	10	902		0	1,771	0	0	0	0
4:15 PM	16		16	0				0		834	10	1	9	894		0	1,779	0	0	0	0
4:30 PM	17		15	0				0		850	8	1	9	880		0	1,779	0	0	0	0
4:45 PM	20		19	0				0		866	5	1	4	902		1	1,816	0	0	0	0
5:00 PM	20		15	0				0		864	6	1	5	914		3	1,824	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 120th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
4:00 PM	0		0	0				0		4	0	4	0	5		5	9
4:05 PM	0		0	0				0		4	0	4	0	1		1	5
4:10 PM	0		0	0				0		2	0	2	0	4		4	6
4:15 PM	0		0	0				0		2	0	2	0	1		1	3
4:20 PM	0		0	0				0		3	1	4	0	3		3	7
4:25 PM	0		0	0				0		3	0	3	0	1		1	4
4:30 PM	0		0	0				0		2	0	2	0	2		2	4
4:35 PM	0		0	0				0		1	0	1	0	2		2	3
4:40 PM	0		0	0				0		1	0	1	0	2		2	3
4:45 PM	0		0	0				0		2	0	2	0	1		1	3
4:50 PM	0		0	0				0		1	0	1	0	5		5	6
4:55 PM	0		0	0				0		1	0	1	0	1		1	2
5:00 PM	0		0	0				0		1	0	1	0	2		2	3
5:05 PM	0		0	0				0		3	0	3	0	1		1	4
5:10 PM	0		0	0				0		2	0	2	0	2		2	4
5:15 PM	0		0	0				0		7	0	7	0	0		0	7
5:20 PM	0		0	0				0		1	0	1	0	1		1	2
5:25 PM	0		0	0				0		3	0	3	0	0		0	3
5:30 PM	0		0	0				0		4	0	4	0	2		2	6
5:35 PM	0		0	0				0		3	0	3	0	1		1	4
5:40 PM	0		0	0				0		1	0	1	0	0		0	1
5:45 PM	0		0	0				0		5	0	5	0	0		0	5
5:50 PM	0		0	0				0		2	0	2	0	2		2	4
5:55 PM	0		0	0				0		2	0	2	0	1		1	3
Total Survey	0		0	0				0		60	1	61	0	40		40	101

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
4:00 PM	0		0	0				0		10	0	10	0	10		10	20
4:15 PM	0		0	0				0		8	1	9	0	5		5	14
4:30 PM	0		0	0				0		4	0	4	0	6		6	10
4:45 PM	0		0	0				0		4	0	4	0	7		7	11
5:00 PM	0		0	0				0		6	0	6	0	5		5	11
5:15 PM	0		0	0				0		11	0	11	0	1		1	12
5:30 PM	0		0	0				0		8	0	8	0	3		3	11
5:45 PM	0		0	0				0		9	0	9	0	3		3	12
Total Survey	0		0	0				0		60	1	61	0	40		40	101

Heavy Vehicle Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound SW 120th Ave			Southbound SW 120th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	34	12	46	12	34	46	46
PHF	0.00			0.00			0.71			0.60			0.77

By Movement	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L		R	Total				Total		T	R	Total	L	T		Total	
Volume	0		0	0				0		34	0	34	0	12		12	46
PHF	0.00		0.00	0.00				0.00		0.71	0.00	0.71	0.00	0.60		0.60	0.77

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

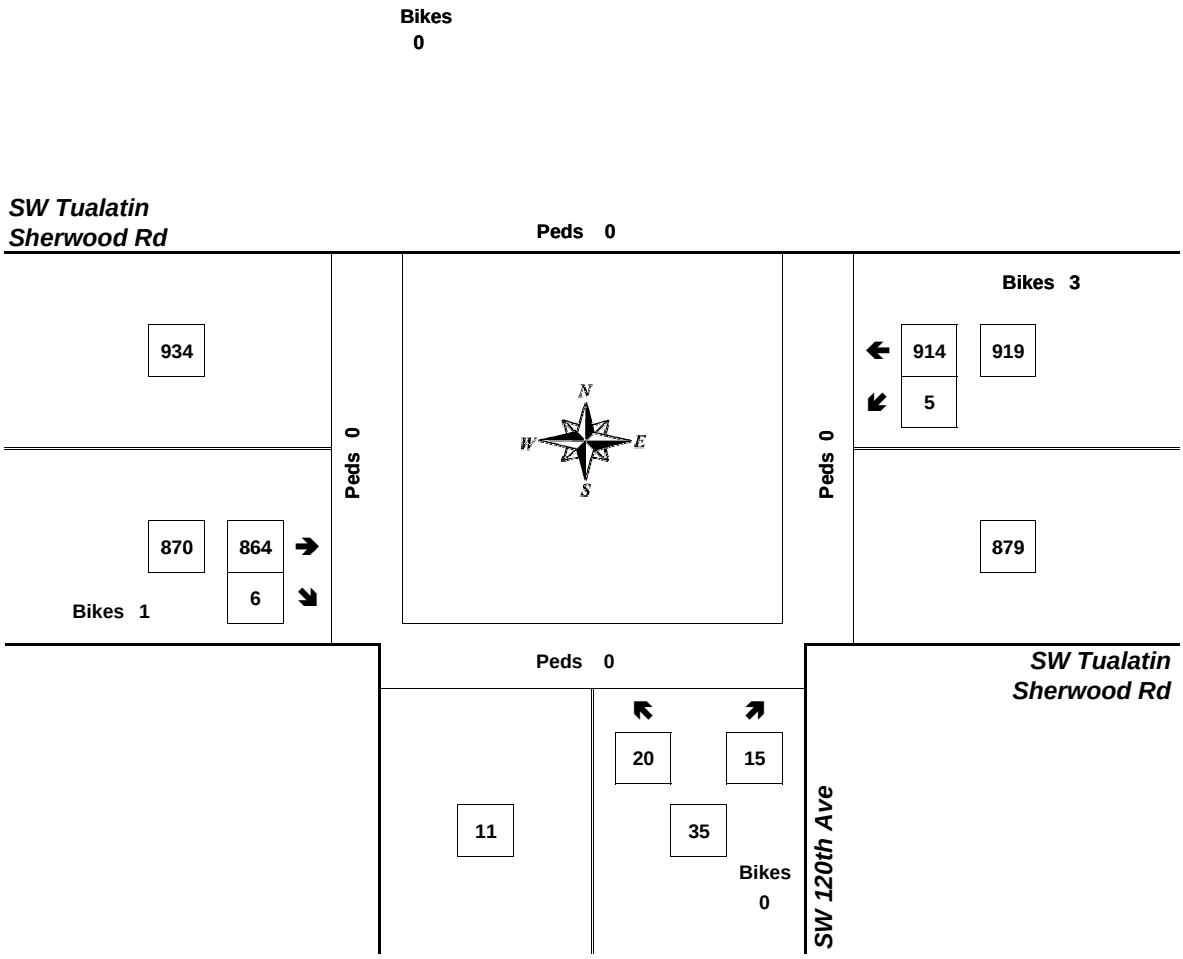
Interval Start Time	Northbound SW 120th Ave				Southbound SW 120th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L		R	Total				Total		T	R	Total	L	T		Total	
4:00 PM	0		0	0				0		26	1	27	0	28		28	55
4:15 PM	0		0	0				0		22	1	23	0	23		23	46
4:30 PM	0		0	0				0		25	0	25	0	19		19	44
4:45 PM	0		0	0				0		29	0	29	0	16		16	45
5:00 PM	0		0	0				0		34	0	34	0	12		12	46

Peak Hour Summary

Clay Carney
(503) 833-2740

SW 120th Ave & SW Tualatin Sherwood Rd

5:00 PM to 6:00 PM
Wednesday, February 06, 2019

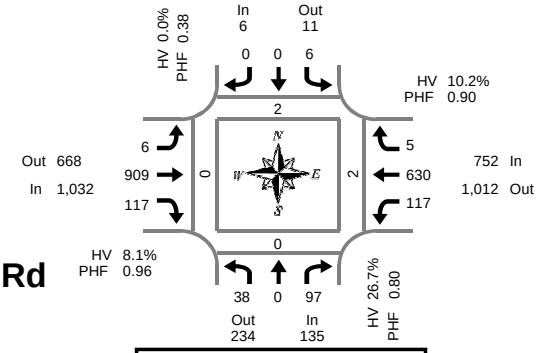


Approach	PHF	HV%	Volume
EB	0.89	3.9%	870
WB	0.89	1.3%	919
NB	0.58	0.0%	35
SB	0.00	0.0%	0
Intersection	0.94	2.5%	1,824

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:25 AM to 8:25 AM

SW 115th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	3	0	7	0	0	0	0	0	0	84	9	0	6	31	0	0	140	0	0	0	0
7:05 AM	4	0	11	0	0	0	1	0	1	83	15	0	8	37	1	0	161	0	0	0	0
7:10 AM	2	1	10	0	1	0	0	0	0	69	11	0	6	45	0	0	145	0	0	0	0
7:15 AM	3	0	7	0	2	1	0	0	0	70	7	0	8	51	1	0	150	0	0	0	0
7:20 AM	2	0	5	0	0	0	0	0	0	69	11	1	8	39	0	0	134	0	0	0	0
7:25 AM	3	0	5	0	2	0	0	0	0	75	12	0	14	73	1	0	185	0	0	2	0
7:30 AM	2	0	8	0	2	0	0	0	0	74	14	0	11	42	0	0	153	0	0	0	0
7:35 AM	4	0	9	0	0	0	0	0	0	82	6	0	5	62	0	0	168	0	0	0	0
7:40 AM	2	0	9	0	0	0	0	0	0	85	7	0	10	43	0	0	156	0	0	0	0
7:45 AM	3	0	6	0	0	0	0	0	0	71	11	0	9	63	0	0	163	0	0	0	0
7:50 AM	6	0	13	0	0	0	0	0	0	68	12	0	12	51	1	0	163	0	0	0	0
7:55 AM	3	0	9	0	0	0	0	0	3	68	11	0	13	55	1	0	163	2	0	0	0
8:00 AM	4	0	7	0	0	0	0	0	0	73	11	0	7	57	1	0	160	0	0	0	0
8:05 AM	4	0	4	0	0	0	0	0	1	73	11	0	14	49	0	0	156	0	0	0	0
8:10 AM	4	0	7	0	2	0	0	0	0	79	8	0	7	46	0	0	153	0	0	0	0
8:15 AM	1	0	14	0	0	0	0	0	1	78	6	0	7	44	0	0	151	0	0	0	0
8:20 AM	2	0	6	0	0	0	0	0	1	83	8	0	8	45	1	0	154	0	0	0	0
8:25 AM	3	0	13	0	0	0	0	0	2	70	3	0	8	42	3	0	144	0	0	2	0
8:30 AM	7	0	5	0	0	0	0	0	1	63	1	0	11	61	2	0	151	0	0	0	0
8:35 AM	5	0	5	0	0	0	1	0	0	73	4	0	6	47	0	0	141	0	0	0	0
8:40 AM	3	0	9	0	1	0	0	0	1	90	6	0	3	64	0	0	177	0	0	0	0
8:45 AM	4	0	2	0	0	0	0	0	1	75	2	0	10	49	1	0	144	0	0	0	0
8:50 AM	3	0	4	0	0	0	0	0	1	79	5	0	9	51	4	0	156	0	0	0	0
8:55 AM	4	0	5	0	2	0	1	0	1	59	3	0	5	55	3	0	138	0	0	0	0
Total Survey	81	1	180	0	12	1	3	0	14	1,793	194	1	205	1,202	20	0	3,706	2	0	4	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	9	1	28	0	1	0	1	0	1	236	35	0	20	113	1	0	446	0	0	0	0
7:15 AM	8	0	17	0	4	1	0	0	0	214	30	1	30	163	2	0	469	0	0	2	0
7:30 AM	8	0	26	0	2	0	0	0	0	241	27	0	26	147	0	0	477	0	0	0	0
7:45 AM	12	0	28	0	0	0	0	0	3	207	34	0	34	169	2	0	489	2	0	0	0
8:00 AM	12	0	18	0	2	0	0	0	1	225	30	0	28	152	1	0	469	0	0	0	0
8:15 AM	6	0	33	0	0	0	0	0	4	231	17	0	23	131	4	0	449	0	0	2	0
8:30 AM	15	0	19	0	1	0	1	0	2	226	11	0	20	172	2	0	469	0	0	0	0
8:45 AM	11	0	11	0	2	0	1	0	3	213	10	0	24	155	8	0	438	0	0	0	0
Total Survey	81	1	180	0	12	1	3	0	14	1,793	194	1	205	1,202	20	0	3,706	2	0	4	0

Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	135	234	369	0	6	11	17	0	1,032	668	1,700	0	752	1,012	1,764	0	1,925	2	0	2	0
%HV	26.7%				0.0%				8.1%				10.2%				10.2%				
PHF	0.80				0.38				0.96				0.90				0.95				

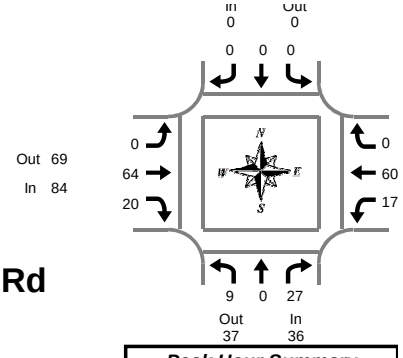
By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	38	0	97	135	6	0	0	6	6	909	117	1,032	117	630	5	752	1,925
%HV	23.7%	0.0%	27.8%	26.7%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	17.1%	8.1%	14.5%	9.5%	0.0%	10.2%	10.2%
PHF	0.73	0.00	0.84	0.80	0.38	0.00	0.00	0.38	0.38	0.94	0.86	0.96	0.86	0.89	0.42	0.90	0.95

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	37	1	99	0	7	1	1	0	4	898	126	1	110	592	5	0	1,881	2	0	2	0
7:15 AM	40	0	89	0	8	1	0	0	4	887	121	1	118	631	5	0	1,904	2	0	2	0
7:30 AM	38	0	105	0	4	0	0	0	8	904	108	0	111	599	7	0	1,884	2	0	2	0
7:45 AM	45	0	98	0	3	0	1	0	10	889	92	0	105	624	9	0	1,876	2	0	2	0
8:00 AM	44	0	81	0	5	0	2	0	10	895	68	0	95	610	15	0	1,825	0	0	2	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 115th Ave & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	1	2	0	0	0	0	0	7	2	9	0	3	0	3	14
7:05 AM	0	0	5	5	0	0	0	0	0	4	1	5	1	4	0	5	15
7:10 AM	1	0	2	3	0	0	0	0	0	4	2	6	0	6	0	6	15
7:15 AM	2	0	3	5	0	0	0	0	0	7	1	8	2	2	0	4	17
7:20 AM	0	0	1	1	0	0	0	0	0	3	1	4	0	5	0	5	10
7:25 AM	1	0	3	4	0	0	0	0	0	3	3	6	1	7	0	8	18
7:30 AM	1	0	2	3	0	0	0	0	0	1	5	6	1	4	0	5	14
7:35 AM	1	0	3	4	0	0	0	0	0	12	2	14	1	6	0	7	25
7:40 AM	1	0	3	4	0	0	0	0	0	3	0	3	0	6	0	6	13
7:45 AM	2	0	3	5	0	0	0	0	0	8	0	8	2	1	0	3	16
7:50 AM	2	0	2	4	0	0	0	0	0	4	2	6	2	2	0	4	14
7:55 AM	0	0	2	2	0	0	0	0	0	7	1	8	0	9	0	9	19
8:00 AM	0	0	0	0	0	0	0	0	0	2	2	4	0	7	0	7	11
8:05 AM	0	0	0	0	0	0	0	0	0	4	1	5	0	7	0	7	12
8:10 AM	1	0	3	4	0	0	0	0	0	3	2	5	3	5	0	8	17
8:15 AM	0	0	3	3	0	0	0	0	0	7	1	8	5	2	0	7	18
8:20 AM	0	0	3	3	0	0	0	0	0	10	1	11	2	4	0	6	20
8:25 AM	1	0	4	5	0	0	0	0	0	4	0	4	2	5	0	7	16
8:30 AM	1	0	3	4	0	0	0	0	0	3	1	4	5	10	0	15	23
8:35 AM	3	0	1	4	0	0	0	0	0	8	1	9	1	3	0	4	17
8:40 AM	1	0	2	3	0	0	0	0	0	5	1	6	0	7	0	7	16
8:45 AM	1	0	0	1	0	0	0	0	0	9	0	9	2	5	0	7	17
8:50 AM	0	0	2	2	0	0	0	0	0	8	1	9	3	6	0	9	20
8:55 AM	2	0	3	5	0	0	0	0	0	7	1	8	2	5	0	7	20
Total Survey	22	0	54	76	0	0	0	0	0	133	32	165	35	121	0	156	397

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	0	8	10	0	0	0	0	0	15	5	20	1	13	0	14	44
7:15 AM	3	0	7	10	0	0	0	0	0	13	5	18	3	14	0	17	45
7:30 AM	3	0	8	11	0	0	0	0	0	16	7	23	2	16	0	18	52
7:45 AM	4	0	7	11	0	0	0	0	0	19	3	22	4	12	0	16	49
8:00 AM	1	0	3	4	0	0	0	0	0	9	5	14	3	19	0	22	40
8:15 AM	1	0	10	11	0	0	0	0	0	21	2	23	9	11	0	20	54
8:30 AM	5	0	6	11	0	0	0	0	0	16	3	19	6	20	0	26	56
8:45 AM	3	0	5	8	0	0	0	0	0	24	2	26	7	16	0	23	57
Total Survey	22	0	54	76	0	0	0	0	0	133	32	165	35	121	0	156	397

Heavy Vehicle Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW 115th Ave			Southbound SW 115th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	36	37	73	0	0	0	84	69	153	77	91	168	197
PHF	0.69			0.00			0.81			0.84			0.86

By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	9	0	27	36	0	0	0	0	0	64	20	84	17	60	0	77	197
PHF	0.45	0.00	0.75	0.69	0.00	0.00	0.00	0.00	0.00	0.70	0.50	0.81	0.43	0.65	0.00	0.84	0.86

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

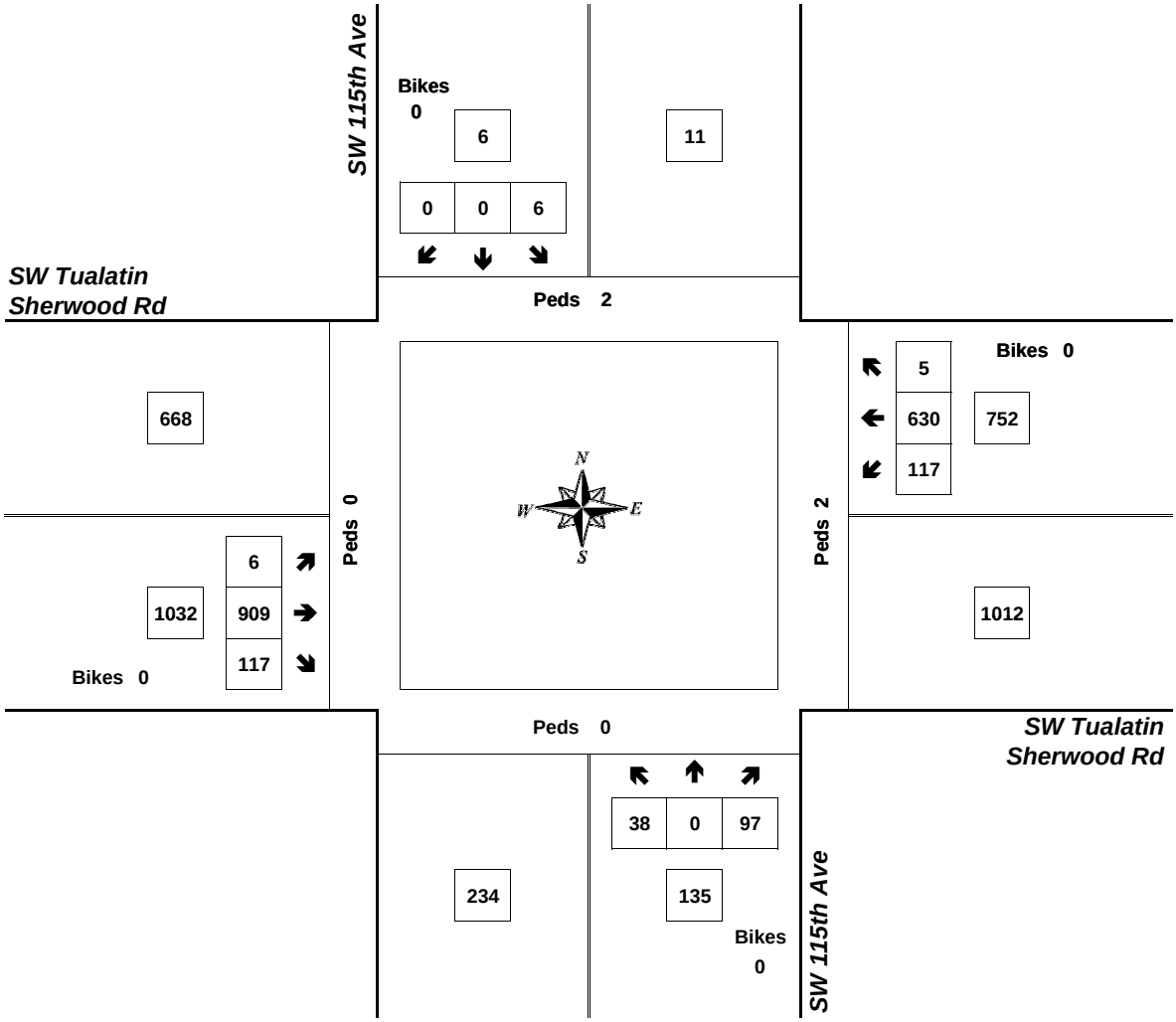
Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	12	0	30	42	0	0	0	0	0	63	20	83	10	55	0	65	190
7:15 AM	11	0	25	36	0	0	0	0	0	57	20	77	12	61	0	73	186
7:30 AM	9	0	28	37	0	0	0	0	0	65	17	82	18	58	0	76	195
7:45 AM	11	0	26	37	0	0	0	0	0	65	13	78	22	62	0	84	199
8:00 AM	10	0	24	34	0	0	0	0	0	70	12	82	25	66	0	91	207

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

SW 115th Ave & SW Tualatin Sherwood Rd

7:25 AM to 8:25 AM
Thursday, February 07, 2019

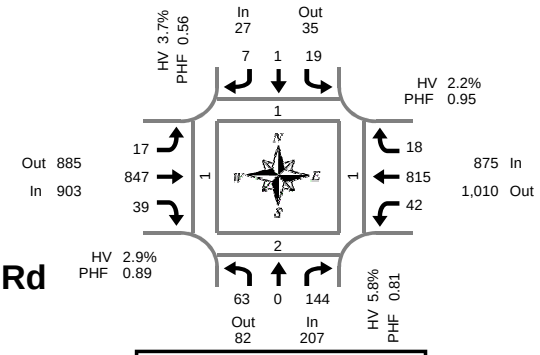


Approach	PHF	HV%	Volume
EB	0.96	8.1%	1,032
WB	0.90	10.2%	752
NB	0.80	26.7%	135
SB	0.38	0.0%	6
Intersection	0.95	10.2%	1,925

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW 115th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:45 PM to 5:45 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	3	1	23	0	2	0	0	0	1	64	3	0	2	64	0	0	163	0	0	0	0
4:05 PM	13	0	21	0	1	0	1	0	1	67	3	0	3	63	1	0	174	0	0	0	0
4:10 PM	10	0	19	0	0	0	0	0	0	53	6	0	8	67	1	0	164	0	0	0	0
4:15 PM	5	1	12	0	2	0	2	0	1	62	3	0	0	73	0	0	161	0	0	0	0
4:20 PM	4	0	6	0	0	0	1	0	2	69	5	0	5	56	2	0	150	0	0	0	0
4:25 PM	5	0	13	0	0	0	0	0	0	69	4	0	4	75	1	0	171	0	0	0	0
4:30 PM	13	0	16	0	2	0	2	0	0	51	2	0	3	61	1	0	151	0	0	0	0
4:35 PM	14	0	13	0	0	0	0	0	0	71	5	0	7	80	1	0	191	0	0	0	0
4:40 PM	10	0	7	0	1	0	1	0	2	48	2	0	0	62	1	0	134	0	0	0	0
4:45 PM	2	0	11	0	0	0	0	0	2	83	2	0	3	72	1	0	176	0	0	0	0
4:50 PM	1	0	16	0	0	1	0	0	1	70	7	0	5	66	3	0	170	0	0	0	0
4:55 PM	4	0	7	0	2	0	0	0	1	60	3	0	6	65	1	0	149	0	0	0	0
5:00 PM	10	0	17	0	4	0	0	0	1	67	4	0	3	61	1	0	168	0	0	0	0
5:05 PM	2	0	12	0	0	0	2	0	1	63	3	0	6	77	2	0	168	0	0	1	0
5:10 PM	9	0	14	0	0	0	0	0	1	74	3	0	6	59	0	0	166	0	0	0	0
5:15 PM	4	0	6	0	1	0	0	0	4	90	3	0	3	72	1	0	184	0	1	0	0
5:20 PM	3	0	10	0	3	0	0	0	2	74	3	0	2	57	2	0	156	1	0	0	0
5:25 PM	8	0	8	0	0	0	2	0	0	59	3	0	2	66	2	0	150	0	0	0	0
5:30 PM	8	0	21	0	4	0	0	0	1	66	2	0	4	79	2	0	187	0	0	0	0
5:35 PM	7	0	9	0	3	0	3	0	1	81	2	0	1	67	3	0	177	0	1	0	1
5:40 PM	5	0	13	0	2	0	0	0	2	60	4	0	1	74	0	0	161	0	0	0	0
5:45 PM	5	0	6	0	1	0	0	0	0	73	4	0	3	80	3	0	175	0	0	0	0
5:50 PM	6	0	12	0	1	0	0	0	0	54	1	0	4	65	0	0	143	0	0	0	0
5:55 PM	5	0	9	0	0	0	2	0	1	83	2	0	1	70	0	0	173	0	0	0	0
Total Survey	156	2	301	0	29	1	16	0	25	1,611	79	0	82	1,631	29	0	3,962	1	2	1	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	26	1	63	0	3	0	1	0	2	184	12	0	13	194	2	0	501	0	0	0	0
4:15 PM	14	1	31	0	2	0	3	0	3	200	12	0	9	204	3	0	482	0	0	0	0
4:30 PM	37	0	36	0	3	0	3	0	2	170	9	0	10	203	3	0	476	0	0	0	0
4:45 PM	7	0	34	0	2	1	0	0	4	213	12	0	14	203	5	0	495	0	0	0	0
5:00 PM	21	0	43	0	4	0	2	0	3	204	10	0	15	197	3	0	502	0	0	1	0
5:15 PM	15	0	24	0	4	0	2	0	6	223	9	0	7	195	5	0	490	1	1	0	0
5:30 PM	20	0	43	0	9	0	3	0	4	207	8	0	6	220	5	0	525	0	1	0	1
5:45 PM	16	0	27	0	2	0	2	0	1	210	7	0	8	215	3	0	491	0	0	0	0
Total Survey	156	2	301	0	29	1	16	0	25	1,611	79	0	82	1,631	29	0	3,962	1	2	1	1

Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	207	82	289	0	27	35	62	0	903	885	1,788	0	875	1,010	1,885	0	2,012	1	2	1	1
%HV	5.8%				3.7%				2.9%				2.2%				2.9%				
PHF	0.81				0.56				0.89				0.95				0.96				

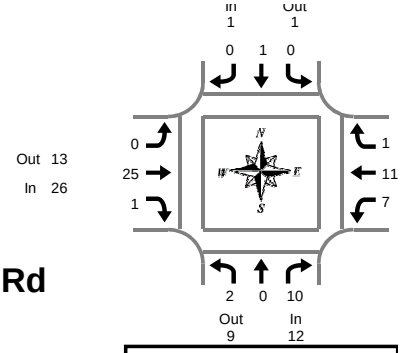
By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	63	0	144	207	19	1	7	27	17	847	39	903	42	815	18	875	2,012
%HV	3.2%	0.0%	6.9%	5.8%	0.0%	#####	0.0%	3.7%	0.0%	3.0%	2.6%	2.9%	16.7%	1.3%	5.6%	2.2%	2.9%
PHF	0.68	0.00	0.84	0.81	0.53	0.25	0.35	0.56	0.61	0.89	0.70	0.89	0.70	0.93	0.64	0.95	0.96

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	84	2	164	0	10	1	7	0	11	767	45	0	46	804	13	0	1,954	0	0	0	0
4:15 PM	79	1	144	0	11	1	8	0	12	787	43	0	48	807	14	0	1,955	0	0	1	0
4:30 PM	80	0	137	0	13	1	7	0	15	810	40	0	46	798	16	0	1,963	1	1	1	0
4:45 PM	63	0	144	0	19	1	7	0	17	847	39	0	42	815	18	0	2,012	1	2	1	1
5:00 PM	72	0	137	0	19	0	9	0	14	844	34	0	36	827	16	0	2,008	1	2	1	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW 115th Ave & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:45 PM to 5:45 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
4:05 PM	1	0	1	2	0	0	0	0	0	6	0	6	2	1	0	3	11
4:10 PM	0	0	1	1	0	0	0	0	0	2	1	3	2	3	0	5	9
4:15 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	1	0	1	4
4:20 PM	1	0	0	1	0	0	0	0	0	5	1	6	0	2	0	2	9
4:25 PM	1	0	0	1	0	0	0	0	0	4	0	4	1	1	0	2	7
4:30 PM	1	0	2	3	0	0	1	1	0	0	1	1	1	0	0	1	6
4:35 PM	0	0	0	0	0	0	0	0	0	2	1	3	1	3	0	4	7
4:40 PM	2	0	1	3	0	0	0	0	0	1	0	1	0	1	0	1	5
4:45 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	1	1	4
4:50 PM	0	0	2	2	0	1	0	1	0	1	1	2	1	2	0	3	8
4:55 PM	1	0	0	1	0	0	0	0	0	1	0	1	1	2	0	3	5
5:00 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	2	0	2	5
5:05 PM	0	0	0	0	0	0	0	0	0	3	0	3	2	1	0	3	6
5:10 PM	1	0	0	1	0	0	0	0	0	3	0	3	0	1	0	1	5
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	4	1	0	0	1	5
5:20 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	2	3
5:25 PM	0	0	1	1	0	0	0	0	0	3	0	3	1	0	0	1	5
5:30 PM	0	0	1	1	0	0	0	0	0	3	0	3	0	1	0	1	5
5:35 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:40 PM	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	4	1	5	1	0	0	1	6
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	2	0	3	4
5:55 PM	0	0	1	1	0	0	0	0	0	2	1	3	0	1	0	1	5
Total Survey	8	0	18	26	0	1	1	2	0	54	7	61	16	28	1	45	134

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	2	3	0	0	0	0	0	9	1	10	4	6	0	10	23
4:15 PM	2	0	2	4	0	0	0	0	0	10	1	11	1	4	0	5	20
4:30 PM	3	0	3	6	0	0	1	1	0	3	2	5	2	4	0	6	18
4:45 PM	1	0	3	4	0	1	0	1	0	4	1	5	2	4	1	7	17
5:00 PM	1	0	2	3	0	0	0	0	0	7	0	7	2	4	0	6	16
5:15 PM	0	0	2	2	0	0	0	0	0	7	0	7	3	1	0	4	13
5:30 PM	0	0	3	3	0	0	0	0	0	7	0	7	0	2	0	2	12
5:45 PM	0	0	1	1	0	0	0	0	0	7	2	9	2	3	0	5	15
Total Survey	8	0	18	26	0	1	1	2	0	54	7	61	16	28	1	45	134

Heavy Vehicle Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound SW 115th Ave			Southbound SW 115th Ave			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	12	9	21	1	1	2	26	13	39	19	35	54	58
PHF	0.60			0.25			0.65			0.59			0.81

By Movement	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	0	10	12	0	1	0	1	0	25	1	26	7	11	1	19	58
PHF	0.50	0.00	0.63	0.60	0.00	0.25	0.00	0.25	0.00	0.63	0.25	0.65	0.58	0.46	0.25	0.59	0.81

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 115th Ave				Southbound SW 115th Ave				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	7	0	10	17	0	1	1	2	0	26	5	31	9	18	1	28	78
4:15 PM	7	0	10	17	0	1	1	2	0	24	4	28	7	16	1	24	71
4:30 PM	5	0	10	15	0	1	1	2	0	21	3	24	9	13	1	23	64
4:45 PM	2	0	10	12	0	1	0	1	0	25	1	26	7	11	1	19	58
5:00 PM	1	0	8	9	0	0	0	0	0	28	2	30	7	10	0	17	56

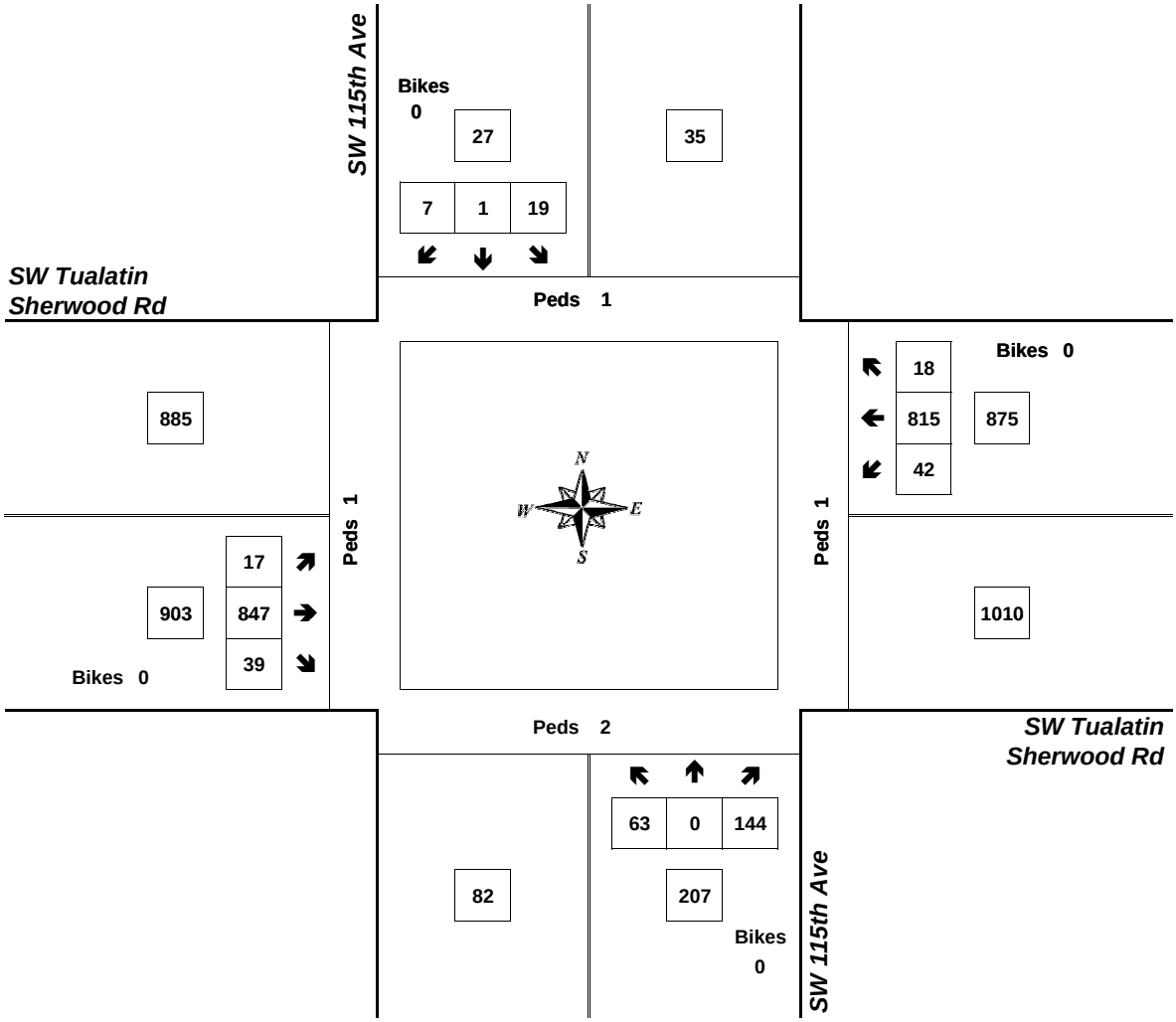
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

SW 115th Ave & SW Tualatin Sherwood Rd

4:45 PM to 5:45 PM
Wednesday, February 06, 2019

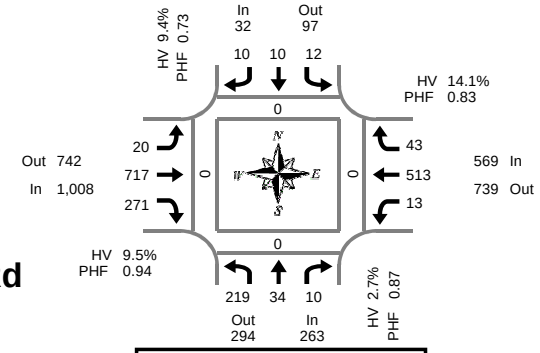


Approach	PHF	HV%	Volume
EB	0.89	2.9%	903
WB	0.95	2.2%	875
NB	0.81	5.8%	207
SB	0.56	3.7%	27
Intersection	0.96	2.9%	2,012

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW Avery St & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	10	4	0	0	0	0	2	0	2	75	14	0	0	26	4	0	137	0	0	0	0
7:05 AM	12	6	0	0	0	0	0	0	1	67	20	0	1	37	4	0	148	0	0	0	0
7:10 AM	12	4	2	0	0	0	0	0	2	56	26	0	0	36	1	0	139	0	0	0	0
7:15 AM	22	3	0	0	3	0	1	0	6	59	13	0	1	34	3	0	145	0	0	0	0
7:20 AM	19	2	1	0	1	1	0	0	4	60	12	0	0	21	9	0	130	0	0	0	0
7:25 AM	14	2	0	0	0	2	2	0	2	57	19	0	2	68	11	0	179	0	0	0	0
7:30 AM	21	6	1	0	0	1	1	0	1	61	26	0	1	25	2	0	146	0	0	0	0
7:35 AM	15	0	1	0	1	0	0	0	0	64	26	0	2	52	3	0	164	0	0	0	0
7:40 AM	20	3	1	0	1	2	1	0	2	59	30	0	1	35	3	0	158	0	0	0	0
7:45 AM	21	2	2	0	3	1	1	0	0	46	29	0	0	58	2	1	165	0	0	0	0
7:50 AM	17	7	1	0	0	1	1	0	4	63	18	0	2	43	4	0	161	0	0	0	0
7:55 AM	21	4	1	0	0	1	2	0	1	61	18	0	1	58	3	0	171	0	0	0	0
8:00 AM	22	1	1	0	1	1	1	0	4	56	23	0	1	29	3	0	143	0	0	0	0
8:05 AM	19	3	1	0	0	0	0	0	0	55	22	0	2	40	4	0	146	0	0	0	0
8:10 AM	17	1	1	0	0	0	0	0	1	59	26	0	0	39	3	0	147	0	0	0	0
8:15 AM	16	3	0	0	2	1	1	0	3	69	16	0	1	28	2	0	142	0	0	0	0
8:20 AM	16	2	0	0	4	0	0	0	2	67	18	0	0	38	3	0	150	0	0	0	0
8:25 AM	11	0	1	0	0	1	1	0	1	75	18	0	3	44	4	0	159	0	0	0	0
8:30 AM	9	0	0	0	3	0	0	0	1	66	6	0	0	52	2	0	139	0	0	0	0
8:35 AM	14	0	1	0	3	0	0	0	0	59	18	0	1	51	4	0	151	0	0	0	0
8:40 AM	13	1	0	0	1	0	0	0	0	86	18	0	2	41	0	0	162	0	0	0	0
8:45 AM	13	0	3	0	0	0	0	0	0	59	17	0	0	49	6	0	147	0	0	0	0
8:50 AM	19	3	0	0	0	1	0	0	1	60	18	0	1	44	3	0	150	0	0	0	0
8:55 AM	16	2	0	0	0	1	0	0	0	46	18	0	1	50	6	0	140	0	0	0	0
Total Survey	389	59	18	0	23	14	14	0	38	1,485	469	0	23	998	89	1	3,619	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	34	14	2	0	0	0	2	0	5	198	60	0	1	99	9	0	424	0	0	0	0
7:15 AM	55	7	1	0	4	3	3	0	12	176	44	0	3	123	23	0	454	0	0	0	0
7:30 AM	56	9	3	0	2	3	2	0	3	184	82	0	4	112	8	0	468	0	0	0	0
7:45 AM	59	13	4	0	3	3	4	0	5	170	65	0	3	159	9	1	497	0	0	0	0
8:00 AM	58	5	3	0	1	1	1	0	5	170	71	0	3	108	10	0	436	0	0	0	0
8:15 AM	43	5	1	0	6	2	2	0	6	211	52	0	4	110	9	0	451	0	0	0	0
8:30 AM	36	1	1	0	7	0	0	0	1	211	42	0	3	144	6	0	452	0	0	0	0
8:45 AM	48	5	3	0	0	2	0	0	1	165	53	0	2	143	15	0	437	0	0	0	0
Total Survey	389	59	18	0	23	14	14	0	38	1,485	469	0	23	998	89	1	3,619	0	0	0	0

Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	263	294	557	0	32	97	129	0	1,008	742	1,750	0	569	739	1,308	1	1,872	0	0	0	0
%HV	2.7%				9.4%				9.5%				14.1%				9.9%				
PHF	0.87				0.73				0.94				0.83				0.94				

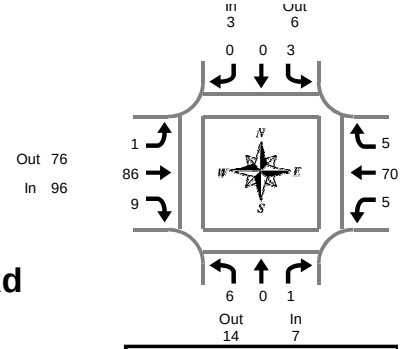
By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	219	34	10	263	12	10	10	32	20	717	271	1,008	13	513	43	569	1,872
%HV	2.7%	0.0%	10.0%	2.7%	25.0%	0.0%	0.0%	9.4%	5.0%	12.0%	3.3%	9.5%	38.5%	13.6%	11.6%	14.1%	9.9%
PHF	0.88	0.65	0.63	0.87	0.50	0.63	0.63	0.73	0.56	0.92	0.80	0.94	0.65	0.81	0.67	0.83	0.94

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	204	43	10	0	9	9	11	0	25	728	251	0	11	493	49	1	1,843	0	0	0	0
7:15 AM	228	34	11	0	10	10	10	0	25	700	262	0	13	502	50	1	1,855	0	0	0	0
7:30 AM	216	32	11	0	12	9	9	0	19	735	270	0	14	489	36	1	1,852	0	0	0	0
7:45 AM	196	24	9	0	17	6	7	0	17	762	230	0	13	521	34	1	1,836	0	0	0	0
8:00 AM	185	16	8	0	14	5	3	0	13	757	218	0	12	505	40	0	1,776	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



SW Avery St & SW Tualatin Sherwood Rd

Thursday, February 07, 2019
7:00 AM to 9:00 AM

Peak Hour Summary
7:25 AM to 8:25 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	7	1	8	0	4	0	4	12
7:05 AM	0	0	0	0	0	0	0	0	0	10	0	10	0	5	0	5	15
7:10 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	5	0	5	9
7:15 AM	0	0	0	0	1	0	0	1	0	11	0	11	0	4	0	4	16
7:20 AM	4	0	0	4	0	0	0	0	0	3	0	3	0	2	1	3	10
7:25 AM	0	0	0	0	0	0	0	0	0	7	1	8	1	9	1	11	19
7:30 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	4	0	4	7
7:35 AM	1	0	0	1	1	0	0	1	0	10	2	12	1	7	1	9	23
7:40 AM	1	0	0	1	0	0	0	0	0	8	1	9	0	6	0	6	16
7:45 AM	0	0	0	0	0	0	0	0	0	7	0	7	0	3	0	3	10
7:50 AM	0	0	0	0	0	0	0	0	1	7	1	9	2	5	0	7	16
7:55 AM	0	0	0	0	0	0	0	0	0	11	0	11	0	7	0	7	18
8:00 AM	1	0	1	2	1	0	0	1	0	3	0	3	0	7	0	7	13
8:05 AM	2	0	0	2	0	0	0	0	0	4	0	4	0	6	1	7	13
8:10 AM	0	0	0	0	0	0	0	0	0	7	1	8	0	8	0	8	16
8:15 AM	0	0	0	0	1	0	0	1	0	6	2	8	1	4	1	6	15
8:20 AM	1	0	0	1	0	0	0	0	0	13	1	14	0	4	1	5	20
8:25 AM	3	0	0	3	0	0	0	0	0	6	2	8	0	8	0	8	19
8:30 AM	0	0	0	0	0	0	0	0	0	8	0	8	0	9	0	9	17
8:35 AM	0	0	1	1	1	0	0	1	0	8	1	9	0	4	1	5	16
8:40 AM	0	0	0	0	0	0	0	0	0	6	0	6	0	7	0	7	13
8:45 AM	1	0	0	1	0	0	0	0	0	7	1	8	0	9	1	10	19
8:50 AM	0	0	0	0	0	1	0	1	0	7	2	9	0	6	1	7	17
8:55 AM	0	0	0	0	0	0	0	0	0	7	1	8	0	7	0	7	15
Total Survey	14	0	2	16	5	1	0	6	1	170	17	188	5	140	9	154	364

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	21	1	22	0	14	0	14	36
7:15 AM	4	0	0	4	1	0	0	1	0	21	1	22	1	15	2	18	45
7:30 AM	2	0	0	2	1	0	0	1	0	21	3	24	1	17	1	19	46
7:45 AM	0	0	0	0	0	0	0	0	1	25	1	27	2	15	0	17	44
8:00 AM	3	0	1	4	1	0	0	1	0	14	1	15	0	21	1	22	42
8:15 AM	4	0	0	4	1	0	0	1	0	25	5	30	1	16	2	19	54
8:30 AM	0	0	1	1	1	0	0	1	0	22	1	23	0	20	1	21	46
8:45 AM	1	0	0	1	0	1	0	1	0	21	4	25	0	22	2	24	51
Total Survey	14	0	2	16	5	1	0	6	1	170	17	188	5	140	9	154	364

Heavy Vehicle Peak Hour Summary
7:25 AM to 8:25 AM

By Approach	Northbound SW Avery St			Southbound SW Avery St			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	7	14	21	3	6	9	96	76	172	80	90	170	186
PHF	0.44			0.75			0.80			0.83			0.91

By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	6	0	1	7	3	0	0	3	1	86	9	96	5	70	5	80	186
PHF	0.50	0.00	0.25	0.44	0.75	0.00	0.00	0.75	0.25	0.83	0.56	0.80	0.63	0.83	0.63	0.83	0.91

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

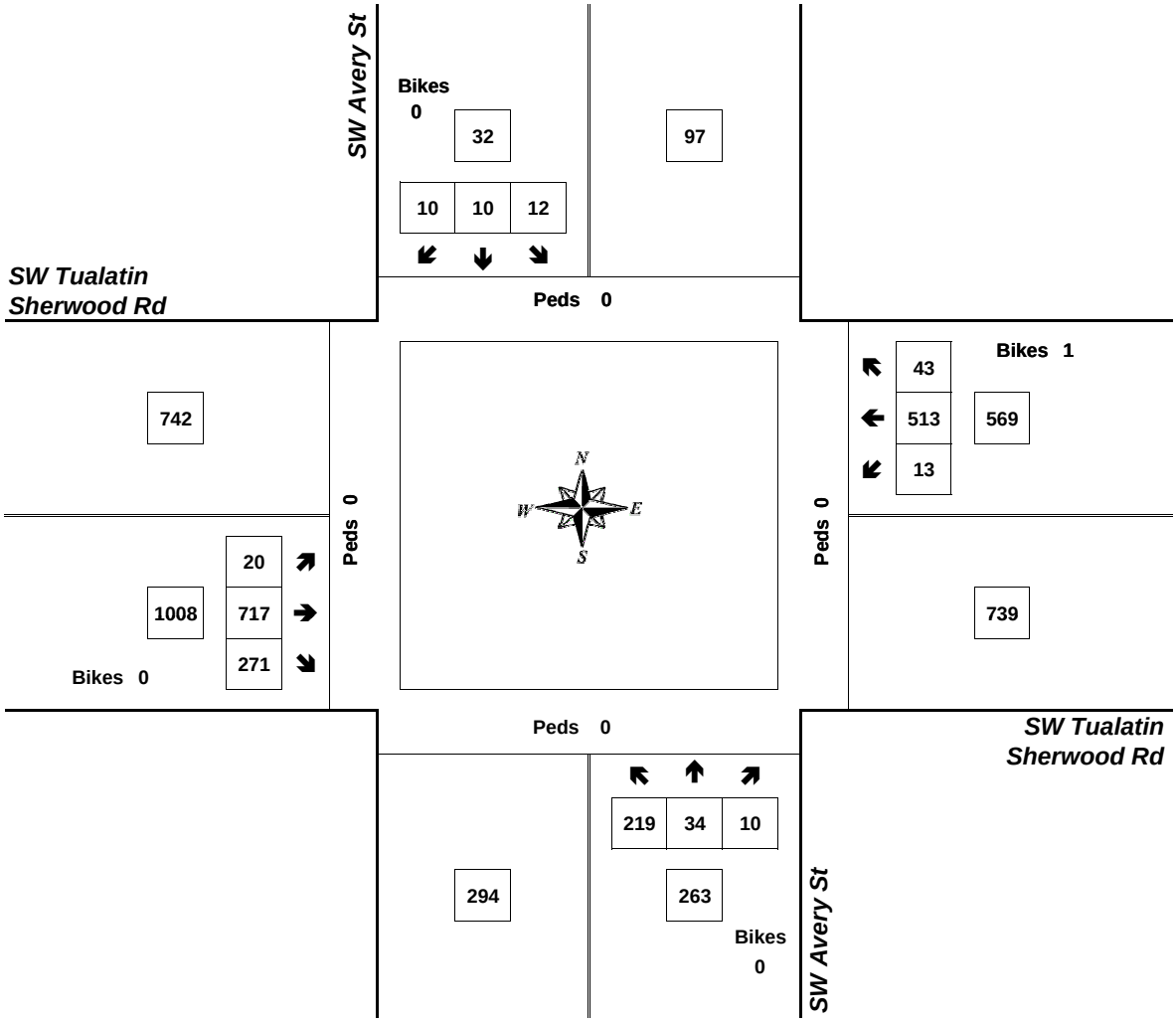
Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	6	0	0	6	2	0	0	2	1	88	6	95	4	61	3	68	171
7:15 AM	9	0	1	10	3	0	0	3	1	81	6	88	4	68	4	76	177
7:30 AM	9	0	1	10	3	0	0	3	1	85	10	96	4	69	4	77	186
7:45 AM	7	0	2	9	3	0	0	3	1	86	8	95	3	72	4	79	186
8:00 AM	8	0	2	10	3	1	0	4	0	82	11	93	1	79	6	86	193

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

SW Avery St & SW Tualatin Sherwood Rd

7:25 AM to 8:25 AM
Thursday, February 07, 2019

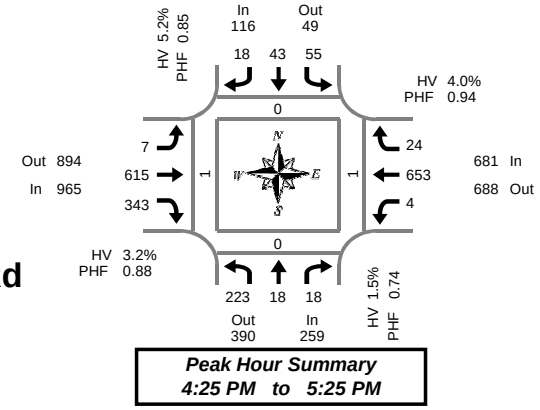


Approach	PHF	HV%	Volume
EB	0.94	9.5%	1,008
WB	0.83	14.1%	569
NB	0.87	2.7%	263
SB	0.73	9.4%	32
Intersection	0.94	9.9%	1,872

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:25 PM to 5:25 PM

SW Avery St & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	25	0	2	0	8	4	3	0	0	53	25	0	0	46	4	0	170	0	0	0	0
4:05 PM	13	2	1	0	1	2	1	0	3	66	23	0	0	47	5	0	164	0	0	1	0
4:10 PM	22	1	2	0	7	0	0	0	1	51	26	1	0	54	1	0	165	0	0	0	0
4:15 PM	10	1	0	0	4	3	3	0	2	52	24	1	0	67	1	0	167	0	0	0	0
4:20 PM	16	1	0	0	5	0	1	0	0	49	21	0	0	52	2	0	147	0	0	0	0
4:25 PM	11	3	3	0	7	3	3	0	0	51	26	0	0	59	1	0	167	0	0	0	0
4:30 PM	25	2	2	0	4	2	1	0	0	41	28	0	0	55	0	0	160	0	0	0	0
4:35 PM	26	2	3	0	6	7	1	0	0	57	22	0	0	61	2	0	187	0	0	0	0
4:40 PM	24	1	3	0	4	4	3	0	1	39	21	0	1	51	2	0	154	0	0	0	0
4:45 PM	14	1	1	0	1	2	0	0	2	62	25	0	1	54	2	0	165	0	0	1	0
4:50 PM	20	2	0	0	6	6	0	0	1	56	29	0	0	56	4	0	180	0	0	0	0
4:55 PM	12	2	1	0	2	1	1	0	1	44	23	0	0	64	1	0	152	0	0	0	0
5:00 PM	25	2	0	0	9	4	2	0	0	51	33	0	1	41	4	0	172	0	0	0	0
5:05 PM	18	0	2	0	3	2	2	0	1	54	24	0	0	52	4	0	162	0	0	0	1
5:10 PM	25	3	3	0	2	2	2	0	0	57	35	0	0	50	1	0	180	0	0	0	0
5:15 PM	10	0	0	0	4	6	3	0	1	53	39	0	0	62	3	0	181	0	0	0	0
5:20 PM	13	0	0	0	7	4	0	0	0	50	38	0	1	48	0	0	161	0	0	0	0
5:25 PM	8	2	1	0	5	4	0	0	1	44	26	0	1	63	2	0	157	0	0	0	0
5:30 PM	19	1	2	0	5	0	1	0	3	47	33	0	0	50	1	0	162	0	0	0	1
5:35 PM	11	4	1	0	4	0	1	0	3	68	30	0	0	61	1	0	184	0	0	0	0
5:40 PM	24	3	1	0	5	0	0	0	0	40	25	0	0	58	3	0	159	0	0	0	0
5:45 PM	14	3	0	0	2	0	2	0	1	63	22	0	0	56	0	0	163	0	0	0	0
5:50 PM	18	1	1	0	2	1	1	0	2	53	18	0	1	61	1	0	160	0	0	0	0
5:55 PM	14	1	0	0	4	1	1	0	6	59	22	0	0	56	4	0	168	0	0	0	0
Total Survey	417	38	29	0	107	58	32	0	29	1,260	638	2	6	1,324	49	0	3,987	0	0	2	2

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	60	3	5	0	16	6	4	0	4	170	74	1	0	147	10	0	499	0	0	1	0
4:15 PM	37	5	3	0	16	6	7	0	2	152	71	1	0	178	4	0	481	0	0	0	0
4:30 PM	75	5	8	0	14	13	5	0	1	137	71	0	1	167	4	0	501	0	0	0	0
4:45 PM	46	5	2	0	9	9	1	0	4	162	77	0	1	174	7	0	497	0	0	1	0
5:00 PM	68	5	5	0	14	8	6	0	1	162	92	0	1	143	9	0	514	0	0	0	1
5:15 PM	31	2	1	0	16	14	3	0	2	147	103	0	2	173	5	0	499	0	0	0	0
5:30 PM	54	8	4	0	14	0	2	0	6	155	88	0	0	169	5	0	505	0	0	0	1
5:45 PM	46	5	1	0	8	2	4	0	9	175	62	0	1	173	5	0	491	0	0	0	0
Total Survey	417	38	29	0	107	58	32	0	29	1,260	638	2	6	1,324	49	0	3,987	0	0	2	2

Peak Hour Summary
4:25 PM to 5:25 PM

By Approach	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	259	390	649	0	116	49	165	0	965	894	1,859	0	681	688	1,369	0	2,021	0	0	1	1
%HV	1.5%				5.2%				3.2%				4.0%				3.4%				
PHF	0.74				0.85				0.88				0.94				0.97				

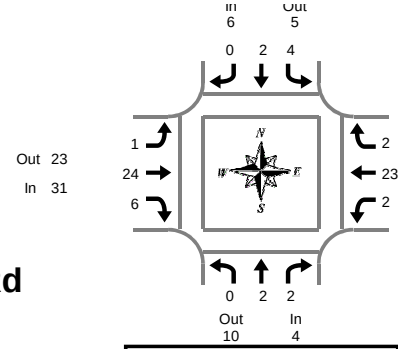
By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	223	18	18	259	55	43	18	116	7	615	343	965	4	653	24	681	2,021
%HV	0.0%	11.1%	11.1%	1.5%	7.3%	4.7%	0.0%	5.2%	14.3%	3.9%	1.7%	3.2%	50.0%	3.5%	8.3%	4.0%	3.4%
PHF	0.74	0.64	0.56	0.74	0.81	0.83	0.64	0.85	0.44	0.94	0.77	0.88	0.50	0.93	0.67	0.94	0.97

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	218	18	18	0	55	34	17	0	11	621	293	2	2	666	25	0	1,978	0	0	2	0
4:15 PM	226	20	18	0	53	36	19	0	8	613	311	1	3	662	24	0	1,993	0	0	1	1
4:30 PM	220	17	16	0	53	44	15	0	8	608	343	0	5	657	25	0	2,011	0	0	1	1
4:45 PM	199	20	12	0	53	31	12	0	13	626	360	0	4	659	26	0	2,015	0	0	1	2
5:00 PM	199	20	11	0	52	24	15	0	18	639	345	0	4	658	24	0	2,009	0	0	0	2

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



SW Avery St & SW Tualatin Sherwood Rd

Wednesday, February 06, 2019
4:00 PM to 6:00 PM

Peak Hour Summary
4:25 PM to 5:25 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	1	1	0	1	1	2	0	2	0	2	5
4:05 PM	0	0	0	0	0	0	0	0	0	7	0	7	0	4	0	4	11
4:10 PM	1	0	0	1	1	0	0	1	1	2	0	3	0	4	0	4	9
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	3	5
4:20 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
4:25 PM	0	1	0	1	0	0	0	0	0	2	1	3	0	1	0	1	5
4:30 PM	0	0	0	0	0	0	0	0	0	2	1	3	0	1	0	1	4
4:35 PM	0	0	0	0	2	0	0	2	0	1	0	1	0	4	0	4	7
4:40 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
4:45 PM	0	0	1	1	0	1	0	1	0	3	0	3	1	1	0	2	7
4:50 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5	7
4:55 PM	0	0	0	0	0	0	0	0	1	1	1	3	0	4	0	4	7
5:00 PM	0	1	0	1	0	0	0	0	0	1	1	2	1	1	1	3	6
5:05 PM	0	0	1	1	0	0	0	0	0	4	0	4	0	1	0	1	6
5:10 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:15 PM	0	0	0	0	1	1	0	2	0	4	1	5	0	2	0	2	9
5:20 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	0	2	4
5:25 PM	0	0	0	0	0	0	0	0	0	4	1	5	0	1	0	1	6
5:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
5:35 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
5:40 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	5	1	6	0	1	0	1	7
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	2	1	4	5
5:55 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	2	3	6
Total Survey	1	2	2	5	5	2	1	8	2	58	10	70	3	44	5	52	135

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	0	1	1	0	1	2	1	10	1	12	0	10	0	10	25
4:15 PM	0	1	0	1	0	0	0	0	0	5	2	7	0	4	0	4	12
4:30 PM	0	0	0	0	2	0	0	2	0	4	2	6	0	5	1	6	14
4:45 PM	0	0	1	1	0	1	0	1	1	6	1	8	1	10	0	11	21
5:00 PM	0	1	1	2	0	0	0	0	0	7	1	8	1	3	1	5	15
5:15 PM	0	0	0	0	2	1	0	3	0	9	2	11	0	5	0	5	19
5:30 PM	0	0	0	0	0	0	0	0	0	8	0	8	0	3	0	3	11
5:45 PM	0	0	0	0	0	0	0	0	0	9	1	10	1	4	3	8	18
Total Survey	1	2	2	5	5	2	1	8	2	58	10	70	3	44	5	52	135

Heavy Vehicle Peak Hour Summary
4:25 PM to 5:25 PM

By Approach	Northbound SW Avery St			Southbound SW Avery St			Eastbound SW Tualatin Sherwood Rd			Westbound SW Tualatin Sherwood Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	4	10	14	6	5	11	31	23	54	27	30	57	68
PHF	0.50			0.50			0.70			0.56			0.81

By Movement	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	2	2	4	4	2	0	6	1	24	6	31	2	23	2	27	68
PHF	0.00	0.50	0.50	0.50	0.50	0.50	0.00	0.50	0.25	0.60	0.75	0.70	0.50	0.58	0.50	0.56	0.81

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

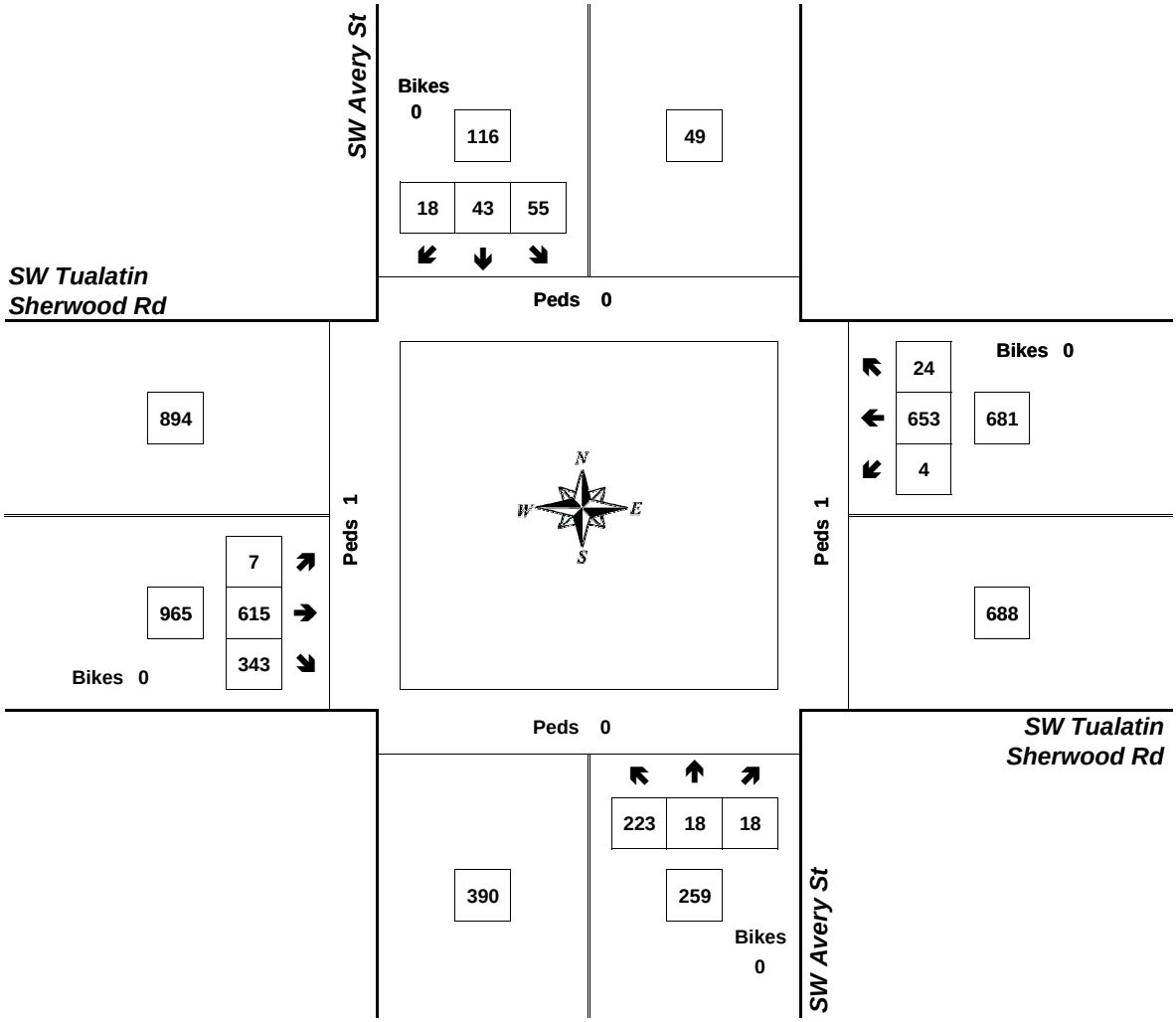
Interval Start Time	Northbound SW Avery St				Southbound SW Avery St				Eastbound SW Tualatin Sherwood Rd				Westbound SW Tualatin Sherwood Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	1	1	3	3	1	1	5	2	25	6	33	1	29	1	31	72
4:15 PM	0	2	2	4	2	1	0	3	1	22	6	29	2	22	2	26	62
4:30 PM	0	1	2	3	4	2	0	6	1	26	6	33	2	23	2	27	69
4:45 PM	0	1	2	3	2	2	0	4	1	30	4	35	2	21	1	24	66
5:00 PM	0	1	1	2	2	1	0	3	0	33	4	37	2	15	4	21	63

Peak Hour Summary

Clay Carney
(503) 833-2740

SW Avery St & SW Tualatin Sherwood Rd

4:25 PM to 5:25 PM
Wednesday, February 06, 2019



Approach	PHF	HV%	Volume
EB	0.88	3.2%	965
WB	0.94	4.0%	681
NB	0.74	1.5%	259
SB	0.85	5.2%	116
Intersection	0.97	3.4%	2,021

Count Period: 4:00 PM to 6:00 PM

1e

TRIP GENERATION CALCULATIONS

Land Use: Utility
Land Use Code: 170
Variable: Employees
Variable Quantity: 300

AM PEAK HOUR

Trip Rate: 0.7

	Enter	Exit	Total
Directional Distribution	81%	19%	
Trip Ends	**170**	**40**	**210**

PM PEAK HOUR

Trip Rate: 0.76

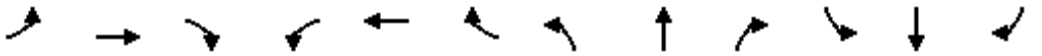
	Enter	Exit	Total
Directional Distribution	15%	85%	
Trip Ends	**34**	**194**	**228**

WEEKDAY

Trip Rate: 4.11

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**617**	**617**	**1,234**

Source: TRIP GENERATION, Tenth Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	839	31	11	546	108	131	179	54	143	134	45
Future Volume (vph)	53	839	31	11	546	108	131	179	54	143	134	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1496	1612	1696	1442	1556	1581		1583	1667	1417
Flt Permitted	0.28	1.00	1.00	0.15	1.00	1.00	0.52	1.00		0.28	1.00	1.00
Satd. Flow (perm)	498	1792	1496	255	1696	1442	856	1581		458	1667	1417
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)	56	893	33	12	581	115	139	190	57	152	143	48
RTOR Reduction (vph)	0	0	11	0	0	41	0	9	0	0	0	38
Lane Group Flow (vph)	56	893	22	12	581	74	139	238	0	152	143	10
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	16%	16%	16%	14%	14%	14%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	70.0	70.0	79.8	67.9	67.9	77.4	30.3	20.5		29.7	20.2	24.3
Effective Green, g (s)	70.0	70.0	79.8	67.9	67.9	77.4	30.3	20.5		29.7	20.2	24.3
Actuated g/C Ratio	0.58	0.58	0.66	0.57	0.57	0.65	0.25	0.17		0.25	0.17	0.20
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	331	1045	994	166	959	984	273	270		202	280	340
v/s Ratio Prot	0.01	c0.50	0.00	0.00	c0.34	0.01	0.04	c0.15		c0.06	0.09	0.00
v/s Ratio Perm	0.09		0.01	0.04		0.05	0.09			0.13		0.01
v/c Ratio	0.17	0.85	0.02	0.07	0.61	0.08	0.51	0.88		0.75	0.51	0.03
Uniform Delay, d1	13.5	20.8	6.8	33.1	17.2	7.9	36.9	48.6		38.3	45.4	38.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	8.9	0.0	0.2	2.8	0.0	1.5	31.2		14.6	6.5	0.0
Delay (s)	13.8	29.7	6.8	33.3	20.0	8.0	38.4	79.8		52.9	51.9	38.4
Level of Service	B	C	A	C	C	A	D	E		D	D	D
Approach Delay (s)		28.0			18.3			64.9			50.5	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1015	40	12	659	16	17
Future Vol, veh/h	1015	40	12	659	16	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	0	-	-	0	16974	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	9	9	11	11	88	88
Mvmt Flow	1057	42	13	686	17	18

Major/Minor	Minor2		Major2	
Conflicting Flow All	712	686	0	0
Stage 1	712	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.59	6.29	4.21	-
Critical Hdwy Stg 1	5.59	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.081	3.381	2.299	-
Pot Cap-1 Maneuver	~ 349	436	-	-
Stage 1	~ 426	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	436	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s		
HCM LOS	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	-	436	-	-
HCM Lane V/C Ratio	-	0.096	-	-
HCM Control Delay (s)	-	14.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	6	909	117	117	630	5	6	0	0	38	0	97
Future Volume (vph)	6	909	117	117	630	5	6	0	0	38	0	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5				4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00				1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00				1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00				1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00				1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95				0.95	1.00
Satd. Flow (prot)	1671	1759	1495	3183	1725		1763				1421	1248
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.62				0.76	1.00
Satd. Flow (perm)	1671	1759	1495	3183	1725		1155				1133	1248
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)	6	957	123	123	663	5	6	0	0	40	0	102
RTOR Reduction (vph)	0	0	33	0	0	0	0	0	0	0	0	75
Lane Group Flow (vph)	6	957	90	123	668	0	6	0	0	0	40	27
Confl. Peds. (#/hr)						2	2					2
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	2%	2%	2%	27%	27%	27%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt			Perm	NA	pm+ov
Protected Phases	7	4		3	8		1	6			2	3
Permitted Phases			4				6			2		2
Actuated Green, G (s)	1.0	83.3	83.3	11.9	94.2		31.3				25.8	37.7
Effective Green, g (s)	1.0	83.3	83.3	11.9	94.2		31.3				25.8	37.7
Actuated g/C Ratio	0.01	0.59	0.59	0.09	0.67		0.22				0.18	0.27
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5				4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0				3.0	3.0
Lane Grp Cap (vph)	11	1046	889	270	1160		262				208	336
v/s Ratio Prot	0.00	c0.54		c0.04	c0.39		c0.00					0.01
v/s Ratio Perm			0.06				0.00				c0.04	0.02
v/c Ratio	0.55	0.91	0.10	0.46	0.58		0.02				0.19	0.08
Uniform Delay, d1	69.3	25.2	12.2	61.0	12.2		42.4				48.3	38.2
Progression Factor	1.00	1.00	1.00	0.83	0.27		1.00				1.00	1.00
Incremental Delay, d2	45.6	13.6	0.2	1.0	1.6		0.0				2.0	0.1
Delay (s)	114.9	38.8	12.4	51.5	5.0		42.5				50.3	38.3
Level of Service	F	D	B	D	A		D				D	D
Approach Delay (s)		36.3			12.2			42.5			41.7	
Approach LOS		D			B			D			D	

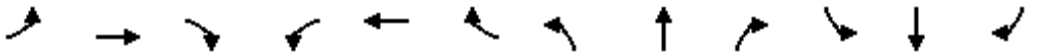
Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	10	10	219	34	10	20	717	271	13	513	43
Future Volume (vph)	12	10	10	219	34	10	20	717	271	13	513	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1656	1612		1752	1780		1641	1727	1468	1583	1667	1387
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1656	1612		1752	1780		1641	1727	1468	1583	1667	1387
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)	13	11	11	233	36	11	21	763	288	14	546	46
RTOR Reduction (vph)	0	10	0	0	8	0	0	0	58	0	0	22
Lane Group Flow (vph)	13	12	0	233	39	0	21	763	230	14	546	24
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	10%	10%	10%	14%	14%	14%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	2.2	18.0		24.8	40.6		4.7	77.2	77.2	2.0	74.5	74.5
Effective Green, g (s)	2.2	18.0		24.8	40.6		4.7	77.2	77.2	2.0	74.5	74.5
Actuated g/C Ratio	0.02	0.13		0.18	0.29		0.03	0.55	0.55	0.01	0.53	0.53
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	26	207		310	516		55	952	809	22	887	738
v/s Ratio Prot	0.01	0.01		c0.13	c0.02		0.01	c0.44		0.01	c0.33	
v/s Ratio Perm									0.16			0.02
v/c Ratio	0.50	0.06		0.75	0.08		0.38	0.80	0.28	0.64	0.62	0.03
Uniform Delay, d1	68.4	53.6		54.7	36.1		66.2	25.2	16.7	68.6	22.8	15.6
Progression Factor	1.00	1.00		1.00	1.00		0.74	0.29	0.10	1.00	1.00	1.00
Incremental Delay, d2	14.3	0.6		9.8	0.3		2.7	4.4	0.5	47.5	3.2	0.1
Delay (s)	82.7	54.1		64.5	36.4		51.5	11.8	2.3	116.1	26.0	15.7
Level of Service	F	D		E	D		D	B	A	F	C	B
Approach Delay (s)		64.7			59.8			10.0			27.3	
Approach LOS		E			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	746	108	20	808	79	90	112	8	115	184	165
Future Volume (vph)	57	746	108	20	808	79	90	112	8	115	184	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1770	1863	1583	1687	1759		1770	1863	1583
Flt Permitted	0.15	1.00	1.00	0.21	1.00	1.00	0.36	1.00		0.60	1.00	1.00
Satd. Flow (perm)	286	1845	1568	392	1863	1583	637	1759		1110	1863	1583
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)	59	777	112	21	842	82	94	117	8	120	192	172
RTOR Reduction (vph)	0	0	36	0	0	31	0	2	0	0	0	134
Lane Group Flow (vph)	59	777	77	21	842	51	94	123	0	120	192	38
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	7%	7%	7%	2%	2%	2%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	81.4	74.9	81.5	70.6	68.6	74.4	25.9	19.3		24.3	18.5	26.8
Effective Green, g (s)	81.4	74.9	81.5	70.6	68.6	74.4	25.9	19.3		24.3	18.5	26.8
Actuated g/C Ratio	0.68	0.62	0.68	0.59	0.57	0.62	0.22	0.16		0.20	0.15	0.22
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	295	1151	1064	253	1065	981	195	282		256	287	353
v/s Ratio Prot	c0.01	c0.42	0.00	0.00	c0.45	0.00	c0.03	0.07		0.02	c0.10	0.01
v/s Ratio Perm	0.12		0.04	0.05		0.03	0.08			0.07		0.02
v/c Ratio	0.20	0.68	0.07	0.08	0.79	0.05	0.48	0.44		0.47	0.67	0.11
Uniform Delay, d1	28.8	14.6	6.5	26.9	20.1	9.0	39.4	45.4		41.3	47.9	37.1
Progression Factor	1.00	1.00	1.00	0.27	0.42	0.22	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	3.2	0.0	0.1	4.8	0.0	1.9	4.9		1.4	11.7	0.1
Delay (s)	29.2	17.8	6.5	7.4	13.2	2.0	41.3	50.3		42.7	59.6	37.2
Level of Service	C	B	A	A	B	A	D	D		D	E	D
Approach Delay (s)		17.2			12.1			46.4			47.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0

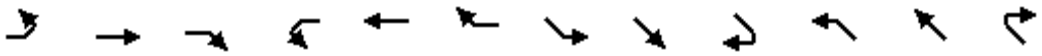
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	864	6	5	914	20	15
Future Vol, veh/h	864	6	5	914	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	0	-	-	0	16974	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	919	6	5	972	21	16

Major/Minor	Minor2		Major2	
Conflicting Flow All	982	972	0	0
Stage 1	982	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.54	6.24	4.12	-
Critical Hdwy Stg 1	5.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.036	3.336	2.218	-
Pot Cap-1 Maneuver	~ 247	304	-	-
Stage 1	~ 325	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	304	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s		
HCM LOS	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	-	304	-	-
HCM Lane V/C Ratio	-	0.021	-	-
HCM Control Delay (s)	-	17.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	17	847	39	42	815	18	19	1	7	63	0	144
Future Volume (vph)	17	847	39	42	815	18	19	1	7	63	0	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.98			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)	1752	1845	1543	3433	1856		1732	1555			1697	1498
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.71	1.00			0.75	1.00
Satd. Flow (perm)	1752	1845	1543	3433	1856		1302	1555			1344	1498
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)	18	882	41	44	849	19	20	1	7	66	0	150
RTOR Reduction (vph)	0	0	18	0	1	0	0	5	0	0	0	109
Lane Group Flow (vph)	18	882	23	44	867	0	20	3	0	0	66	41
Confl. Peds. (#/hr)			2			1	1		1	1		1
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		Perm	NA	pm+ov
Protected Phases	7	4		3	8		1	6			2	3
Permitted Phases			4				6			2		2
Actuated Green, G (s)	2.0	67.1	67.1	9.2	74.3		30.2	30.2			23.7	32.9
Effective Green, g (s)	2.0	67.1	67.1	9.2	74.3		30.2	30.2			23.7	32.9
Actuated g/C Ratio	0.02	0.56	0.56	0.08	0.62		0.25	0.25			0.20	0.27
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	29	1031	862	263	1149		334	391			265	466
v/s Ratio Prot	0.01	c0.48		0.01	c0.47		c0.00	0.00				0.01
v/s Ratio Perm			0.01				0.01				c0.05	0.02
v/c Ratio	0.62	0.86	0.03	0.17	0.75		0.06	0.01			0.25	0.09
Uniform Delay, d1	58.6	22.4	11.8	51.8	16.3		34.1	33.7			40.6	32.4
Progression Factor	1.00	1.00	1.00	0.77	0.34		1.00	1.00			1.00	1.00
Incremental Delay, d2	34.8	9.1	0.1	0.2	3.5		0.1	0.0			2.2	0.1
Delay (s)	93.4	31.4	11.9	40.0	9.1		34.2	33.7			42.9	32.5
Level of Service	F	C	B	D	A		C	C			D	C
Approach Delay (s)		31.8			10.6			34.1			35.7	
Approach LOS		C			B			C			D	

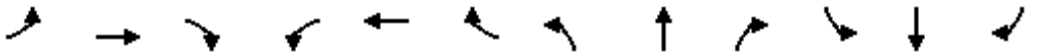
Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	43	18	223	18	18	7	615	343	4	653	24
Future Volume (vph)	55	43	18	223	18	18	7	615	343	4	653	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1716		1770	1703		1752	1845	1568	1736	1827	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	1716		1770	1703		1752	1845	1568	1736	1827	1553
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)	57	44	19	230	19	19	7	634	354	4	673	25
RTOR Reduction (vph)	0	13	0	0	14	0	0	0	95	0	0	12
Lane Group Flow (vph)	57	50	0	230	24	0	7	634	259	4	673	13
Confl. Peds. (#/hr)			1			1						
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	7.3	18.0		21.2	31.9		1.0	61.8	61.8	1.0	61.8	61.8
Effective Green, g (s)	7.3	18.0		21.2	31.9		1.0	61.8	61.8	1.0	61.8	61.8
Actuated g/C Ratio	0.06	0.15		0.18	0.27		0.01	0.51	0.51	0.01	0.51	0.51
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	104	257		312	452		14	950	807	14	940	799
v/s Ratio Prot	0.03	c0.03		c0.13	0.01		0.00	c0.34		0.00	c0.37	
v/s Ratio Perm									0.17			0.01
v/c Ratio	0.55	0.20		0.74	0.05		0.50	0.67	0.32	0.29	0.72	0.02
Uniform Delay, d1	54.7	44.7		46.8	32.8		59.3	21.5	16.9	59.1	22.4	14.2
Progression Factor	1.00	1.00		1.00	1.00		0.76	0.36	0.08	1.00	1.00	1.00
Incremental Delay, d2	5.8	1.7		8.8	0.2		18.1	2.6	0.7	10.9	4.7	0.0
Delay (s)	60.5	46.4		55.5	33.0		63.1	10.3	2.1	70.1	27.0	14.3
Level of Service	E	D		E	C		E	B	A	E	C	B
Approach Delay (s)		53.1			52.3			7.8			26.8	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	908	35	12	614	200	146	200	57	164	143	52
Future Volume (vph)	72	908	35	12	614	200	146	200	57	164	143	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1496	1612	1696	1442	1556	1583		1583	1667	1417
Flt Permitted	0.22	1.00	1.00	0.09	1.00	1.00	0.54	1.00		0.20	1.00	1.00
Satd. Flow (perm)	394	1792	1496	158	1696	1442	884	1583		338	1667	1417
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)	77	966	37	13	653	213	155	213	61	174	152	55
RTOR Reduction (vph)	0	0	13	0	0	77	0	8	0	0	0	43
Lane Group Flow (vph)	77	966	24	13	653	136	155	266	0	174	152	12
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	16%	16%	16%	14%	14%	14%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	69.2	69.2	78.5	66.5	66.5	76.6	30.0	20.7		31.6	21.5	26.2
Effective Green, g (s)	69.2	69.2	78.5	66.5	66.5	76.6	30.0	20.7		31.6	21.5	26.2
Actuated g/C Ratio	0.58	0.58	0.65	0.55	0.55	0.64	0.25	0.17		0.26	0.18	0.22
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	278	1033	978	111	939	974	273	273		193	298	362
v/s Ratio Prot	0.01	c0.54	0.00	0.00	c0.38	0.01	0.04	c0.17		c0.08	0.09	0.00
v/s Ratio Perm	0.15		0.01	0.06		0.08	0.10			0.16		0.01
v/c Ratio	0.28	0.94	0.02	0.12	0.70	0.14	0.57	0.97		0.90	0.51	0.03
Uniform Delay, d1	15.6	23.3	7.3	41.6	19.4	8.6	37.8	49.4		38.6	44.5	36.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	16.2	0.0	0.5	4.2	0.1	2.7	48.1		38.4	6.1	0.0
Delay (s)	16.1	39.5	7.3	42.0	23.6	8.7	40.5	97.5		77.0	50.6	37.0
Level of Service	B	D	A	D	C	A	D	F		E	D	D
Approach Delay (s)		36.7			20.3			76.9			60.7	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1107	42	13	819	17	18
Future Vol, veh/h	1107	42	13	819	17	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	0	-	-	0	16974	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	9	9	11	11	88	88
Mvmt Flow	1153	44	14	853	18	19

Major/Minor	Minor2		Major2	
Conflicting Flow All	881	853	0	0
Stage 1	881	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.59	6.29	4.21	-
Critical Hdwy Stg 1	5.59	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.081	3.381	2.299	-
Pot Cap-1 Maneuver	~ 278	349	-	-
Stage 1	~ 355	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	349	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s		
HCM LOS	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	-	349	-	-
HCM Lane V/C Ratio	-	0.125	-	-
HCM Control Delay (s)	-	16.8	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	6	994	125	124	783	5	6	0	0	46	0	103
Future Volume (vph)	6	994	125	124	783	5	6	0	0	46	0	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5				4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00				1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00				1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00				1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00				1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95				0.95	1.00
Satd. Flow (prot)	1671	1759	1495	3183	1725		1763				1421	1247
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.62				0.76	1.00
Satd. Flow (perm)	1671	1759	1495	3183	1725		1145				1133	1247
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)	6	1046	132	131	824	5	6	0	0	48	0	108
RTOR Reduction (vph)	0	0	33	0	0	0	0	0	0	0	0	80
Lane Group Flow (vph)	6	1046	99	131	829	0	6	0	0	0	48	28
Confl. Peds. (#/hr)						2	2					2
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	2%	2%	2%	27%	27%	27%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt			Perm	NA	pm+ov
Protected Phases	7	4		3	8		1	6			2	3
Permitted Phases			4				6			2		2
Actuated Green, G (s)	1.0	84.3	84.3	11.1	94.4		31.1				25.6	36.7
Effective Green, g (s)	1.0	84.3	84.3	11.1	94.4		31.1				25.6	36.7
Actuated g/C Ratio	0.01	0.60	0.60	0.08	0.67		0.22				0.18	0.26
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5				4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0				3.0	3.0
Lane Grp Cap (vph)	11	1059	900	252	1163		258				207	326
v/s Ratio Prot	0.00	c0.59		0.04	c0.48		c0.00					0.01
v/s Ratio Perm			0.07				0.00				c0.04	0.02
v/c Ratio	0.55	0.99	0.11	0.52	0.71		0.02				0.23	0.09
Uniform Delay, d1	69.3	27.3	11.9	61.9	14.3		42.6				48.8	39.0
Progression Factor	1.00	1.00	1.00	0.79	0.26		1.00				1.00	1.00
Incremental Delay, d2	45.6	24.9	0.2	1.1	2.4		0.0				2.6	0.1
Delay (s)	114.9	52.2	12.1	50.2	6.1		42.6				51.4	39.1
Level of Service	F	D	B	D	A		D				D	D
Approach Delay (s)		48.1			12.1			42.6			42.9	
Approach LOS		D			B			D			D	

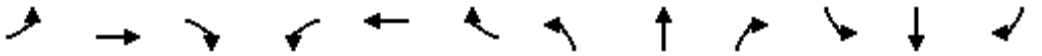
Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	13	11	11	234	36	11	21	789	289	14	656	46
Future Volume (vph)	13	11	11	234	36	11	21	789	289	14	656	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1656	1612		1752	1778		1641	1727	1468	1583	1667	1387
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1656	1612		1752	1778		1641	1727	1468	1583	1667	1387
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)	14	12	12	249	38	12	22	839	307	15	698	49
RTOR Reduction (vph)	0	10	0	0	8	0	0	0	58	0	0	23
Lane Group Flow (vph)	14	14	0	249	42	0	22	839	249	15	698	26
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	10%	10%	10%	14%	14%	14%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	2.2	18.0		26.2	42.0		3.9	75.8	75.8	2.0	73.9	73.9
Effective Green, g (s)	2.2	18.0		26.2	42.0		3.9	75.8	75.8	2.0	73.9	73.9
Actuated g/C Ratio	0.02	0.13		0.19	0.30		0.03	0.54	0.54	0.01	0.53	0.53
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	26	207		327	533		45	935	794	22	879	732
v/s Ratio Prot	c0.01	0.01		c0.14	c0.02		0.01	c0.49		0.01	c0.42	
v/s Ratio Perm									0.17			0.02
v/c Ratio	0.54	0.07		0.76	0.08		0.49	0.90	0.31	0.68	0.79	0.04
Uniform Delay, d1	68.4	53.6		53.9	35.1		67.1	28.6	17.7	68.7	26.9	15.9
Progression Factor	1.00	1.00		1.00	1.00		0.73	0.30	0.09	1.00	1.00	1.00
Incremental Delay, d2	19.8	0.6		10.0	0.3		4.2	7.4	0.5	62.1	7.3	0.1
Delay (s)	88.2	54.2		64.0	35.4		53.1	16.0	2.1	130.8	34.2	16.0
Level of Service	F	D		E	D		D	B	A	F	C	B
Approach Delay (s)		66.7			59.2			13.0			34.9	
Approach LOS		E			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	827	122	21	883	97	100	120	8	210	205	193
Future Volume (vph)	64	827	122	21	883	97	100	120	8	210	205	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1770	1863	1583	1687	1760		1770	1863	1583
Flt Permitted	0.09	1.00	1.00	0.16	1.00	1.00	0.42	1.00		0.46	1.00	1.00
Satd. Flow (perm)	166	1845	1568	289	1863	1583	741	1760		860	1863	1583
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)	67	861	127	22	920	101	104	125	8	219	214	201
RTOR Reduction (vph)	0	0	44	0	0	35	0	2	0	0	0	119
Lane Group Flow (vph)	67	861	83	22	920	66	104	131	0	219	214	82
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	7%	7%	7%	2%	2%	2%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	76.8	71.3	78.1	71.8	68.8	78.5	24.8	18.0		30.6	20.9	26.4
Effective Green, g (s)	76.8	71.3	78.1	71.8	68.8	78.5	24.8	18.0		30.6	20.9	26.4
Actuated g/C Ratio	0.64	0.59	0.65	0.60	0.57	0.65	0.21	0.15		0.26	0.17	0.22
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	178	1096	1079	209	1068	1094	206	264		292	324	407
v/s Ratio Prot	c0.02	0.47	0.00	0.00	c0.49	0.00	0.03	0.07		c0.06	0.11	0.01
v/s Ratio Perm	0.22		0.05	0.06		0.04	0.08			c0.13		0.04
v/c Ratio	0.38	0.79	0.08	0.11	0.86	0.06	0.50	0.50		0.75	0.66	0.20
Uniform Delay, d1	20.5	18.5	7.7	15.9	21.6	7.5	40.4	46.8		39.7	46.2	38.2
Progression Factor	1.00	1.00	1.00	0.34	0.41	0.20	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.3	5.7	0.0	0.2	6.8	0.0	1.9	6.6		10.3	10.1	0.2
Delay (s)	21.9	24.2	7.7	5.6	15.6	1.5	42.4	53.4		50.0	56.4	38.5
Level of Service	C	C	A	A	B	A	D	D		D	E	D
Approach Delay (s)		22.1			14.0			48.6			48.5	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1040	6	5	1009	21	16
Future Vol, veh/h	1040	6	5	1009	21	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	0	-	-	0	16974	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	1106	6	5	1073	22	17

Major/Minor	Minor2		Major2	
Conflicting Flow All	1083	1073	0	0
Stage 1	1083	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.54	6.24	4.12	-
Critical Hdwy Stg 1	5.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.036	3.336	2.218	-
Pot Cap-1 Maneuver	~ 215	265	-	-
Stage 1	~ 291	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	265	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s		
HCM LOS	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	-	265	-	-
HCM Lane V/C Ratio	-	0.024	-	-
HCM Control Delay (s)	-	18.9	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	18	1015	48	45	903	19	20	1	7	68	0	153
Future Volume (vph)	18	1015	48	45	903	19	20	1	7	68	0	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.98			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)	1752	1845	1543	3433	1856		1733	1555			1697	1497
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.60	1.00			0.75	1.00
Satd. Flow (perm)	1752	1845	1543	3433	1856		1090	1555			1344	1497
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)	19	1057	50	47	941	20	21	1	7	71	0	159
RTOR Reduction (vph)	0	0	21	0	1	0	0	5	0	0	0	117
Lane Group Flow (vph)	19	1057	29	47	960	0	21	3	0	0	71	42
Confl. Peds. (#/hr)			2			1	1		1	1		1
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		Perm	NA	pm+ov
Protected Phases	7	4		3	8		1	6			2	3
Permitted Phases			4				6			2		2
Actuated Green, G (s)	2.0	68.5	68.5	7.8	74.3		30.2	30.2			23.7	31.5
Effective Green, g (s)	2.0	68.5	68.5	7.8	74.3		30.2	30.2			23.7	31.5
Actuated g/C Ratio	0.02	0.57	0.57	0.06	0.62		0.25	0.25			0.20	0.26
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	29	1053	880	223	1149		285	391			265	392
v/s Ratio Prot	0.01	c0.57		0.01	c0.52		c0.00	0.00				0.01
v/s Ratio Perm			0.02				0.02				c0.05	0.02
v/c Ratio	0.66	1.00	0.03	0.21	0.84		0.07	0.01			0.27	0.11
Uniform Delay, d1	58.7	25.8	11.3	53.2	18.0		34.1	33.7			40.8	33.6
Progression Factor	1.00	1.00	1.00	0.78	0.41		1.00	1.00			1.00	1.00
Incremental Delay, d2	42.6	28.7	0.1	0.3	4.8		0.1	0.0			2.5	0.1
Delay (s)	101.2	54.4	11.3	41.8	12.2		34.2	33.7			43.3	33.7
Level of Service	F	D	B	D	B		C	C			D	C
Approach Delay (s)		53.3			13.6			34.1			36.6	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	58	46	19	239	19	19	7	767	366	4	729	25
Future Volume (vph)	58	46	19	239	19	19	7	767	366	4	729	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1716		1770	1703		1752	1845	1568	1736	1827	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	1716		1770	1703		1752	1845	1568	1736	1827	1553
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)	60	47	20	246	20	20	7	791	377	4	752	26
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	83	0	0	12
Lane Group Flow (vph)	60	54	0	246	25	0	7	791	294	4	752	14
Confl. Peds. (#/hr)			1			1						
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	7.8	18.0		20.3	30.5		1.0	62.7	62.7	1.0	62.7	62.7
Effective Green, g (s)	7.8	18.0		20.3	30.5		1.0	62.7	62.7	1.0	62.7	62.7
Actuated g/C Ratio	0.06	0.15		0.17	0.25		0.01	0.52	0.52	0.01	0.52	0.52
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	111	257		299	432		14	964	819	14	954	811
v/s Ratio Prot	0.03	c0.03		c0.14	0.01		0.00	c0.43		0.00	c0.41	
v/s Ratio Perm									0.19			0.01
v/c Ratio	0.54	0.21		0.82	0.06		0.50	0.82	0.36	0.29	0.79	0.02
Uniform Delay, d1	54.4	44.8		48.1	33.9		59.3	23.9	16.8	59.1	23.3	13.8
Progression Factor	1.00	1.00		1.00	1.00		0.73	0.30	0.08	1.00	1.00	1.00
Incremental Delay, d2	5.3	1.9		16.5	0.3		13.7	4.2	0.6	10.9	6.6	0.0
Delay (s)	59.6	46.6		64.6	34.1		56.7	11.4	2.0	70.1	29.8	13.8
Level of Service	E	D		E	C		E	B	A	E	C	B
Approach Delay (s)		52.8			60.3			8.6			29.5	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

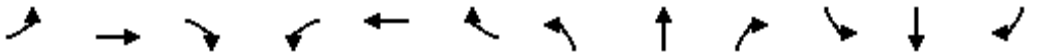
Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	37	403	12	158	190
Future Vol, veh/h	3	37	403	12	158	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	12	12	14	14
Mvmt Flow	3	40	438	13	172	207

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	996	445	0	0	451	0
Stage 1	445	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.24	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.326	-
Pot Cap-1 Maneuver	271	613	-	-	1049	-
Stage 1	646	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	227	613	-	-	1049	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	4.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	571	1049	-
HCM Lane V/C Ratio	-	-	0.076	0.164	-
HCM Control Delay (s)	-	-	11.8	9.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.6	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	908	59	114	614	200	151	208	81	164	175	52
Future Volume (vph)	72	908	59	114	614	200	151	208	81	164	175	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1496	1612	1696	1442	1556	1569		1583	1667	1417
Flt Permitted	0.26	1.00	1.00	0.06	1.00	1.00	0.45	1.00		0.18	1.00	1.00
Satd. Flow (perm)	464	1792	1496	102	1696	1442	743	1569		296	1667	1417
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)	77	966	63	121	653	213	161	221	86	174	186	55
RTOR Reduction (vph)	0	0	24	0	0	78	0	11	0	0	0	43
Lane Group Flow (vph)	77	966	39	121	653	135	161	296	0	174	186	12
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	16%	16%	16%	14%	14%	14%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	69.2	65.0	74.5	72.6	66.7	76.6	31.6	22.1		32.4	22.5	26.7
Effective Green, g (s)	69.2	65.0	74.5	72.6	66.7	76.6	31.6	22.1		32.4	22.5	26.7
Actuated g/C Ratio	0.57	0.54	0.62	0.60	0.55	0.63	0.26	0.18		0.27	0.19	0.22
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	308	963	977	134	935	967	258	286		184	310	365
v/s Ratio Prot	0.01	c0.54	0.00	c0.04	0.38	0.01	0.05	c0.19		c0.08	0.11	0.00
v/s Ratio Perm	0.13		0.02	0.50		0.08	0.11			0.18		0.01
v/c Ratio	0.25	1.00	0.04	0.90	0.70	0.14	0.62	1.03		0.95	0.60	0.03
Uniform Delay, d1	14.4	28.0	9.1	32.4	19.8	8.9	37.4	49.4		39.0	45.1	37.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	29.8	0.0	49.3	2.3	0.1	4.6	62.1		50.3	8.3	0.0
Delay (s)	14.8	57.7	9.1	81.7	22.1	9.0	42.1	111.5		89.4	53.4	37.0
Level of Service	B	E	A	F	C	A	D	F		F	D	D
Approach Delay (s)		52.0			26.5			87.6			66.3	
Approach LOS		D			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1131	42	13	921	17	18
Future Vol, veh/h	1131	42	13	921	17	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	0	-	-	0	16974	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	9	9	11	11	88	88
Mvmt Flow	1178	44	14	959	18	19

Major/Minor	Minor2		Major2	
Conflicting Flow All	987	959	0	0
Stage 1	987	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.59	6.29	4.21	-
Critical Hdwy Stg 1	5.59	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.081	3.381	2.299	-
Pot Cap-1 Maneuver	~ 241	302	-	-
Stage 1	~ 317	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	302	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s		
HCM LOS	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	-	302	-	-
HCM Lane V/C Ratio	-	0.145	-	-
HCM Control Delay (s)	-	18.9	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	6	1018	125	124	885	5	6	0	0	46	0	103
Future Volume (vph)	6	1018	125	124	885	5	6	0	0	46	0	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5				4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00				1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00				1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00				1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00				1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95				0.95	1.00
Satd. Flow (prot)	1671	1759	1495	3183	1726		1763				1421	1247
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.62				0.76	1.00
Satd. Flow (perm)	1671	1759	1495	3183	1726		1145				1133	1247
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)	6	1072	132	131	932	5	6	0	0	48	0	108
RTOR Reduction (vph)	0	0	33	0	0	0	0	0	0	0	0	80
Lane Group Flow (vph)	6	1072	99	131	937	0	6	0	0	0	48	28
Confl. Peds. (#/hr)						2	2					2
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	2%	2%	2%	27%	27%	27%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt			Perm	NA	pm+ov
Protected Phases	7	4		3	8		1	6			2	3
Permitted Phases			4				6			2		2
Actuated Green, G (s)	1.0	84.3	84.3	11.1	94.4		31.1				25.6	36.7
Effective Green, g (s)	1.0	84.3	84.3	11.1	94.4		31.1				25.6	36.7
Actuated g/C Ratio	0.01	0.60	0.60	0.08	0.67		0.22				0.18	0.26
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5				4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0				3.0	3.0
Lane Grp Cap (vph)	11	1059	900	252	1163		258				207	326
v/s Ratio Prot	0.00	c0.61		0.04	c0.54		c0.00					0.01
v/s Ratio Perm			0.07				0.00				c0.04	0.02
v/c Ratio	0.55	1.01	0.11	0.52	0.81		0.02				0.23	0.09
Uniform Delay, d1	69.3	27.9	11.9	61.9	16.3		42.6				48.8	39.0
Progression Factor	1.00	1.00	1.00	0.78	0.30		1.00				1.00	1.00
Incremental Delay, d2	45.6	30.7	0.2	0.9	3.1		0.0				2.6	0.1
Delay (s)	114.9	58.6	12.1	49.3	8.0		42.6				51.4	39.1
Level of Service	F	E	B	D	A		D				D	D
Approach Delay (s)		53.8			13.0			42.6			42.9	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	13	11	11	234	36	11	21	813	289	14	758	46
Future Volume (vph)	13	11	11	234	36	11	21	813	289	14	758	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1656	1612		1752	1778		1641	1727	1468	1583	1667	1387
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1656	1612		1752	1778		1641	1727	1468	1583	1667	1387
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)	14	12	12	249	38	12	22	865	307	15	806	49
RTOR Reduction (vph)	0	10	0	0	8	0	0	0	56	0	0	23
Lane Group Flow (vph)	14	14	0	249	42	0	22	865	251	15	806	26
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	10%	10%	10%	14%	14%	14%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	2.2	18.0		25.2	41.0		3.9	76.8	76.8	2.0	74.9	74.9
Effective Green, g (s)	2.2	18.0		25.2	41.0		3.9	76.8	76.8	2.0	74.9	74.9
Actuated g/C Ratio	0.02	0.13		0.18	0.29		0.03	0.55	0.55	0.01	0.54	0.54
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	26	207		315	520		45	947	805	22	891	742
v/s Ratio Prot	c0.01	0.01		c0.14	c0.02		0.01	c0.50		0.01	c0.48	
v/s Ratio Perm									0.17			0.02
v/c Ratio	0.54	0.07		0.79	0.08		0.49	0.91	0.31	0.68	0.90	0.04
Uniform Delay, d1	68.4	53.6		54.9	35.9		67.1	28.6	17.2	68.7	29.3	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.29	0.08	1.00	1.00	1.00
Incremental Delay, d2	19.8	0.6		12.7	0.3		3.9	7.9	0.5	62.1	14.4	0.1
Delay (s)	88.2	54.2		67.5	36.2		52.5	16.1	1.8	130.8	43.7	15.5
Level of Service	F	D		E	D		D	B	A	F	D	B
Approach Delay (s)		66.7			62.3			13.1			43.6	
Approach LOS		E			E			B			D	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

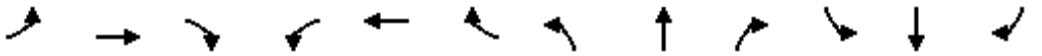
Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	180	228	2	32	348
Future Vol, veh/h	14	180	228	2	32	348
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	15	196	248	2	35	378

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	697	249	0	0	250	0
Stage 1	249	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	407	790	-	-	1316	-
Stage 1	792	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	396	790	-	-	1316	-
Mov Cap-2 Maneuver	486	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	756	1316	-
HCM Lane V/C Ratio	-	-	0.279	0.026	-
HCM Control Delay (s)	-	-	11.6	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	827	127	41	883	97	127	157	124	210	212	193
Future Volume (vph)	64	827	127	41	883	97	127	157	124	210	212	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	1770	1863	1583	1687	1658		1770	1863	1583
Flt Permitted	0.06	1.00	1.00	0.11	1.00	1.00	0.48	1.00		0.16	1.00	1.00
Satd. Flow (perm)	112	1845	1568	203	1863	1583	846	1658		303	1863	1583
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)	67	861	132	43	920	101	132	164	129	219	221	201
RTOR Reduction (vph)	0	0	51	0	0	37	0	23	0	0	0	104
Lane Group Flow (vph)	67	861	81	43	920	64	132	270	0	219	221	97
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	7%	7%	7%	2%	2%	2%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	71.0	65.7	73.4	68.4	64.4	76.2	28.2	20.5		36.4	24.6	29.9
Effective Green, g (s)	71.0	65.7	73.4	68.4	64.4	76.2	28.2	20.5		36.4	24.6	29.9
Actuated g/C Ratio	0.59	0.55	0.61	0.57	0.54	0.64	0.23	0.17		0.30	0.21	0.25
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	138	1010	1017	167	999	1064	252	283		236	381	453
v/s Ratio Prot	c0.02	0.47	0.01	0.01	c0.49	0.01	0.03	0.16		c0.09	0.12	0.01
v/s Ratio Perm	0.26		0.05	0.14		0.03	0.09			c0.19		0.05
v/c Ratio	0.49	0.85	0.08	0.26	0.92	0.06	0.52	0.95		0.93	0.58	0.21
Uniform Delay, d1	24.3	23.0	9.5	20.0	25.5	8.3	38.3	49.3		35.0	43.0	35.7
Progression Factor	1.00	1.00	1.00	0.47	0.47	0.17	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.7	9.1	0.0	0.6	11.2	0.0	2.0	42.8		38.9	6.3	0.2
Delay (s)	27.0	32.1	9.5	9.9	23.3	1.4	40.2	92.0		74.0	49.4	36.0
Level of Service	C	C	A	A	C	A	D	F		E	D	D
Approach Delay (s)		29.0			20.7			75.9			53.6	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1156	6	5	1029	21	16
Future Vol, veh/h	1156	6	5	1029	21	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	130	440	-	0	-
Veh in Median Storage, #	0	-	-	0	16974	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	1230	6	5	1095	22	17

Major/Minor	Minor2		Major2	
Conflicting Flow All	1105	1095	0	0
Stage 1	1105	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.54	6.24	4.12	-
Critical Hdwy Stg 1	5.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.036	3.336	2.218	-
Pot Cap-1 Maneuver	~ 209	257	-	-
Stage 1	~ 284	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	257	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	EB	WB
HCM Control Delay, s		
HCM LOS	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	-	257	-	-
HCM Lane V/C Ratio	-	0.025	-	-
HCM Control Delay (s)	-	19.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	18	1131	48	45	923	19	20	1	7	68	0	153
Future Volume (vph)	18	1131	48	45	923	19	20	1	7	68	0	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.98			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)	1752	1845	1543	3433	1856		1733	1555			1697	1497
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.60	1.00			0.75	1.00
Satd. Flow (perm)	1752	1845	1543	3433	1856		1090	1555			1344	1497
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)	19	1178	50	47	961	20	21	1	7	71	0	159
RTOR Reduction (vph)	0	0	21	0	1	0	0	5	0	0	0	104
Lane Group Flow (vph)	19	1178	29	47	980	0	21	3	0	0	71	55
Confl. Peds. (#/hr)			2			1	1		1	1		1
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	6%	6%	6%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		Perm	NA	pm+ov
Protected Phases	7	4		3	8		1	6			2	3
Permitted Phases			4				6			2		2
Actuated Green, G (s)	2.0	68.5	68.5	7.8	74.3		30.2	30.2			23.7	31.5
Effective Green, g (s)	2.0	68.5	68.5	7.8	74.3		30.2	30.2			23.7	31.5
Actuated g/C Ratio	0.02	0.57	0.57	0.06	0.62		0.25	0.25			0.20	0.26
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	29	1053	880	223	1149		285	391			265	392
v/s Ratio Prot	0.01	c0.64		0.01	c0.53		c0.00	0.00				0.01
v/s Ratio Perm			0.02				0.02				c0.05	0.03
v/c Ratio	0.66	1.12	0.03	0.21	0.85		0.07	0.01			0.27	0.14
Uniform Delay, d1	58.7	25.8	11.3	53.2	18.4		34.1	33.7			40.8	33.9
Progression Factor	1.00	1.00	1.00	0.80	0.43		1.00	1.00			1.00	1.00
Incremental Delay, d2	42.6	66.4	0.1	0.3	5.1		0.1	0.0			2.5	0.2
Delay (s)	101.2	92.1	11.3	42.7	13.0		34.2	33.7			43.3	34.0
Level of Service	F	F	B	D	B		C	C			D	C
Approach Delay (s)		89.0			14.4			34.1			36.9	
Approach LOS		F			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	58	46	19	239	19	19	7	883	366	4	749	25
Future Volume (vph)	58	46	19	239	19	19	7	883	366	4	749	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1716		1770	1703		1752	1845	1568	1736	1827	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	1716		1770	1703		1752	1845	1568	1736	1827	1553
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)	60	47	20	246	20	20	7	910	377	4	772	26
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	73	0	0	12
Lane Group Flow (vph)	60	54	0	246	25	0	7	910	304	4	772	14
Confl. Peds. (#/hr)			1			1						
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	7.9	18.0		18.6	28.7		1.0	64.4	64.4	1.0	64.4	64.4
Effective Green, g (s)	7.9	18.0		18.6	28.7		1.0	64.4	64.4	1.0	64.4	64.4
Actuated g/C Ratio	0.07	0.15		0.16	0.24		0.01	0.54	0.54	0.01	0.54	0.54
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	113	257		274	407		14	990	841	14	980	833
v/s Ratio Prot	0.03	c0.03		c0.14	0.01		0.00	c0.49		0.00	c0.42	
v/s Ratio Perm									0.19			0.01
v/c Ratio	0.53	0.21		0.90	0.06		0.50	0.92	0.36	0.29	0.79	0.02
Uniform Delay, d1	54.3	44.8		49.8	35.2		59.3	25.4	16.0	59.1	22.3	13.0
Progression Factor	1.00	1.00		1.00	1.00		0.70	0.25	0.06	1.00	1.00	1.00
Incremental Delay, d2	4.7	1.9		29.1	0.3		9.3	6.0	0.4	10.9	6.4	0.0
Delay (s)	59.0	46.6		78.9	35.5		50.9	12.4	1.4	70.1	28.7	13.0
Level of Service	E	D		E	D		D	B	A	E	C	B
Approach Delay (s)		52.5			72.8			9.4			28.4	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group