



## TRAFFIC IMPACT ANALYSIS

**To**

City of Sherwood and  
Washington County

**For**

Sherwood Industrial Park  
Phase 3

**Dated**

September 26, 2022

**Project Number**

2200393.03



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**LIST OF ABBREVIATIONS**

AASHTO	American Association of State Highway and Transportation Officials
ADT	Average Daily Traffic
AWSC	All-Way, Stop-Controlled
CIP	Capital Improvement Plan
EB	Eastbound approach
EBL	Eastbound Left movement
EBT	Eastbound Through movement
EBR	Eastbound Right movement
EBT+R	Eastbound Through and Right movements
HCM	Highway Capacity Manual
ISD	Intersection Sight Distance
ITE	Institute of Transportation Engineers
KSF	Thousand Square Feet
LOS	Level of Service
LUC	Land Use Code
MEV	Million Entering Vehicles
MSTIP	Major Streets Transportation Improvement Program
MUTCD	Manual on Uniform Traffic Control Devices
NB	Northbound approach
NBL	Northbound Left movement
NBT	Northbound Through movement
NBR	Northbound Right movement
NBT+R	Northbound Through and Right movements
NCHRP	National Cooperative Highway Research Program
ODOT	Oregon Department of Transportation
ROW	Right-of-Way
SB	Southbound approach
SBL	Southbound Left movement
SBT	Southbound Through movement
SBR	Southbound Right movement
SBT+R	Southbound Through and Right movements
SMC	Sherwood Municipal Code
SSD	Stopping Sight Distance
TIA	Traffic Impact Analysis
TSP	Transportation System Plan
TWSC	Two-Way, Stop-Controlled
v/c	Volume-to-Capacity
WB	Westbound approach
WBL	Westbound Left movement
WBT	Westbound Through movement
WBR	Westbound Right movement
WBT+R	Westbound Through and Right movements

## I. INTRODUCTION

This Traffic Impact Analysis (TIA) has been prepared in support of the proposed Sherwood Industrial Park Phase 3 development located at the southeast corner of SW Tualatin-Sherwood Road and SW Century Drive in Sherwood, Oregon, on property containing buildings constructed during Phases 1 and 2 of the project. Figure 1 in Appendix A presents a vicinity map depicting the project location.

### **Project Description**

The proposed development will include up to two (2) retail buildings on Tax Map 2S129D, east of SW Century Drive. Lot 150 is proposed to include up to 18,860 SF of commercial retail space. Access to proposed project will include two (2) driveways on the east side of SW Century Drive. Figure 2 presents a site plan of the proposed development.

### **Scope of Analysis**

This TIA has been prepared in accordance with Sherwood Municipal Code (SMC) Section 16.106.080, Washington County Resolution No. 86-95, and City of Sherwood pre-application meeting notes dated November 25, 2020. This TIA includes a summary of existing traffic conditions, crash review, estimated trip generation, and an analysis of intersection operations, sight distance, and queuing. Washington County staff noted a concern over left turns at the North Access and their effect on traffic safety along SW Tualatin-Sherwood Road. Therefore, this TIA includes a review of conditions both with and without left-turn movements at the North Access. A scoping letter dated March 22, 2021 was approved by DKS Associates, the City's traffic consultant, in an April 14, 2021 email with some adjustments. Additional in-process trips were confirmed in an April 21, 2022 email from DKS Associates. The scoping letter and associated scoping email correspondence are provided in Appendix B.

### **Study Area**

The City requires the study area to include intersections projected to be impacted by 50 or more peak hour trips, per SMC Section 16.106.080.C.4. Analysis of site access points and intersections adjacent to the site, including those located within the access spacing requirements, is also required. Based on these criteria, the following study area is included in this analysis:

1. SW Tualatin-Sherwood Road/SW Langer Farms Parkway
2. SW Tualatin-Sherwood Road/SW Century Drive
3. SW Langer Farms Parkway/SW Century Drive
4. SW Century Drive/North Site Access
5. SW Century Drive/South Site Access

While the proposed development is not expected to impact the SW Tualatin-Sherwood Road/SW Langer Farms Parkway intersections by 50 or more peak hour trips, this intersection was included in the study area to review the potential for queue spillbacks to SW Century Drive. All study area intersections are located within the City of Sherwood. Intersections along SW Tualatin-Sherwood Road are regulated and maintained by Washington County.

### ***Analysis Scenarios***

Analysis is provided for all study area intersections during the AM and PM peak hours. In order to evaluate the impact of left-turn movements at the North Access, analysis scenarios both with and without left-turn movements at this location were analyzed. Per SMC Section 16.106.080.E., the following analysis scenarios were evaluated in the TIA:

- 2022 Existing
- 2024 Pre-Development
- 2024 Post-Development with Restricted-Movement at North Access
- 2024 Post-Development with Full Access at North Access

## II. EXISTING CONDITIONS

The existing conditions analysis is based on a current year 2022 inventory of transportation.

### Site Conditions

The project site is located at 14816-15028 SW Century Drive in Sherwood. The site is identified as Tax Map 2S129D, Lot 150 by the Washington County Assessor. Lot 150 is approximately 37.47 acres and is currently zoned Light Industrial (LI). The portion proposed to be developed is currently vacant.

### Vehicular Transportation Facilities

The study area presented in this TIA includes roadways under City of Sherwood and Washington County jurisdiction. Table 1 presents a summary of the study area roadways' characteristics. Figure 3 presents the existing and future lane configurations and traffic control devices for the study area intersections.

TABLE 1 – ROADWAY CHARACTERISTICS						
Roadway	Functional Classification	Posted Speed (mph)	Travel Lanes	Bike Lanes	On-Street Parking	Sidewalks
SW Tualatin-Sherwood Road	Arterial	35/45	3/5	Yes	No	Yes
SW Century Drive	Collector	25	3	No	No	Yes
SW Langer Farms Parkway	Collector	25	3/4	No	No	Yes

### Pedestrian and Bicycle Facilities

In the vicinity of the project site, sidewalks are provided on both sides of SW Century Drive, SW Tualatin-Sherwood Road, and SW Langer Farms Parkway and continue for some distance outside of the study area. Five-foot bike lanes are provided on both sides of SW Tualatin-Sherwood Road. No bike lanes are provided on SW Century Drive or SW Langer Farms Parkway.

### Transit Facilities

The study area is currently served by TriMet Bus Lines 94 and 97. Bus Line 94 runs Monday through Friday from 4:34 AM to 1:10 AM with 30-minute headways during peak times. Bus Line 97 runs Monday through Friday from 6:18 AM to 7:03 PM during peak AM and peak PM commuter times with 60-minute headways in the AM and 70-minute headways in the PM.

Copies of the 94 and 97 bus line maps and schedules are provided in Appendix C for reference.

## Existing Traffic Counts

Turning movement counts utilized in this study were collected on Wednesday, April 27, 2022, before construction on SW Tualatin-Sherwood Road started August 1, 2022. The construction is associated with a Washington County project to widen Tualatin-Sherwood Road to five lanes. The improvements are planned to be completed in the fall of 2025.

Historical traffic volumes on I-5 near the Nyberg Street exit were reviewed to determine if any adjustments to existing traffic were necessary due to the COVID-19 pandemic. Highway traffic volumes on I-5 both northbound and southbound show that while northbound AM peak hour traffic volumes are not at or above pre-pandemic levels, PM peak hour traffic volumes for April 2022 are above pre-pandemic levels. This suggests there may be some travel pattern changes during the morning commute hours as flexibility with telecommuting has increased. Therefore, no adjustments were made to existing traffic volumes.

Figure 4 presents the existing year 2022 weekday AM and PM peak hour traffic volumes for all study area intersections. Raw traffic count summaries are provided in Appendix D.

## Crash Analysis

Historical crash data reported for the study area intersections were evaluated for safety. Crash data for the 5-year period of 2016 through 2020 were obtained from Oregon Department of Transportation's (ODOT's) crash database and used to review crash patterns.

### *Intersection Crash Rates*

When evaluating the relative safety of an intersection, consideration is given not only to the total number and types of crashes occurring, but also to the number of vehicles entering the intersection. This concept, referred to as a "crash rate," is usually expressed in terms of the number of crashes occurring per one million entering vehicles (MEV) for the intersection per year. Intersections having a crash rate higher than 1.0 crashes/MEV should be reviewed for opportunities to improve safety.

The intersection crash rate is calculated by dividing the average number of crashes per year by the MEV per year. A daily traffic volume was estimated by dividing the PM peak hour volume at each intersection by a peak-to-daily factor, of k-factor. Two (2) k-factors along were averaged using traffic data from the ODOT TransGIS website to reach a 0.89 value. The data utilized to calculate this k-factor was collected 0.1 miles northeast and 0.25 miles southwest of SW Tualatin-Sherwood Road on Highway 99W in 2019.

All intersections were calculated to have a crash rate below 1.0 crashes/MEV. The crash evaluation is summarized in Table 2. The raw crash data is provided in Appendix E for reference.



TABLE 2 – INTERSECTION CRASH RATES								
Intersection (Traffic Control Type)	Year					Total Crashes	ADT	Crash Rate
	2016	2017	2018	2019	2020			
SW Tualatin-Sherwood Road/ SW Langer Farms Parkway (Signalized)	12	6	8	8	4	38	25,400	0.82
SW Tualatin-Sherwood Road/ SW Century Drive (TWSC)	2	3	3	1	3	12	20,400	0.32
SW Langer Farms Parkway/ SW Century Drive (Roundabout)	2	5	2	0	0	9	13,100	0.38

### ***Crash Data Summary***

There were 59 crashes reported at the study area intersections during the five (5) years that were analyzed for this report. There were no reported fatal, pedestrian, or bicycle related crashes in the study area. There was one (1) incapacitating injury (Type A) crash reported in 2019 at SW Tualatin-Sherwood Road/SW Century Drive. There were six (6) reported crashes resulting in visible injury (Type B), 26 reported crashes resulting in possible injury (Type C) crashes, and the remaining 34 crashes were reported as resulting in Property Damage Only (PDO).

There were thirty-eight reported crashes at the SW Tualatin-Sherwood Road/SW Langer Farms Parkway intersection. The most reported crash type (22 of 38) at the SW Tualatin-Sherwood Road/SW Langer Farms Parkway intersection were rear-end type crashes. Half of the reported rear-end crashes were attributed to drivers traveling westbound. All of these rear-end crashes were reportedly attributed to either drivers following too closely or driver inattention. Rear-end crashes are typical at signalized intersections with heavy traffic flows.

The next most reported crash type (11 of 38) at the SW Tualatin-Sherwood Road/SW Langer Farms Parkway intersection were turning-movement crashes. There is no clear pattern to the direction of travel; however, all of these turning-movement crashes but one (1) were reportedly attributed to drivers failing to yield the right-of-way or disregarding the traffic light. The one (1) outlier was reported as a driver making an improper turn. The remaining five (5) crashes were two (2) angle type crashes, two (2) sideswipe-overtaking crashes, and one (1) sideswipe-meeting crash. There is no clear pattern to these five (5) crashes.

There were 12 crashes reported at the SW Tualatin-Sherwood Road/SW Century Drive intersection. Nine (9) of the crashes were reported as rear-end type crashes. All of these rear-end crashes were reportedly attributed to drivers following too closely, failing to avoid the vehicle ahead, or inattention. The remaining three (3) crashes were reported as one (1) sideswipe-overtaking and two (2) turning-movement crashes. The two (2) turning-movement crashes reportedly resulting in one (1) incapacitating injury (Type A) and one (1) visible injury (Type B) crash. Both the Type A and Type B crashes were reportedly caused by westbound drivers attempting to make left turns and failing to yield the right-of-way, striking eastbound-traveling vehicles.

All crashes at this intersection, except one (1) northbound rear-end crash, were attributed to drivers traveling eastbound or westbound. The rear-end collisions did not involve vehicles waiting to make a turn, thereby implying queues from SW Langer Farms Parkway spill back to SW Century Drive where drivers are slowing down. With the roadway widening that is currently underway, queue spillback to SW Century Drive should be minimized.

We reviewed existing queuing estimates on SW Tualatin-Sherwood Road; SimTraffic simulations project 500-foot queues during the PM peak hour at SW Tualatin-Sherwood Road/SW Langer Farms Parkway. Thus, SimTraffic simulations show that queue spillback from SW Langer Farms Parkway may be contributing to this pattern of rear-end crashes at the SW Tualatin-Sherwood Road/SW Langer Farms Parkway intersection. Queues were reviewed in this analysis to determine if spillback is projected to occur to SW Century Drive with Washington County's planned additional travel lane in each direction on SW Tualatin-Sherwood Road. SimTraffic simulations for future conditions project westbound queues from the SW Tualatin-Sherwood Road/SW Langer Farms Parkway to be less than 300 feet. Therefore, we expect for these rear-end crashes occurring at SW Century Drive to be reduced, or potentially eliminated, with the current roadway widening project.

There were nine (9) reported crashes at the SW Langer Farms Parkway/SW Century Drive roundabout. The most commonly reported crash type (4 of 12) at this roundabout was rear-end type crashes. There is no clear pattern to the direction of travel for these rear-end type crashes and all were attributed to drivers failing to avoid the vehicle ahead or following too closely. The next most commonly reported crash type was two (2) angled type crashes. The others were one (1) sideswipe-overtaking, turning movement, and fixed object type crashes. All nine (9) of these crashes were attributed to some form of poor driving and do not indicate any pattern to the direction of travel. There do not appear to be any deficiencies with the geometry or sight lines with this roundabout. Therefore, we are not recommending any improvements to this intersection to reduce the occurrence of these crash types.

### III. PRE-DEVELOPMENT CONDITIONS

The pre-development conditions reflect a build-out year scenario without the proposed development. This scenario includes existing year 2022 traffic, background traffic growth to year 2024, and in-process traffic from other approved developments that have not yet been constructed.

#### Planned Transportation Improvements

The City's adopted *Capital Improvement Plan, Fiscal Years 2022/23 – 2027/28* (CIP) and the County's *Major Streets Transportation Improvement Program* (MSTIP) documents were reviewed for scheduled transportation projects within that study area that may affect intersection and/or roadway capacity. The following projects were identified within the study area:

- Tualatin-Sherwood Road (Highway 99W Crossing) – City of Sherwood (MP Project #D1), Washington County
- Herman Road (Arrow Street) Extension – City of Sherwood (MP Project #D21)

#### ***Tualatin-Sherwood Road (Highway 99W Crossing)***

The Tualatin-Sherwood Road improvements at Highway 99W include an additional westbound through lane, a second receiving lane on SW Roy Rogers Road, an additional eastbound left-turn lane, and a dedicated eastbound right-turn lane. Between SW Langer Farms Parkway and SW Borchers Drive, SW Tualatin-Sherwood Road will be widened to five (5) lanes to include two (2) through lanes in each direction and a center turn lane. Buffered bike lanes will also be installed on both sides of the roadway. Project design is complete. Construction began August 1, 2022 and is estimated to be completed by fall of 2025, after opening of the proposed development. Therefore, the five-lane cross-section was assumed in the pre-development and post-development conditions of this analysis.

#### ***Herman (Arrow Street) Road Extension***

This capital improvement project will extend Herman Road from its current terminus at Cipole Road to Langer Farms Parkway. The new roadway will be either a two-lane or three-lane collector with bike lanes, sidewalks, and planter strips. Funding for this project has been identified and the project is on the City's "1 Year CIP List;" however, construction of this new roadway is not anticipated to impact trip routing or capacity. Therefore, these improvements were not assumed in the pre-development and post-development conditions of this analysis.

#### Background Traffic Growth

Background traffic growth is applied to existing traffic volumes to forecast future traffic demand. We applied a linear background traffic growth of 1% per year over two (2) years to year 2022 traffic volumes to estimate 2024 background traffic volumes. This growth rate was estimated using ODOT's 2040 Future Volumes Table for volumes on Highway 99W north and south of SW Tualatin-Sherwood Road. Background growth was applied to all movements at all intersections, except for driveways.

Figure 5 presents the AM and PM peak hour background growth traffic volumes for all study area intersections.

## **In-Process Traffic**

In-process traffic volumes account for developments that have been approved or that are under construction at the time of a traffic study. These traffic volumes account for traffic that will be added to the external roadway network before build-out of the proposed development. Traffic volumes for the following developments were included in the analysis to account for in-process traffic:

- Parkway Village South
- T-S Corporate Park
- Sherwood Commerce Center

The Cipole Industrial Park development was originally identified as an approved development to include in-process trips for; however, this development was occupied at the time the April 2022 traffic counts were collected.

Figure 6 presents the in-process trips for the AM and PM peak hours at all study area intersections.

## **Pre-Development Traffic**

The 2024 pre-development analysis scenario is a combination of 2022 adjusted traffic volumes, a linear 1% annual background growth rate over two (2) years, and in-process trips. The pre-development traffic volumes without the project trips indicate if traffic issues are projected in the future before the addition of the proposed development.

Figure 7 presents the 2024 pre-development traffic volumes for the AM and PM peak hours at all study area intersections.

## IV. SITE DEVELOPMENT

The trip-making characteristics of the proposed development are described below.

### Trip Generation

Trip generation estimates for the proposed uses were developed using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition.

The existing LI zoning limits commercial and office uses to a maximum of 5,000 SF per user and approximately 20,000 SF combined area between the two (2) buildings. Our original March 22, 2021 scoping letter reviewed trip generation estimates for general retail and medical-dental office using data presented in ITE's *Trip Generation Manual*, 10th Edition; however, since then, the proposed uses have changed and ITE has released the 11th Edition, which includes more specific trip rates for retail uses of varying sizes. Therefore, we have utilized trip rates for ITE's "Strip Retail Plaza (<40k)" (ITE LUC 822) use to reflect a mix of potential retail, restaurant, and office tenants.

Table 3 summarizes the trip generation estimates for the proposed project.

TABLE 3 – SITE TRIP GENERATION ESTIMATES										
Land Use	ITE LUC	Size	Trip Type	AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Strip Retail Plaza (<40k)	822	18.86 KSF	Primary	27	18	45	49	73	122	1,027
			Pass-by %	34%			34%			34%
			Pass-by	8	8	16	21	21	42	350
			<b>Primary</b>	<b>19</b>	<b>10</b>	<b>29</b>	<b>28</b>	<b>52</b>	<b>80</b>	<b>677</b>

As presented in Table 3, the proposed development is estimated to generate 45 AM peak hour, 122 PM peak hour, and 1,027 daily trips. Of those trips, 29 AM peak hour, 80 PM peak hour, and 677 daily trips are estimated to be primary, or new trips to the site.

### Trip Distribution and Assignment

#### *Pass-by Trips*

Pass-by trip distribution was estimated using existing 2022 traffic volumes along SW Tualatin-Sherwood Road at SW Century Drive. The following pass-by trip distribution was assumed:

- 65% (AM)/45% (PM) from the west on SW Tualatin-Sherwood Road
- 35% (AM)/55% (PM) from the east on SW Tualatin-Sherwood Road

Overall pass-by trip distribution is the same for scenarios with and without restricted movements at the North Access; however, trip assignment differs for the two (2) scenarios. The following figures present the trip distribution and traffic assignment for the two access scenarios during the AM and PM peak hours:

- Figure 8 – Pass-by Trip Distribution + Assignment with Restricted Access
- Figure 12 – Pass-by Trip Distribution + Assignment with Full-Movement Access

**Primary Trips**

Trip distribution for the proposed development was estimated using select zone travel demand model plots from Washington County Base year 2015 and future year 2040 traffic volumes for Transportation Analysis Zone (TAZ) 997 were reviewed to establish the following trip distribution:

- 15% to/from the west on SW Roy Rogers Road
- 25% to/from the east on SW Tualatin-Sherwood Road
- 10% to/from the west on SW Century Drive to adjacent neighborhood
- 10% to/from the south on SW 124th Avenue
- 10% to/from the north on Highway 99W
- 15% to/from the south on Highway 99W
- 5% to/from the east on SW Herman Road
- 10% to/from the south on SW Langer Farms Parkway

Overall primary trip distribution is the same for scenarios both with and without restricted movements at the North Access; however, trip assignment differs for the two (2) scenarios. The following figures present the trip distribution and traffic assignment for the two access scenarios during the AM and PM peak hours:

- Figure 9 – Primary Trip Distribution + Assignment with Restricted Access
- Figure 13 – Primary Trip Distribution + Assignment with Full-Movement Access

**Total Trips**

Total trips are all trips that appear at the site driveways and are the combination of pass-by and primary trips. The following figures present the total trip assignment for the two (2) access scenarios during the AM and PM peak hours:

- Figure 10 – Total Trip Assignment with Restricted Access
- Figure 14 – Total Trip Assignment with Full-Movement Access

**Post-Development Traffic**

Post-development traffic volumes are the sum of the pre-development traffic volumes and the proposed site trips. The following figures present the 2024 post-development traffic volumes for the two (2) access scenarios during the AM and PM peak hours:

- Figure 11 – 2024 Post-Development Traffic with Restricted Access
- Figure 15 – 2024 Post-Development Traffic with Full-Movement Access

## V. SITE ACCESS AND CIRCULATION

The evaluation of site access and on-site circulation are presented below. This evaluation includes the assessment of access spacing and sight distance.

### Site Access

Two (2) full-movement driveways are proposed on the east side of SW Century Drive to serve the development. Both driveways will be 30 feet wide. The North Access will be spaced approximately 210 feet south of SW Tualatin-Sherwood Road, as measured from the near edge of the driveway to the existing curb return on SW Tualatin-Sherwood Road. After the widening on SW Tualatin-Sherwood Road, that spacing will be approximately 200 feet from the near edge of the driveway to the future curb return. The South Access will be spaced approximately 180 feet south of the North Access, as measured between the near edges of the driveways.

### Access Spacing

SW Century Drive is designated a Collector by the City of Sherwood. Per SMC 16.106.040.M.2.c., the following spacing standards apply to private driveways on a Collector in reference to driveways and public streets on both sides of the roadway:

- 100 feet from an intersection as measured to the projected right-of-way (ROW) line
- 100 feet from adjacent driveways as measured between the near travel lanes

Table 4 provides a summary of the access spacing for the proposed site driveways.

TABLE 4 – ACCESS SPACING SUMMARY ON SW CENTURY DRIVE				
Access	Spacing Standard (feet)	Available Spacing (feet)		Meets Standard?
		To North	To South	
North Access	100	200	180	Yes
South Access		180	180	Yes

As presented in Table 4, all proposed driveways meet the City’s access spacing requirement of 100 feet from either an adjacent driveway or public street.

### On-Site Circulation

Cross-circulation between the two (2) proposed buildings on lot 150 will be provided; however, the storm pond on the southern portion of the lot precludes cross-circulation with JB Hunt located south of the proposed site and the remaining industrial developments south of JB Hunt. At-grade sidewalk connections to SW Century Drive will be provided south of Building 6 and north of Building 5. A staircase leading to Building 6 will also be provided at SW Century Drive.

## Off-Site Circulation

SW Century Drive is currently a three-lane roadway with a center left-turn lane. This roadway will adequately facilitate turning movements into the proposed driveways. Vehicles can enter and exit the site via the west through the SW Langer Farms Parkway roundabout or via the north to the unsignalized intersection of SW Century Drive with SW Tualatin-Sherwood Road.

Pedestrians will have sidewalk continuity between the site along SW Century Drive and continuing along both SW Tualatin-Sherwood Road and SW Langer Farms Parkway. Adequately marked crosswalks are currently available at both the SW Tualatin-Sherwood Road and SW Century Drive intersections with SW Langer Farms Parkway. No marked crosswalk is provided on SW Tualatin-Sherwood Road in the vicinity of SW Century Drive. Existing year 2022 traffic counts show that pedestrian volumes on SW Tualatin-Sherwood Road are low, with only two (2) pedestrians crossing the south leg of the intersection during the AM peak hour and one (1) pedestrian crossing the south leg during the PM peak hour. The surrounding uses are mostly industrial in nature to the north and east, so few pedestrians are expected to cross SW Tualatin-Sherwood Road at SW Century Drive.

Through volumes on SW Tualatin-Sherwood Road are high enough to warrant a pedestrian crossing treatment with any number of crossing pedestrians, per the National Cooperative Highway Research Program's (NCHRP) Report 562 methodology; however, the proposed retail development is estimated to generate 29 and 80 primary trips during the AM and PM peak hours, respectively, and few of those trips are anticipated to be pedestrian trips. Some trips may arrive via transit. If so, pedestrians will have an opportunity to cross SW Tualatin-Sherwood Road at the nearby bus stops located at SW Langer Farms Parkway to the west and SW Gerda Lane to the east. Therefore, no pedestrian crossing treatments are recommended on SW Tualatin-Sherwood Road at SW Century Drive with the proposed development.

## Sight Distance Evaluation

Intersection sight distance was evaluated at the proposed site driveways on SW Century Drive. The American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets*, 7th Edition, provides recommendations for intersection sight distance (ISD) based on roadway design speed. At minimum, stopping sight distance (SSD) must be provided.

The posted speed on SW Century Drive is 25 mph. The designated design speed for Collector roadways within the City is 35 mph, per Section 120.5 of the City's *Engineering Design and Standard Details Manual*, dated January 4, 2018. SW Century Drive is relatively flat with an overall grade of approximately 3%. Therefore, no grade adjustment was applied to the sight distance requirement and recommendation.

A time gap of 7.5 seconds was assumed for passenger cars completing a left turn from stop on a minor approach (driveway). An additional 0.5 seconds was added to the sight distance calculations to account for passenger cars crossing an additional lane (center turn lane) of traffic.

The recommendations for ISD have been noted in Table 7 for left turns from stop on a stop-controlled minor approach, or driveway. The table also presented the required SSD along SE Century Drive.



TABLE 5 – SIGHT DISTANCE EVALUATION						
Access	Design Speed (mph)	Design Vehicle	Recommended ISD (feet)	Required SSD (feet)	Available Sight Distance (feet)	
					To North/East	To South/West
North Access	35	Passenger Car	415	250	270	520
South Access					490	300

As presented in Table 5, ISD for passenger cars is available from both proposed site driveways. The minimum required SSD along SW Century Drive is also available.

***Tualatin-Sherwood Road/Century Drive***

The proposed development will be operational by the time the SW Tualatin-Sherwood Road widening is completed. Therefore, sight distance was evaluated for SW Tualatin-Sherwood Road (Washington County Arterial) at SW Century Drive for the future five-lane cross-section.

The posted speed on SW Tualatin-Sherwood Road is 45 mph. Washington County’s designated design speed for an Arterial roadway is 45 mph, per the County’s *Road Design and Construction Standards* dated February 2011. Therefore, the recommended ISD and required SSD along SW Tualatin-Sherwood Road were calculated based on a design speed of 45 mph. Both SW Century Drive and SW Tualatin-Sherwood Road are relatively flat roadways. Therefore, no grade adjustments were applied to the sight distance requirement and recommendation.

The recommendation for ISD have been noted in Table 7 for left turns from stop on a stop-controlled minor approach with the major approach having a five-lane cross-section. The table also presents the required SSD along SW Tualatin-Sherwood Road.

TABLE 6 – SIGHT DISTANCE EVALUATION AT CENTURY AND TUALATIN-SHERWOOD						
Roadway	Design Speed (mph)	Design Vehicle	Recommended ISD (feet)	Required SSD (feet)	Available Sight Distance (feet)	
					To West	To East
Tualatin-Sherwood Road	45	Passenger Car	565	360	>565	>565

As presented in Table 6, when accounting for the new edge of travel way due to the widening of SW Tualatin-Sherwood Road, the proposed northern building and the existing building on the west side of SW Century Drive are not anticipated to block the recommended sightlines for left or right turns from a stop at SW Century Drive.

## VI. OPERATIONS ANALYSIS

Two (2) aspects of operational analysis were evaluated for the study area intersections: 1) intersection operations analysis, which evaluates how well an intersection processes traffic demand, and 2) queuing analysis, which compares projected intersection queues with available storage for different travel lanes.

### Intersection Operations Analysis

Intersection operations are generally measured by three (3) mobility standards: volume-to-capacity (v/c) ratio, level-of-service (LOS), and delay (measured in seconds). Signalized and all-way, stop-controlled (AWSC) intersections are typically measured by one overall v/c ratio, LOS, and delay. Roundabout-controlled intersections are measured by one overall LOS and delay representative of the average for the intersection. Two-way, stop-controlled (TWSC) intersections are typically measured by a single v/c ratio, LOS, and delay based on the worst-performing stopped movement.

#### *Performance Measures*

All study area intersections lie within City of Sherwood. SW Tualatin-Sherwood Road is a Washington County roadway. Therefore, Washington County mobility standards will apply to study area intersections along SW Tualatin-Sherwood Road.

#### *City of Sherwood*

Per the City's 2014 Transportation System Plan (TSP), the following mobility standards apply to intersections within City limits:

- 1.1 v/c for streets within Sherwood Town Center boundary
- 0.99 v/c for streets outside Sherwood Town Center boundary but on Metro's Arterial and Throughway Network
- LOS D or 0.85 v/c for AWSC and Roundabout intersections
- LOS E or 0.90 v/c for TWSC intersections

The SW Langer Farms Parkway/SW Century Drive intersection is located within the Sherwood Town Center boundary. All other intersections are on Metro's Arterial and Throughway Network.

#### *Washington County*

The study area intersections along SW Tualatin-Sherwood Road are on Arterial and Throughway Network. Therefore, the County's 0.99 v/c standard applies to these study area intersections.

#### *Methodology*

Intersection operations were analyzed with the use of Synchro 11 software, which utilizes the Transportation Research Board's *Highway Capacity Manual* (HCM) 2000, HCM 2010, and HCM 6 methodologies. Signalized study area intersections were reported using HCM 6 reports for delay and LOS; the overall intersection v/c was calculated per ODOT's APM guidance. Two-way, stop-controlled, and roundabout intersections were reported using HCM 6 reports. Signal timing plans were obtained from Washington County's online traffic signal plans database and are provided in Appendix F for reference.

### Findings

The operation results for the intersection or critical movement at each study area intersection are presented in Table 7. These results reflect a full-movement driveway at North Access. The detailed Synchro capacity results are provided in Appendix I for reference.

TABLE 7 – PEAK HOUR INTERSECTION OPERATIONS WITH FULL-MOVEMENT DRIVEWAY				
Intersection (Control)	Peak Hour	Analysis Results (v/c-LOS-Delay in seconds)		
		2022 Existing	2024 Pre-Development	2024 Post-Development
SW Tualatin-Sherwood Road/ SW Langer Farms Parkway (Signalized)	AM	0.70-B-15.8	0.56-B-14.2	0.56-B-14.2
	PM	0.78-C-20.1	0.71-B-18.4	0.71-B-18.5
SW Tualatin-Sherwood Road/ SW Century Drive (TWSC)	AM	0.14-C-16.0 (NBR)	0.11-B-12.6 (NBR)	0.13-B-12.8 (NBR)
	PM	0.23-B-10.8 (WBL)	0.25-B-11.3 (WBL)	0.17-E-36.4 (NBL)
SW Langer Farms Parkway/ SW Century Drive (Roundabout)	AM	N/A-A-4.2	N/A-A-4.4	N/A-A-4.5
	PM	N/A-A-5.2	N/A-A-5.5	N/A-A-5.5
SW Century Drive/ North Access	AM	N/A	N/A	0.01-A-8.8 (WB)
	PM	N/A	N/A	0.05-A-9.1 (WB)
SW Century Drive/ South Access	AM	N/A	N/A	0.01-A-8.7 (WB)
	PM	N/A	N/A	0.04-A-9.0 (WB)

As presented in Table 7, there are no existing or projected capacity deficiencies at any study area intersection during the AM and PM peak hours.

Table 8 presents a comparison of the operation results with both full-movement and no left turns in (restricted movements) at the North Access. This table allows for easy comparison of driveway operations with the two access scenarios.

TABLE 8 – 2024 POST-DEVELOPMENT DRIVEWAY INTERSECTION OPERATIONS				
Intersection (Control)	Peak Hour	Movement	Analysis Results (v/c-LOS-Delay in seconds)	
			With Full-Movement Access	With Restricted-Movement Access
SW Century Drive/ North Access	AM	WB	0.01-A-8.8	0.01-A-8.8
		SBL	0.01-A-7.4	N/A
	PM	WB	0.05-A-9.1	0.04-A-9.1
		SBL	0.02-A-7.4	N/A
SW Century Drive/ South Access	AM	WB	0.01-A-8.7	0.01-A-8.7
		SBL	0.01-A-7.4	0.02-A-7.4
	PM	WB	0.04-A-9.0	0.03-A-7.4
		SBL	0.01-A-7.4	0.05-A-9.1

As presented in Table 8, allowing left turns into the North Access is not projected to result in operational deficiencies. Additionally, restricting left turns at the North Access does is not expected to result in poor operations of the South Access. Due to the minimal differences in intersection operations between these scenarios, queuing was also reviewed with and without restricted movements at the North Access to determine if left turns in should be limited at this location.

### Intersection Queuing Analysis

An intersection queuing analysis was conducted for the study area intersections during the AM and PM peak hours to evaluate any potential queue spillbacks.

#### **Methodology**

The 95th percentile queues were estimated using SimTraffic software. Queue demand results were rounded to the nearest 25 feet to represent average vehicle lengths. Because queues are based on an average of five (5) traffic simulations using random arrivals, some fluctuation in results can be anticipated, particularly for movements that are near or over-capacity.

Available queue lengths were estimated using Google Earth Pro software and rounded to the nearest 5 feet. For turn lanes, two (2) available storage values are stated: the first represents the striped storage and the second is the effective storage, or the length physically available regardless of striping, such as a center turn lane upstream of a striped left-turn lane at an intersection. Although travel lanes have no storage defined by striping, two (2) values are reported for storage: the first is the distance to an upstream driveway; the second is the distance to an upstream public street intersection.

At the proposed North Access location, vehicles are legally allowed to turn left across double yellow striping to enter the site. Queues for this southbound left-turning movement were reviewed to determine if any spillback to SW Tualatin-Sherwood Road is expected with this movement.

**Findings**

The 95th percentile queues for the AM and PM peak hours are presented in Table 9. These results reflect a full-movement driveway at the North Access. Queues exceeding the existing or planned storage areas are **bolded**. The detailed SimTraffic queuing results are provided in Appendix J for reference.

TABLE 9 – 95TH PERCENTILE QUEUING ANALYSIS WITH FULL-MOVEMENT DRIVEWAY					
Intersection (Control)	Approach/ Movement	Available/ Effective Storage (feet)	AM/PM Queue (feet)		
			2022 Existing	2024 Pre- Development	2024 Post- Development
SW Tualatin-Sherwood Road/ SW Langer Farms Parkway (Signalized)	EBL	Existing: 110/320 Future: 105/165	25/100	25/50	25/50
	EBT	650	475/525	250/275	225/300
	EBT+R	Existing: 0 Future: 650	N/A	275/300	225/325
	EBR	Existing: 145/170 Future: 0	100/ <b>175</b>	N/A	N/A
	WBL	Existing: 100/200 Future: 400/450	75/200	75/150	75/150
	WBT+R	160/660	332/525	150/200	150/200
	WBT	Existing: 0 Future: 660	N/A	150/175	150/200
	NBL	130/980	100/175	100/200	100/175
	NBT	150/980	100/100	125/150	125/125
	NBR	130/290	75/100	75/75	75/75
	SBL	125/160	75/100	100/125	100/100
SBT+R	285/>1,000	100/225	125/250	100/250	
SW Tualatin-Sherwood Road/ SW Century Drive (TWSC)	WBL	Existing: >1,000 Future: 250/290	50/125	50/100	75/125
	NBL	185/230	25/25	25/25	50/75
	NBR	200/>1,000	75/75	50/75	75/75

TABLE 9 – 95TH PERCENTILE QUEUING ANALYSIS WITH FULL-MOVEMENT DRIVEWAY					
Intersection (Control)	Approach/ Movement	Available/ Effective Storage (feet)	AM/PM Queue (feet)		
			2022 Existing	2024 Pre- Development	2024 Post- Development
SW Langer Farms Parkway/ SW Century Drive (Roundabout)	EBL+T+R	310	50/100	75/100	75/100
	EBR	140/180	25/25	25/25	25/25
	WBL+T+R	165/>1,000	50/125	50/125	50/125
	WBR	165/230	25/25	25/25	25/50
	NBL+T	430	50/50	50/50	50/50
	NBT+R	130/160	25/25	25/25	25/25
	SBL+T	260	50/125	50/100	50/100
	SBT+R	205/235	25/50	25/50	25/25
SW Century Drive/ North Access (TWSC)	WB	50	N/A	N/A	50/50
	SBL	200	N/A	N/A	25/25
SW Century Drive/ South Access (TWSC)	WB	50	N/A	N/A	25/50
	SBL	175/400	N/A	N/A	25/25

As presented in Table 9, existing queues are estimated to be accommodated by existing storage areas, except the eastbound right-turn movement at the SW Tualatin-Sherwood Road/SW Langer Farms Parkway intersection. Future queues along SW Tualatin-Sherwood Road, including the eastbound right-turn queue at SW Langer Farms Parkway, are projected to decrease with the future five-lane cross-section.

Table 10 presents the queuing results with both full-movement and no left turns in (restricted movements) at the North Access. Because restricting left turns in at the North Access will impact queuing at both SW Tualatin-Sherwood Road and the South Access, queuing results for these three (3) locations alone are presented in the table.

TABLE 10 – 2024 POST-DEVELOPMENT 95TH PERCENTILE QUEUING ANALYSIS				
Intersection (Control)	Approach/ Movement	Available/ Effective Storage (feet)	AM/PM Queue (feet)	
			With Full-Movement Access	With Restricted- Movement Access
SW Tualatin-Sherwood Road/ SW Century Drive (TWSC)	WBL	>1,000	75/125	50/125
	NBL	185/230	50/75	50/75
	NBR	200/>1,000	75/75	75/75
SW Century Drive/ North Access (TWSC)	WB	25	50/50	25/50
	SBT+L	200	25/25	N/A
SW Century Drive/ South Access (TWSC)	WB	50	25/50	25/50
	SBL	175/405	25/25	25/25

As presented in Table 10, the northbound left- and right-turn queues on SW Century Drive at SW Tualatin-Sherwood Road are not expected to exceed 200 feet, the distance to the proposed development’s North Access from the stop bar at SW Tualatin-Sherwood Road. Therefore, access into the North Access from the north is not expected to be blocked by northbound traffic queued at SW Tualatin-Sherwood Road. Additionally, the peak-hour southbound left-turn queues at the proposed North Access are not anticipated to spill back to SW Tualatin-Sherwood Road. The projected 25-foot queues for this movement are anticipated to allow adequate transition area for vehicles to safely turn onto SW Century Drive from SW Tualatin-Sherwood Road. With approximately 175 feet of clear distance between the back of the queue for southbound left-turns at the North Access and SW Tualatin-Sherwood Road, adequate SSD is available for vehicles traveling up to 27 mph.

Based on these results, allowing left-turn movements into the North Access is not anticipated to adversely impact traffic turning onto SW Century Drive from SW Tualatin-Sherwood Road, as long as drivers turn from the southbound through lane on SW Century Drive rather than from the northbound left-turn lane at SW Tualatin-Sherwood Road. Compliance may be achieved by providing a physical barrier to keep southbound left-turning vehicles from turning too soon before the site’s North Access. Therefore, we recommend installing delineators along the double yellow striping on SW Century Drive, as depicted in Figure 16.

## VII. MITIGATION AND RECOMMENDATIONS

All study area intersections currently operate and are projected to continue to operate within the City's and County's mobility standards with the proposed development. Intersection operations and queuing are projected to improve along SW Tualatin-Sherwood Road with the planned improvements to widen the roadway to five (5) lanes.

The potential need for pedestrian crossing enhancements were evaluated for adjacent roadways. Through volumes on SW Tualatin-Sherwood Road are high enough to warrant a pedestrian crossing, per NCHRP methodology; however, few pedestrians are anticipated to cross SW Tualatin-Sherwood Road at SW Century Drive to and from the proposed development. Therefore, a pedestrian crossing is not recommended with the proposed development.

The proposed full-movement driveway at the North Access is not anticipated to adversely impact safety and operations for the SW Tualatin-Sherwood Road/SW Century Drive intersection. Delays for the southbound left-turning traffic are expected to be minimal during peak hours and no queue spillback is projected to SW Tualatin-Sherwood Road. Additionally, the driveway is not projected to be blocked by northbound left- and/or right-turning traffic to SW Tualatin-Sherwood Road; however, to ensure drivers turn from the southbound through lane, we recommend installing delineators along the double yellow striping on SW Century Drive, as depicted in Figure 16.

No additional off-site improvements are recommended with the proposed development.



## **VIII. APPENDIX**

- Appendix A. Figures
- Appendix B. Scoping Material
- Appendix C. Transit Information
- Appendix D. Traffic Count Summaries
- Appendix E. Crash Data
- Appendix F. In-Process Data
- Appendix G. Trip Distribution Information
- Appendix H. Signal Information
- Appendix I. Operations Calculations
- Appendix J. Queuing Analysis

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APPENDIX A  
**FIGURES**



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**VICINITY MAP**

**SHERWOOD INDUSTRIAL LOT 150  
SHERWOOD, OREGON**

**FIGURE**

**1**

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SHERWOOD  
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(PHASE 3)

PERFORM SCHEDULE

Table with 2 columns: PERFORM SCHEDULE, SHEET TITLE

SITE PLAN  
BUILDINGS  
8 & 9

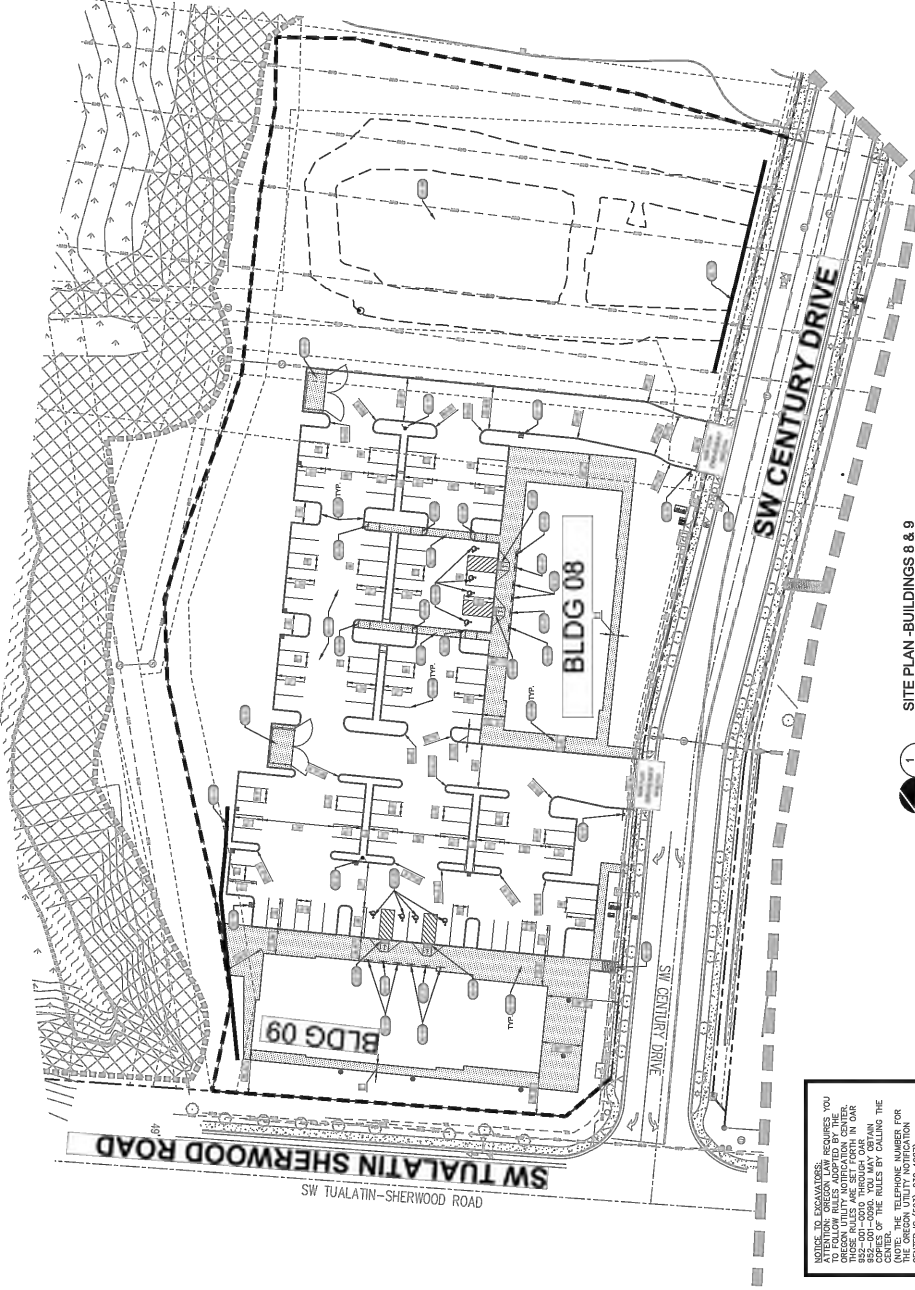
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PRELIMINARY ONLY

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SITE PLAN

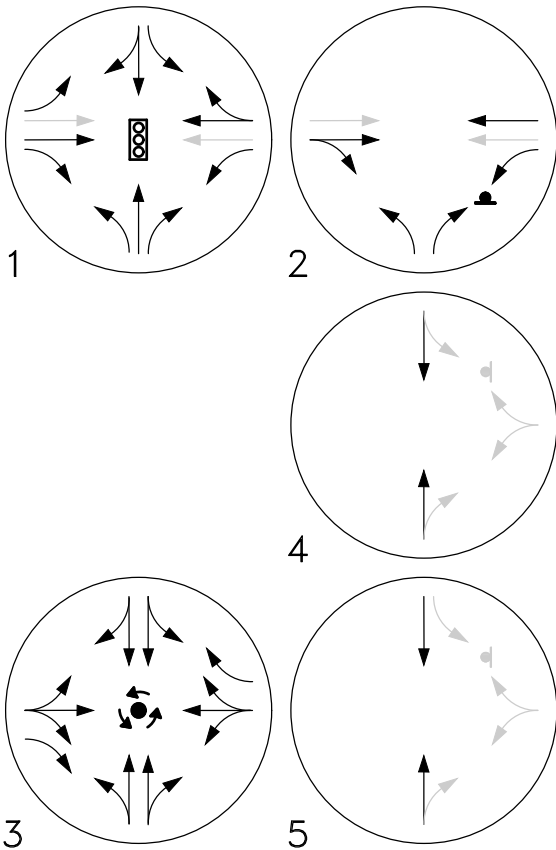
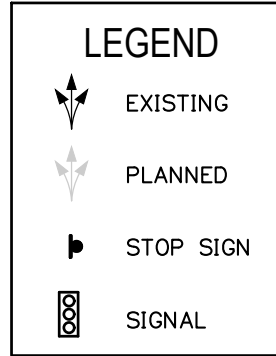
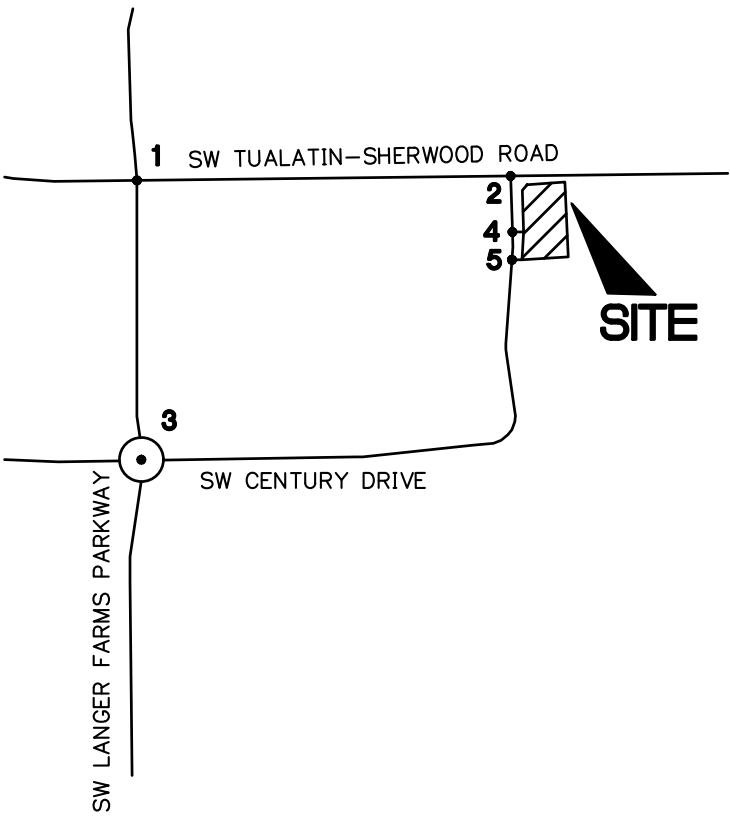
SHERWOOD INDUSTRIAL LOT 150  
SHERWOOD, OREGON

FIGURE  
2

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EXISTING + PLANNED  
 TRAFFIC CONTROL DEVICES  
 + LANE CONFIGURATIONS

SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE

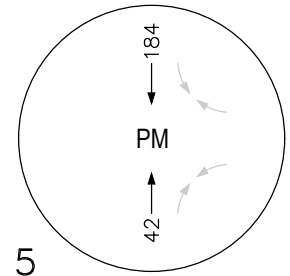
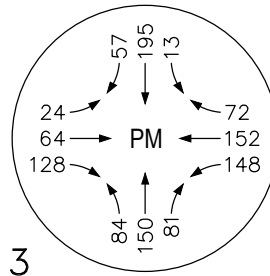
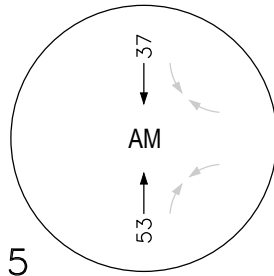
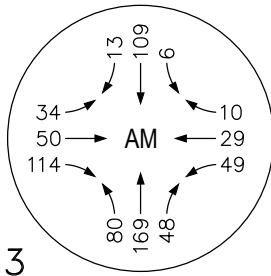
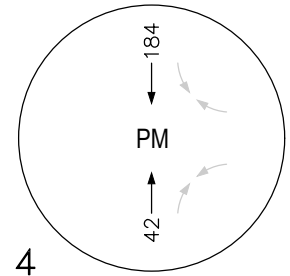
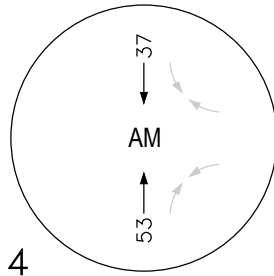
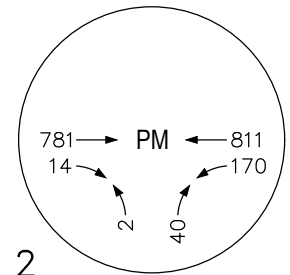
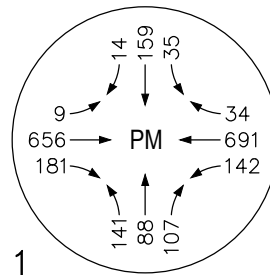
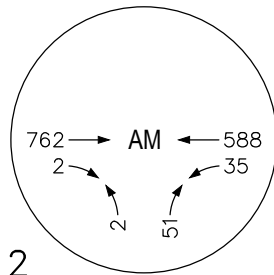
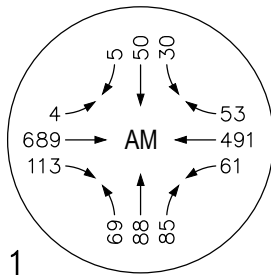
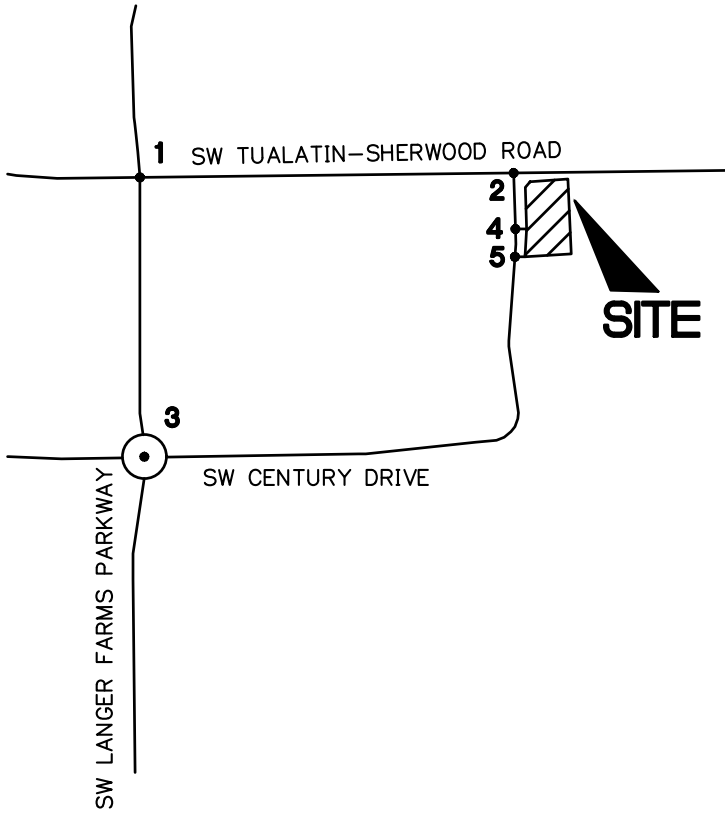
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## 2022 EXISTING TRAFFIC VOLUMES

SHERWOOD INDUSTRIAL LOT 150  
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FIGURE

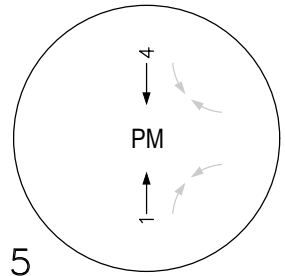
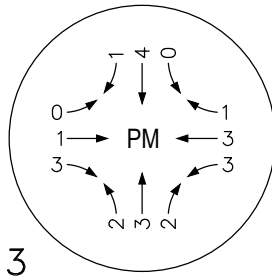
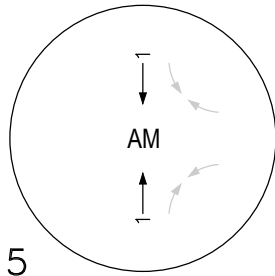
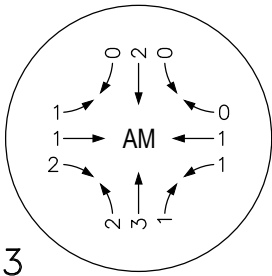
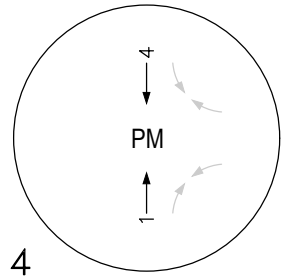
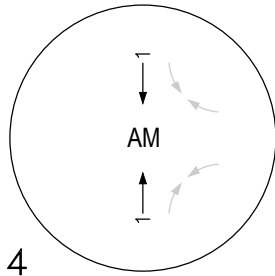
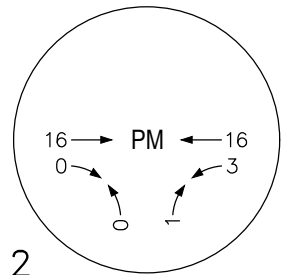
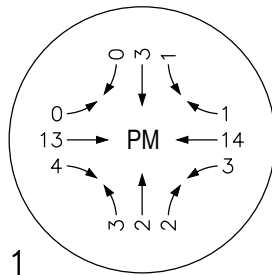
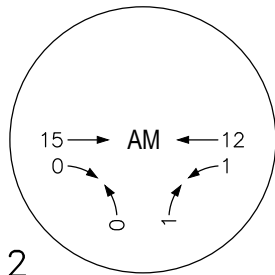
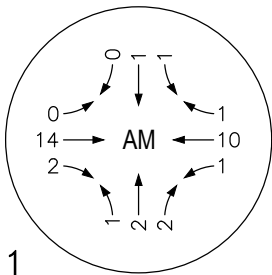
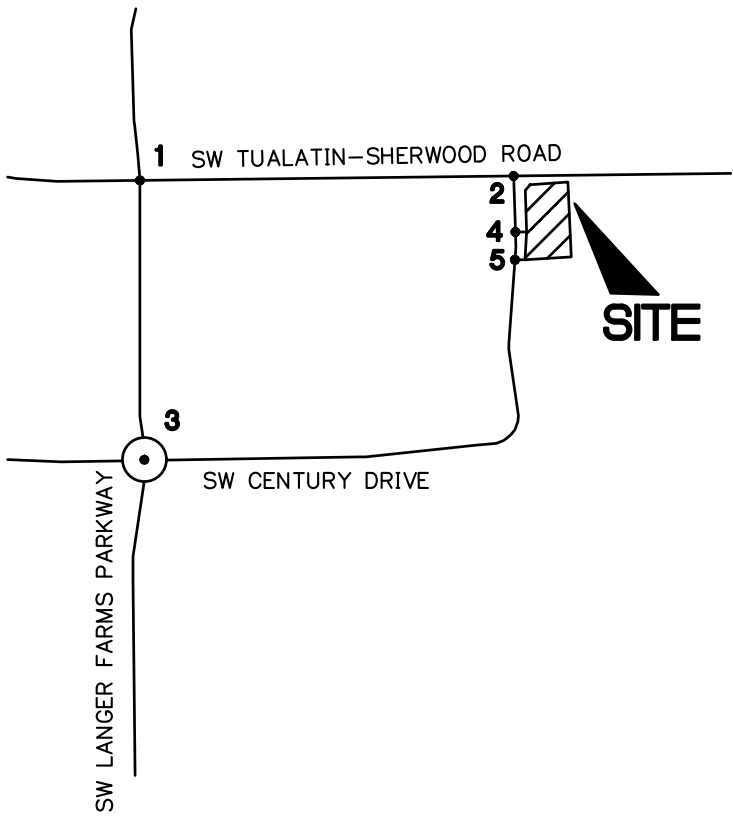
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DATE: 09.14.2022

DRAWN BY: JHA

CHECKED BY: JTJ

JOB NO:  
 220039300

BACKGROUND TRAFFIC GROWTH,  
 2 YEARS AT 1.0% PER YEAR

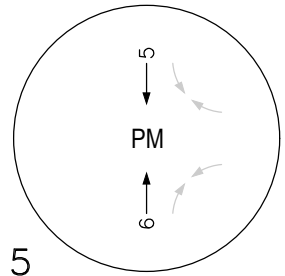
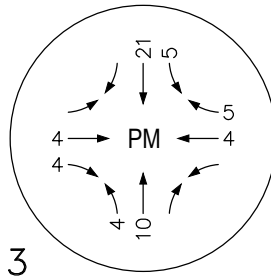
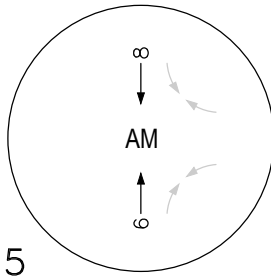
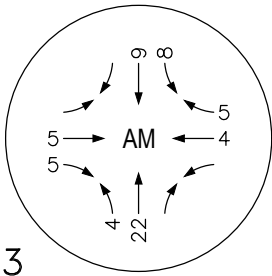
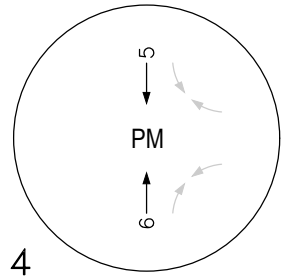
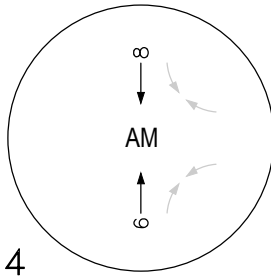
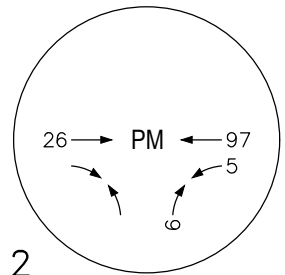
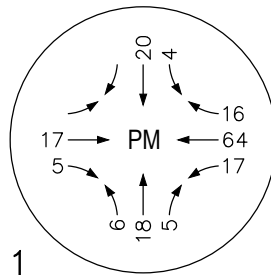
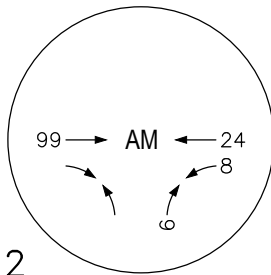
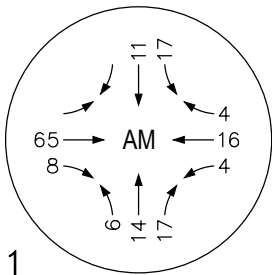
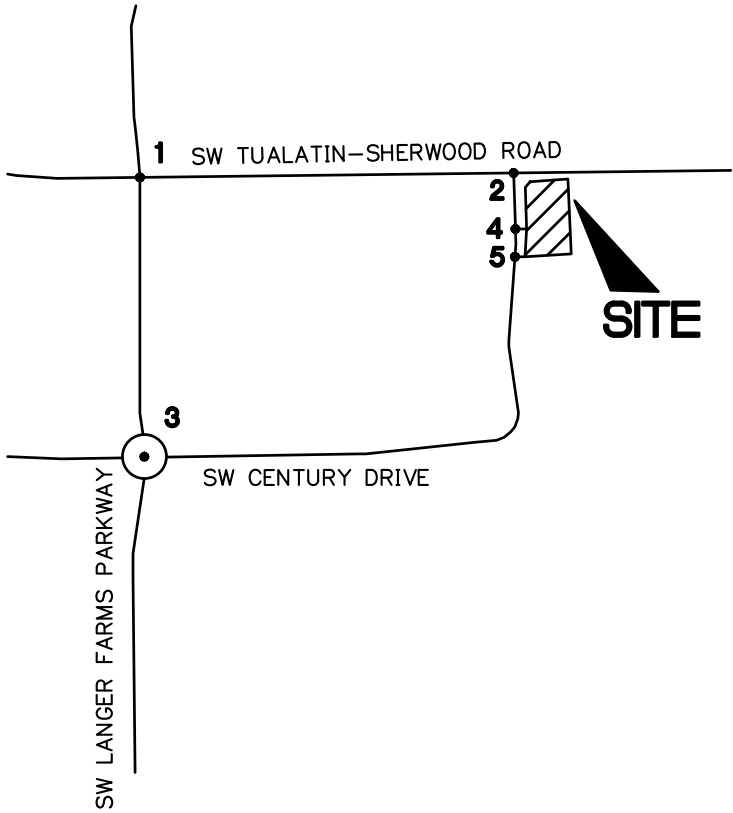
SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE

5



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JOB NO:  
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IN-PROCESS  
 TRAFFIC VOLUMES

SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

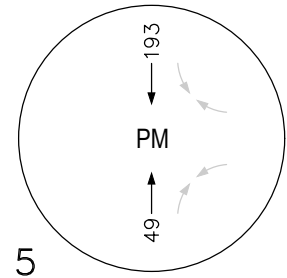
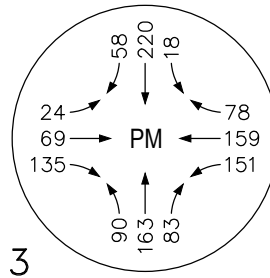
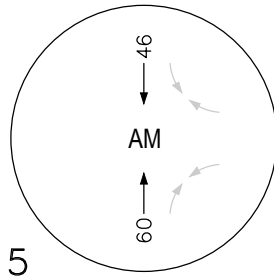
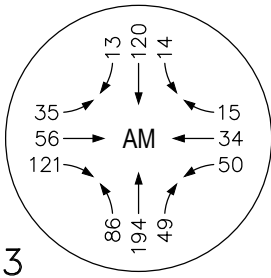
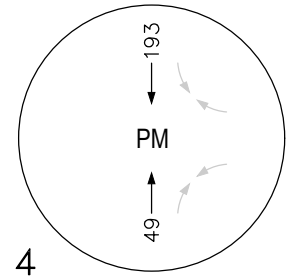
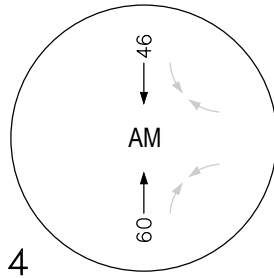
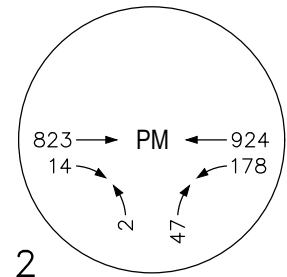
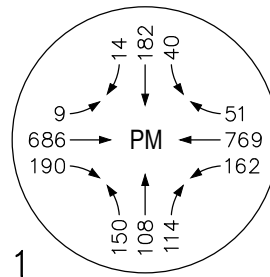
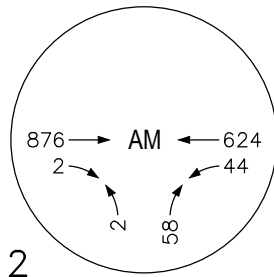
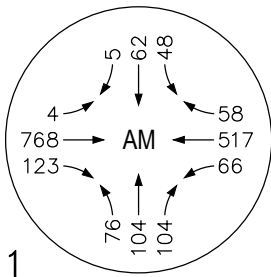
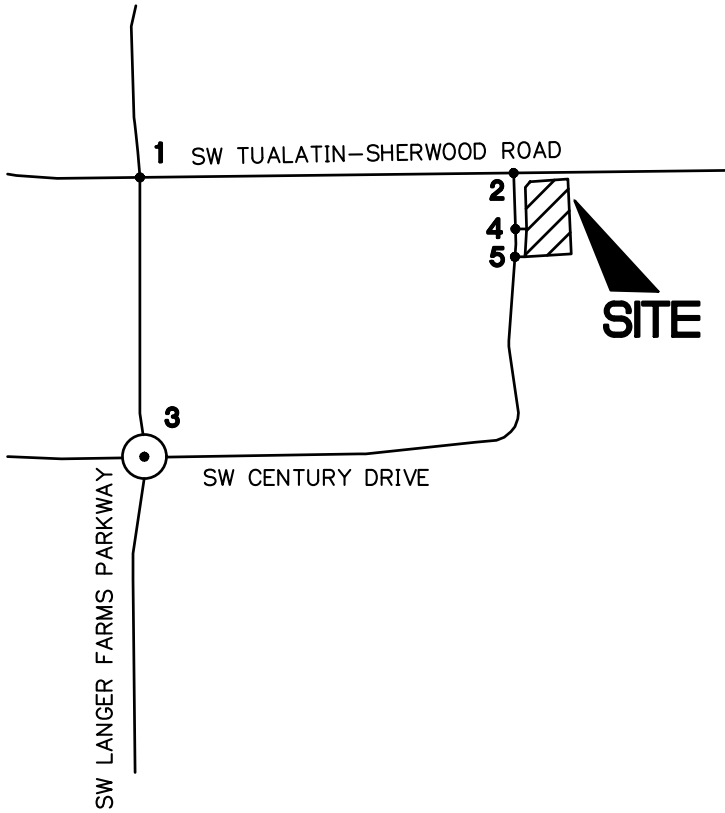
FIGURE

6





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## 2024 PRE-DEVELOPMENT TRAFFIC VOLUMES

SHERWOOD INDUSTRIAL LOT 150  
SHERWOOD, OREGON

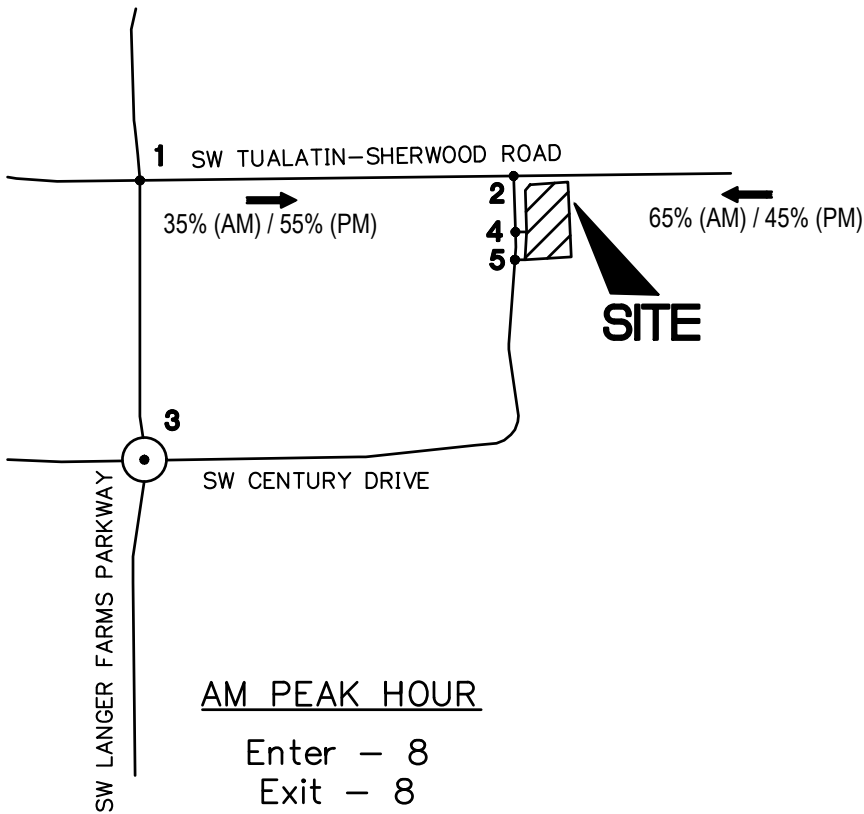
FIGURE

7

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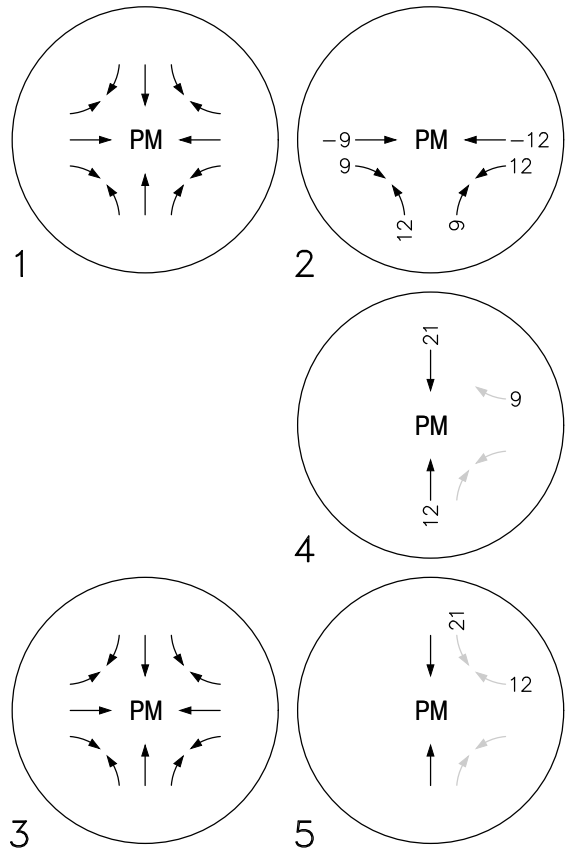
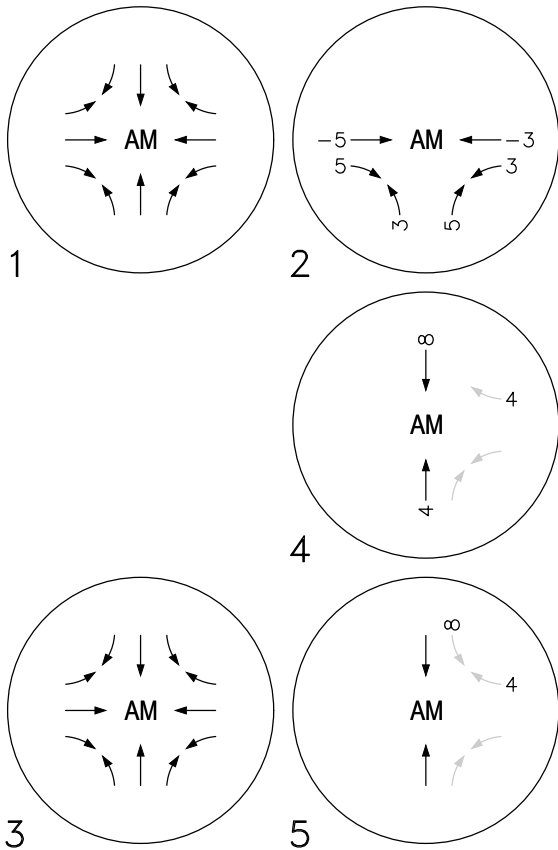


### AM PEAK HOUR

Enter - 8  
 Exit - 8  
 Total - 16

### PM PEAK HOUR

Enter - 21  
 Exit - 21  
 Total - 42



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DRAWN BY: JHA

CHECKED BY: JTJ

JOB NO:  
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PASS-BY TRIP DISTRIBUTION +  
 TRAFFIC ASSIGNMENT  
 WITH RESTRICTED ACCESS

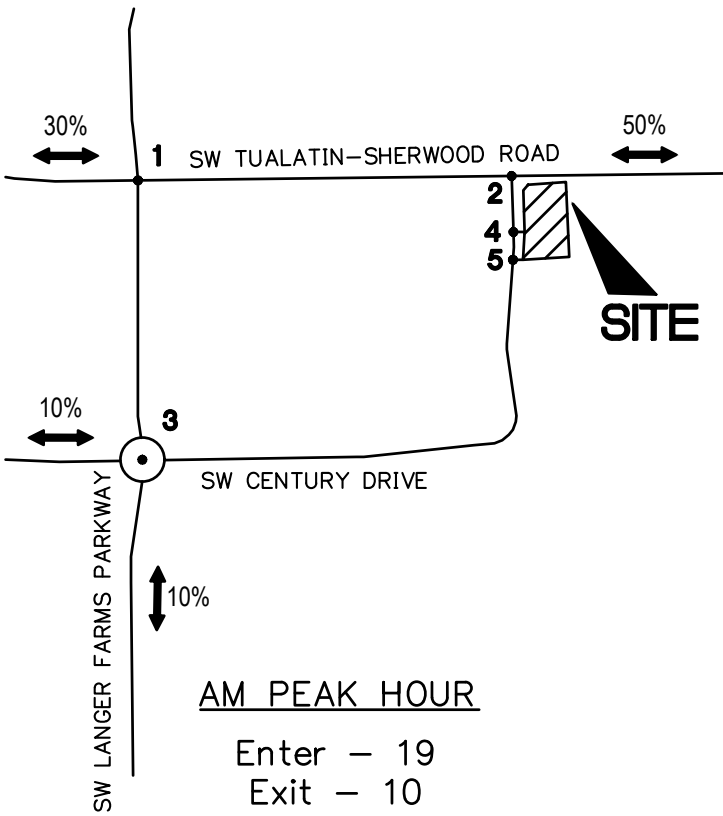
SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE

8



NOT TO SCALE

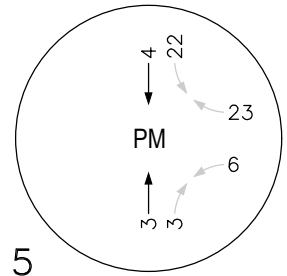
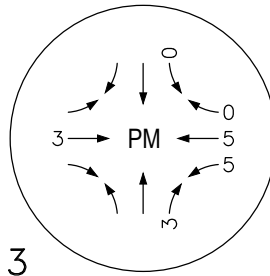
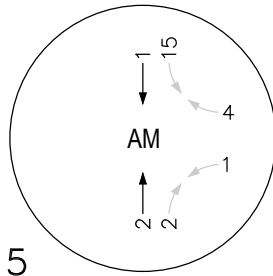
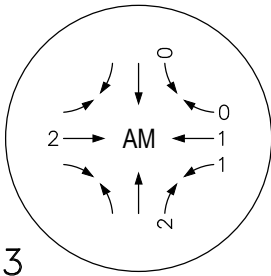
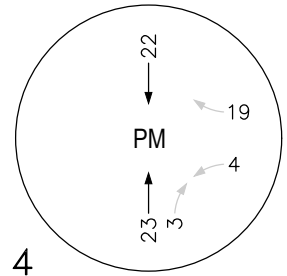
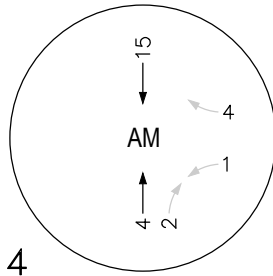
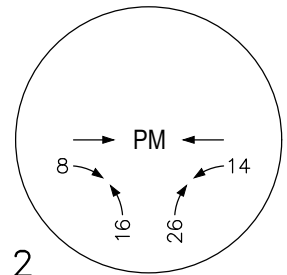
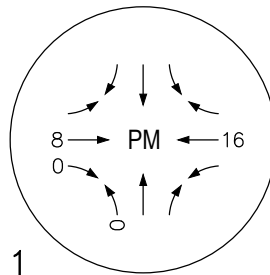
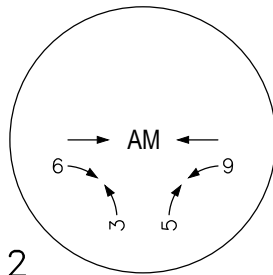
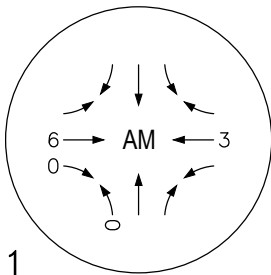


### AM PEAK HOUR

Enter - 19  
 Exit - 10  
 Total - 29

### PM PEAK HOUR

Enter - 28  
 Exit - 52  
 Total - 80



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PRIMARY TRIP DISTRIBUTION +  
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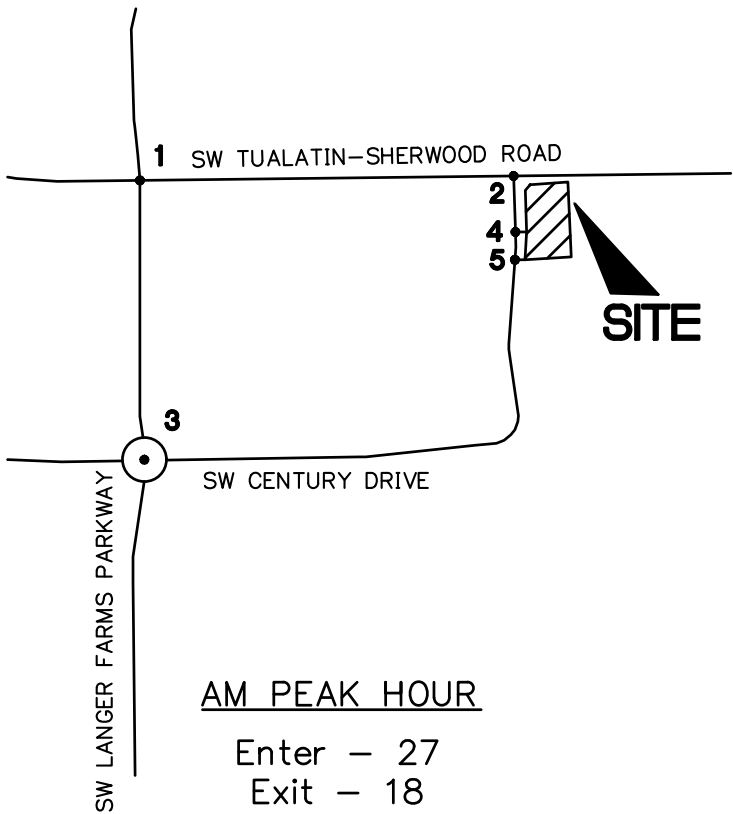
SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE

9



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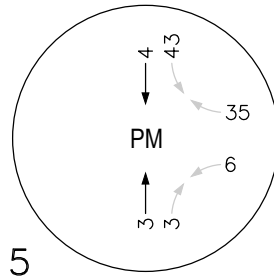
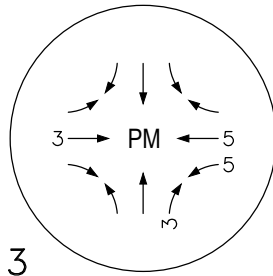
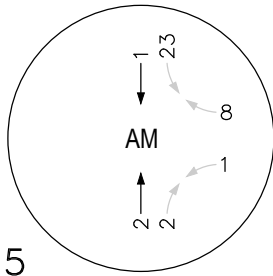
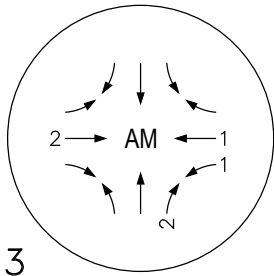
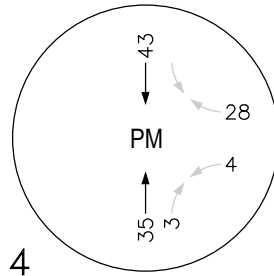
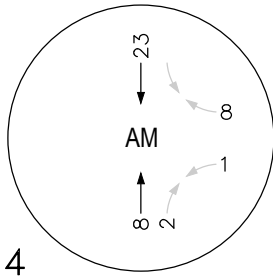
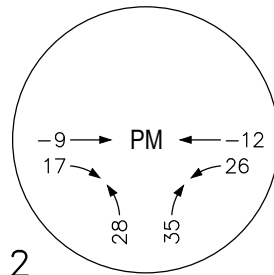
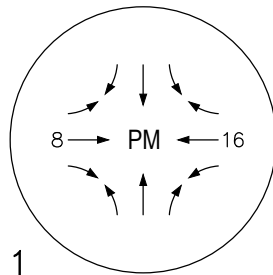
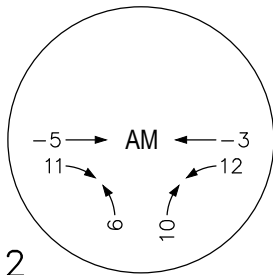
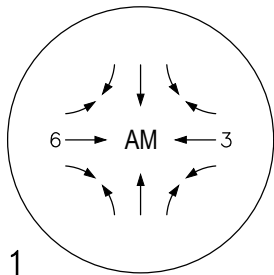


AM PEAK HOUR

Enter - 27  
 Exit - 18  
 Total - 45

PM PEAK HOUR

Enter - 49  
 Exit - 73  
 Total - 122



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TOTAL TRIP ASSIGNMENT  
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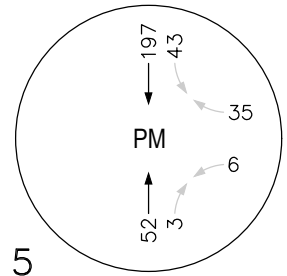
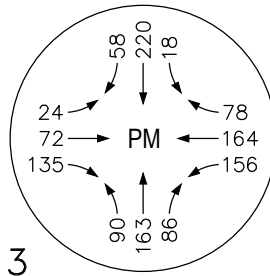
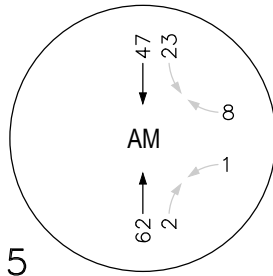
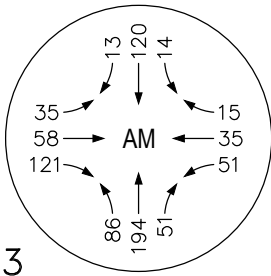
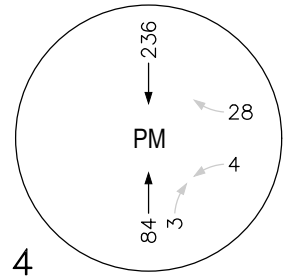
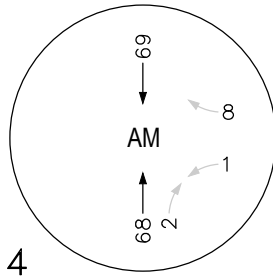
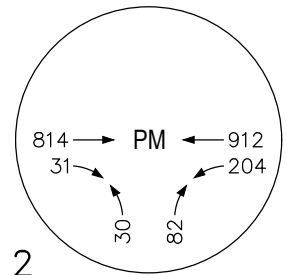
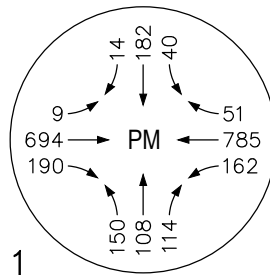
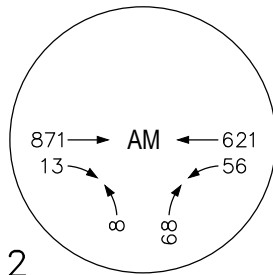
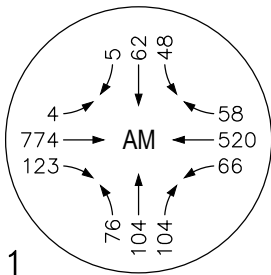
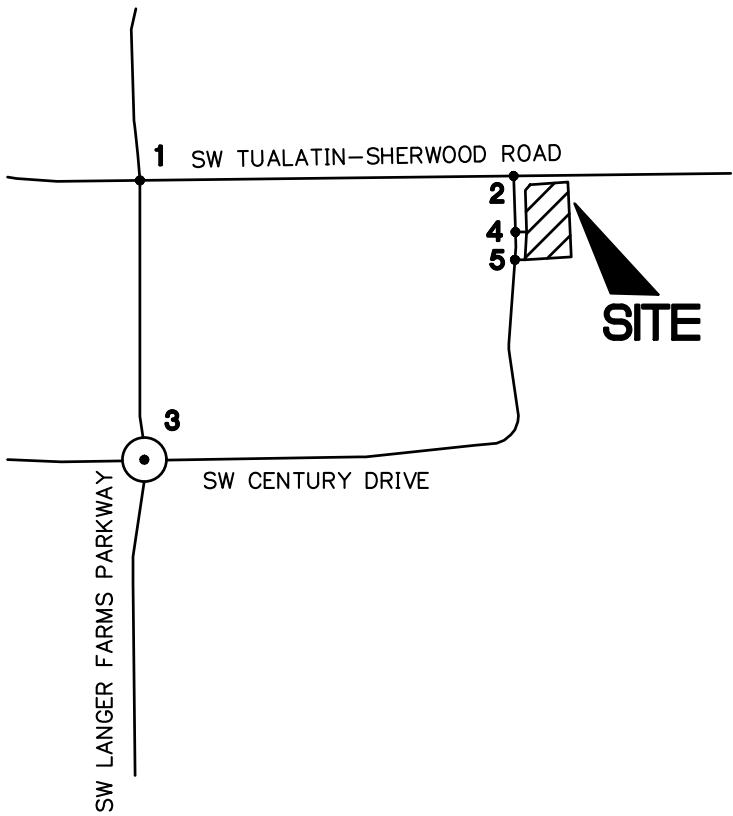
SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE  
 10

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2024 POST-DEVELOPMENT  
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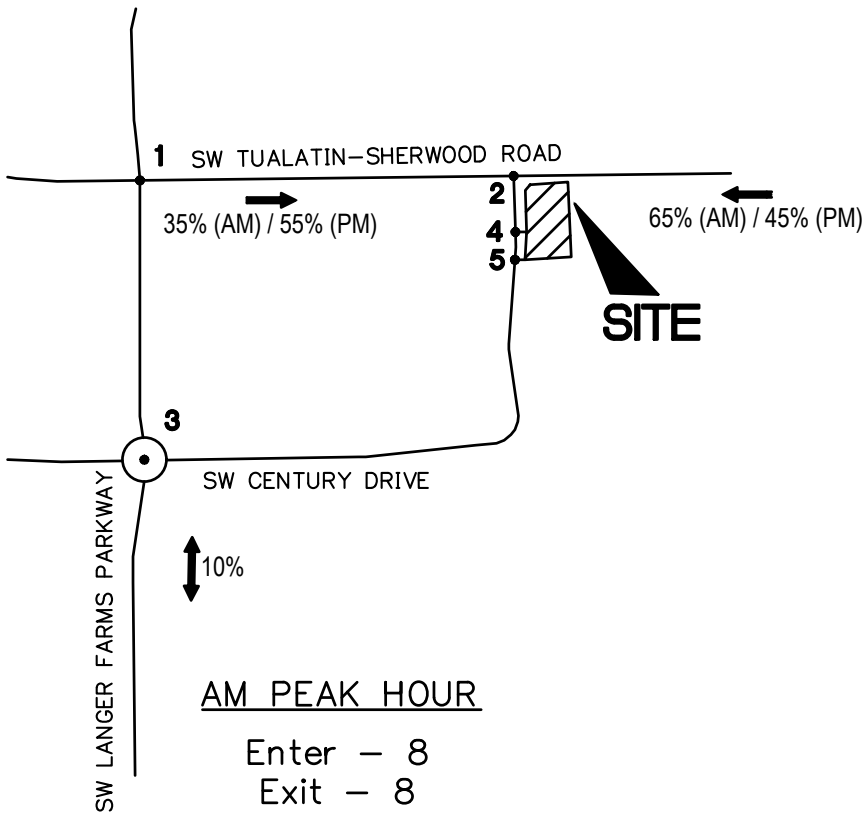
SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE

11



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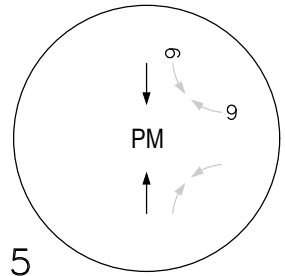
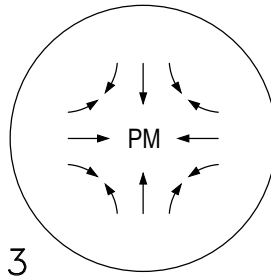
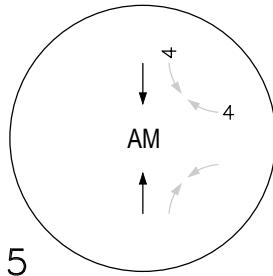
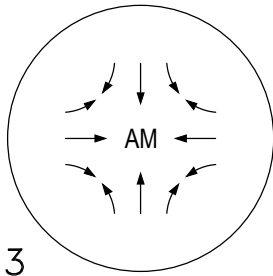
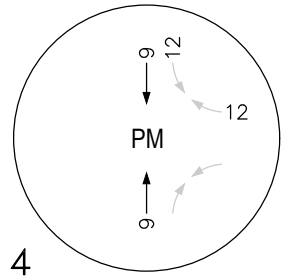
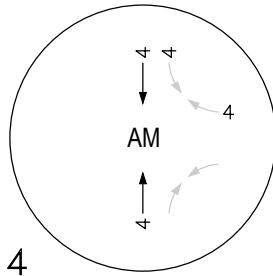
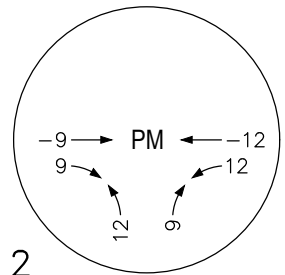
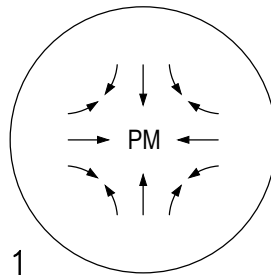
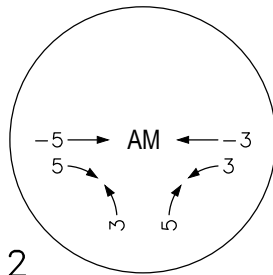
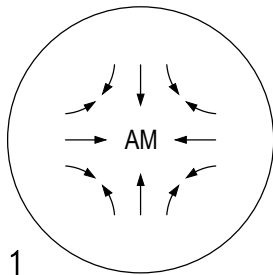


### AM PEAK HOUR

Enter - 8  
 Exit - 8  
 Total - 16

### PM PEAK HOUR

Enter - 21  
 Exit - 21  
 Total - 42



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PASS-BY TRIP DISTRIBUTION +  
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SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE

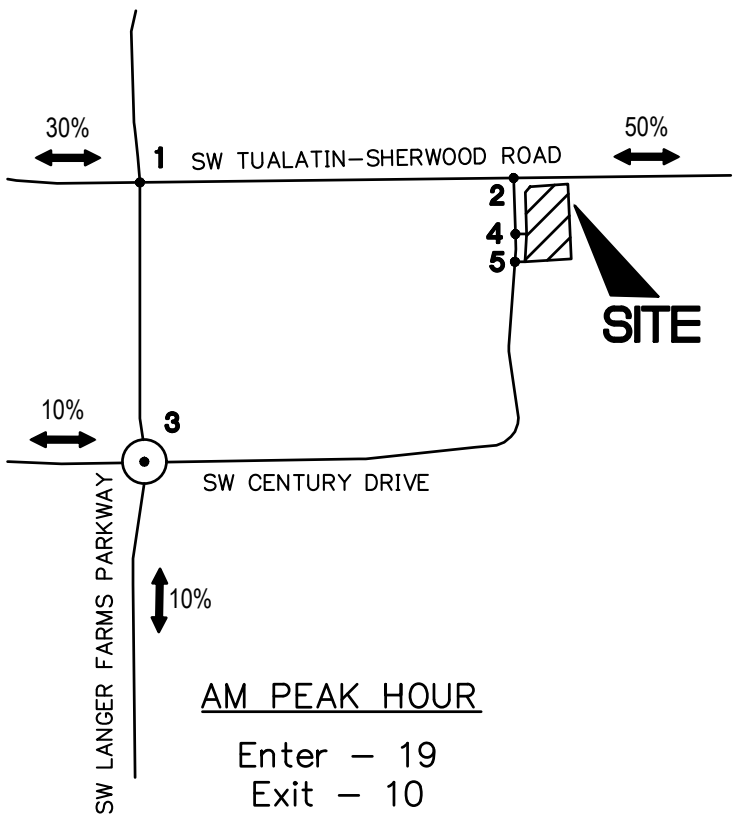
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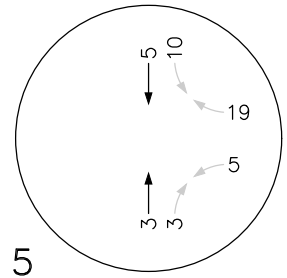
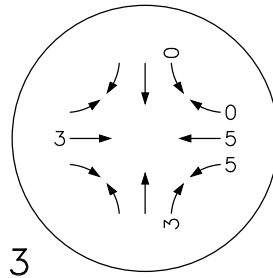
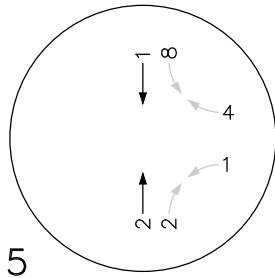
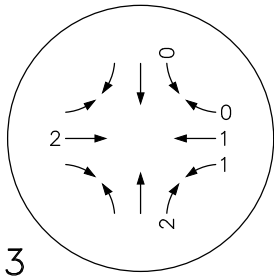
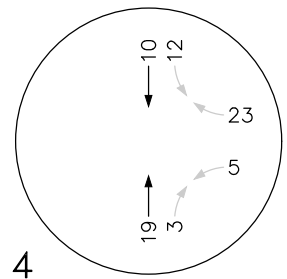
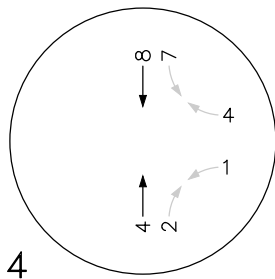
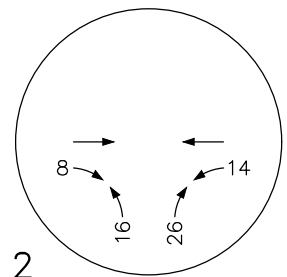
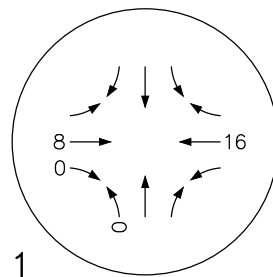
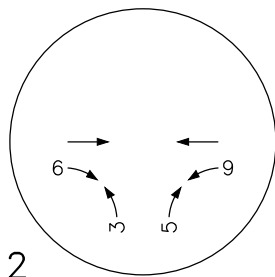
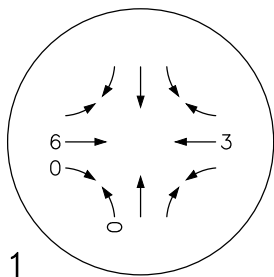


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PM PEAK HOUR

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JOB NO:  
 220039300

PRIMARY TRIP DISTRIBUTION +  
 TRAFFIC ASSIGNMENT  
 WITH FULL ACCESS

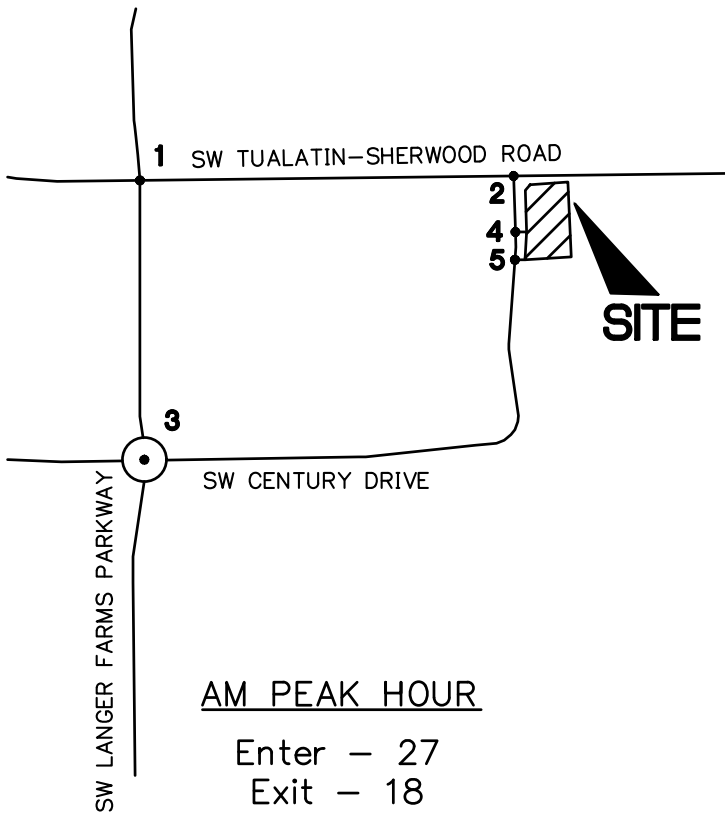
SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE

13



NOT TO SCALE

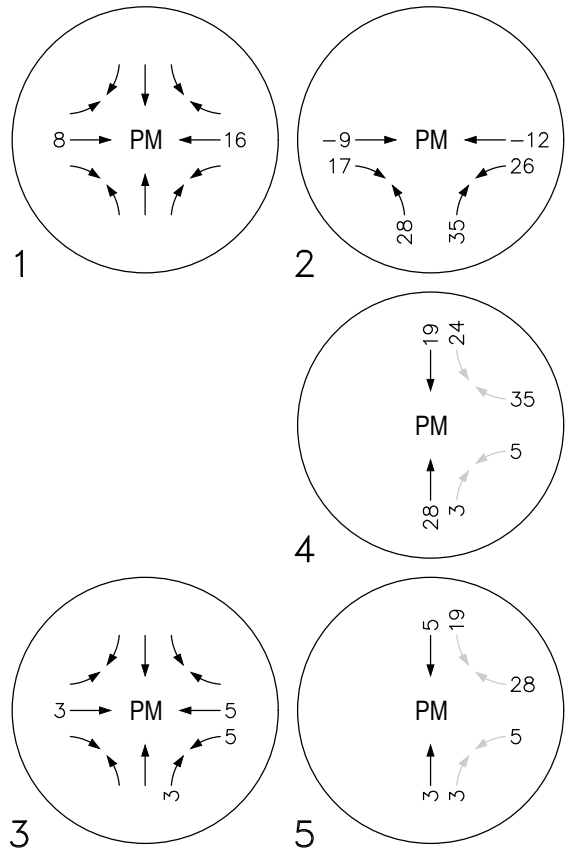
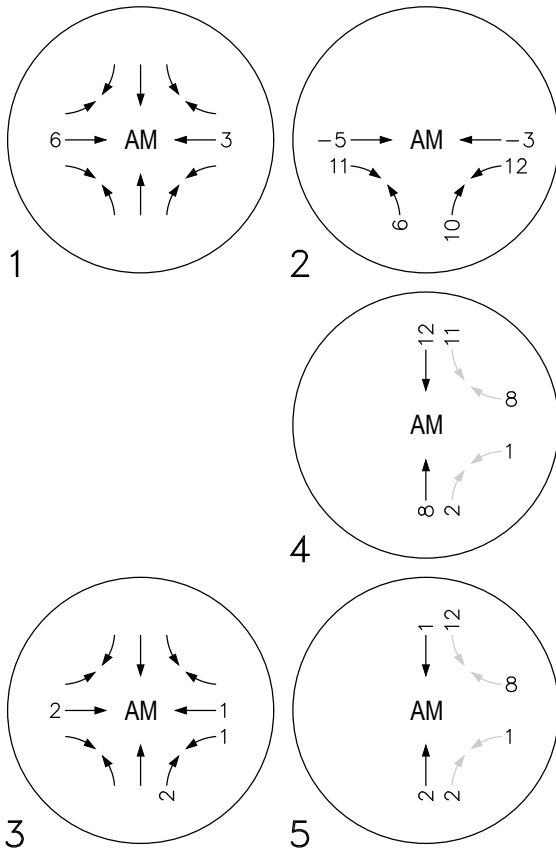


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## TOTAL TRIP ASSIGNMENT WITH FULL ACCESS

SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

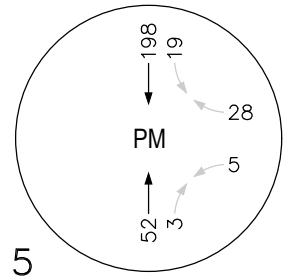
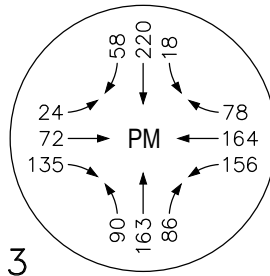
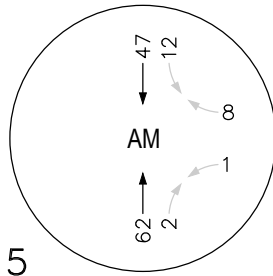
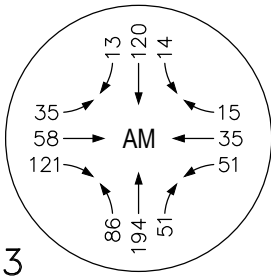
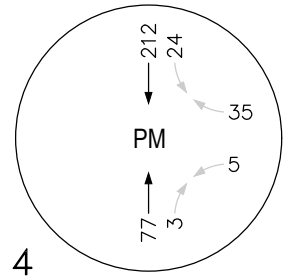
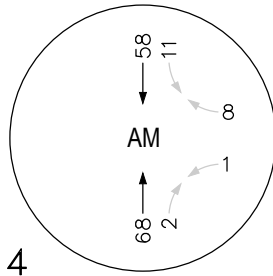
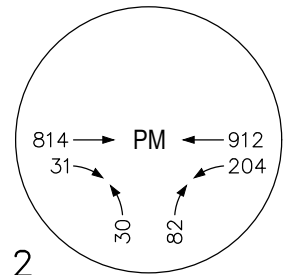
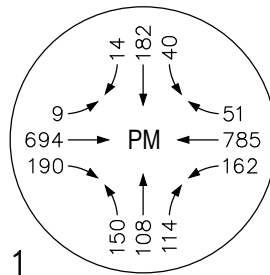
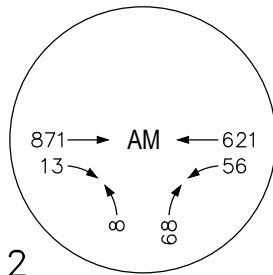
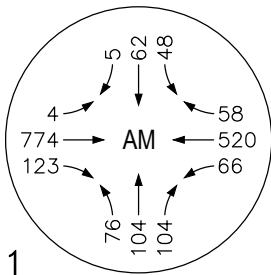
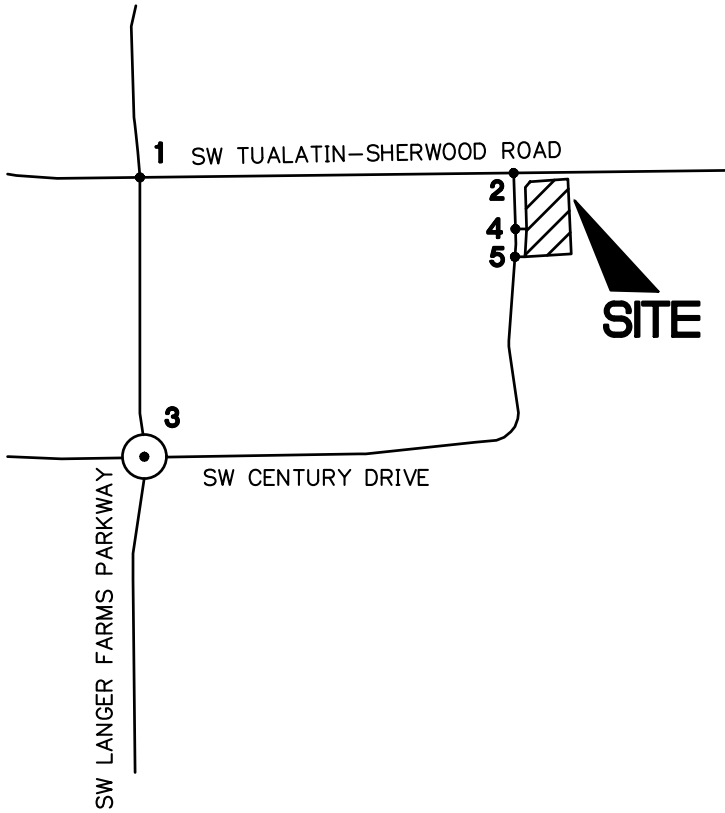
FIGURE

14





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2024 POST-DEVELOPMENT  
 WITH FULL ACCESS

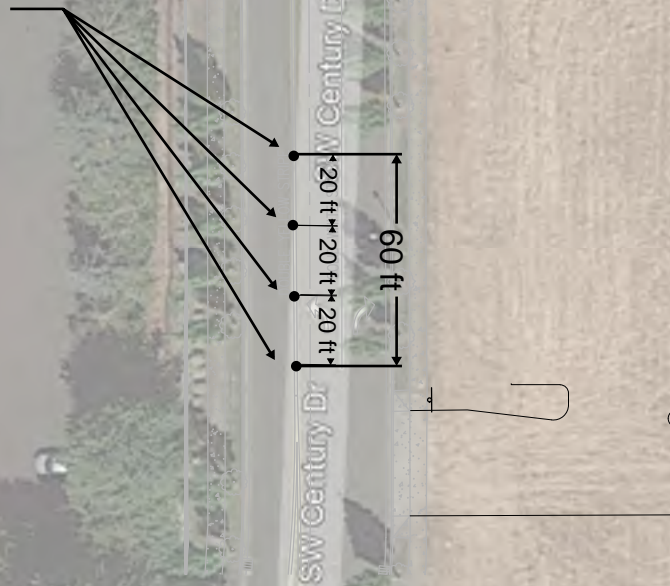
SHERWOOD INDUSTRIAL LOT 150  
 SHERWOOD, OREGON

FIGURE  
 15

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SW Tualatin-Sherwood Rd

Recommended delineators per MUTCD Chapter 3.F standards



Google Earth



100 ft



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RECOMMENDED MITIGATION

SHERWOOD INDUSTRIAL LOT 150  
SHERWOOD, OREGON

FIGURE

16

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APPENDIX B  
**SCOPING  
MATERIAL**

# MACKENZIE.

March 22, 2021

City of Sherwood  
Attention: Bob Galati, City Engineer  
22560 SW Pine Street  
Sherwood, OR 97140

Re: **Sherwood Industrial Park – Phases 3 and 4**  
*Traffic Impact Analysis Scoping*  
Project Number 2200393.00

Dear Mr. Galati:

Mackenzie has prepared this letter to present the proposed scoping for the required Traffic Impact Analysis (TIA) in support of Phases 3 and 4 of the Sherwood Industrial Park in Sherwood, Oregon.

## INTRODUCTION

The proposed development includes industrial uses on Phases 3 and 4 of the Sherwood Industrial Park located at 14816-15028 SW Century Drive in Sherwood. The site is partially developed with multiple buildings and associated parking and trailer storage. Phase 3 proposes development of up to three (3) industrial buildings on Tax Map 2S129D, Lot 151, west of SW Century Drive. Phase 4 proposes development of up to two (2) buildings including commercial and industrial space on Tax Lot 150, east of SW Century Drive. Buildout of the site is anticipated to be 2023. The proposed building sizes are presented in Table 1 below.

TABLE 1 – PROPOSED BUILDING SIZES AND USE CATEGORIES			
Phase	Building	Land Use Category	Size
3	5	Industrial	63,120 SF
	6	Industrial	27,464 SF
	7	Industrial	15,512 SF
Phase 3 Total			106,096SF
4	8	Industrial/Commercial	16,444 SF
	9	Commercial	7,325 SF
Phase 4 Total			23,769 SF
<b>TOTAL</b>			<b>129,865 SF</b>



Multiple users are expected in each building, except Building 5 in Phase 3, which is assumed to be a single-user building. Up to 12,33 SF and 7,325 SF of retail are expected in Buildings 8 and 9 of Phase 4, respectively. The remainder of Phase 4 will be industrial.

## TRIP GENERATION

Trip generation estimates were prepared using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. Table 2 presents the trip generation estimates for the proposed development assuming 19,660 SF of shopping center use. Table 3 presents the trip generation estimates for the proposed development assuming 19,200 SF of medical-dental office.

TABLE 2 – SITE TRIP GENERATION ESTIMATES WITH SHOPPING CENTER											
Development Scenario	Land Use	ITE LUC	Size	Trip Type	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
Phase 3	Manufacturing	140	106.10 KSF	Primary	51	15	66	22	49	71	495
Phase 4	Specialty Trade Contractor	180	4.00 KSF	Primary	5	2	7	3	5	8	41
	Shopping Center	820	19.66 KSF	Total	12	7	19	36	39	75	742
				Pass-by %	34%			34%			34%
				Pass-by	3	3	6	13	13	26	252
				Primary	8	4	12	23	26	49	490
<b>TOTAL</b>				<b>Total</b>	<b>67</b>	<b>24</b>	<b>91</b>	<b>61</b>	<b>93</b>	<b>154</b>	<b>1278</b>
				<b>Pass-by</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>13</b>	<b>13</b>	<b>26</b>	<b>252</b>
				<b>Primary</b>	<b>64</b>	<b>21</b>	<b>85</b>	<b>48</b>	<b>80</b>	<b>128</b>	<b>1,026</b>

LUC – Land Use Code  
 KSF – Thousand Square Feet

TABLE 3 – SITE TRIP GENERATION ESTIMATES WITH MEDICAL-DENTAL OFFICE											
Development Scenario	Land Use	ITE LUC	Size	Trip Type	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
Phase 3	Manufacturing	140	106.10 KSF	Primary	51	15	66	22	49	71	495
Phase 4	Specialty Trade Contractor	180	4.00 KSF	Primary	5	2	7	3	5	8	41
	Medical-Dental Office Building	820	19.20 KSF	Primary	40	11	51	19	48	67	650
<b>TOTAL</b>				<b>Primary</b>	<b>96</b>	<b>28</b>	<b>124</b>	<b>44</b>	<b>102</b>	<b>146</b>	<b>1,186</b>

LUC – Land Use Code  
 KSF – Thousand Square Feet

As presented in Table 2, the site is estimated to generate 91 AM peak hour, 154 PM peak hour, and 1,278 daily trips with a shopping center use in Phase 4. Of those trips, 85 AM peak hour, 128 PM peak hour, and 1,026 daily trips will be primary trips. As presented in Table 3, the site is estimated to generate 124 AM peak hour, 146 PM peak hour, and 1,186 daily trips, all of which are primary trips. Per Sherwood Municipal Code (SMC) Section 16.106.080.B.3., a TIA is required for any development estimated to generate 100 PM peak hour trips on the local transportation system. Therefore, a TIA will be required if either a shopping center or medical-dental office is assumed for Phase 4. As a conservative approach, we will prepare the TIA based on the medical-dental office use, as this scenario generates more primary trips than the shopping center use.

### TRIP DISTRIBUTION

Primary trip distribution for the proposed development was based on a similar trip distribution used for the nearby Parkway Village South project. Select zone travel demand model plots will be obtained from Washington County to confirm the trip distribution. The following primary trip distribution is proposed:

1. 15% to/from the west on SW Roy Rogers Road
2. 25% to/from the east on SW Tualatin-Sherwood Road
3. 10% to/from the west on SW Century Drive
4. 10% to/from the south on SW 124th Avenue
5. 10% to/from the north on Highway 99W
6. 15% to/from the south on Highway 99W
7. 5% to/from the east on SW Herman Road
8. 10% to/from the south on SW Langer Farms Parkway

The attached figures present the proposed primary distribution patterns and traffic assignment for the AM and PM peak hour trips.

## STUDY AREA

The proposed industrial and commercial development is estimated to generate 123 AM and 145 PM peak hour trips. Per SMC Section 16.106.080.C.4., intersection analysis is required at every intersection impacted by 50 or more peak hour trips. Analysis of site access points and intersections adjacent to the site, including those located within the access spacing requirements, is also required. Based on these criteria, the following study area is proposed:

1. SW Tualatin-Sherwood Road/SW Langer Farms Parkway
2. SW Tualatin-Sherwood Road/SW Century Drive
3. SW Langer Farms Parkway/SW Century Drive
4. SW Century Drive/Phase 4 North Access
5. SW Century Drive/Phase 4 South Access
6. SW Century Drive/Phase 3 North Access
7. SW Century Drive/Phase 3 South Access
8. SW Century Drive/Phase 3 East Access
9. SW Century Drive/Phase 3 West Access

The impact to the Highway 99W/Roy Rogers Road/SW Tualatin-Sherwood Road intersection is expected to be below the City's 50-trip threshold. Additionally, improvements at this intersection are currently underway, with design complete and right-of-way acquisition and construction to follow. The improvements will include an additional westbound through lane, a second receiving lane on Roy Rogers Road, an additional eastbound left-turn lane, and a dedicated eastbound right-turn lane. With these added improvements, the Highway 99W/Roy Rogers Road/SW Tualatin-Sherwood Road is expected to have more than adequate capacity for the added site trips at the subject site. Therefore, we propose to not include this intersection in the study area.

We understand that Washington County staff has expressed concerns about vehicles turning left into the Phase 4 site. Southbound left-turning vehicles utilizing the through lane could impede vehicles turning from Tualatin-Sherwood Road. If southbound left-turning vehicles utilize the turn lane, these vehicles entering the site could interfere with the existing left-turn lane at the approach to Tualatin-Sherwood Road. This analysis will include a review of conditions with and without left turns at the Phase 4 northerly access on SW Century Boulevard.

## BACKGROUND CONDITIONS

Historical turning movement counts from June 2017 and February 2019 are available at the proposed study area intersections. We will add a linear background growth of 1.4% per year to these counts to estimate 2021 conditions. This historical background growth was estimated using ODOT Highway 99W Average Annual Daily Traffic (AADT) volumes north of SW Tualatin-Sherwood Road for years 2016 through 2019.

A linear background growth of 1% per year will be applied to year 2021 volumes over two (2) years to estimate 2023 background traffic volumes. This growth rate was estimated using ODOT's 2039 Future Volumes Table for volumes on Highway 99W north and south of SW Tualatin-Sherwood Road. In-process trips will be added for approved developments that are not yet constructed to estimate 2023 pre-development traffic.

## ANALYSIS SCENARIOS

Per SMC Section 16.106.080.E., the following analysis scenarios will be evaluated in the TIA:

1. 2021 Existing
2. 2023 Pre-Development
3. 2023 Post-Development with Restricted-Movement Phase 4 North Access
4. 2023 Post-Development with Full-Access Phase 4 North Access

As previously noted, the analysis will include evaluation of conditions with and without the proposed Phase 4 north access left-turn movement into the site.

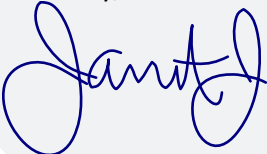
## INFORMATION REQUEST

Please confirm the study assumptions provided in this letter will be acceptable and provide the following information:

1. In-process trips for newly approved developments.
2. Confirm the timing of planned improvements on Tualatin-Sherwood Road and at the Highway 99W /Roy Rogers Road/SW Tualatin-Sherwood Road intersection.
3. Traffic signal timing for the following intersections:
  - A. SW Tualatin-Sherwood Road/SW Langer Farms Parkway (Washington County)
  - B. SW Tualatin-Sherwood Road/SW 124th Avenue (Washington County)

Please contact me at [jjones@mcknze.com](mailto:jjones@mcknze.com) or 971-346-3741 if you have any questions or comments regarding the information presented in this letter.

Sincerely,

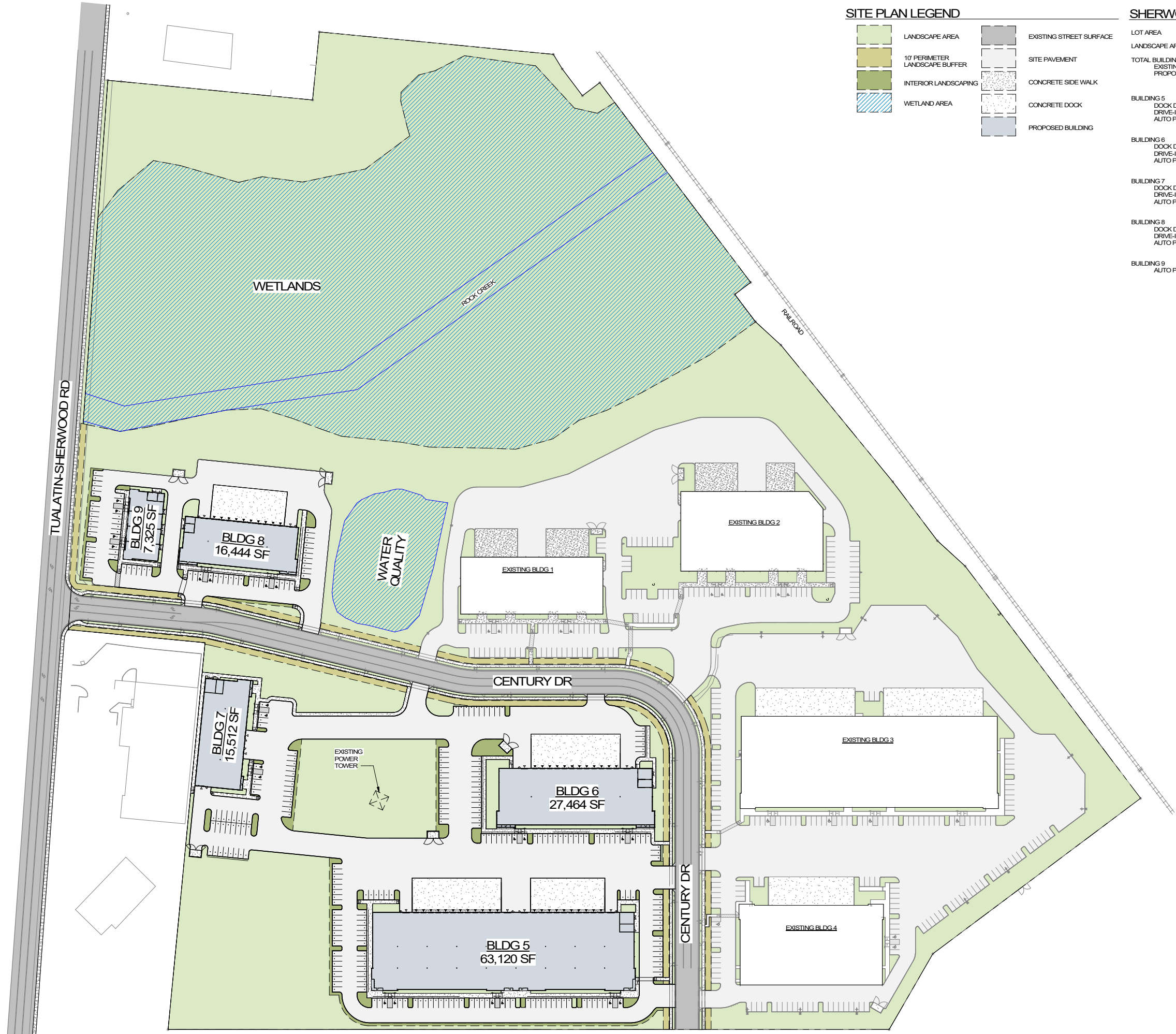


Janet Jones, PE  
Traffic Engineer










Enclosure(s): Site Plan, Trip Distribution and Assignment Figures

- c: Craig Christensen – City of Sherwood  
Naomi Vogel – Washington County  
Avi Tayar – ODOT, Region 1  
Dale Poppe, Brian Varricchione, Brent Ahrend – Mackenzie





**SITE PLAN LEGEND**

- |   |                                |   |                         |
|---|--------------------------------|---|-------------------------|
|   | LANDSCAPE AREA                 |   | EXISTING STREET SURFACE |
|  | 10' PERIMETER LANDSCAPE BUFFER |  | SITE PAVEMENT           |
|  | INTERIOR LANDSCAPING           |  | CONCRETE SIDE WALK      |
|  | WETLAND AREA                   |  | CONCRETE DOCK           |
|   |                                |  | PROPOSED BUILDING       |

**SHERWOOD INDUSTRIAL PARK**

LOT AREA	(52.10 AC)	2,269,600 SF
LANDSCAPE AREA	(28.14 AC)	1,225,600 SF
TOTAL BUILDING AREA	(6.82 AC)	296,890 SF
EXISTING AREA		167,025 SF
PROPOSED AREA		129,865 SF
<b>BUILDING 5</b>		
DOCK DOORS:		63,120 SF
DRIVE-IN DOORS:		22
AUTO PARKING:		4
ACCESSIBLE:		104 STALLS
ACCESSIBLE:		6 STALLS
<b>BUILDING 6</b>		
DOCK DOORS:		27,464 SF
DRIVE-IN DOORS:		12
AUTO PARKING:		2
ACCESSIBLE:		77 STALLS
ACCESSIBLE:		4 STALLS
<b>BUILDING 7</b>		
DOCK DOORS:		15,512 SF
DRIVE-IN DOORS:		0
AUTO PARKING:		3
ACCESSIBLE:		46 STALLS
ACCESSIBLE:		4 STALLS
<b>BUILDING 8</b>		
DOCK DOORS:		16,444 SF
DRIVE-IN DOORS:		10
AUTO PARKING:		2
ACCESSIBLE:		28 STALLS
ACCESSIBLE:		4 STALLS
<b>BUILDING 9</b>		
DOCK DOORS:		7,325 SF
AUTO PARKING:		36 STALLS
ACCESSIBLE:		4 STALLS



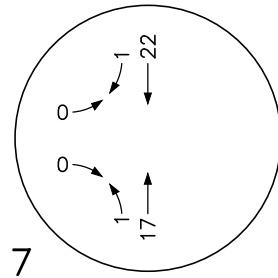
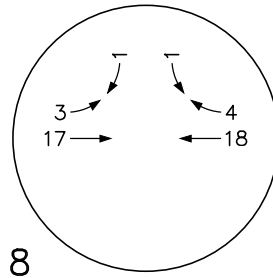
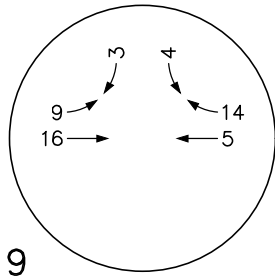
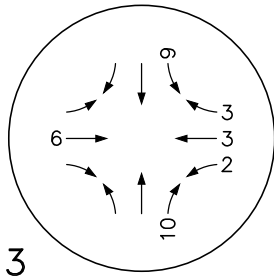
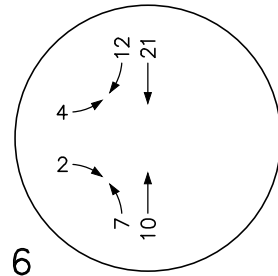
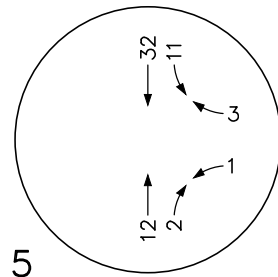
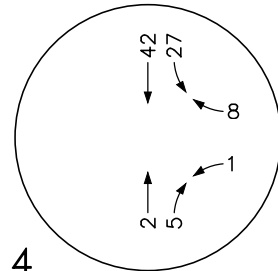
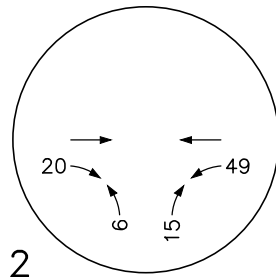
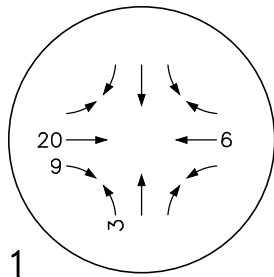
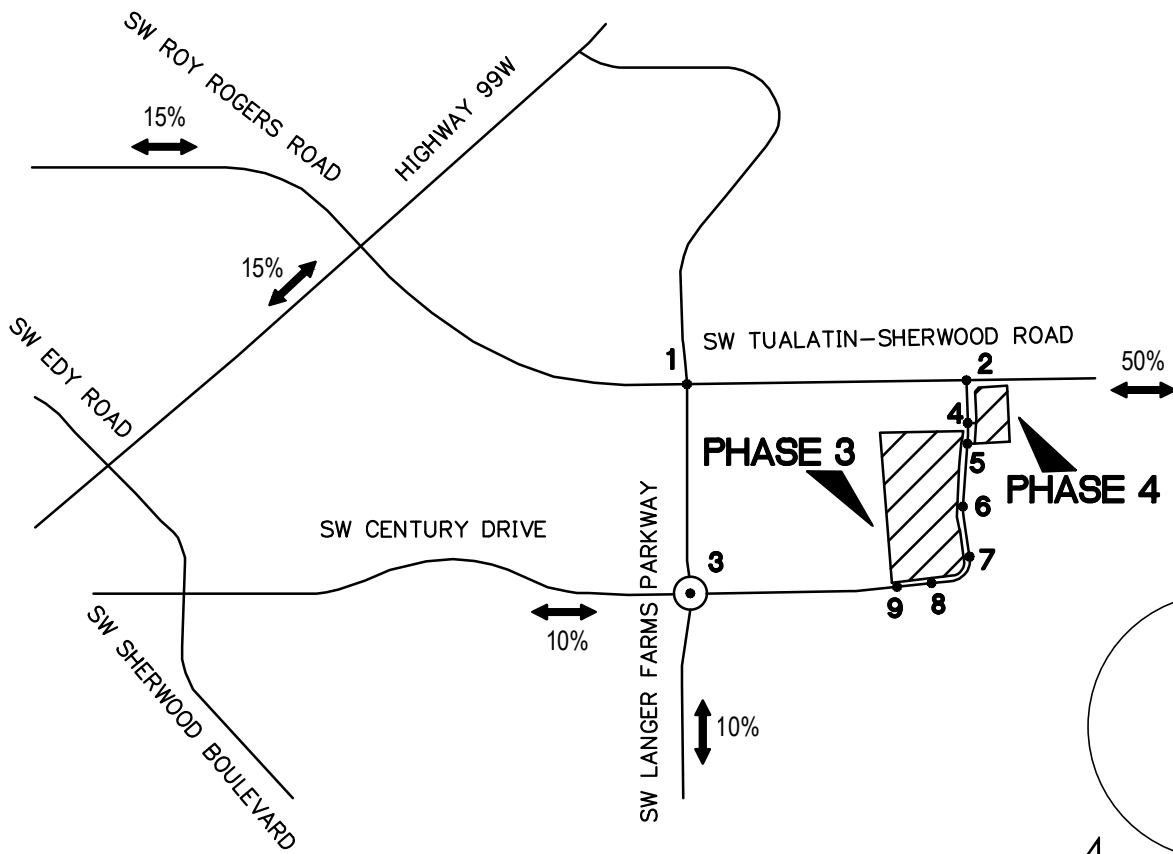
**PARK SITE PLAN**  
2200393.00

**Sherwood LLC | SIP PHASE 3**

**ORWA**  
03/15/2021



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AM PEAK HOUR

Enter - 96  
Exit - 28  
Total - 124



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TRAFFIC ASSIGNMENT -  
AM PEAK HOUR

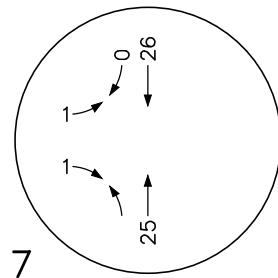
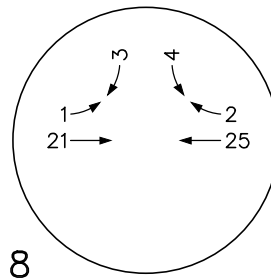
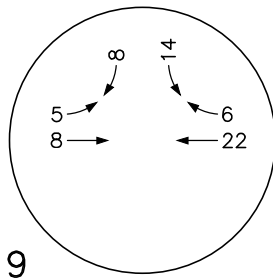
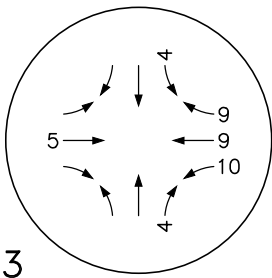
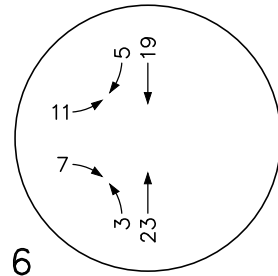
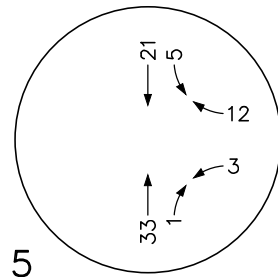
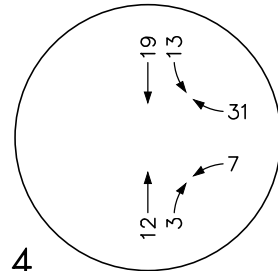
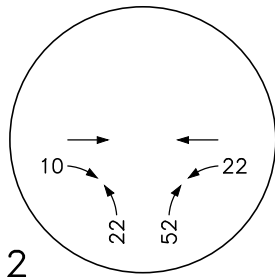
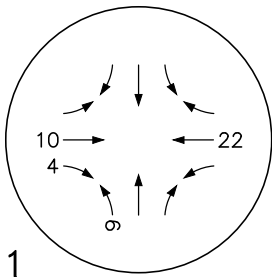
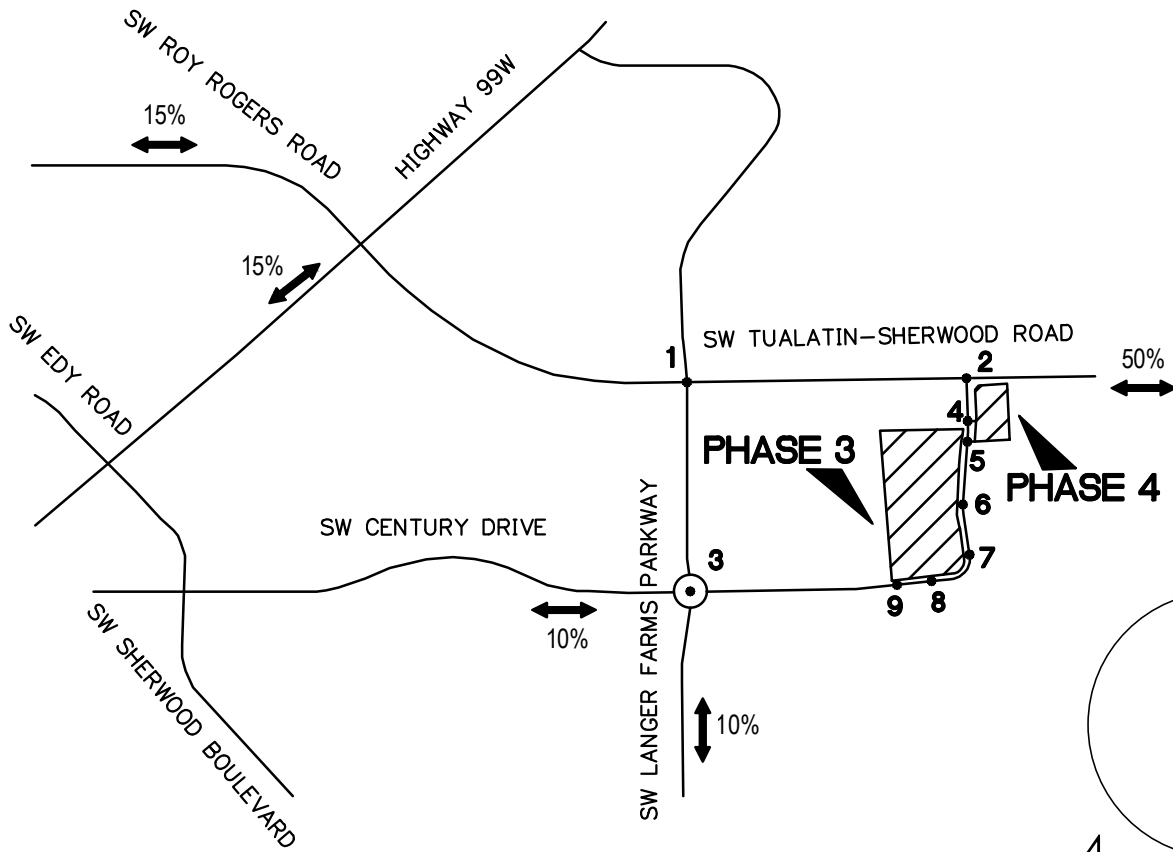
SHERWOOD INDUSTRIAL PARK  
SHERWOOD, OREGON

FIGURE  
1A

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NOT TO SCALE



PM PEAK HOUR

Enter - 44  
Exit - 102  
Total - 146

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**Planning - Engineering**

**MACKENZIE**  
DATE: 03.21.2021  
DRAWN BY: JHA  
CHECKED BY: JTJ  
JOB NO:  
220039300

**TRIP DISTRIBUTION +  
TRAFFIC ASSIGNMENT -  
PM PEAK HOUR**  
**SHERWOOD INDUSTRIAL PARK  
SHERWOOD, OREGON**

**FIGURE  
1B**

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## Janet T. Jones

---

**From:** Janet T. Jones  
**Sent:** Wednesday, April 27, 2022 1:36 PM  
**To:** Garth Appanaitis  
**Cc:** Bob Galati  
**Subject:** RE: Document Issue No. 7 - Sherwood Industrial Phases 3/4 - TIA Scoping

Thanks, Garth!

Bob, can you confirm the status of Parkway Village South and North Cipole Industrial? Are there any other recent approvals we should include?

Thank you,

Janet Jones, PE | she/her/hers  
Associate | Transportation Engineering  
D 971.346.3741 E [jjones@mcknze.com](mailto:jjones@mcknze.com)

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**From:** Garth Appanaitis <[gaa@dksassociates.com](mailto:gaa@dksassociates.com)>  
**Sent:** Thursday, April 21, 2022 10:20 AM  
**To:** Janet T. Jones <[JTJ@mcknze.com](mailto:JTJ@mcknze.com)>  
**Cc:** Bob Galati <[GalatiB@sherwoodoregon.gov](mailto:GalatiB@sherwoodoregon.gov)>  
**Subject:** Re: Document Issue No. 7 - Sherwood Industrial Phases 3/4 - TIA Scoping

Hi Janet,

Here are some updates. **Bob, can you please verify these?**

- Sherwood Commerce Center was recently approved and is a new one to add to the prior list: <https://www.sherwoodoregon.gov/planning/project/lu-2021-012-spcupvar-sherwood-commerce-center>
- TS Corporate Park - Still need to include
- Parkway Village South - At least part of this has been occupied, but I'm not sure if it is fully constructed/occupied. If that is the case, it can come off the list. **Bob?**
- North Cipole Industrial - I'm not sure of the status on this one. **Bob, has this been finished/occupied?**
- **Bob - Any other recent approvals that I missed that should have traffic included?**

Thanks,  
Garth

**Garth Appanaitis, PE (OR) (he/him)** | Project Manager, Portland Planning Group Manager  
Direct: 503.972.1212 | Cell: 971.570.4709 | [gaa@dksassociates.com](mailto:gaa@dksassociates.com)



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On Thu, Apr 21, 2022 at 10:04 AM Janet T. Jones <[JTJ@mcknze.com](mailto:JTJ@mcknze.com)> wrote:

Hi Garth,

We are gearing up to submit this application soon. We will be collecting new traffic counts next week. Can you please share the list of current in-process developments that should be included in our analysis?

Thank you,

**Janet Jones, PE | she/her/hers**

Associate | Transportation Engineering

D 971.346.3741 E [jjones@mcknze.com](mailto:jjones@mcknze.com)

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---

**From:** Garth Appanaitis <[gaa@dksassociates.com](mailto:gaa@dksassociates.com)>

**Sent:** Thursday, April 22, 2021 8:20 AM

**To:** Janet T. Jones <[JTJ@mcknze.com](mailto:JTJ@mcknze.com)>

**Cc:** Bob Galati <[GalatiB@sherwoodoregon.gov](mailto:GalatiB@sherwoodoregon.gov)>

**Subject:** Re: Document Issue No. 7 - Sherwood Industrial Phases 3/4 - TIA Scoping

Hi Janet,

I believe these are the three key developments with in process (or completed since prior counts) that impact the study area:

- 1) TS Corporate Park <https://www.sherwoodoregon.gov/planning/project/t-s-corporate-park>
- 2) Parkway Village South <https://www.sherwoodoregon.gov/planning/project/parkway-village-south>
- 3) North Cipole Industrial <https://www.sherwoodoregon.gov/planning/project/north-cipole-industrial>

The links above each include the traffic studies and trip information. Let me know if you have any questions.

Thanks,  
Garth

**Garth Appanaitis, PE (OR)** | Project Manager, Portland Planning Group Manager  
Direct: 503.972.1212 | Cell: 971.570.4709 | [gaa@dksassociates.com](mailto:gaa@dksassociates.com)



720 SW Washington Street, Suite 500 | Portland, OR 97205 | 503.243.3500  
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On Wed, Apr 21, 2021 at 8:57 AM Garth Appanaitis <[gaa@dksassociates.com](mailto:gaa@dksassociates.com)> wrote:

Hi Janet,

I'll confirm the list with the City and send it over to you today.

Thanks

**Garth Appanaitis, PE (OR)** | Project Manager, Portland Planning Group Manager

Direct: 503.972.1212 | Cell: 971.570.4709 | [gaa@dksassociates.com](mailto:gaa@dksassociates.com)



720 SW Washington Street, Suite 500 | Portland, OR 97205 | 503.243.3500

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On Wed, Apr 21, 2021 at 8:56 AM Janet T. Jones <[JTJ@mcknze.com](mailto:JTJ@mcknze.com)> wrote:

Hi Garth,

Just following up on the below. Can you please send us the applicable traffic studies to account for in-process trips in our study?

Thank you,

Janet Jones, PE

D 971.346.3741

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---

**From:** Janet T. Jones  
**Sent:** Thursday, April 15, 2021 9:11 AM  
**To:** Garth Appanaitis <[gaa@dksassociates.com](mailto:gaa@dksassociates.com)>  
**Cc:** Bob Galati <[GalatiB@sherwoodoregon.gov](mailto:GalatiB@sherwoodoregon.gov)>  
**Subject:** RE: Document Issue No. 7 - Sherwood Industrial Phases 3/4 - TIA Scoping

Thanks for the comments, Garth.

Like I noted previously we were going to rely on counts from June 8, 2017 used in the Kittelson study for Parkway Village South. In comparing some recent counts from 2018 it appeared the 2017 counts were higher, but we can use more recent counts as appropriate. Please send us the traffic studies for approved developments impacting our study area to include in our TIA.

Thank you,

Janet Jones, PE

D 971.346.3741

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---

**From:** Garth Appanaitis <[gaa@dksassociates.com](mailto:gaa@dksassociates.com)>  
**Sent:** Wednesday, April 14, 2021 3:47 PM  
**To:** Janet T. Jones <[JTJ@mcknze.com](mailto:JTJ@mcknze.com)>  
**Cc:** Bob Galati <[GalatiB@sherwoodoregon.gov](mailto:GalatiB@sherwoodoregon.gov)>  
**Subject:** Re: Document Issue No. 7 - Sherwood Industrial Phases 3/4 - TIA Scoping



Hi Janet,

Here are the comments on the scoping memo. Please let me know if you have any questions.

1. Trip generation - Use General Light Industrial (ITE 110) in place of Specialty Trade Contractor (ITE 180)
2. Study intersection - The list proposed is adequate. The City understands that ODOT has identified other locations on OR 99W as requested study locations, but these are not required by the City due to the limited degree of added traffic, distance from the site, and (in the case of TS/Roy Rogers/99W) funded improvements.
3. Traffic Counts - Clarify the dates of the traffic counts that are available for each intersection. More recent counts may be available from prior studies. Confirm that no new traffic counts.
4. Traffic Count Adjustments - The background growth assumptions for the traffic counts are adequate, but will also need to include "in process" trips for developments that have occurred since the time that the traffic counts were collected. Some of these (such as Parkway Village South) may already be developed but were not present in the historical counts. Coordinate with DKS to obtain a list of these developments pending the confirmation of existing traffic count data.
5. Planned Improvements - The estimated timing for the planned improvements on Tualatin Sherwood Road (LFP to Borchers) are 10/31/2024 based on the schedule on Washington County's project page. There will also be widening from LFP to Teton in the next several years. The analysis should assume the funded TS Road widening when reviewing background/build conditions whether the analysis is for 2023 or 2024.
6. Signal Timing - Traffic signal timing data will need to be requested from Washington County.
7. Site Access - The driveway confirmation shown on the preliminary site plan includes a driveway that is offset from the existing driveway. Provide a summary of safety considerations for all driveways, including evaluation of the offset driveways.
8. Pedestrian Safety - Evaluate the need for pedestrian crossing enhancements on streets adjacent to the site frontage, including Tualatin Sherwood Road.
9. Vehicle queuing - In addition to traffic operations, a vehicle 95th percentile vehicle queueing analysis should be provided for all study intersections.

Thanks

**Garth Appanaitis, PE (OR)** | Project Manager, Portland Planning Group Manager  
Direct: 503.972.1212 | Cell: 971.570.4709 | [gaa@dksassociates.com](mailto:gaa@dksassociates.com)



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On Wed, Apr 14, 2021 at 1:58 PM Janet T. Jones <[JTJ@mcknze.com](mailto:JTJ@mcknze.com)> wrote:

Hi Garth,

Just following up on the scoping review for this project. Let me know if there are any other questions I can answer at the moment.

Thanks!

Janet Jones, PE

D 971.346.3741

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---

**From:** Janet T. Jones

**Sent:** Friday, April 9, 2021 10:40 AM

**To:** Garth Appanaitis <[gaa@dksassociates.com](mailto:gaa@dksassociates.com)>

**Cc:** Bob Galati <[GalatiB@sherwoodoregon.gov](mailto:GalatiB@sherwoodoregon.gov)>

**Subject:** RE: Document Issue No. 7 - Sherwood Industrial Phases 3/4 - TIA Scoping

Thanks for the update, Garth.

We have counts from both 2017 and 2019, but the 2017 counts were much higher, so as a conservative estimate we are using the 2017 counts. The 2027 counts were conducted on June 8, 2017. These are the counts Kittelson used in their Parkway Village South study and they confirmed in the study schools were in session at the time counts were collected.

Thanks again, and have a great weekend!

Janet Jones, PE

Associate | Transportation Planning

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Architecture | Interiors | Engineering | Planning

D 971.346.3741 P 503.224.9560 W [mcknze.com](http://mcknze.com)

RiverEast Center, 1515 SE Water Avenue #100, Portland, OR 97214

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**From:** Garth Appanaitis <[gaa@dksassociates.com](mailto:gaa@dksassociates.com)>

**Sent:** Friday, April 9, 2021 9:29 AM

**To:** Janet T. Jones <[JTJ@mcknze.com](mailto:JTJ@mcknze.com)>; Bob Galati <[GalatiB@sherwoodoregon.gov](mailto:GalatiB@sherwoodoregon.gov)>

**Subject:** Re: Document Issue No. 7 - Sherwood Industrial Phases 3/4 - TIA Scoping

Hi Janet,

Just wanted to give you an update and let you know that I need to review a few of the scoping items with Bob but that he is out of the office until Tuesday. I should be able to forward the traffic scoping comments at that time.

Can you please provide a list of the traffic count dates that you have for each of the proposed study intersections? We'll need those to determine what recent or in-process development that we'll need to grab for additional traffic considerations.

Thanks,

Garth

**Garth Appanaitis, PE (OR)** | Project Manager, Portland Planning Group Manager  
Direct: 503.972.1212 | Cell: 971.570.4709 | [gaa@dksassociates.com](mailto:gaa@dksassociates.com)



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On Mon, Apr 5, 2021 at 4:13 PM Janet Jones (Mackenzie (Portland)) <[jtj@mcknze.com](mailto:jtj@mcknze.com)> wrote:

## **2200393.00 - Sherwood Industrial Park - Phase 3 Issue 7**

Issued by: Janet Jones (Mackenzie)

On: 05 Apr 2021

Garth,

Bob Galati informed me you will be reviewing our TIA scoping letter for the proposed Sherwood Industrial Phases 3/4 development (PAC 2020-017). I'm providing you with a direct link to download the document as a link forwarded to you by Bob may not work. Please let me know if you run into any problems downloading this letter.

Thank you,

Janet Jones, PE  
Associate | Transportation Planning  
Architecture | Interiors | Engineering | Planning  
D 971.346.3741 P 503.224.9560 W [mcknze.com](http://mcknze.com)  
RiverEast Center, 1515 SE Water Avenue #100, Portland, OR 97214

[Access the documents for this issue](#)

Recipients:

Janet Jones (Mackenzie (Portland))  
Garth Appanaitis (DKS Associates (<Default>))

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APPENDIX C  
**TRANSIT  
INFORMATION**



## 97-Tualatin-Sherwood Rd

Weekday		To Tualatin WES Station	
16100 Block SW Langer Stop ID 9190	SW Tualatin- Sherwood Rd & Avery Stop ID 13843	SW Boones Ferry Rd & Martinez Stop ID 13078	SW Boones Ferry Rd & Nyberg Stop ID 13079
6:58	7:06	7:16	7:18
8:00	8:08	8:16	8:18
9:00	9:08	9:16	9:18
<b>3:12</b>	<b>3:20</b>	<b>3:31</b>	<b>3:33</b>
<b>4:21</b>	<b>4:29</b>	<b>4:41</b>	<b>4:43</b>
5:30	5:38	5:51	5:53
<b>6:42</b>	<b>6:50</b>	<b>7:01</b>	<b>7:03</b>

Times in darker print are p.m.

**Please note:** Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at [trimet.org/alerts](http://trimet.org/alerts) or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.



## 97-Tualatin-Sherwood Rd

Weekday	To SW Langer Dr/Sherwood Plaza	
SW Boones Ferry Rd & Nyberg Stop ID 13079	SW Tualatin-Sherwood Rd & 112th Stop ID 13830	SW Langer & Sherwood Plaza Stop ID 9188
6:18	6:23	6:32
7:18	7:23	7:32
8:18	8:23	8:32
9:18	9:23	9:32
<b>3:33</b>	<b>3:39</b>	<b>3:50</b>
<b>4:43</b>	<b>4:49</b>	<b>5:00</b>
<b>5:53</b>	<b>5:59</b>	<b>6:10</b>

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## 94-Pacific Hwy/Sherwood

Weekday		To Portland City Center				
SW Pine & 2nd Stop ID 4451	16200 Block SW Langer Stop ID 12849	SW Pacific Hwy & Durham Stop ID 8792	SW Main & Commercial Stop ID 13636	Barbur Transit Center Stop ID 212	SW 6th & Yamhill Stop ID 7807	SW 6th & W Burnside Stop ID 7751
—	4:34	4:45	—	—	—	—
—	5:14	5:25	—	—	—	—
—	5:42	5:53	6:02	6:13	6:28	6:31
—	6:05	6:16	6:26	6:37	6:52	6:55
—	6:26	6:37	6:47	7:00	7:16	7:19
—	6:36	6:48	7:00	7:14	7:31	7:35
6:24	6:50	7:02	7:15	7:29	7:46	7:49
—	7:03	7:15	7:28	7:42	8:01	8:05
—	7:17	7:29	7:42	7:56	8:16	8:19
—	7:34	7:46	7:58	8:11	8:31	8:35
7:43	7:49	8:01	8:13	8:26	8:46	8:49
8:15	8:21	8:33	8:45	8:58	9:16	9:19
8:48	8:54	9:06	9:17	9:30	9:46	9:49
9:18	9:24	9:36	9:47	10:00	10:16	10:19
9:48	9:54	10:06	10:17	10:30	10:46	10:49
9:42	10:24	10:36	10:47	11:00	11:16	11:19
10:12	10:54	11:06	11:17	11:30	11:46	11:49
10:43	11:23	11:36	11:47	12:00	12:16	12:19
11:13	11:52	12:05	12:17	12:30	12:46	12:49
11:43	12:22	12:35	12:47	1:00	1:16	1:19
12:13	12:52	1:05	1:17	1:30	1:46	1:49
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1:14	1:52	2:05	2:17	2:30	2:46	2:49
1:44	2:21	2:34	2:46	3:00	3:16	3:19
2:14	2:50	3:03	3:15	3:29	3:46	3:49
2:45	3:18	3:31	3:43	3:57	4:15	4:18
3:16	3:47	4:00	4:12	4:26	4:45	4:48
3:47	4:16	4:29	4:41	4:55	5:15	5:18
4:17	4:58	5:11	5:23	5:37	5:55	5:58
5:21	5:53	6:06	6:17	6:31	6:46	6:49
6:19	6:55	7:07	7:18	7:31	7:46	7:49
7:52	7:58	8:10	8:19	8:31	8:46	8:49
8:53	8:59	9:10	9:19	9:31	9:46	9:49
9:55	10:01	10:11	10:20	10:31	10:46	10:49
11:05	11:10	11:20	—	—	—	—

**Note:** Buses to Portland City Center serve: all stops from Sherwood to Main & Commercial in Tigard, then Main & Scoffins, 99W & Main, 99W & 74th, Barbur Blvd & Capitol Hwy, Barbur Blvd Transit Center, Barbur & Bertha, then travel express with no stops to SW Broadway & 5th, SW 6th at Market, Jefferson, Yamhill, Oak, and Burnside.

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## 94-Pacific Hwy/Sherwood

Weekday		To Sherwood		
SW 5th & Morrison Stop ID 7625	Barbur Transit Center Stop ID 8213	SW Main & Commercial Stop ID 3656	SW Pacific Hwy & Durham Stop ID 8644	SW Pine & 2nd Stop ID 4451
—	—	6:03	6:11	6:24
6:26	6:40	6:51	7:00	7:15
6:56	7:11	7:22	7:31	7:47
7:25	7:40	7:52	8:01	8:17
7:52	8:07	8:19	8:28	8:44
8:22	8:37	8:47	8:56	9:12
8:52	9:07	9:17	9:26	9:42
9:22	9:37	9:47	9:56	10:12
9:52	10:07	10:17	10:27	10:43
10:22	10:37	10:47	10:57	11:13
10:52	11:07	11:17	11:27	11:43
11:22	11:37	11:47	11:57	12:13
11:52	12:07	12:17	12:28	12:44
12:22	12:37	12:47	12:58	1:14
12:52	1:07	1:17	1:28	1:44
1:22	1:37	1:47	1:58	2:14
1:52	2:07	2:17	2:29	2:45
2:22	2:37	2:48	3:00	3:16
2:52	3:08	3:19	3:31	3:47
3:22	3:38	3:49	4:01	4:17
3:37	3:53	4:04	4:16	4:32
3:52	4:08	4:19	4:31	4:47
4:08	4:25	4:36	4:48	5:04
4:23	4:40	4:52	5:04	5:21
4:38	4:55	5:07	5:19	5:36
4:53	5:10	5:22	5:34	5:50
5:08	5:25	5:37	5:49	6:05
5:23	5:40	5:52	6:04	6:19
5:53	6:09	6:20	6:31	6:46
6:32	6:47	6:57	7:07	7:22
7:22	7:37	7:47	7:57	8:12
8:22	8:37	8:47	8:57	9:11
9:21	9:36	9:46	9:56	10:09
10:16	10:31	10:41	10:51	—
11:12	11:27	11:37	11:47	12:00
—	—	12:17	12:24	—
—	—	1:03	1:10	—

**Note:** Line 94 buses to Sherwood serve: stops on SW 5th at Pine, Morrison, Madison, Market, Hall, and Broadway then travel express to Barbur & Bertha; then stop at: Barbur Blvd Transit Center; Pacific Hwy at 74th, SW Main in Tigard, then all stops to Sherwood.

Times in darker print are p.m.

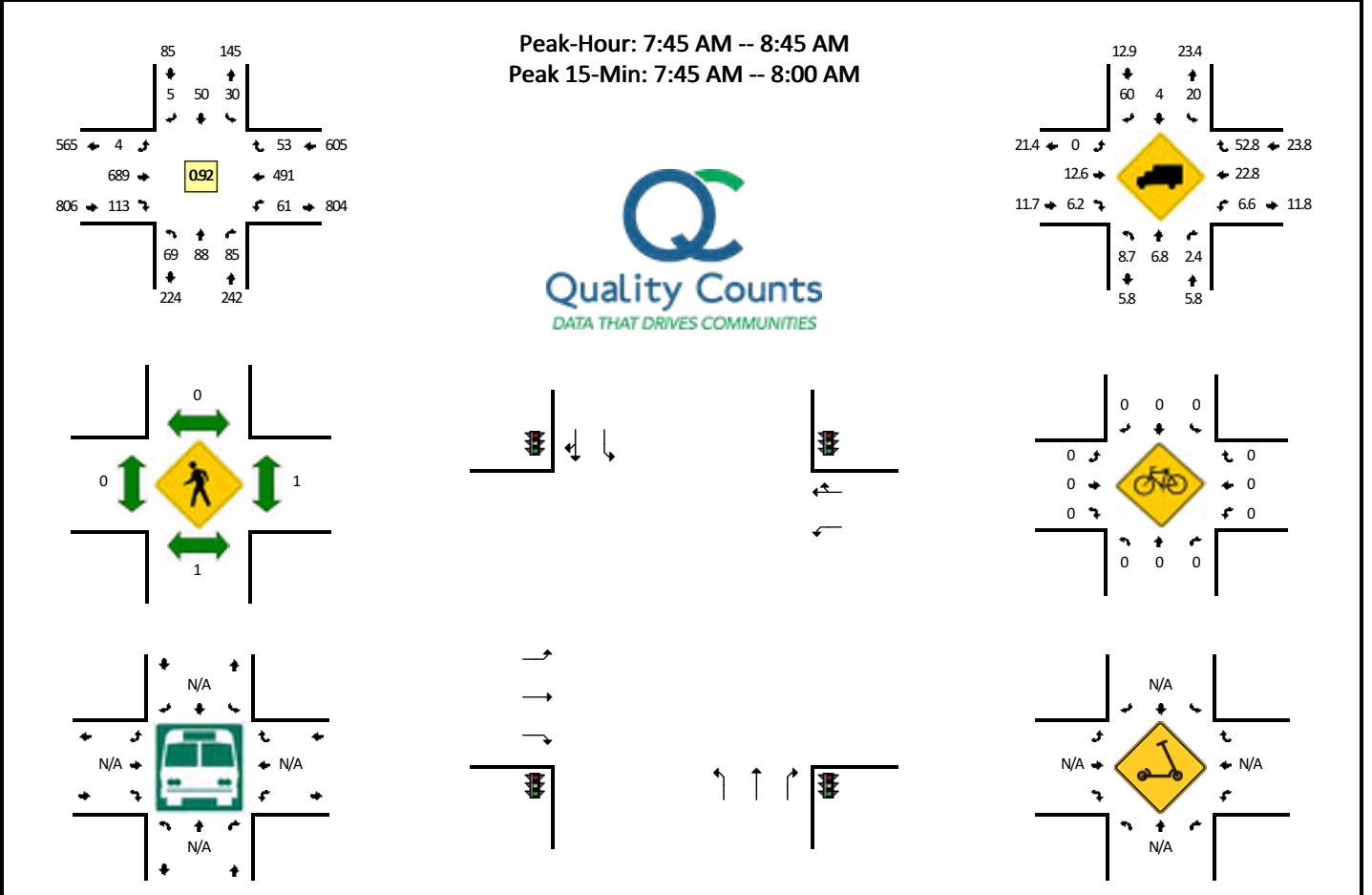
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APPENDIX D  
**TRAFFIC  
COUNT  
SUMMARIES**

**LOCATION:** SW Langer Farms Pkwy -- SW Tualatin Sherwood Rd  
**CITY/STATE:** Sherwood, OR

**QC JOB #:** 15793201  
**DATE:** Tue, Apr 26 2022

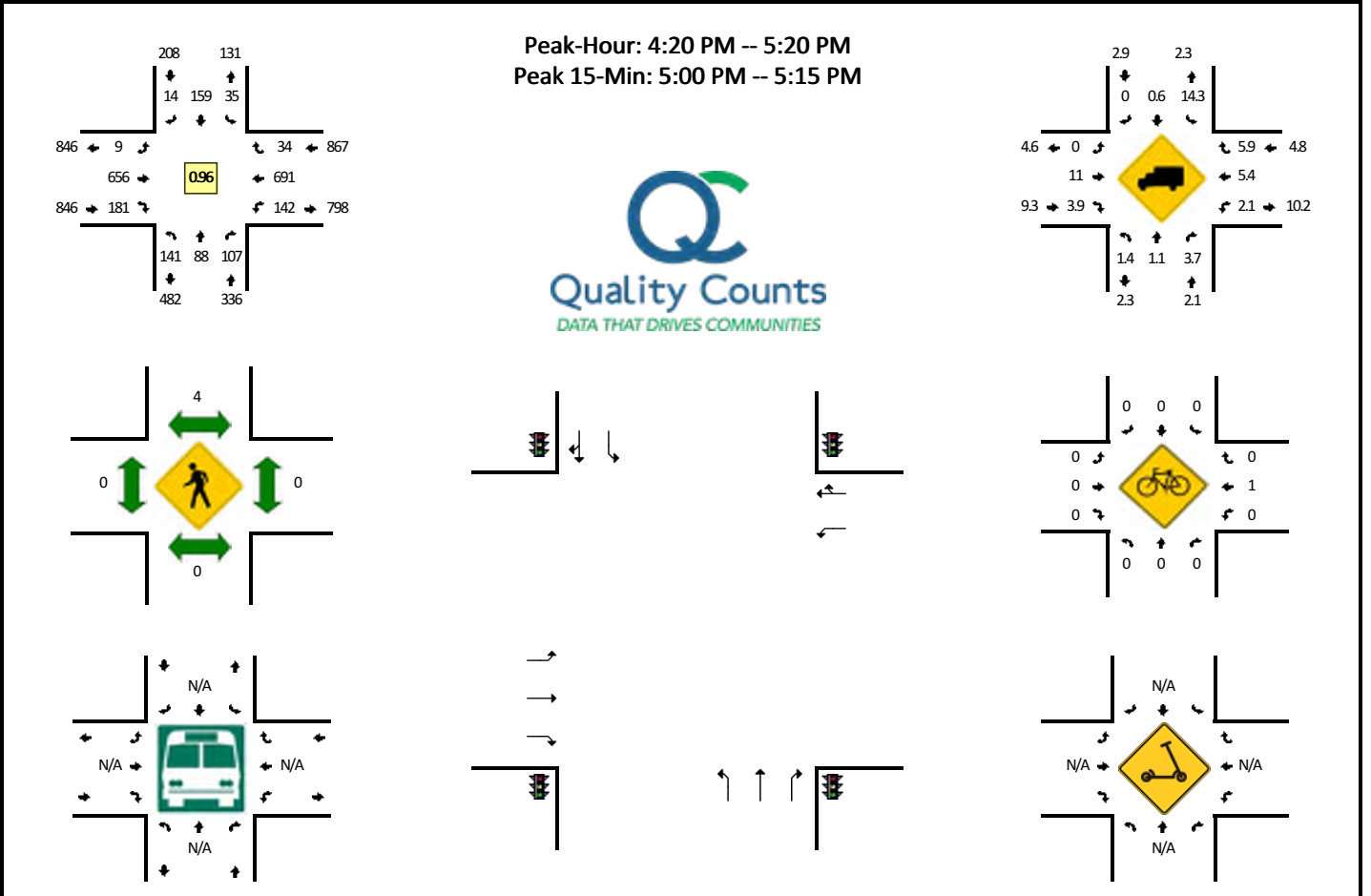


5-Min Count Period Beginning At	SW Langer Farms Pkwy (Northbound)				SW Langer Farms Pkwy (Southbound)				SW Tualatin Sherwood Rd (Eastbound)				SW Tualatin Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	4	5	0	2	6	1	0	1	48	9	0	1	22	2	0	105	
7:05 AM	2	1	7	0	1	1	1	0	0	59	4	0	5	29	4	0	114	
7:10 AM	5	5	2	0	2	1	0	0	0	58	5	0	1	24	1	0	104	
7:15 AM	4	5	6	0	2	1	0	0	1	73	9	0	4	42	3	0	150	
7:20 AM	1	4	2	0	3	0	0	0	0	69	9	0	6	36	2	0	132	
7:25 AM	4	5	4	0	1	2	0	0	0	61	8	0	4	41	2	0	132	
7:30 AM	5	4	9	0	6	3	1	0	1	53	10	0	3	27	4	0	126	
7:35 AM	6	10	6	0	3	3	0	0	2	57	6	0	5	33	1	0	132	
7:40 AM	8	5	3	0	1	2	0	0	1	66	11	0	1	43	7	0	148	
7:45 AM	8	15	5	0	0	3	1	0	0	71	11	0	1	39	4	0	158	
7:50 AM	4	10	9	0	3	9	0	0	0	72	12	0	7	46	5	0	177	
7:55 AM	6	6	8	0	3	7	1	0	1	57	9	0	2	29	9	0	138	1616
8:00 AM	6	4	2	0	3	5	2	0	0	54	13	0	6	45	7	0	147	1658
8:05 AM	9	8	9	0	3	4	0	0	1	45	11	0	4	24	5	0	123	1667
8:10 AM	3	8	6	0	1	2	1	0	1	61	7	0	7	45	2	0	144	1707
8:15 AM	4	7	7	0	4	5	0	0	0	34	10	0	7	41	4	0	123	1680
8:20 AM	5	6	10	0	4	2	0	0	0	56	8	0	6	48	5	0	150	1698
8:25 AM	4	2	4	0	0	3	0	0	0	68	9	0	3	46	2	0	141	1707
8:30 AM	7	7	5	0	3	4	0	0	0	47	3	0	9	39	2	0	126	1707
8:35 AM	6	6	7	0	1	5	0	0	1	71	8	0	6	47	1	0	159	1734
8:40 AM	7	9	13	0	5	1	0	0	0	53	12	0	3	42	7	0	152	1738
8:45 AM	7	7	5	0	0	4	1	0	0	56	15	0	5	35	6	0	141	1721
8:50 AM	4	2	6	0	0	5	0	0	0	55	7	0	4	49	4	0	136	1680
8:55 AM	6	5	9	0	3	3	0	0	0	30	8	0	11	44	7	0	126	1668
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	72	124	88	0	24	76	8	0	4	800	128	0	40	456	72	0	1892	
Heavy Trucks	8	12	4		8	0	4		0	80	4		0	96	44		260	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:

**LOCATION:** SW Langer Farms Pkwy -- SW Tualatin Sherwood Rd  
**CITY/STATE:** Sherwood, OR

**QC JOB #:** 15793202  
**DATE:** Mon, Apr 25 2022

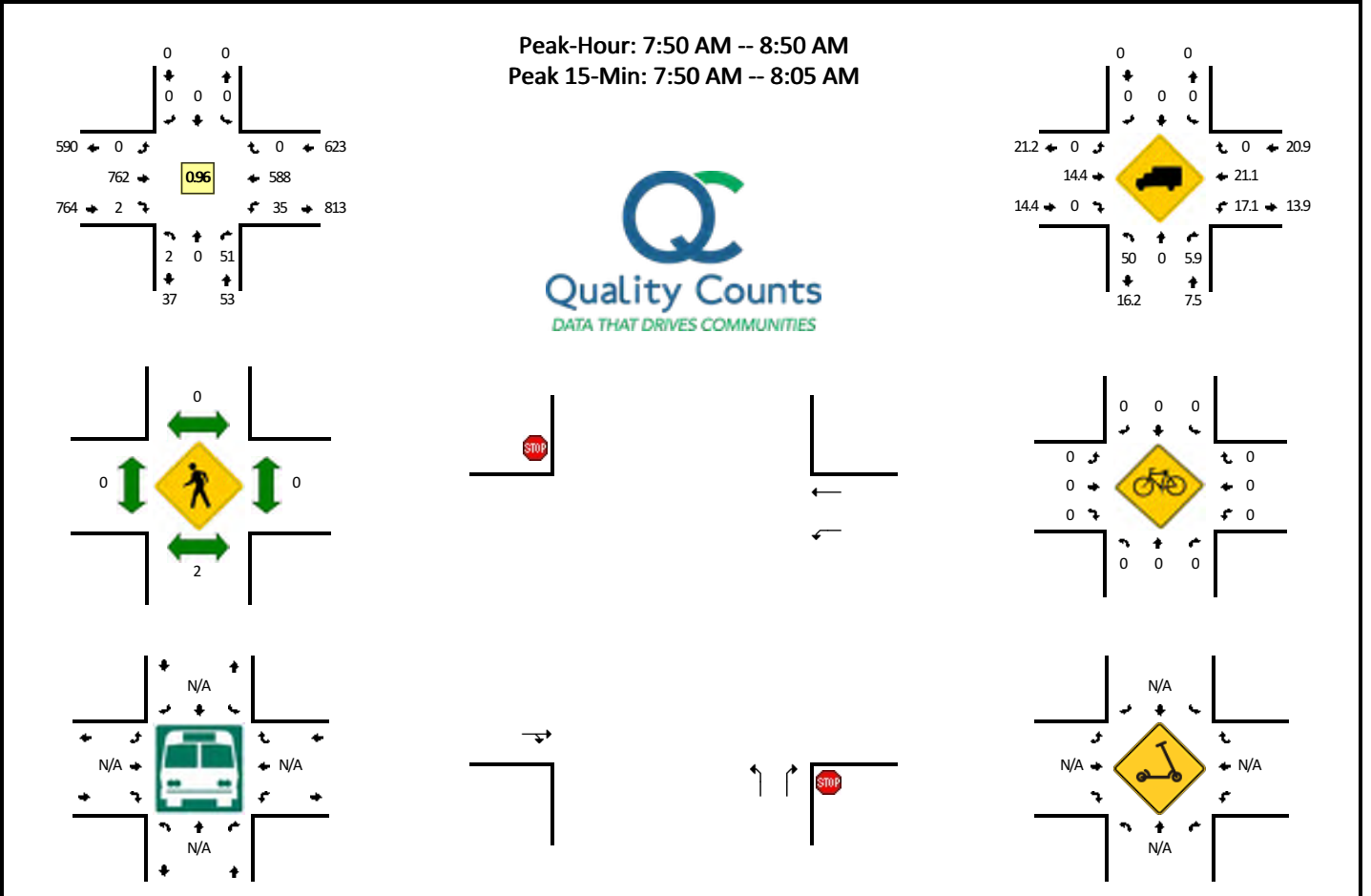


5-Min Count Period Beginning At	SW Langer Farms Pkwy (Northbound)				SW Langer Farms Pkwy (Southbound)				SW Tualatin Sherwood Rd (Eastbound)				SW Tualatin Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	6	7	0	5	7	0	0	0	49	15	0	10	54	4	0	165	
4:05 PM	11	11	11	0	2	8	0	0	1	44	19	0	12	55	3	0	177	
4:10 PM	14	8	5	0	3	9	0	0	0	40	17	0	9	63	2	0	170	
4:15 PM	15	6	4	0	6	10	1	0	0	44	16	0	7	54	8	0	171	
4:20 PM	11	9	10	0	5	9	3	0	3	45	12	0	7	59	2	0	175	
4:25 PM	12	5	10	0	1	8	0	0	0	48	12	0	19	60	3	0	178	
4:30 PM	10	5	9	0	2	19	2	0	0	52	12	0	16	45	1	0	173	
4:35 PM	12	12	12	0	2	9	0	0	0	71	16	0	10	64	1	0	209	
4:40 PM	14	2	5	0	6	18	2	0	1	48	14	0	10	51	4	0	175	
4:45 PM	7	4	10	0	1	18	0	0	0	73	14	0	9	60	3	0	199	
4:50 PM	13	6	14	0	7	16	3	0	1	60	19	0	15	46	6	0	206	
4:55 PM	9	1	5	0	1	10	1	0	1	55	14	0	10	62	4	0	173	2171
5:00 PM	16	12	3	0	3	21	0	0	0	53	21	0	10	61	0	0	200	2206
5:05 PM	21	18	13	0	3	5	0	0	1	33	20	0	15	62	1	0	192	2221
5:10 PM	7	9	9	0	0	14	1	0	1	70	12	0	6	61	5	0	195	2246
5:15 PM	9	5	7	0	4	12	2	0	1	48	15	0	15	60	4	0	182	2257
5:20 PM	7	7	6	0	1	8	0	0	1	55	9	0	6	44	2	0	146	2228
5:25 PM	6	4	4	0	0	5	0	0	1	39	12	0	6	56	4	0	137	2187
5:30 PM	9	6	6	0	4	13	0	0	1	42	12	0	10	65	1	0	169	2183
5:35 PM	14	8	9	0	3	8	1	0	1	45	8	0	11	55	0	0	163	2137
5:40 PM	9	7	5	0	0	8	0	0	2	42	18	0	12	53	3	0	159	2121
5:45 PM	16	7	10	0	2	12	0	0	1	35	18	0	4	56	4	0	165	2087
5:50 PM	7	5	8	0	3	11	1	0	1	46	19	0	8	56	0	0	165	2046
5:55 PM	15	9	7	0	0	9	0	0	2	62	13	0	8	50	2	0	177	2050
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	176	156	100	0	24	160	4	0	8	624	212	0	124	736	24	0	2348	
Heavy Trucks	0	0	4		4	0	0		0	64	12		8	24	0		116	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

*Comments:*

**LOCATION:** SW Centruy Dr -- SW Tualatin Sherwood Rd  
**CITY/STATE:** Sherwood, OR

**QC JOB #:** 15793203  
**DATE:** Tue, Apr 26 2022

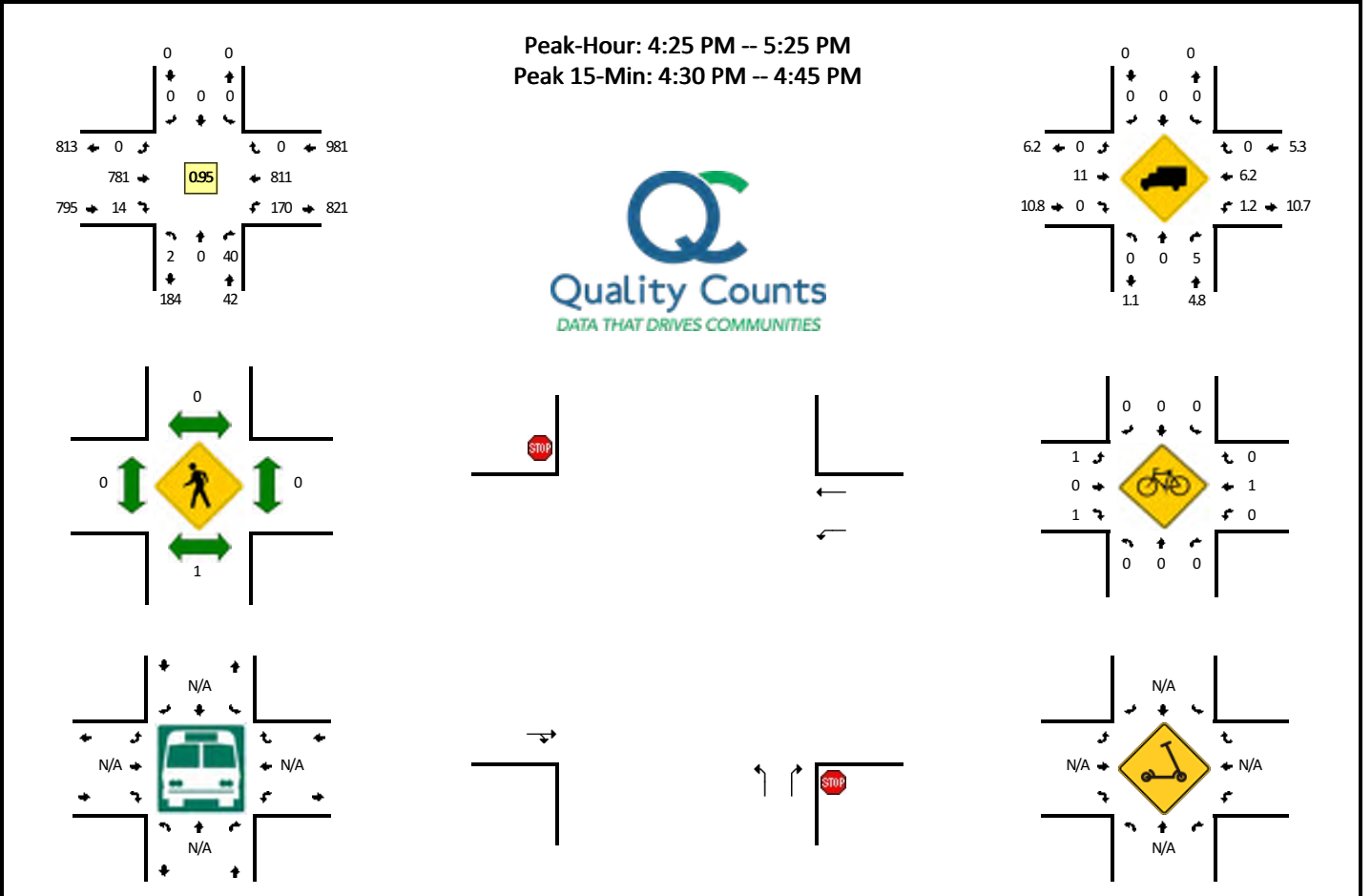


5-Min Count Period Beginning At	SW Centruy Dr (Northbound)				SW Centruy Dr (Southbound)				SW Tualatin Sherwood Rd (Eastbound)				SW Tualatin Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	8	0	0	0	0	0	0	44	0	0	6	27	0	0	85	
7:05 AM	0	0	6	0	0	0	0	0	0	60	0	0	1	34	0	0	101	
7:10 AM	0	0	3	0	0	0	0	0	0	62	1	0	1	29	0	0	96	
7:15 AM	0	0	5	0	0	0	0	0	0	68	0	0	1	51	0	0	125	
7:20 AM	0	0	1	0	0	0	0	0	0	73	0	0	2	40	0	0	116	
7:25 AM	1	0	3	0	0	0	0	0	0	72	0	0	4	48	0	0	128	
7:30 AM	0	0	3	0	0	0	0	0	0	71	0	0	1	33	0	0	108	
7:35 AM	0	0	5	0	0	0	0	0	0	64	0	0	3	43	0	0	115	
7:40 AM	0	0	1	0	0	0	0	0	0	72	0	0	2	53	0	0	128	
7:45 AM	0	0	6	0	0	0	0	0	0	60	0	0	4	41	0	0	111	
7:50 AM	0	0	5	0	0	0	0	0	0	89	0	0	4	52	0	0	150	
7:55 AM	0	0	7	0	0	0	0	0	0	66	0	0	2	39	0	0	114	1377
8:00 AM	0	0	3	0	0	0	0	0	0	51	1	0	7	50	0	0	112	1404
8:05 AM	0	0	3	0	0	0	0	0	0	66	0	0	1	45	0	0	115	1418
8:10 AM	0	0	2	0	0	0	0	0	0	56	0	0	5	46	0	0	109	1431
8:15 AM	0	0	3	0	0	0	0	0	0	44	0	0	5	49	0	0	101	1407
8:20 AM	0	0	5	0	0	0	0	0	0	68	0	0	1	57	0	0	131	1422
8:25 AM	0	0	7	0	0	0	0	0	0	59	0	0	3	59	0	0	128	1422
8:30 AM	1	0	2	0	0	0	0	0	0	63	0	0	0	48	0	0	114	1428
8:35 AM	0	0	4	0	0	0	0	0	0	58	0	0	3	52	0	0	117	1430
8:40 AM	0	0	5	0	0	0	0	0	0	78	1	0	0	48	0	0	132	1434
8:45 AM	1	0	5	0	0	0	0	0	0	64	0	0	4	43	0	0	117	1440
8:50 AM	0	0	4	0	0	0	0	0	0	49	0	0	5	66	0	0	124	1414
8:55 AM	0	0	2	0	0	0	0	0	0	56	0	0	3	55	0	0	116	1416
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	60	0	0	0	0	0	0	824	4	0	52	564	0	0	1504	
Heavy Trucks	0	0	4	0	0	0	0	0	0	128	0	0	4	120	0	0	256	
Buses																		
Pedestrians		0			0					0				0			0	
Bicycles	0	0	0		0	0	0			0	0	0	0	0	0		0	
Scoters																		

Comments:

**LOCATION:** SW Centruy Dr -- SW Tualatin Sherwood Rd  
**CITY/STATE:** Sherwood, OR

**QC JOB #:** 15793204  
**DATE:** Mon, Apr 25 2022

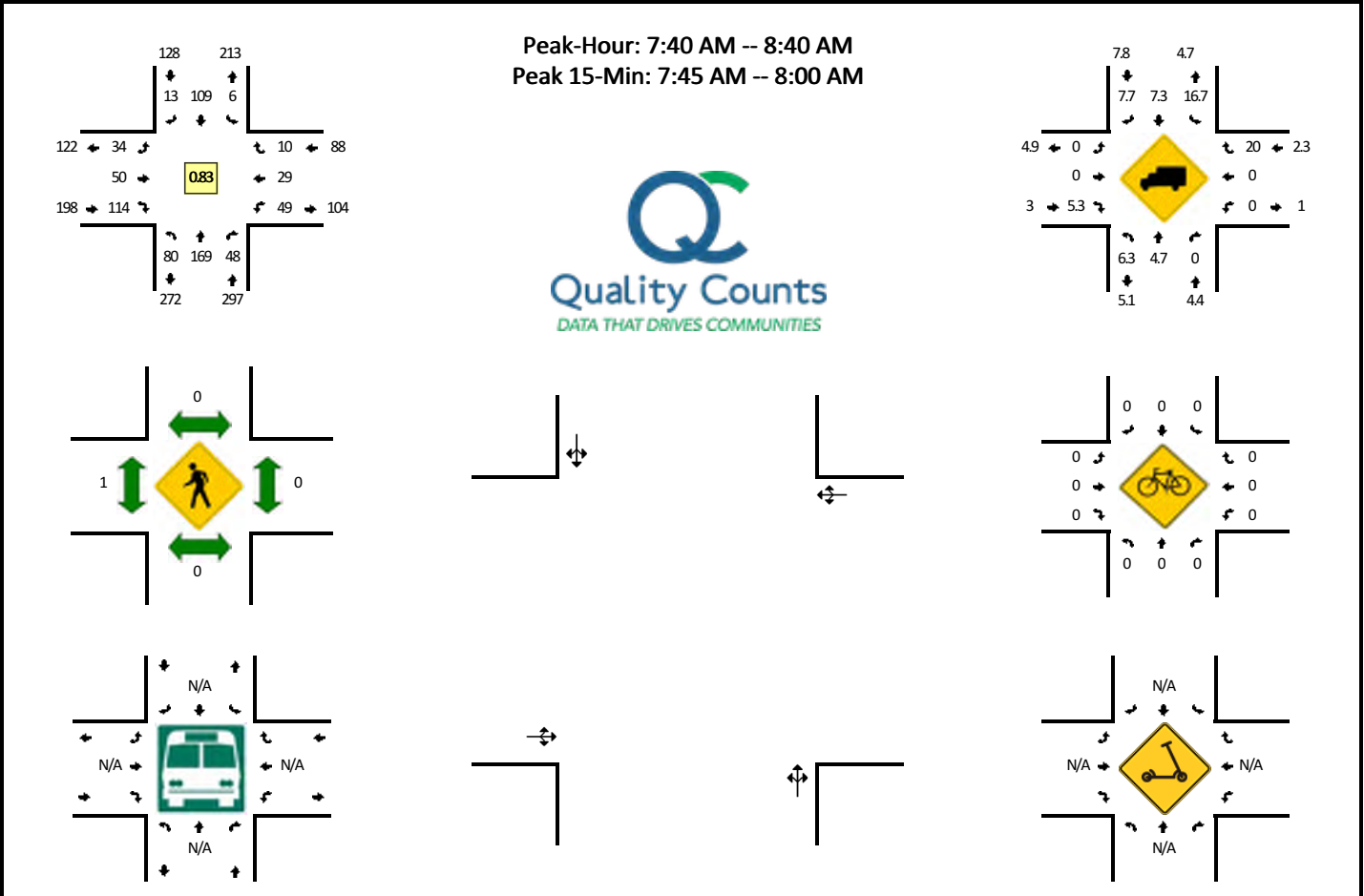


5-Min Count Period Beginning At	SW Centruy Dr (Northbound)				SW Centruy Dr (Southbound)				SW Tualatin Sherwood Rd (Eastbound)				SW Tualatin Sherwood Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	7	0	0	0	0	0	0	54	6	0	9	62	0	0	138	
4:05 PM	0	0	2	0	0	0	0	0	0	58	1	0	9	60	0	0	130	
4:10 PM	1	0	4	0	0	0	0	0	0	59	1	0	14	63	0	0	142	
4:15 PM	1	0	3	0	0	0	0	0	0	48	1	0	11	71	0	0	135	
4:20 PM	1	0	5	0	0	0	0	0	0	41	0	0	17	69	0	0	133	
4:25 PM	0	0	2	0	0	0	0	0	0	58	0	0	13	68	0	0	141	
4:30 PM	0	0	3	0	0	0	0	0	0	81	2	0	7	78	0	0	171	
4:35 PM	0	0	2	0	0	0	0	0	0	65	1	0	12	73	0	0	153	
4:40 PM	0	0	7	0	0	0	0	0	0	69	1	0	15	63	0	0	155	
4:45 PM	0	0	2	0	0	0	0	0	0	83	1	0	14	71	0	0	171	
4:50 PM	1	0	2	0	0	0	0	0	0	67	0	0	15	66	0	0	151	
4:55 PM	0	0	2	0	0	0	0	0	0	54	1	0	4	56	0	0	117	1737
5:00 PM	0	0	6	0	0	0	0	0	0	48	5	0	14	77	0	0	150	1749
5:05 PM	0	0	2	0	0	0	0	0	0	66	0	0	17	78	0	0	163	1782
5:10 PM	0	0	6	0	0	0	0	0	0	68	3	0	19	50	0	0	146	1786
5:15 PM	1	0	5	0	0	0	0	0	0	60	0	0	25	71	0	0	162	1813
5:20 PM	0	0	1	0	0	0	0	0	0	62	0	0	15	60	0	0	138	1818
5:25 PM	0	0	4	0	0	0	0	0	0	50	1	0	18	59	0	0	132	1809
5:30 PM	0	0	1	0	0	0	0	0	0	45	0	0	11	58	0	0	115	1753
5:35 PM	1	0	1	0	0	0	0	0	0	66	1	0	5	63	0	0	137	1737
5:40 PM	0	0	6	0	0	0	0	0	0	38	0	0	11	64	0	0	119	1701
5:45 PM	0	0	2	0	0	0	0	0	0	47	2	0	6	59	0	0	116	1646
5:50 PM	0	0	0	0	0	0	0	0	0	57	0	0	4	69	0	0	130	1625
5:55 PM	0	0	1	0	0	0	0	0	0	50	1	0	11	55	0	0	118	1626
Peak 15-Min Flows	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	48	0	0	0	0	0	0	860	16	0	136	856	0	0	1916	
Heavy Trucks	0	0	4		0	0	0		0	116	0		0	56	0		176	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

*Comments:*

**LOCATION:** SW Langer Farms Pkwy -- SW Century Dr  
**CITY/STATE:** Sherwood, OR

**QC JOB #:** 15793205  
**DATE:** Tue, Apr 26 2022



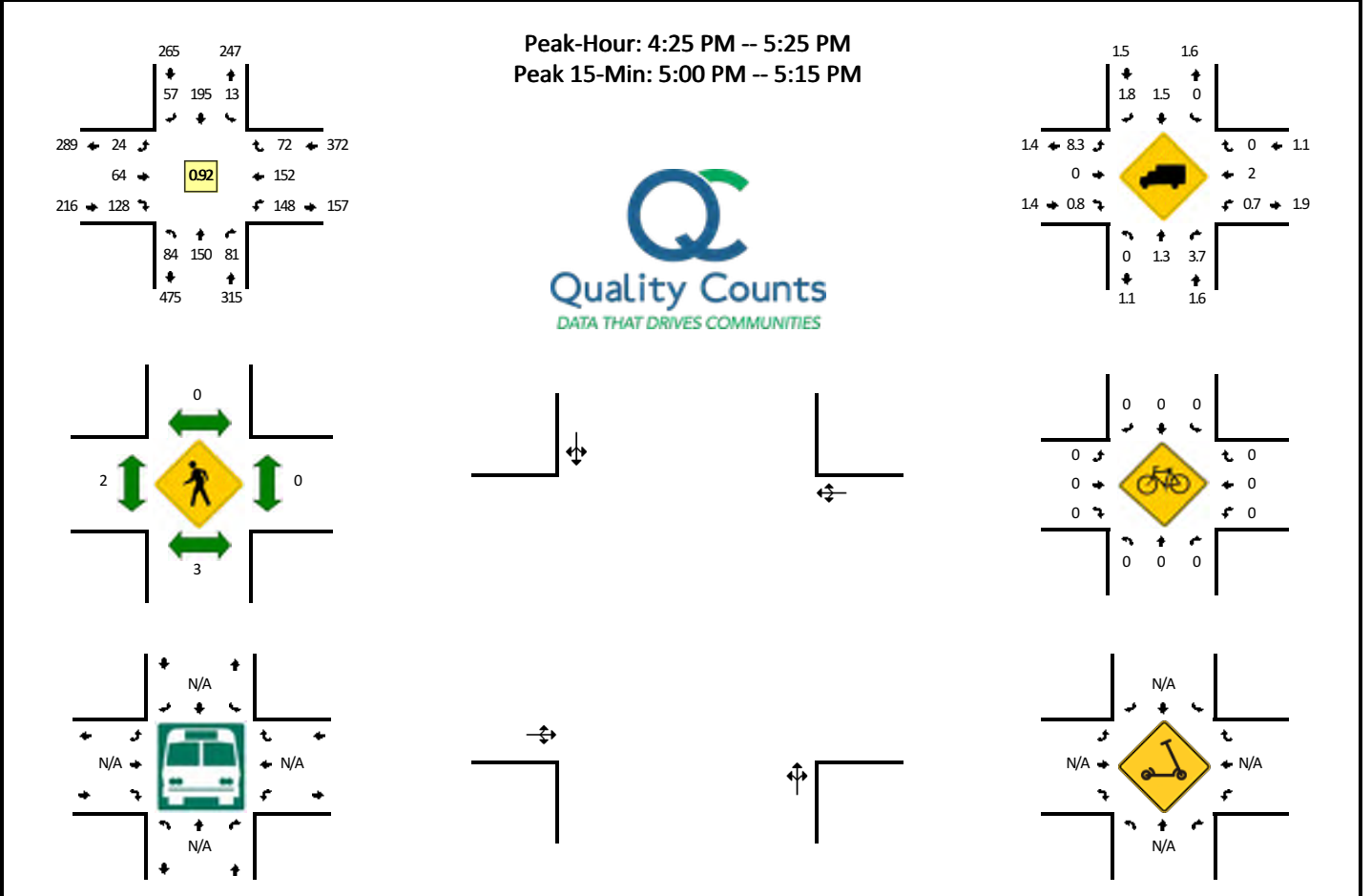
5-Min Count Period Beginning At	SW Langer Farms Pkwy (Northbound)				SW Langer Farms Pkwy (Southbound)				SW Century Dr (Eastbound)				SW Century Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	5	2	0	1	8	1	0	0	3	0	0	3	5	1	0	34	
7:05 AM	2	8	2	0	0	2	1	0	2	2	6	0	5	1	1	0	32	
7:10 AM	3	9	2	0	1	3	0	0	1	3	4	0	3	5	0	0	34	
7:15 AM	6	16	1	0	0	6	1	0	0	3	7	0	3	0	0	0	43	
7:20 AM	4	4	1	0	0	6	1	0	1	6	7	0	3	2	0	0	35	
7:25 AM	6	6	5	0	0	10	3	0	2	1	7	0	2	3	0	0	45	
7:30 AM	4	12	2	0	0	10	0	0	3	3	9	0	0	0	0	0	43	
7:35 AM	1	13	2	0	0	7	2	0	3	6	10	0	3	1	2	0	50	
7:40 AM	11	16	4	0	0	7	1	0	4	3	8	0	2	1	2	0	59	
7:45 AM	4	18	6	0	0	15	1	0	5	7	16	0	1	3	1	0	77	
7:50 AM	8	19	2	0	0	14	2	0	4	4	14	0	4	2	0	0	73	
7:55 AM	7	15	3	0	1	6	3	0	3	5	13	0	6	1	0	0	63	588
8:00 AM	7	9	4	0	1	11	0	0	0	5	11	0	8	6	1	0	63	617
8:05 AM	8	24	4	0	0	12	0	0	1	2	11	0	4	4	0	0	70	655
8:10 AM	6	17	2	0	2	6	0	0	2	3	11	0	4	1	1	0	55	676
8:15 AM	11	13	4	0	0	6	1	0	4	4	6	0	3	4	2	0	58	691
8:20 AM	4	8	3	0	1	8	0	0	5	3	5	0	6	2	0	0	45	701
8:25 AM	6	7	5	0	0	7	1	0	2	3	5	0	2	1	0	0	39	695
8:30 AM	5	13	8	0	0	10	2	0	2	4	5	0	3	1	2	0	55	707
8:35 AM	3	10	3	0	1	7	2	0	2	7	9	0	6	3	1	0	54	711
8:40 AM	3	16	1	0	0	8	0	0	2	3	5	0	3	1	1	1	44	696
8:45 AM	4	11	4	0	0	4	3	0	1	3	3	0	5	1	1	0	40	659
8:50 AM	3	6	8	0	0	10	1	0	0	2	5	0	5	3	1	0	44	630
8:55 AM	2	14	2	0	0	6	3	0	2	1	6	0	5	1	1	0	43	610
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	76	208	44	0	4	140	24	0	48	64	172	0	44	24	4	0	852	
Heavy Trucks	8	20	0		0	4	0		0	0	0		0	0	0		32	
Buses																	0	
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:



**LOCATION:** SW Langer Farms Pkwy -- SW Century Dr  
**CITY/STATE:** Sherwood, OR

**QC JOB #:** 15793206  
**DATE:** Mon, Apr 25 2022



5-Min Count Period Beginning At	SW Langer Farms Pkwy (Northbound)				SW Langer Farms Pkwy (Southbound)				SW Century Dr (Eastbound)				SW Century Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	14	8	0	0	15	7	0	2	6	5	0	13	9	4	0	87	
4:05 PM	6	12	7	0	0	20	1	0	0	8	7	0	9	12	9	0	91	
4:10 PM	8	17	9	0	2	16	6	0	1	6	8	0	10	9	1	0	93	
4:15 PM	5	10	9	0	3	10	4	0	4	6	7	0	16	9	6	0	89	
4:20 PM	12	16	5	0	2	7	1	1	1	7	10	0	11	12	10	0	95	
4:25 PM	10	8	10	0	0	17	5	0	1	3	9	0	7	10	5	0	85	
4:30 PM	5	19	10	0	1	18	6	0	1	8	10	0	11	6	5	0	100	
4:35 PM	6	12	7	0	1	16	9	1	5	4	3	0	10	16	4	0	94	
4:40 PM	1	13	7	0	2	16	4	0	3	8	11	0	5	13	4	0	87	
4:45 PM	4	10	9	0	2	14	6	0	1	5	14	0	15	17	3	0	100	
4:50 PM	13	19	5	2	3	22	3	0	3	10	12	0	9	9	7	0	117	
4:55 PM	7	17	8	1	0	13	4	0	2	4	7	0	7	3	4	0	77	1115
5:00 PM	9	12	4	1	3	19	7	0	0	4	10	0	25	13	10	0	117	1145
5:05 PM	7	10	3	0	0	16	4	0	1	3	17	0	13	13	17	0	104	1158
5:10 PM	5	6	4	0	0	18	2	0	1	6	11	0	12	27	4	0	96	1161
5:15 PM	6	11	4	0	0	13	3	0	4	5	13	0	18	14	4	0	95	1167
5:20 PM	7	13	10	0	0	13	4	0	2	4	11	0	16	11	5	0	96	1168
5:25 PM	6	11	6	0	0	6	6	0	0	6	7	0	14	13	5	0	80	1163
5:30 PM	4	16	6	0	1	13	4	0	5	7	12	0	16	8	2	0	94	1157
5:35 PM	2	8	4	0	0	15	5	0	2	5	5	0	14	14	2	0	76	1139
5:40 PM	5	13	7	0	0	12	3	0	3	4	15	0	15	10	4	0	91	1143
5:45 PM	3	10	11	1	1	11	6	0	5	3	9	0	11	8	1	0	80	1123
5:50 PM	7	23	11	0	1	13	5	0	1	7	4	0	14	8	7	0	101	1107
5:55 PM	12	14	4	0	1	14	4	0	2	3	8	0	9	11	5	1	88	1118
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	84	112	44	4	12	212	52	0	8	52	152	0	200	212	124	0	1268	
Heavy Trucks	0	0	4		0	4	0		0	0	0		0	0	0		8	
Buses																		
Pedestrians		8				0				0				0			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

*Comments:*

AM Peak Hour Historical Volumes												
Count Location	4/23/2019	4/24/2019	4/25/2019	Average	4/26/2022	4/27/2022	4/28/2022	Average	9/6/2022	9/7/2022	9/8/2022	Average
I-5 NB @ Nyberg	6869	4798	6279	5982	6290	6025	6313	6209	6208	6445	5973	6209
I-5 SB @ Nyberg	2720	1988	2731	2480	2394	2406	2323	2374	2362	2416	2441	2406

PM Peak Hour Historical Volumes												
Count Location	4/23/2019	4/24/2019	4/25/2019	Average	4/26/2022	4/27/2022	4/28/2022	Average	9/6/2022	9/7/2022	9/8/2022	Average
I-5 NB @ Nyberg	4976	4936	4379	4764	5645	6042	5477	5721	5615	5683	5912	5737
I-5 SB @ Nyberg	2431	2487	2365	2428	2997	2937	2753	2896	2791	2819	2691	2767

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APPENDIX E  
**CRASH DATA**



URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and TUALATIN-SHERWOOD, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020

6 - 8 of 56 Crash records shown.

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE	MOVE	A	S																		
														INVEST	E	A	U	I	C	O	DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	OWNER
RD DPT	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE			
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE		
01060	N	N	N			02/28/2018	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE	9	STRGHT											29		
NONE						WE	0	SW TUALATIN-SHERWOOD	E			TRF SIGNAL	N	WET	REAR	N/A	E -W											000	00		
N						6A			06	0			N	DLIT	PDO	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00			
N						45 22 4.03	-122 50 10.5																								
																02	NONE	9	STOP												
																N/A	E -W		01	DRVR	NONE	00	Unk	UNK		000	000	011	00		
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00			
04327	N	N	N			08/26/2019	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT											07		
CITY						MO	0	SW TUALATIN-SHERWOOD	E			TRF SIGNAL	N	DRY	REAR	PRVTE	E -W											000	00		
N						5P			06	0			N	DAY	INJ	PSNGR CAR		01	DRVR	NONE	27	M	NONE		043	000		07			
N						45 22 4.03	-122 50 10.5																								
																02	NONE	0	STOP												
																PRVTE	E -W		01	DRVR	INJC	66	M	OR-Y		000	000		00		
																PSNGR CAR													00		
00056	N	N	N			01/03/2016	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	SNOW	S-1STOP	01	NONE	0	STRGHT										124	29		
CITY						SU	0	SW TUALATIN-SHERWOOD	S			TRF SIGNAL	N	ICE	REAR	PRVTE	S -N											000	124	00	
N						2P			06	0			N	DAY	INJ	PSNGR CAR		01	DRVR	NONE	32	M	OR-Y		026	017		29			
N						45 22 4.03	-122 50 10.5																								
																01	NONE	0	STRGHT												
																PRVTE	S -N		02	PSNG	INJC	32	F					000	000	124	00
																PSNGR CAR													00		
																01	NONE	0	STRGHT												
																PRVTE	S -N		03	PSNG	NO<5	01	F					000	000	124	00
																PSNGR CAR													00		
																02	NONE	0	STOP												
																PRVTE	S -N		01	DRVR	NONE	17	M	OR-Y		000	000		012	00	
																PSNGR CAR													00		
05081	N	N	N			08/20/2017	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT											29		
NONE						SU	0	SW TUALATIN-SHERWOOD	S			TRF SIGNAL	N	DRY	REAR	PRVTE	S -N											000	00		
N						4P			06	0			N	DAY	INJ	PSNGR CAR		01	DRVR	NONE	36	M	OR-Y		026	000		29			
N						45 22 4.03	-122 50 10.5																								
																02	NONE	0	STOP												
																PRVTE	S -N		01	DRVR	INJC	41	F	OR-Y		000	000		011	00	
																PSNGR CAR													00		

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URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and TUALATIN-SHERWOOD, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020

14 - 17 of 56 Crash records shown.

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	SPCL USE																			
INVEST	E	A	U	I	C	O	DIST	FIRST STREET		(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE	A	S												
RD DPT	E	L	G	N	H	R	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED								
UNLOC?	D	C	S	V	L	K	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE		
04493	N	N	N	N	N	08/28/2018	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT												
CITY						TU	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00		
N						12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	60	F	OR-Y		043	000		07		
N						45 22 4.03	-122 50																OR<25							
															02	NONE	0	STOP									011		00	
																PRVTE	W -E													
															01	DRVR	NONE	35	M	OR-Y			OR<25		000	000		00		
															02	NONE	0	STOP									011		00	
																PRVTE	W -E													
															02	PSNGR CAR		02	PSNG	INJC	60	M			000	000		00		
06452	N	N	N			12/07/2019	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	CLR	S-STRGHT	01	NONE	9	STRGHT											29	
NONE						SA	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E									000		00		
N						1P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk UNK		000	000		00			
N						45 22 4.03	-122 50															UNK								
															02	NONE	9	STRGHT									000		00	
																N/A	W -E													
															01	DRVR	NONE	00	Unk UNK				UNK		000	000		00		
																PSNGR CAR														
03745	N	N	N	N	N	10/14/2020	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	9	STRGHT											07	
CITY						WE	0	SW TUALATIN-SHERWOOD	W		TRF SIGNAL	N	DRY	REAR		N/A	W -E									088		00		
N						5P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk UNK		000	000		00			
N						45 22 4.05	-122 50															UNK								
															02	NONE	9	STOP									012		00	
																N/A	W -E													
															01	DRVR	NONE	00	Unk UNK				UNK		000	000		00		
																PSNGR CAR														
05306	N	N	N	N	N	08/09/2016	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE	0	STRGHT									040		04	
CITY						TU	0	SW TUALATIN-SHERWOOD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W -E									000	040		00	
N						11A			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	67	M	OR-Y		000	000		00		
N						45 22 4.03	-122 50																OR<25							
															01	NONE	0	STRGHT									000	040		00
																PRVTE	W -E													
															02	PSNGR CAR		02	PSNG	INJC	74	F			000	000		00		
															02	NONE	0	TURN-L												
																PRVTE	E -S													
															01	DRVR	NONE	34	F	OR-Y			OR<25		020	000		04		

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT  
URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and TUALATIN-SHERWOOD, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020  
23 - 27 of 56 Crash records shown.

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE																						
											INVEST	E	A	U	I	C	O	DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE		A	S	
RD DPT	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED									
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE			
07865	N	N	N	N	N	12/08/2017	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	N	CLR	O-1 L-TURN	01	NONE	9	TURN-L													02
CITY						FR	0	SW TUALATIN-SHERWOOD	CN				TRF SIGNAL	N	DRY	TURN	N/A		S -W										000	00		
N						5P			01	0			N	DLIT	PDO		PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
N						45 22 4.03	-122 50	10.5									02	NONE	9	STRGHT										000	00	
																	N/A		N -S										000	00		
																	PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
00441	N	N	N	N	N	01/26/2018	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	N	RAIN	ANGL-OTH	01	NONE	9	STRGHT												04	
CITY						FR	0	SW TUALATIN-SHERWOOD	CN				TRF SIGNAL	N	WET	ANGL	N/A		S -N										000	00		
N						10P			04	0			N	DLIT	PDO		PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
N						45 22 4.03	-122 50	10.5									02	NONE	9	STRGHT									000	00		
																	N/A		W -E										000	00		
																	PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
02097	N	N	N	N	N	04/27/2018	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	N	CLD	ANGL-OTH	01	NONE	9	TURN-L												02	
CITY						FR	0	SW TUALATIN-SHERWOOD	CN				TRF SIGNAL	N	DRY	TURN	N/A		W -N										000	00		
N						11A			04	0			N	DAY	PDO		PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
N						45 22 4.03	-122 50	10.5									02	NONE	9	STRGHT									000	00		
																	N/A		S -N										000	00		
																	PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
06068	N	N	N	N	N	11/09/2018	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	N	CLR	O-1 L-TURN	01	NONE	9	STRGHT												02	
CITY						FR	0	SW TUALATIN-SHERWOOD	CN				TRF SIGNAL	N	DRY	TURN	N/A		W -E										000	00		
N						5P			03	0			N	DLIT	PDO		PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
N						45 22 4.03	-122 50	10.5									02	NONE	9	TURN-L									000	00		
																	N/A		E -S										000	00		
																	PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
05087	N	N	N	N	N	09/27/2018	14	SW LANGER FARM PKWY	INTER	CROSS	N	N	N	CLR	O-1 L-TURN	01	NONE	9	STRGHT												02	
CITY						TH	0	SW TUALATIN-SHERWOOD	CN				TRF SIGNAL	N	DRY	TURN	N/A		W -E										000	00		
N						2P			03	0			N	DAY	PDO		PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		
N						45 22 4.03	-122 50	10.5									02	NONE	9	TURN-L									000	00		
																	N/A		E -S										000	00		
																	PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00		

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CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and TUALATIN-SHERWOOD, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020

32 - 36 of 56 Crash records shown.

SER#	S D M	P R J S W DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE																	
INVEST	E A U I C O DAY		DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE		A S									
RD DPT	E L G N H R TIME		FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM		PRTC	INJ	G E	LICNS	PED					
UNLOC?	D C S V L K LAT		LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO		P# TYPE	SVRTY	E X	RES	LOC	ERROR	ACT	EVENT	CAUSE	
03188	N N N	N N 06/22/2018	17	SW LANGER FARM PKWY	ALLEY		N	N	CLR	ANGL-OTH	01 NONE 9	TURN-L											02
CITY		FR	150	SW TUALATIN-SHERWOOD	S	(NONE)	UNKNOWN	N	DRY	TURN	N/A	W -N									018	00	
N		7P			07			N	DAY	PDO	PSNGR CAR			01 DRVR	NONE	00	Unk UNK		000	000		00	
N		45 22 1.79	-122 50 10.48	<b>Driveway</b>		(03)																	
											02 NONE 9	TURN-L											
											N/A	S -W										019	00
											PSNGR CAR			01 DRVR	NONE	00	Unk UNK		000	000		00	
																							00
																							00
01105	N N N	N N 03/03/2018	17	SW LANGER FARM PKWY	ALLEY		N	Y	CLR	FIX OBJ	01 NONE 9	TURN-L										053	10
CITY		SA	185	SW TUALATIN-SHERWOOD	S	(NONE)	UNKNOWN	N	DRY	FIX	N/A	W -N										018	00
Y		12P		<b>Driveway</b>	08			N	DAY	PDO	PSNGR CAR			01 DRVR	NONE	00	Unk UNK		000	000		00	
N		45 22 1.69	-122 50 10.48			(02)																	
01655	N N N	03/24/2017	17	SW LANGER FARM PKWY	ALLEY		N	N	RAIN	ANGL-OTH	01 NONE 0	STRGHT											02
NONE		FR	415	SW TUALATIN-SHERWOOD	S	(NONE)	STOP SIGN	N	WET	ANGL	PRVTE	E -W										018	00
N		7P			08			N	DUSK	INJ	PSNGR CAR			01 DRVR	NONE	30	F OR-Y		028	000		02	
N		45 21 59.42	-122 50 10.46	<b>Driveway</b>		(03)																	
											02 NONE 0	STRGHT											
											PRVTE	S -N										000	00
											PSNGR CAR			01 DRVR	INJC	23	F OR-Y		000	000		00	
																							00
																							00
06797	N N N	12/11/2018	17	SW LANGER FARM PKWY	ALLEY		N	N	RAIN	ANGL-OTH	01 NONE 0	STRGHT											02
NONE		TU	425	SW TUALATIN-SHERWOOD	S	(NONE)	STOP SIGN	N	WET	TURN	PRVTE	S -N										000	00
N		6A		<b>Driveway</b>	08			N	DARK	INJ	PSNGR CAR			01 DRVR	INJC	41	M OR-Y		000	000		00	
N		45 21 59.33	-122 50 10.46			(03)																	
											02 NONE 0	TURN-L											
											PRVTE	E -S										018	00
											PSNGR CAR			01 DRVR	NONE	53	M OR-Y		028	000		02	
																							00
																							00
																							00
05280	N N N	10/15/2019	17	SW LANGER FARM PKWY	ALLEY		N	N	CLR	ANGL-OTH	01 NONE 0	STRGHT											02
NONE		TU	425	SW TUALATIN-SHERWOOD	S	(NONE)	UNKNOWN	N	DRY	ANGL	PRVTE	N -S										000	00
N		7P			07			N	DLIT	INJ	PSNGR CAR			01 DRVR	NONE	34	M OR-Y		000	000		00	
N		45 21 59.33	-122 50 10.46	<b>Driveway</b>		(03)																	
											02 NONE 0	STRGHT											
											PRVTE	E -W										019	00
											PSNGR CAR			01 DRVR	NONE	18	F OR-Y		028	000		02	
																							00
																							00
											02 NONE 0	STRGHT											00
											PRVTE	E -W										019	00
											PSNGR CAR			02 PSNG	INJC	18	F		000	000		00	

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URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and TUALATIN-SHERWOOD, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020

40 - 43 of 56 Crash records shown.

SER#	INVEST RD DPT UNLOC?	S P E L D C	D R J A U I N	M S W I C O S V	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	INT-REL	OFFRD	WTHR	CRASH	SPCL USE	MOVE	A	S	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE
		E L G N H R	T I C O S V L K	TIME		FROM	SECOND STREET	DIRECT	LEGS TRAF-	RNDBT	SURF	COLL	OWNER	FROM		G	E							
		D C S V L K	L A T			LONG	LRS	LOCTN	(#LANES) CONTL	DRVWY	LIGHT	SVRTY	V# TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC			
03983	N N N	N N N	N N	08/06/2019	17	17	SW LANGER FARM PKWY	ALLEY	N	N	CLR	ANGL-OTH	01 NONE	9	STRGHT									
	CITY			TU		430	SW TUALATIN-SHERWOOD	S	(NONE)	STOP SIGN	N	DRY	ANGL	N/A	E -W						019	00		
	N			1P				07			N	DAY	PDO	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
	N			45 21 59.3		-122 50 10.46	<b>Driveway</b>		(03)											UNK				
													02 NONE	9	STRGHT									
													N/A	N -S							006	00		
													SEMI TOW		01	DRVR	NONE	00	Unk	UNK	000	000	00	
00165	N N N	N N N	N N	01/09/2020	17	17	SW LANGER FARM PKWY	ALLEY	N	N	CLR	O-1 L-TURN	01 NONE	0	TURN-L									
	NO RPT			TH		430	SW TUALATIN-SHERWOOD	S	(NONE)	UNKNOWN	N	WET	TURN	PRVTE	W -N						018	00		
	N			5P				08			N	DLIT	INJ	PSNGR CAR		01	DRVR	NONE	42	F	OR-Y	028	000	02
	N			45 21 59.26		-122 50 10.46	<b>Driveway</b>		(03)															
													02 NONE	0	STRGHT									
													PRVTE	E -W							018	00		
													PSNGR CAR		01	DRVR	INJC	38	F	OR-Y	000	000	00	
03646	N N N	N N N	N N	10/06/2020	17	17	SW LANGER FARM PKWY	ALLEY	N	N	CLR	ANGL-OTH	01 NONE	0	STRGHT									
	CITY			TU		440	SW TUALATIN-SHERWOOD	S	(NONE)	STOP SIGN	N	DRY	ANGL	PRVTE	N -S						000	00		
	N			7P				07			N	DLIT	INJ	PSNGR CAR		01	DRVR	INJB	36	F	OR-Y	000	000	00
	N			45 21 59.19		-122 50 10.45	<b>Driveway</b>		(03)															
													01 NONE	0	STRGHT									
													PRVTE	N -S							000	00		
													PSNGR CAR		02	PSNG	INJB	21	F		000	000	00	
													02 NONE	0	STRGHT									
													PRVTE	W -E							018	00		
													PSNGR CAR		01	DRVR	NONE	31	F	OTH-Y	028	000	02	
07038	N N N	N N N	N N	10/14/2016	17	17	SW LANGER FARM PKWY	STRGHT	N	N	RAIN	S-1STOP	01 NONE	0	STRGHT									
	CITY			FR		75	SW TUALATIN-SHERWOOD	N	(NONE)	TRF SIGNAL	N	WET	REAR	PRVTE	N -S						000	00		
	N			4P				08			N	DAY	INJ	PSNGR CAR		01	DRVR	INJB	34	F	OR-Y	026	000	29
	N			45 22 5.32		-122 50 10.51	<b>Driveway</b>		(03)															
													02 NONE	0	STOP									
													PRVTE	N -S							012	00		
													PSNGR CAR		01	DRVR	NONE	67	F	OR-Y	000	000	00	
00841	N N N	N N N	N N	02/16/2018	14	14	SW TUALATIN-SHERWOOD	STRGHT	Y	N	CLR	S-STRGHT	01 NONE	9	STRGHT							07, 32		
	CITY			FR		25	SW LANGER FARM PKWY	E	(NONE)	NONE	N	DRY	REAR	N/A	E -W						000	00		
	N			6P				06			N	DLIT	PDO	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000	00
	N			45 22 4		-122 50 9.2	<b>Driveway</b>		(02)															

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT  
URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and TUALATIN-SHERWOOD, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020

49 - 52 of 56 Crash records shown.

SER#	S P	D M	R J S W DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE	A S							
INVEST	E A U I C O DAY			DIST	FIRST STREET	RD CHAR	(MEDIAN) INT-REL	OFFRD WTHR CRASH	TRLR QTY	MOVE		A S			
RD DPT	E L G N H R TIME			FROM	SECOND STREET	DIRECT	LEGS TRAF-	RNDBT SURF COLL	OWNER	FROM	PRTC INJ	G E LICNS PED			
UNLOC?	D C S V L K LAT			LONG	LRS	LOCTN	(#LANES) CONTL	DRVWY LIGHT SVRTY	V# TYPE	TO	P# TYPE SVRTY	E X RES LOC	ERROR	ACT EVENT	CAUSE
07859	N N N		11/15/2016	14	SW TUALATIN-SHERWOOD	STRGHT	N	N CLR S-STRGHT	01 NONE 9	STRGHT					13
NONE			TU	150	SW LANGER FARM PKWY	E	(NONE) UNKNOWN	N DRY SS-O	N/A	E -W				000	00
N			2P			08		N DAY PDO	PSNGR CAR		01 DRVR NONE	00 Unk UNK	000	000	00
N			45 22 3.94	-122 50 7.44			(03)								
									02 NONE 9	STRGHT					
									N/A	E -W				000	00
									PSNGR CAR		01 DRVR NONE	00 Unk UNK	000	000	00
00961	N N N		02/24/2018	14	SW TUALATIN-SHERWOOD	STRGHT	N	N CLR S-STRGHT	01 NONE 0	STRGHT					29
NONE			SA	150	SW LANGER FARM PKWY	E	(NONE) UNKNOWN	N DRY REAR	PRVTE	E -W				000	00
N			7P			08		N DLIT INJ	PSNGR CAR		01 DRVR NONE	69 M OR-Y	042	000	29
N			45 22 3.94	-122 50 7.45			(02)								
									02 NONE 0	STRGHT					
									PRVTE	E -W				000	00
									PSNGR CAR		01 DRVR INJC	23 F OR-Y	000	000	00
02368	N N N		07/01/2020	14	SW TUALATIN-SHERWOOD	STRGHT	N	N CLR S-STRGHT	01 NONE 0	STRGHT					13
NONE			WE	150	SW LANGER FARM PKWY	E	(NONE) UNKNOWN	N DRY SS-O	PRVTE	E -W				000	00
N			1P			08		N DAY INJ	PSNGR CAR		01 DRVR INJC	44 M OR-Y	045	000	13
N			45 22 3.96	-122 50 7.47			(02)								
									01 NONE 0	STRGHT					
									PRVTE	E -W				000	00
									PSNGR CAR		02 PSNG INJC	11 F	000	000	00
									02 NONE 0	STRGHT					
									PRVTE	E -W				000	00
									PSNGR CAR		01 DRVR NONE	42 M OTH-Y	000	000	00
04208	N N N		08/19/2019	14	SW TUALATIN-SHERWOOD	STRGHT	N	N CLR S-1STOP	01 NONE 0	STRGHT					29
CITY			MO	300	SW LANGER FARM PKWY	E	(NONE) UNKNOWN	N DRY REAR	UNKN	E -W				000	00
N			1P			08		N DAY INJ	PSNGR CAR		01 DRVR NONE	00 Unk UNK	026	000	29
N			45 22 3.95	-122 50 5.38			(02)								
									02 NONE 0	STOP					
									PRVTE	E -W				011	00
									PSNGR CAR		01 DRVR INJC	53 F OR-Y	000	000	00
04474	N N N	N N	12/05/2020	14	SW TUALATIN-SHERWOOD	STRGHT	Y	N CLR S-1STOP	01 NONE 0	STRGHT					27
CITY			SA	300	SW LANGER FARM PKWY	E	(NONE) UNKNOWN	N DRY REAR	PRVTE	E -W				000	00
N			2P			08		N DAY INJ	PSNGR CAR		01 DRVR INJB	50 F OR-Y	016,026	038	27
N			45 22 3.95	-122 50 5.56			(02)								

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URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and CENTURY DR, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020

1 - 3 of 10 Crash records shown.

SER#	S D M			CLASS	CITY STREET	INT-TYPE	SPCL USE	RD CHAR	CRASH	TRLR QTY	MOVE	A S																												
	P	R	J										DATE	FIRST STREET	LEGS	INT-REL	OFFRD	WTHR	COLL	OWNER	FROM	PRTC	INJ	G E	LICNS	PED	ERROR	ACT	EVENT	CAUSE										
																															W	TIME	SECOND STREET	TRAFF-	RNDBT	SURF	OWN	TO	#	TYPE
02994	N	N	N	05/07/2016	17	LANGER FARM PKWY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT																								
NONE				SA	0	CENTURY DR	S			YIELD	Y	DRY	REAR	PRVTE	S -N												000									00				
N				12P			06	0			N	DAY	INJ	PSNGR CAR				01	DRVR	NONE	71	M	OR-Y		026		000									29				
N				45 21 52.27	-122 50																																			
03190	N	N	N	05/30/2017	17	LANGER FARM PKWY	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE	0	STRGHT																								
NONE				TU	0	CENTURY DR	W			YIELD	Y	WET	REAR	PRVTE	E -W												000										00			
N				10A			05	4			N	DAY	INJ	PSNGR CAR				01	DRVR	NONE	22	F	OR-Y		026		000										29			
N				45 21 52.47	-122 50																																			
00024	N	N	N	01/02/2016	17	LANGER FARM PKWY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT																								
NONE				SA	0	CENTURY DR	CN			YIELD	Y	DRY	REAR	PRVTE	E -W												000											00		
N				3P			01	0			N	DAY	INJ	PSNGR CAR				01	DRVR	NONE	17	M	OR-Y		026		000										29			
N				45 21 52.47	-122 50																																			
04026	N	N	N	07/05/2017	17	LANGER FARM PKWY	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	0	TURN-R																								
CITY				WE	0	CENTURY DR	CN			YIELD	Y	DRY	TURN	PRVTE	S -E												000											00		
N				6P			04	4			N	DAY	INJ	PSNGR CAR				01	DRVR	NONE	73	M	OR-Y		028		000										02			
N				45 21 52.27	-122 50																																			

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT  
URBAN NON-SYSTEM CRASH LISTING

CITY OF SHERWOOD, WASHINGTON COUNTY

LANGER FARM PKWY and CENTURY DR, City of Sherwood, Washington County, 01/01/2016 to 12/31/2020

4 - 9 of 10 Crash records shown.

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	SPCL USE	TRLR QTY	MOVE	A	S	INJ	G	E	LICNS	PED	ACT	EVENT	CAUSE								
INVEST	E	A	U	I	C	DAY	DIST	FIRST STREET	DIRECT	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED	ACT	EVENT	CAUSE						
RD DPT	E	L	G	N	H	R	TIME	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED	ACT	EVENT	CAUSE						
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE		
												02	NONE	0	STRGHT																
															PRVTE	W	-E											000	000	00	
															PSNGR	CAR			01	DRVR	INJB	43	M	OR-Y			000	000	00		
03571	N	N	N			06/15/2017	17	LANGER FARM PKWY	INTER	CROSS	N		N	RAIN	ANGL-OTH	01	NONE	9	STRGHT												
NONE						TH	0	CENTURY DR	CN		YIELD	Y	WET	ANGL	N/A												000	000	00		
N						2P			01	0		N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
N						45 21 52.47	-122 50				11.39																				
															02	NONE	9	STRGHT													
															N/A		E	-W										000	000	00	
															PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
04811	N	N	Y			08/06/2017	17	LANGER FARM PKWY	INTER	CROSS	N		Y	CLR	FIX OBJ	01	NONE	9	STRGHT												
CITY						SU	0	CENTURY DR	CN		YIELD	Y	DRY	FIX	N/A												000	000	00		
N						8A			01	0		N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
N						45 21 52.47	-122 50				11.39																				
07369	N	N	N			11/19/2017	17	LANGER FARM PKWY	INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE	9	STRGHT										025,080	10	
CITY						SU	0	CENTURY DR	CN		YIELD	Y	DRY	OTH	N/A												000	000	00		
N						6P			03	0		N	DLIT	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
N						45 21 52.47	-122 50				11.39																				
															02	NONE	9	STRGHT													
															N/A		N	-S										000	000	00	
															PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
06125	N	N	N	N	N	11/12/2018	17	LANGER FARM PKWY	INTER	CROSS	N		N	CLR	S-STRGHT	01	NONE	9	STRGHT												
CITY						MO	0	CENTURY DR	CN		UNKNOWN	Y	DRY	SS-O	N/A												000	000	00		
N						9A			03	0		N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
N						45 21 52.47	-122 50				11.39																				
															02	NONE	9	STRGHT													
															N/A		N	-S										000	000	00	
															PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
06407	N	N	N	N	N	11/24/2018	17	LANGER FARM PKWY	INTER	CROSS	N		N	FOG	S-STRGHT	01	NONE	9	STRGHT												
CITY						SA	0	CENTURY DR	CN		YIELD	Y	DRY	REAR	N/A												000	000	00		
N						4P			01	0		N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	
N						45 21 52.47	-122 50				11.39																				
															02	NONE	9	STRGHT													
															N/A		N	-S										000	000	00	
															PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	000	000	00	

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APPENDIX F  
**IN-PROCESS  
TRIPS**

## Sherwood Commerce Center

---

Date: November 30, 2021

Project #: 26314

To: Bob Galati, PE, City of Sherwood

From: Kristine Connolly, PE, Diego Arguea, PE, & Michael Ruiz-Leon

Cc: Garth Appanaitis, PE – DKS Associates

Project: Sherwood Commerce Center – Sherwood, Oregon

Subject: Traffic Impact Analysis



---

This report presents the traffic impact analysis (TIA) completed for Phase 1 of the proposed Sherwood Commerce Center development, to be located on the northeast quadrant of the SW Oregon Street and SW Tonquin Road intersection in Sherwood, Oregon. Based on the results of this TIA, the proposed Sherwood Commerce Center can be developed while maintaining acceptable levels of mobility at the study intersections, assuming provision of the recommended mitigation measures. Additional details of the operational analysis, findings, and recommendations are included herein.

### INTRODUCTION

The Applicant, Harsch Investment Properties, is proposing to construct up to 468,000 square-feet of industrial park as Phase 1 development of the subject property. The site is currently vacant and is bordered by SW Oregon St to the west, future industrial land uses to the east, SW Tonquin Road to the south, and a planned future east-west connector to the north, Ice Age Drive (connection from SW Oregon Street to SW 124<sup>th</sup> Avenue). Ice Age Drive will not be in place upon Phase 1 development, and therefore was not assumed for this analysis.

Figure 1 displays a site vicinity map and Figure 2 displays the proposed site plan. This traffic study analyzes the northern half (Phase 1) of the site including buildings A, B, and C. During Phase 1 of the development the site will be served initially by a single temporary access along SW Oregon Street on the north end of the site. Access will also be provided to a future roadway connection SW Tonquin Court (timeline unknown at the time of this report) to the south. The temporary northern driveway will be closed with the construction of a future east-west connector, Ice Age Drive (timeline unknown at the time of preparation of this report) and replaced by direct access to Ice Age Drive. A separate traffic land use application will be prepared for Phase 2.

## Proposed Development Plan

The proposed development consists of up to 468,000 square-feet of industrial park as part of Phase 1 development including Buildings A, B and C. During Phase 1 of the development the site will be served initially by a single temporary access along SW Oregon Street on the north end of the site. Access will also be provided to a future roadway connection SW Tonquin Court (timeline unknown at the time of this report) to the south. The temporary northern driveway will be closed with the construction of a future east-west connector, Ice Age Drive (timeline unknown at the time of preparation of this report) and replaced by direct access to Ice Age Drive.

### *Trip Generation*

A trip generation estimate for the proposed development was prepared based on the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10<sup>th</sup> Edition (Reference 10). Table 6 displays the anticipated trip generation for the proposed site.

**Table 6. Preliminary Trip Generation Estimate**

Land Use Category	ITE Code	Size (SF)	Total Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Industrial Park	130	468,000	1,577	187	151	36	187	39	148

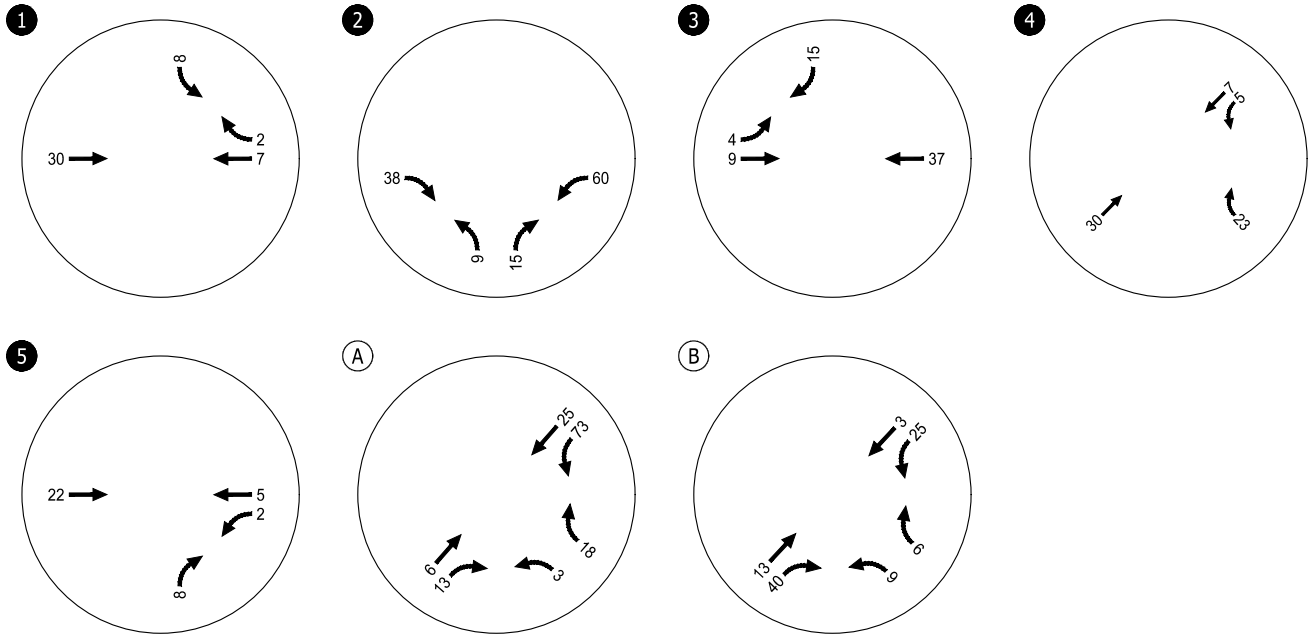
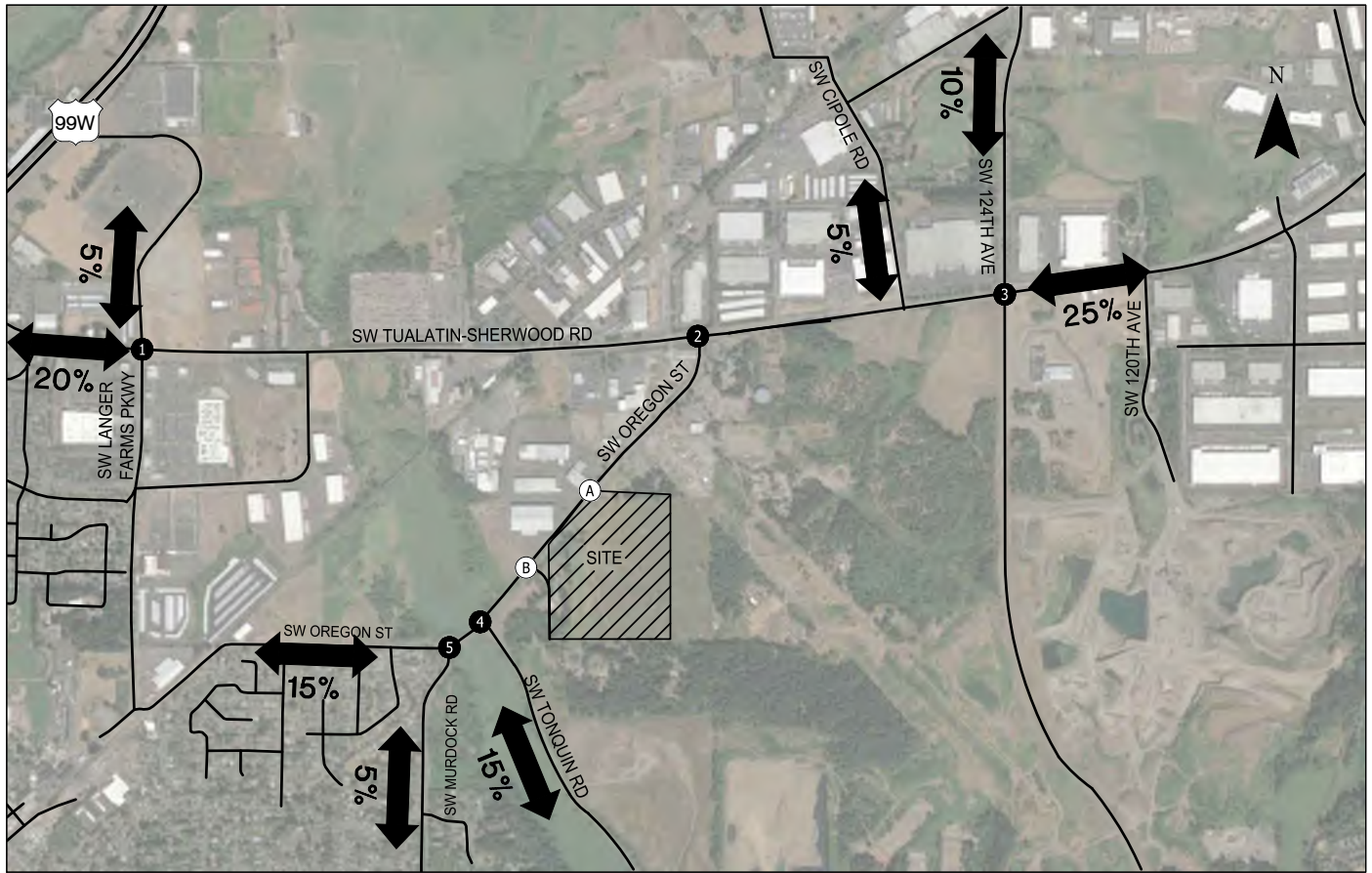
### *Trip Distribution*

Based on a review of general traffic patterns in the region, the proposed land use and external site access patterns, and prior history of our firm's involvement on other development projects in the City of Sherwood, the following site trip distribution was utilized:

- 25 percent to/from the west via SW Tualatin-Sherwood Road,
- 40 percent to/from the east via SW Tualatin-Sherwood Road,
- 15 percent to/from the southeast via SW Tonquin Road,
- 5 percent to/from the south via SW Murdock Road,
- 15 percent to/from the southwest via SW Oregon Street.

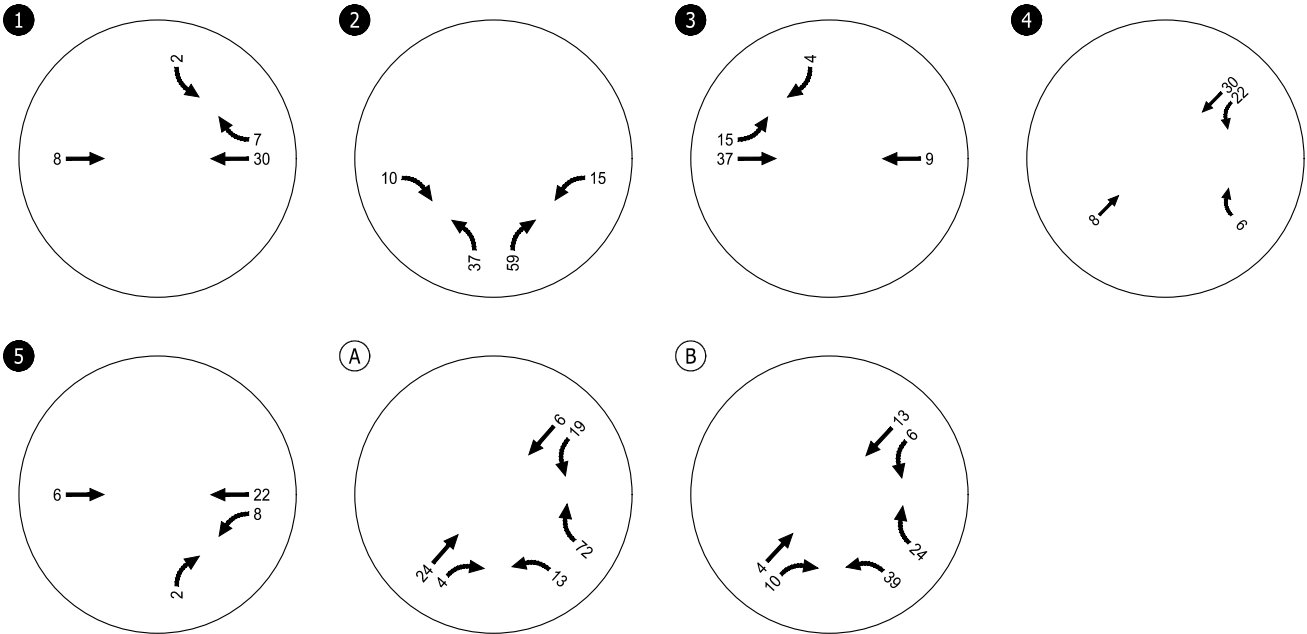
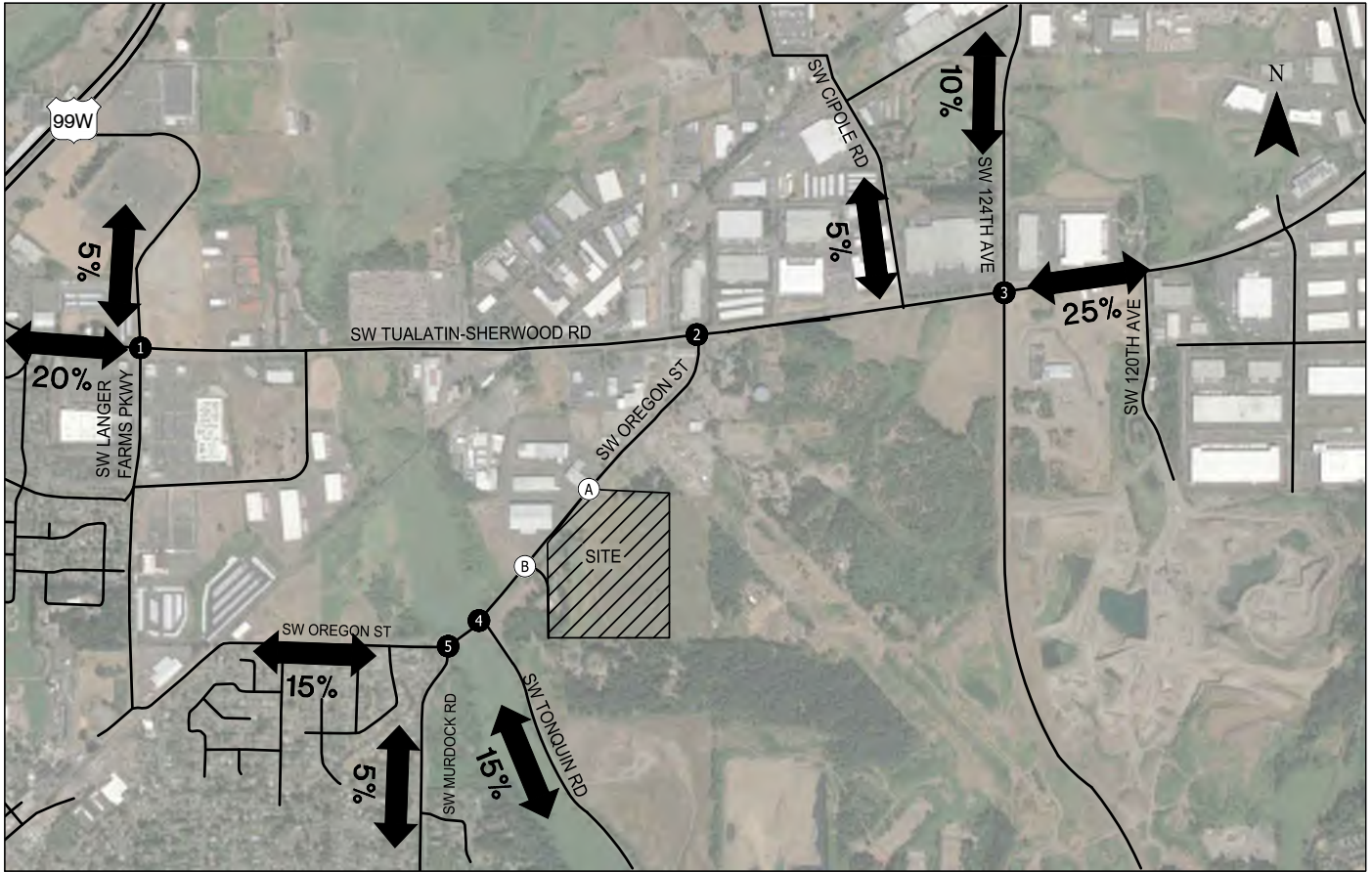
The trip distribution percentages and trip assignment patterns are shown in Figure 8 and 9.

Site truck traffic percentage and distribution was estimated by review of the nearby industrial development driveway counts heavy vehicle percentage and turning movement counts collected at the NE 115<sup>th</sup> Avenue / SW Tualatin-Sherwood Road intersection. It was estimated that 13 percent of the proposed development traffic would be heavy vehicles during the AM peak hour and 8 percent would be heavy vehicles during the PM peak hour. The east/west directional distribution of heavy vehicles at the NE 115<sup>th</sup> Avenue / SW Tualatin-Sherwood Road intersection was generally even, therefore the heavy percentages listed above were applied evenly to each movement to and from the study site.



Estimated Trip Distribution Pattern and Site Generated Trips  
 Weekday AM Peak Hour  
 Sherwood, Oregon

Figure  
 8



Estimated Trip Distribution Pattern and Site Generated Trips  
 Weekday PM Peak Hour  
 Sherwood, Oregon

Figure  
 9

H:\2626314 - Sherwood Commerce Center\report\figs\26314 Figures.dwg Nov 23, 2021 - 4:48am - mruiz-leon Layout Tab: TA\_PM

## Parkway Village South – Transportation Impact Study

---

Date: July 18, 2017 Project #: 21487

To: Bob Galati, City of Sherwood  
22560 SW Pine Street  
Sherwood, OR 97140

From: Brian J. Dunn, PE, Krista Purser, & Caitlin Mildner

CC: Joey Shearer & John Christiansen – AKS Engineering & Forestry

Project: PAC 16-08 Parkway Village South (SW Langer Farms Parkway) – Sherwood, Oregon

Subject: Transportation Impact Study

---



This memorandum presents the transportation impact analysis completed for the proposed Parkway Village South recreational and commercial development located on SW Century Drive/SW Langer Farms Parkway in Sherwood, Oregon. Based on the results of this transportation impact analysis, the proposed Parkway Village South project can be developed while maintaining acceptable levels of mobility and safety at the study intersections, assuming provision of the recommended mitigation measures. The primary findings and recommendations of this study are summarized below.

### FINDINGS

Based on the analysis herein, the following findings and recommendations are associated with the proposed development of the Parkway Village South project:

#### **Year 2017 Existing Conditions**

- All study intersections operate acceptably during the weekday AM and PM peak hours.
- The intersections of 99W/SW Tualatin-Sherwood Road and SW Langer Farms Parkway/SW Tualatin-Sherwood Road are on Washington County's 2011-2013 SPIS List.

#### **Year 2019 Background Traffic Conditions**

- The year 2019 background traffic volumes were developed by applying a 2.0 percent annual growth rate to the existing volumes during the weekday AM and PM peak hours and by adding the trips generated by the in-process developments.

Multipurpose Recreational Facilities (ITE Code 435), have very limited or unreliable data sets (3 or less studies).

- The size of the proposed “Fun Center” building, at around 92,899 SF, fits within the range of building sizes of the empirical data in ITE for a Recreational Community Center. It does not fit within the range of building sizes for a Multipurpose Recreational Facility.

In conclusion, while the proposed “Fun Center” may better fit the description of a Multipurpose Recreational Facility (ITE Code 435), the Recreational Community Center (ITE Code 495) land use is a more reliable and accurate choice, due to ample data sets and a compatible land use description.

Table 6 displays the estimated trip generation for the proposed site development. *Appendix “G” includes the OTISS trip internalization calculations.*

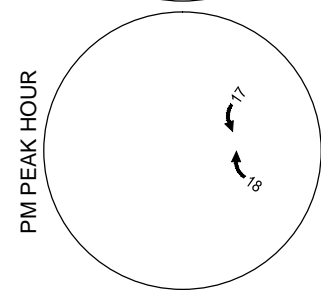
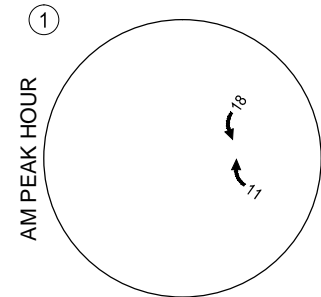
**Table 6: Proposed Parkway Village South Development Trip Generation Estimate**

Land Use Category	ITE Code	Size (SF)	Total Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Coffee/Donut Shop Drive Through, No Indoor Seating	938	392	706	119	60	59	29	15	14
<i>Less Internal Trips (7% AM, 38% PM)</i>			-19	-8	-4	-4	-11	-4	-7
<i>Less Pass-By Trips (83% Daily, AM, and PM)</i>			-570	-92	-46	-46	-15	-9	-6
Shopping Center (Retail A + Retail B+ 70% of Retail C + Pad A)	820	30,608	3,146	76	47	29	271	130	141
<i>Less Internal Trips (21% AM, 14% PM)</i>			-57	-16	-8	-8	-41	-22	-19
<i>Less Pass-By Trips (34% Daily and AM, 62% PM)</i>			-1050	-20	-13	-7	-143	-67	-76
Fast-Food Restaurant with Drive Through (30% of Retail C)	934	1,800	893	82	42	40	59	31	28
<i>Less Internal Trips (10% AM, 39% PM)</i>			-31	-8	-4	-4	-23	-10	-13
<i>Less Pass-By Trips (49% Daily, 49% AM, 50% PM)</i>			-422	-39	-20	-19	-18	-11	-8
Recreational Community Center	495	92,899	3,142	190	125	65	255	125	130
<i>Less Internal Trips (0% AM, 6% PM)</i>			-15	0	0	0	-15	-9	-6
<i>Less Pass-By Trips (0%)</i>			0	0	0	0	0	0	0
<b>Total Trips</b>			<b>7,887</b>	<b>467</b>	<b>274</b>	<b>193</b>	<b>614</b>	<b>301</b>	<b>313</b>
<i>Less Internal Trips</i>			-122	-32	-16	-16	-90	-45	-45
<i>Less Pass-by Trips</i>			-2042	-151	-79	-72	-176	-87	-90
<b>Net New Primary Trips</b>			<b>5,723</b>	<b>284</b>	<b>179</b>	<b>105</b>	<b>348</b>	<b>169</b>	<b>178</b>

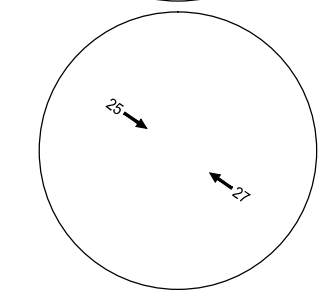
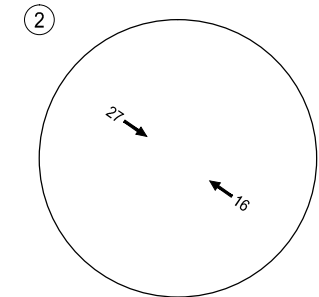
### Trip Distribution

The distribution of site-generated trips onto the study area roadway system was estimated based on a review of surrounding roadway characteristics, existing land uses, proposed uses for the site, and current traffic count patterns. It should be emphasized that while the recreational community center element of this project is expected to draw customers both from the local population of Sherwood as well as nearby cities, the remaining retail elements, which generate more traffic, are expected to primarily draw from the local population. Figure 6 illustrates the proposed trip distribution patterns for site build-out.

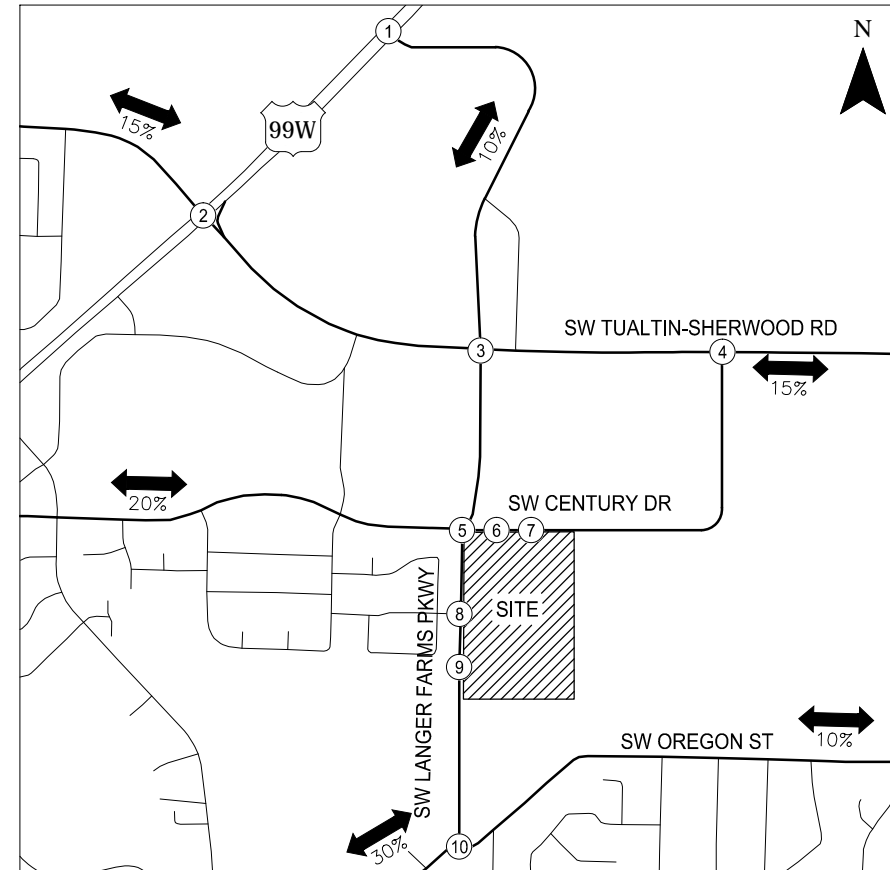
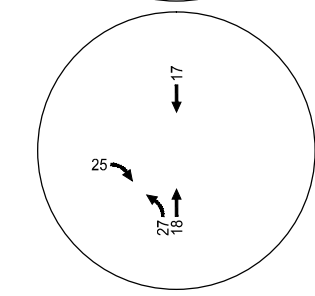
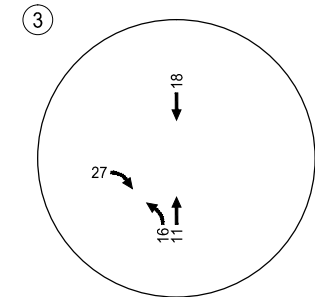
99W/  
SW LANGER FARMS PKWY



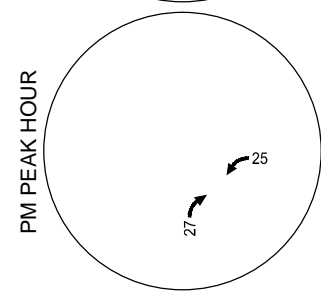
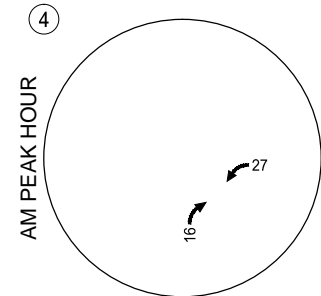
99W/  
SW TUALATIN-SHERWOOD RD



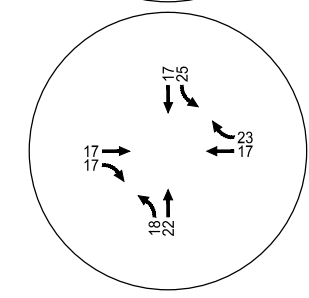
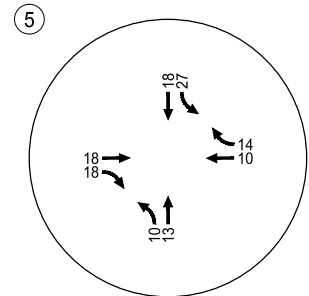
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SW TUALATIN-SHERWOOD RD



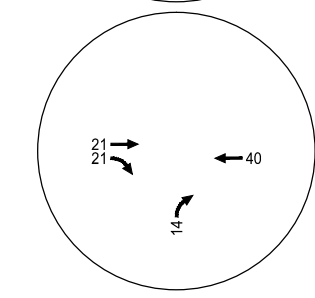
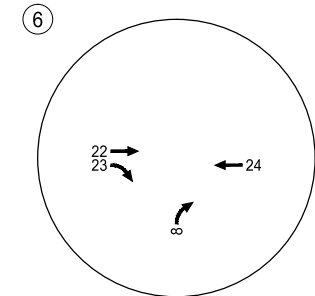
SW CENTURY DR/  
SW TUALATIN-SHERWOOD RD



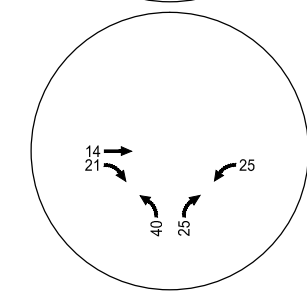
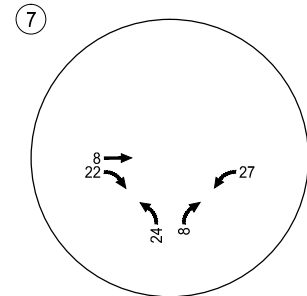
SW LANGER FARMS PKWY/  
SW CENTURY DR



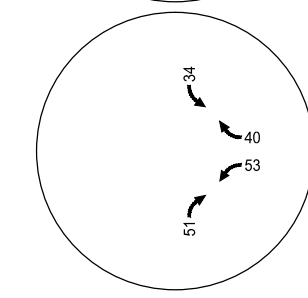
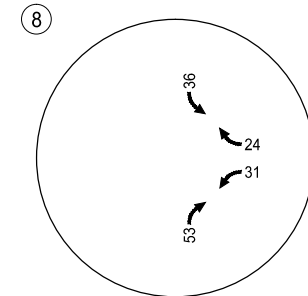
WEST ACCESS/  
SW CENTURY DR



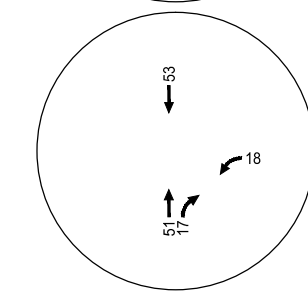
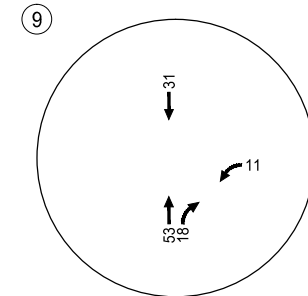
EAST ACCESS/  
SW CENTURY DR



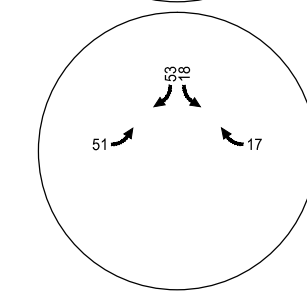
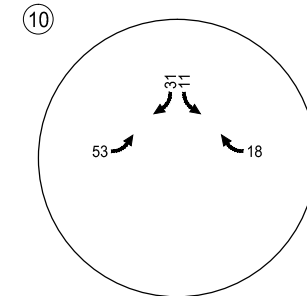
SW LANGER FARMS PKWY/  
NORTH ACCESS



SW LANGER FARMS PKWY/  
SOUTH ACCESS



SW LANGER FARMS PKWY/  
SW OREGON ST

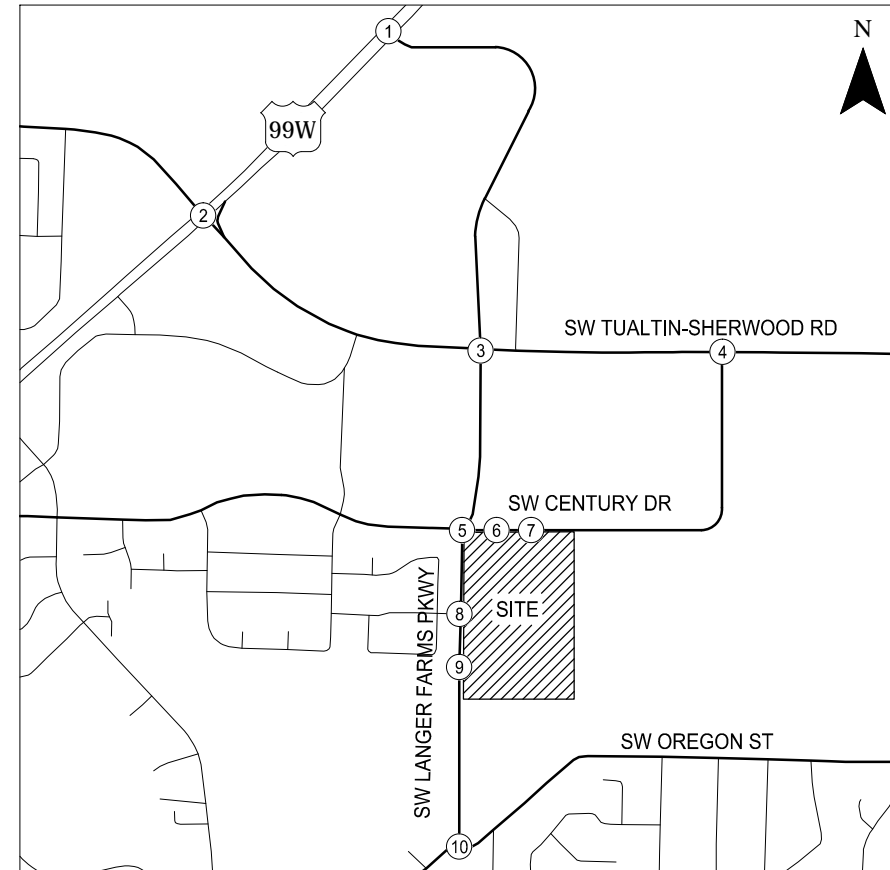
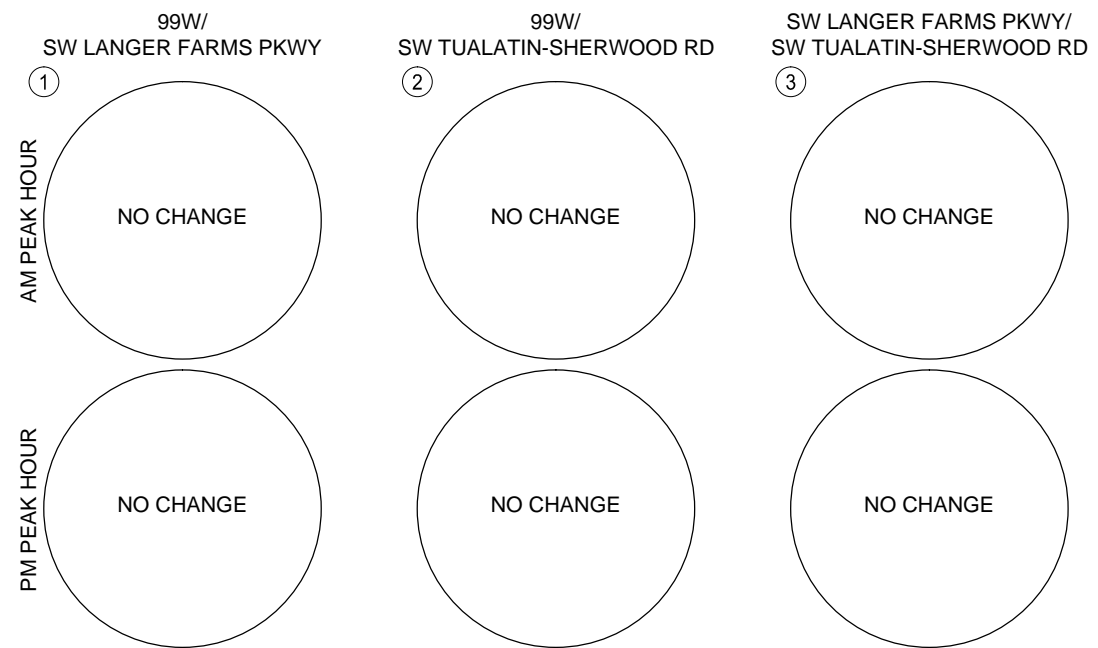


Estimated Net New Trip Distribution and Assignment  
Weekday AM and PM Peak Hours  
Sherwood, Oregon

Figure  
6

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Rerouted Traffic Volumes  
Weekday AM and PM Peak Hours  
Sherwood, Oregon

Figure  
7

## T-S Corporate Park – Traffic Impact Analysis

---

Date: January 15, 2020  
To: Bob Galati, PE, City of Sherwood  
Jinde Zhu, PE, Washington County  
From: Brian J. Dunn, PE, Kristine Connolly, PE & Claire Dougherty  
CC: Garth Appanaitis, PE – DKS Associates  
Project: T-S Corporate Park – Sherwood, Oregon  
Subject: Traffic Impact Analysis

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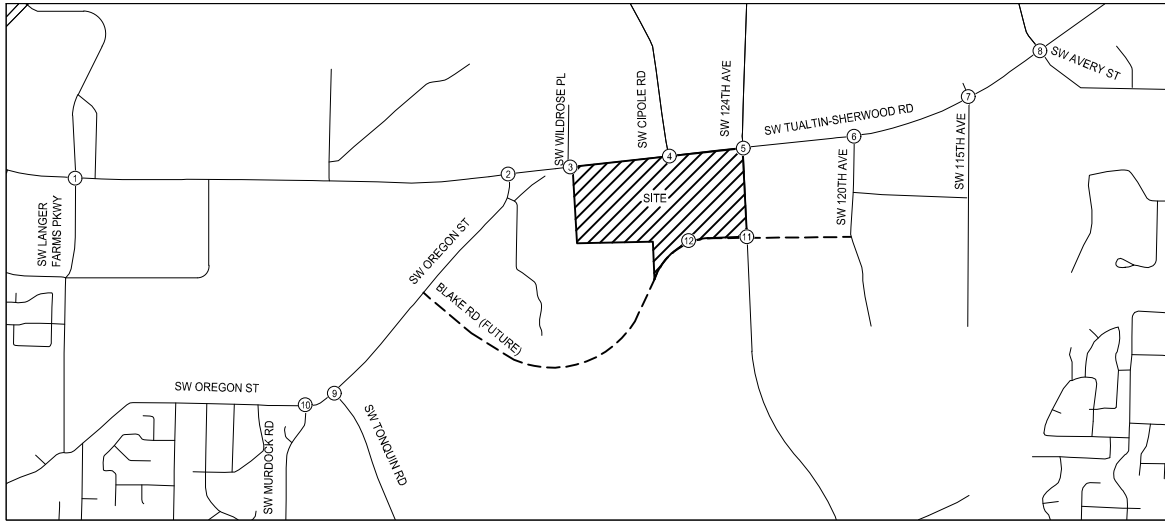
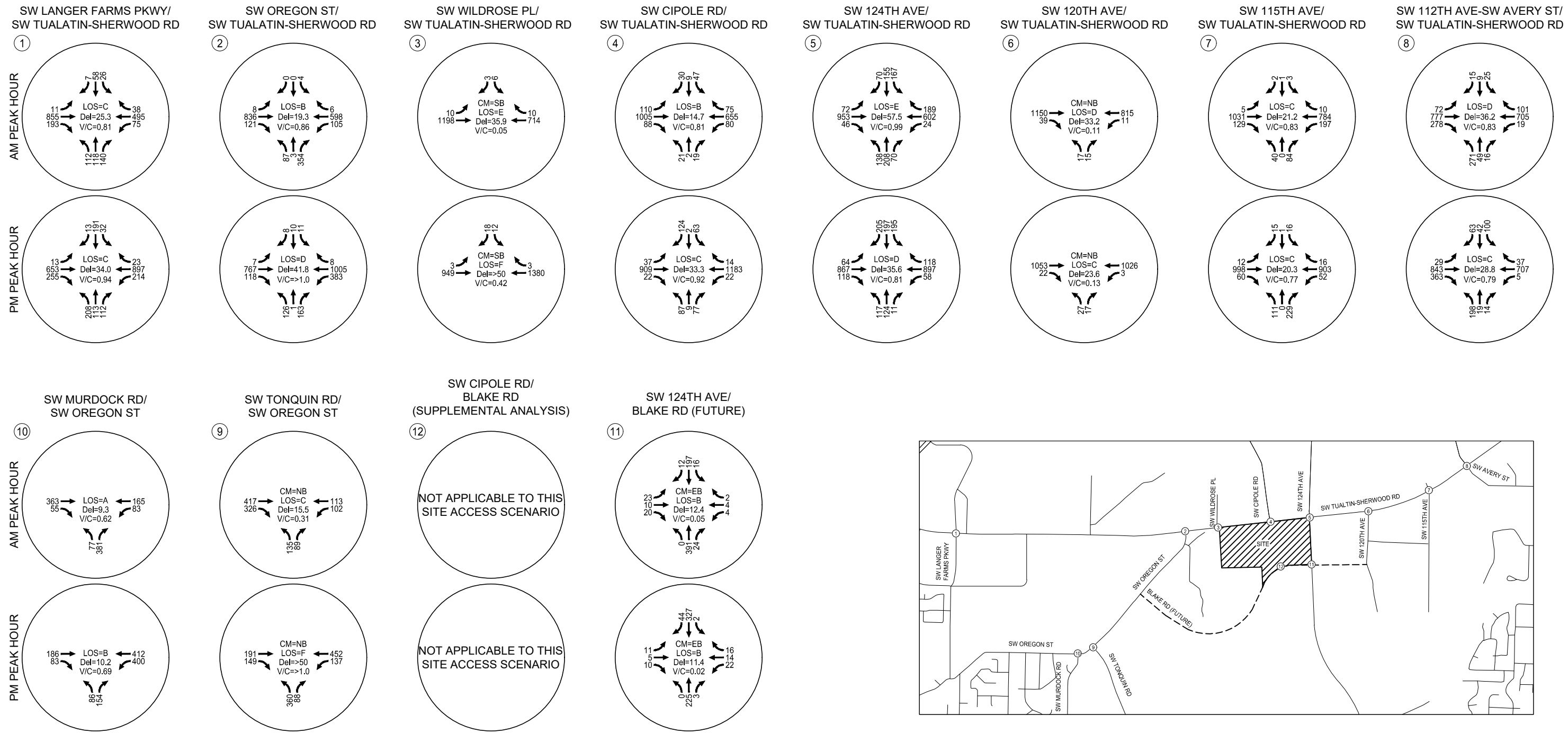
This report presents the comprehensive traffic impact analysis (TIA) completed for the proposed T-S Corporate Park development, to be located the southwest quadrant of the SW Tualatin-Sherwood Road and SW 124<sup>th</sup> Avenue intersection in Sherwood, Oregon. Based on the results of this TIA, the proposed T-S Corporate Park can be developed while maintaining acceptable levels of mobility and safety at the study intersections, assuming provision of the recommended mitigation measures. The primary findings and recommendations of this study are summarized below and in the following sections of this report.

### FINDINGS AND RECOMMENDATIONS

Based on the analysis herein, the following findings and recommendations are associated with the proposed development of the T-S Corporate Park project:

#### Year 2019 Existing Conditions

- Crash History:
  - The observed crash rates exceed the ODOT published 90<sup>th</sup> percentile crash rate at three study intersections:
    - SW Oregon Street/SW Tualatin-Sherwood Road
    - SW 124<sup>th</sup> Avenue/SW Tualatin-Sherwood Road
    - SW 112<sup>th</sup> Avenue-SW Avery Street/SW Tualatin-Sherwood Road
  - The ODOT published 2017 Washington County Safety Priority Index System (SPIS) List identifies the study intersection of SW 115<sup>th</sup> Avenue/ W Tualatin-Sherwood Road, with an SPIS score of 80.23 out of 100.

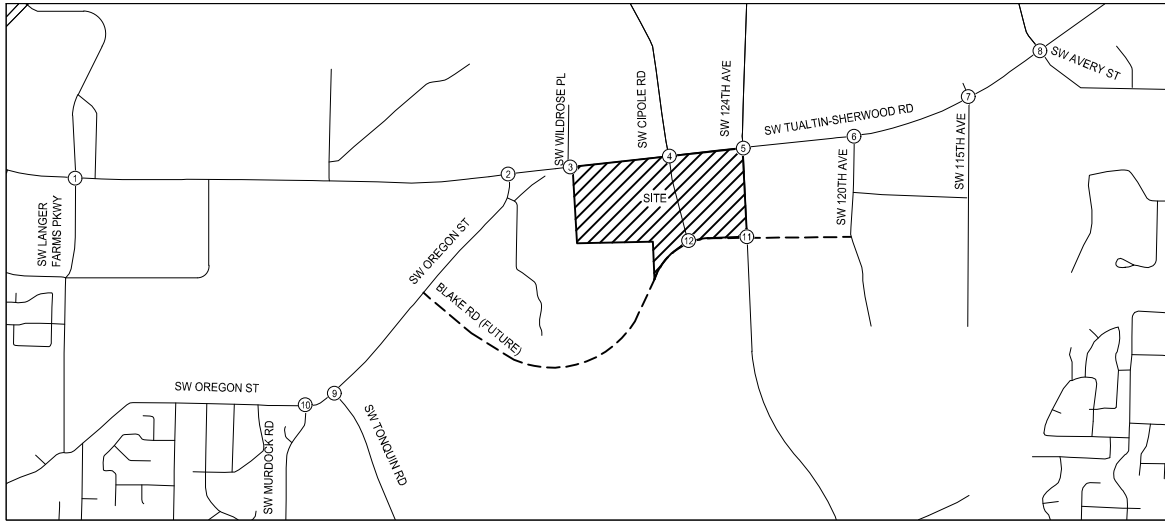
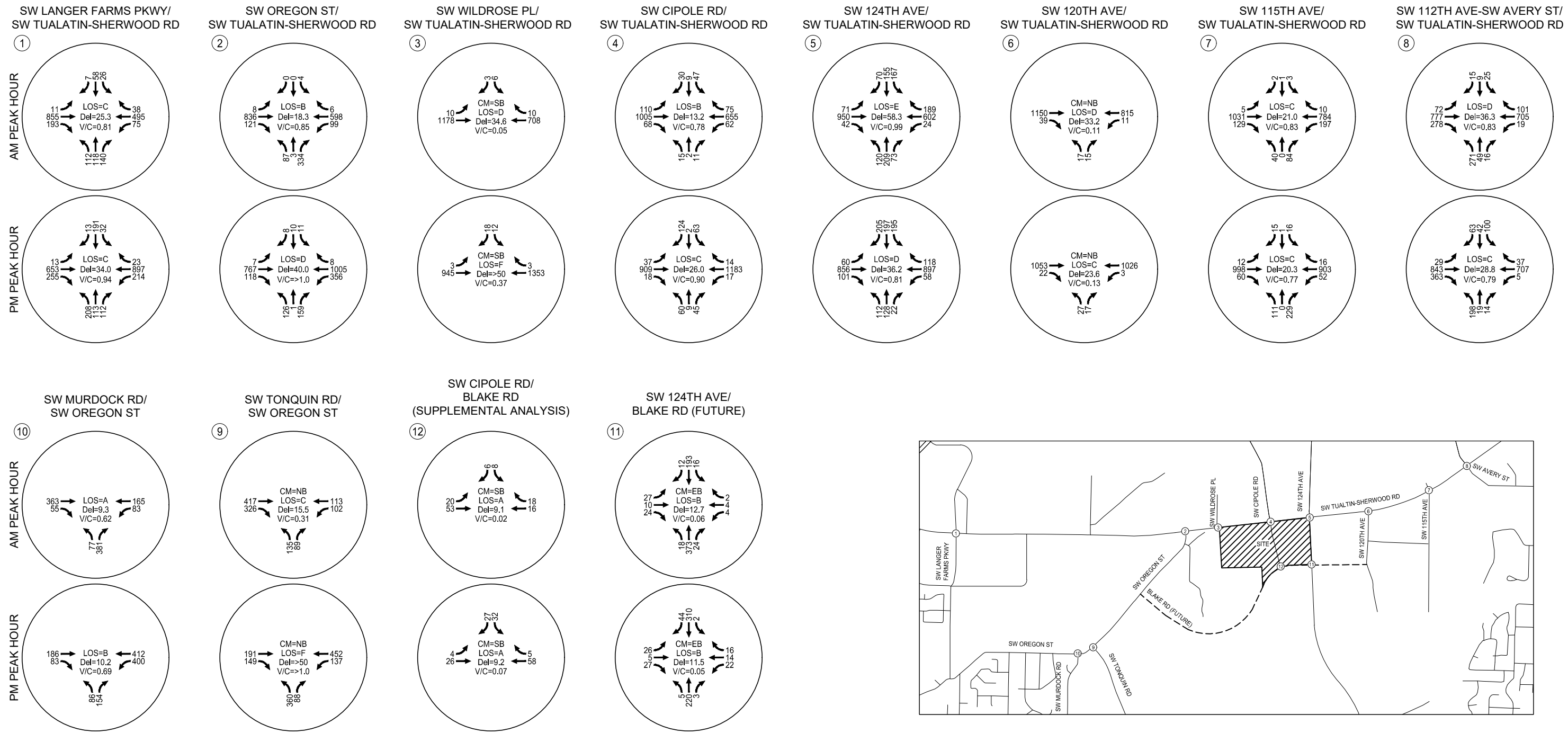


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CM = Critical Movement (Unsignalized)  
 LOS = Intersection Level of Service (Signalized) / Critical Movement Level of Service (Unsignalized)  
 Del = Intersection Average Control Delay (Signalized) / Critical Movement Control Delay (Unsignalized)  
 V/C = Volume-to-Capacity Ratio

Year 2021 - Traffic Traffic Conditions  
 Weekday AM and PM Peak Hours  
 Sherwood, Oregon

Figure 7



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CM = Critical Movement (Unsignalized)  
 LOS = Intersection Level of Service (Signalized) / Critical Movement Level of Service (Unsignalized)  
 Del = Intersection Average Control Delay (Signalized) / Critical Movement Control Delay (Unsignalized)  
 V/C = Volume-to-Capacity Ratio

Year 2021 - Traffic Traffic Conditions - Alternative Access Scenario  
 Weekday AM and PM Peak Hours  
 Sherwood, Oregon

Figure 12

network, introducing conflict. Were the connection to be made, vehicles (including large trucks) associated with the T-S Corporate Park would enter or leave the site by making unprotected left turns across a collector street (Blake Road) and arterial roadway (124<sup>th</sup> Avenue), whereas, without the connection to Blake Road, left-turning vehicles would have the added protection of traffic signal phasing at both the SW Cipole Road / SW Tualatin-Sherwood Road and SW 124<sup>th</sup> Avenue/SW Tualatin-Sherwood Road intersections. In our opinion, limiting Cipole Road to a cul-de-sac ending would result in fewer unprotected left-turn conflict points on the surrounding roadway network, especially those involving large trucks.

## Recommendations

Based on the analysis provided and documented herein, the proposed development can be constructed while meeting the traffic mobility and safety standards established for the surrounding transportation system, assuming Washington County completes the planned and funded widening of SW Tualatin-Sherwood Road to five lanes by 2025 and the following site traffic impact mitigation measures are made:

- Provide a proportionate cost share allocation towards the future conversion of the SW Tonquin / SW Oregon Street intersection either to a roundabout or signalized intersection.
- Modify the existing traffic signal at the SW Cipole Road / SW Tualatin-Sherwood Road intersection to accommodate the addition of the proposed south leg.
- Provide a northbound left-turn lane with 150 feet of storage exiting the site.

The SW Oregon Street / SW Tualatin-Sherwood Road intersection is anticipated to exceed jurisdictional mobility standards by 2021, with or without the T-S Corporate Park development. However, when SW Tualatin-Sherwood Road is widening to five lanes by year 2025, the SW Oregon Street / SW Tualatin-Sherwood Road intersection will meet jurisdictional mobility standards. The planned widening will also aid in reducing existing crashes and queuing along SW Tualatin-Sherwood Road. Based on this finding, we are not recommending any mitigation associated with site development at this location.

Additionally, shrubbery and landscaping, as well as above ground utilities and signage should be appropriately located and maintained on-site and at the proposed site access to provide adequate intersection sight distance per City of Sherwood standards.

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APPENDIX G  
**TRIP  
DISTRIBUTION  
INFORMATION**



# Memorandum

**To:** James Abbott, Mackenzie  
**From:** Steve Kelley, Senior Transportation Planner  
**Date:** March 17, 2021  
**Re:** Select Zone Assignments for Sherwood Industrial Park

---

Attached are the results of the select zone assignments that you requested. Included are total traffic volumes, and select zone traffic volumes.

Two scenarios were completed:

- 2015 Base-year PM 1-hour traffic
- 2040 Future-year TSP Network PM 1-hour traffic

A single plot for each scenario was generated, the select zone vehicles are and total vehicles are both listed on each link. The select zone volumes show the traffic from the zone and can be used to calculate distribution percentages to and from the site.

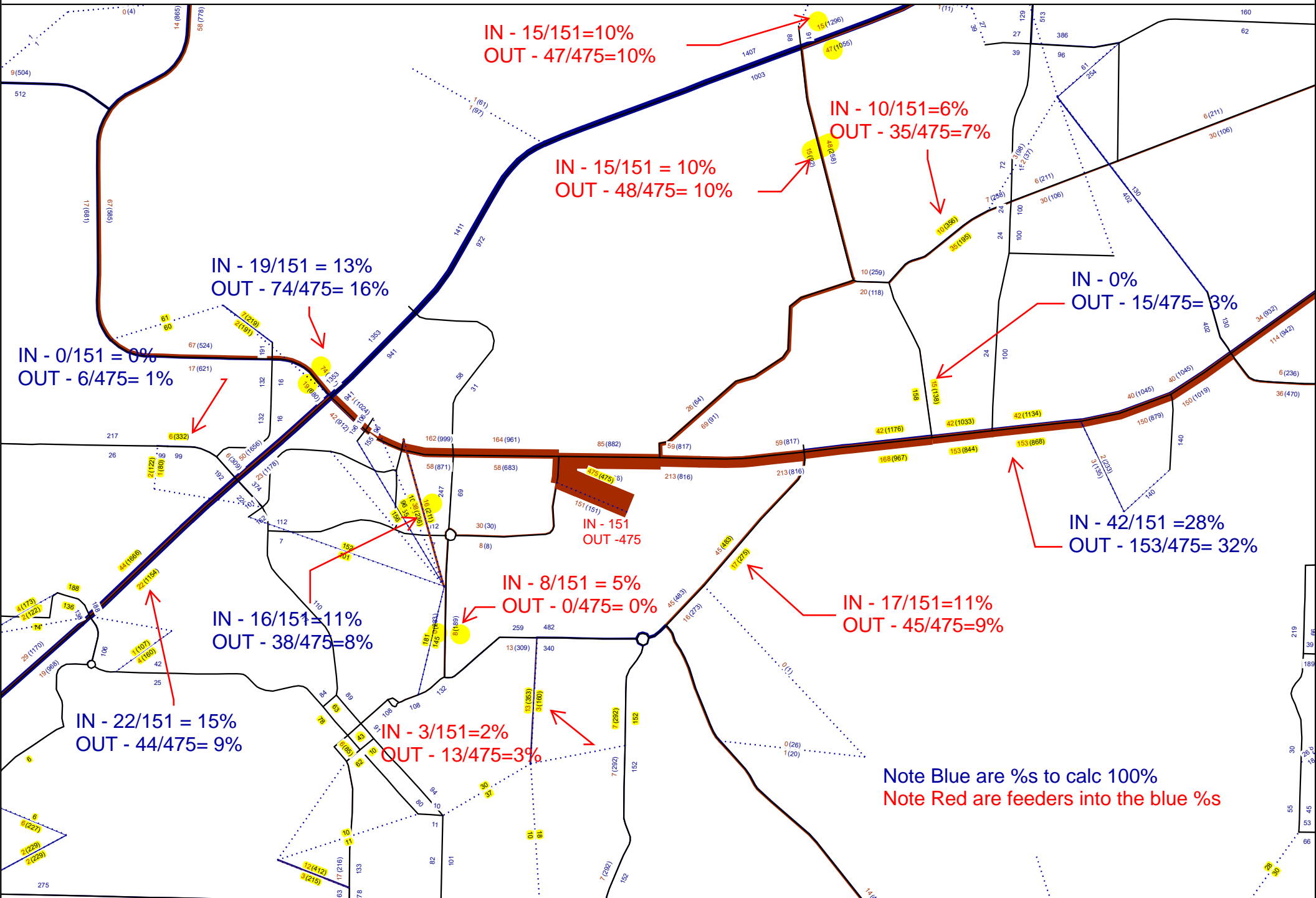
Please note that all results are for the PM 1-hour time period (a pm2 model was used, but results are converted to PM 1-hour total vehicles).

The Westside forecast has been calibrated to link approach volumes. The forecast is best used as a comparison between scenarios (e.g. 2015 vs 2040) and may require adjustments consistent with NHCRP recommended practices to be applicable to turn counts or other intersection level traffic studies. Please contact staff if you any questions concerning how to apply or use the data provided.

An invoice for 2 hours of time and materials will follow. If you have any questions please contact me directly at 503-846-3764. Be sure to let me know if you have any additional questions, or need addition information.

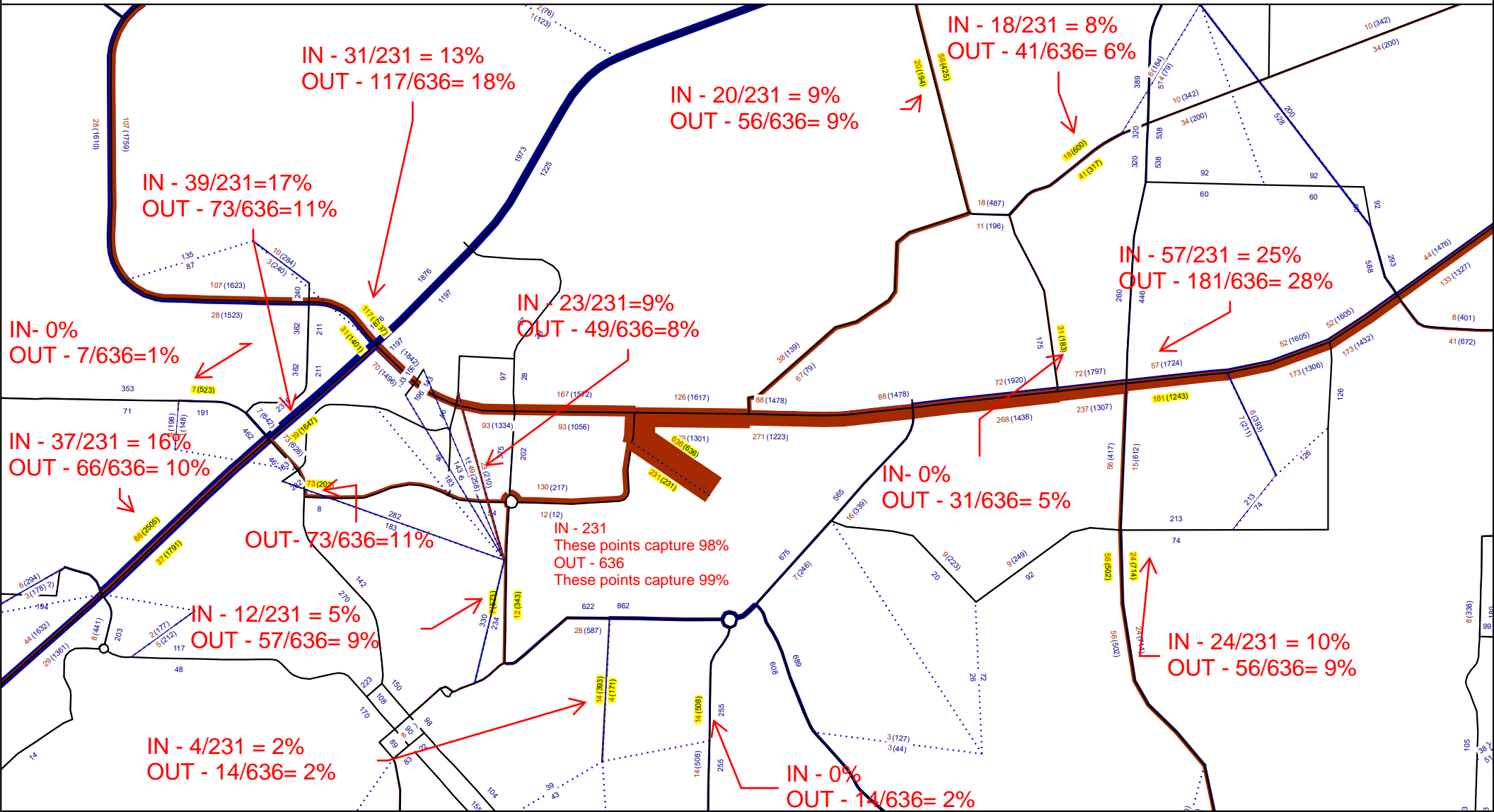
**CC:** Erin Wardell, Principal Planner  
Marcie Branham, Management Analyst  
Jinde Zhu, Traffic Engineer  
Bob Galati, City of Sherwood

# 2015 PM1 zone 997 vehicles (total vehicles)





# 2040 PM1 zone 997 vehicles (total vehicles)



Washington County	Westside Focus Model	2015 PM 1-hour
Steve Kelley	2040FC_westside_3-16-21.ver	17.03.2021

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APPENDIX H  
**SIGNAL  
INFORMATION**

Monday, April 13, 2020

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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Revision						
NO	Date				Description	by
	Y	M	D			

**ADMINISTRATION - COMMUNICATIONS SETTINGS - IP SETTINGS**

Unit IP Address..... : \_\_\_\_\_ Gateway..... : \_\_\_\_\_  
 NTP Server Address..... : \_\_\_\_\_ Subnet Mask..... : \_\_\_\_\_

**CONTROLLER UNIT DATA**

Extended Mode..... : Disable  
 Startup Flash..... : 0 Time in Seconds (0 - 255)  
 Auto Pedestrian Clear.... : Enable  
 Red Revert..... : 4 Time in Seconds  
 Backup Time..... : 600  
 Startup Clearance Hold. : 6  
 Green Flash Freq..... : 60  
 Yellow Flash Freq..... : 60  
 MCE Sequence..... : 1  
 MCE Enable..... : Enable  
 Start Yellow Override.... : 0  
 Start Red Override..... : 6  
 Free Sequence..... : 1 Sequence number used when running manual free  
 All Red Flash Exit Time.. : 6  
 Local Flash thru CVM... : Disable  
 3-phase Diamond Seq... : \_\_\_\_\_  
 4-phase Diamond Seq... : \_\_\_\_\_  
 Sep. Diamond Seq..... : \_\_\_\_\_  
 Master By TOD..... : Disable  
 All Red Lcl Flash Sense. : Disable

**PHASE TIMES**

PHASE PLAN 1																				
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Description	WBL	EB	NBL	SB	EBL	WB	SBL	NB												
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	21	0	20	0	23	0	20	0	0	0	0	0	0	0	0	0	0	0	0
Steady Don't Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Green	5	10	5	6	5	10	5	6	1	1	1	1	1	1	1	1	1	1	1	1
Passage	1.5	4.5	0	1.5	1.5	4.5	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0
Max 1	15	60	15	20	15	60	15	20	0	0	0	0	0	0	0	0	0	0	0	0
Max 2	15	60	15	20	15	60	15	20	0	0	0	0	0	0	0	0	0	0	0	0
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Chg	3	4.5	3	4	3	4.5	3	4	3	3	3	3	3	3	3	3	3	3	3	3
Red Clear	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Add Red Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert	5	5	5	5	5	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
--	--	-----------------------------	--

Time to Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dyn. Max Limit	0	75	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dyn. Max Step	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
Advance Walk																				
Delayed Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alt Ped Clear																				
Pre Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pre Clearance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Phase</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
Description																				
Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Steady Don't Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Min Green	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Passage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Max 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Max 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Yellow Chg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Red Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Add Red Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Time B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cars B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Time to Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dyn. Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dyn. Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Advance Walk																				
Delayed Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Alt Ped Clear																				
Pre Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pre Clearance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

<b>PHASE PLAN 2</b>																				
<b>Phase</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
Description																				
Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Steady Don't Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Green	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Passage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Max 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Yellow Chg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Red Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Add Red Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time to Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dyn. Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dyn. Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570
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Advance Walk																				
Delayed Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Ped Clear																				
Pre Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pre Clearance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Phase</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
Description																				
Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Steady Don't Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Green	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Passage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Max 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Yellow Chg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Red Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Add Red Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars B4 Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time to Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dyn. Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dyn. Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Advance Walk																				
Delayed Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Ped Clear																				
Pre Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pre Clearance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**PHASE OPTIONS**

<b>PHASE PLAN 1</b>																				
<b>Phase</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
Enabled	X	X	X	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.
Auto Flash Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Auto Flash Exit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act. 1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act. 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Lock Mem.	X	X	X	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.
Min Recall	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dual Entry	.	X	X	X	.	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.
Sim. Gap Disable	X	.	X	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
Guarant. Passage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act Rest Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond Svc Enable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Add Initial Calc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During Ylw	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond. Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
w Chg Min Override	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Advance Warning	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No Ped Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
ed Clr During OVTG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flash Exit Veh Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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Flash Exit Ped Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped 2 Time	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During PreClr	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped NA+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Red Rest	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
rv Every Other Even	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
rv Every Other Odd	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Force Crd Ped Yld	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<b>Phase</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
Enabled	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Auto Flash Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Auto Flash Exit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act. 1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act. 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Lock Mem.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dual Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sim. Gap Disable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guarant. Passage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act Rest Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond Svc Enable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Add Initial Calc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During Ylw	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond. Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
w Chg Min Override	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Advance Warning	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No Ped Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During OVTG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flash Exit Veh Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flash Exit Ped Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped 2 Time	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During PreClr	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped NA+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Red Rest	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
rv Every Other Even	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
rv Every Other Odd	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Force Crd Ped Yld	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

<b>PHASE PLAN 2</b>																				
<b>Phase</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
Enabled	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Auto Flash Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Auto Flash Exit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act. 1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act. 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Lock Mem.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dual Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sim. Gap Disable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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Guarant. Passage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act Rest Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond Svc Enable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Add Initial Calc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During Ylw	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr During Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond. Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
w Chg Min Override	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Force Crd Ped Yld	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<b>Phase</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
Enabled	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Auto Flash Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dual Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sim. Gap Disable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guarant. Passage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act Rest Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**NO SERVED PHASE PLANS**

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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<i>Sequence</i>	<i>1</i>
<i>Phase</i>	<i>No Serve Phases</i>
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<i>Sequence</i>	<i>2</i>
<i>Phase</i>	<i>No Serve Phases</i>
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<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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**PHASE CONFIGURATION**

Ph.	Startup	Ring	Concurrency	Phs Startup Min	Description
1	On	1	5,6	0	WBL
2	Walk	1	5,6	0	EB
3	On	1	7,8	0	NBL
4	On	1	7,8	0	SB
5	On	2	1,2	0	EBL
6	Walk	2	1,2	0	WB
7	On	2	3,4	0	SBL
8	On	2	3,4	0	NB
9	None	0		0	
10	None	0		0	
11	None	0		0	
12	None	0		0	
13	None	0		0	
14	None	0		0	
15	None	0		0	
16	None	0		0	
17	None	0		0	
18	None	0		0	
19	None	0		0	
20	None	0		0	
21	None	0		0	
22	None	0		0	
23	None	0		0	
24	None	0		0	
25	None	0		0	
26	None	0		0	
27	None	0		0	
28	None	0		0	
29	None	0		0	
30	None	0		0	
31	None	0		0	
32	None	0		0	
33	None	0		0	
34	None	0		0	
35	None	0		0	
36	None	0		0	
37	None	0		0	
38	None	0		0	
39	None	0		0	
40	None	0		0	

**BACKUP PROTECTION PLAN**

SEQUENCE	1																				
No Backup Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>Serve Phase</b>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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No Backup Phase	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
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<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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<b>Serve Ph</b>	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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SEQUENCE		2																				
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	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	19	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	21	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	22	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	23	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	24	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	25	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	26	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	27	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	28	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	29	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
32	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
34	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
35	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
36	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
37	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
38	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
39	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
40	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
<b>No Backup Phase</b>		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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21	
22	
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<b>Sequence</b>	<b>2</b>
<b>Phase</b>	<b>Backup Call Phases</b>
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
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**BACKUP THROUGH RED**

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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<i>Sequence</i>	<i>Backup Through Red</i>
1	No
2	No
3	No
4	No
5	No
6	No
7	No
8	No
9	No
10	No
11	No
12	No
13	No
14	No
15	No
16	No
17	No
18	No
19	No
20	No

**SEQUENCE PARAMETERS**

<i>Sequence</i>	<i>1</i>
<i>Ring</i>	<i>Sequence Data</i>
1	1,2,a,3,4,b
2	5,6,a,7,8,b
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

<i>Sequence</i>	<i>2</i>
<i>Ring</i>	<i>Sequence Data</i>
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

**GLOBAL PHASE RECALLS**

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570
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Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Min Recall	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act. Walk Rest	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Phase	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Min Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act. Walk Rest	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**DETECTOR CONFIGURATION**  
**GLOBAL VEHICLE DETECTOR PARAMETERS**

<b>Global No Activity</b>	<b>Global Max Presence</b>	<b>Global Erratic Count</b>	<b>Global Failed Recall</b>
0	0	0	Max Recall

**VEHICLE DETECTOR PLANS**

**VEHICLE DETECTOR PLAN 1**

Det.	Call Phs	Call Ovl	Add'l Call Phases	Switch Phases	Dly	Ext	Que Lmt	No Act	Max Pres	Err Cnts	Fail Time	Failed Recall	Failed Link	Description
1	1	0		6	0	0	0	0	0	0	0	None	0	
2	2	0		0	0	2	0	0	0	0	0	None	0	
3	2	0		0	0	2	0	0	0	0	0	None	0	
4	2	0		0	0	0	0	0	0	0	0	None	0	
5	2	0		0	0	0	0	0	0	0	0	None	0	
6	2	0		0	0	0	0	0	0	0	0	None	0	
7	3	0		8	0	0	0	0	0	0	0	None	0	
8	4	0		0	0	0	0	0	0	0	0	None	0	
9	4	0		0	5	2	0	0	0	0	0	None	0	
10	4	0		0	10	0	0	0	0	0	0	None	0	
11	4	0		0	0	0	0	0	0	0	0	None	0	
12	4	0		0	0	0	0	0	0	0	0	None	0	
13	1	0		6	0	0	0	0	0	0	0	None	0	
14	3	0		8	0	0	0	0	0	0	0	None	0	
15	5	0		2	0	0	0	0	0	0	0	None	0	
16	6	0		0	0	2	0	0	0	0	0	None	0	
17	6	0		0	0	2	0	0	0	0	0	None	0	
18	6	0		0	0	0	0	0	0	0	0	None	0	
19	6	0		0	0	0	0	0	0	0	0	None	0	
20	6	0		0	0	0	0	0	0	0	0	None	0	
21	7	0		4	0	0	0	0	0	0	0	None	0	
22	8	0		0	0	0	0	0	0	0	0	None	0	
23	8	0		0	5	2	0	0	0	0	0	None	0	
24	8	0		0	10	0	0	0	0	0	0	None	0	
25	8	0		0	0	0	0	0	0	0	0	None	0	
26	8	0		0	0	0	0	0	0	0	0	None	0	
27	5	0		2	0	0	0	0	0	0	0	None	0	
28	7	0		4	0	0	0	0	0	0	0	None	0	
29	0	0		0	0	0	0	0	0	0	0	None	0	
30	0	0		0	0	0	0	0	0	0	0	None	0	
31	0	0		0	0	0	0	0	0	0	0	None	0	
32	0	0		0	0	0	0	0	0	0	0	None	0	
33	0	0		0	0	0	0	0	0	0	0	None	0	
34	0	0		0	0	0	0	0	0	0	0	None	0	
35	0	0		0	0	0	0	0	0	0	0	None	0	
36	0	0		0	0	0	0	0	0	0	0	None	0	
37	0	0		0	0	0	0	0	0	0	0	None	0	
38	0	0		0	0	0	0	0	0	0	0	None	0	
39	0	0		0	0	0	0	0	0	0	0	None	0	
40	0	0		0	0	0	0	0	0	0	0	None	0	
41	0	0		0	0	0	0	0	0	0	0	None	0	
42	0	0		0	0	0	0	0	0	0	0	None	0	
43	0	0		0	0	0	0	0	0	0	0	None	0	
44	0	0		0	0	0	0	0	0	0	0	None	0	
45	0	0		0	0	0	0	0	0	0	0	None	0	
46	0	0		0	0	0	0	0	0	0	0	None	0	
47	0	0		0	0	0	0	0	0	0	0	None	0	
48	0	0		0	0	0	0	0	0	0	0	None	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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49	0	0		0	0	0	0	0	0	0	0	None	0	
50	0	0		0	0	0	0	0	0	0	0	None	0	
51	0	0		0	0	0	0	0	0	0	0	None	0	
52	0	0		0	0	0	0	0	0	0	0	None	0	
53	0	0		0	0	0	0	0	0	0	0	None	0	
54	0	0		0	0	0	0	0	0	0	0	None	0	
55	0	0		0	0	0	0	0	0	0	0	None	0	
56	0	0		0	0	0	0	0	0	0	0	None	0	
57	0	0		0	0	0	0	0	0	0	0	None	0	
58	0	0		0	0	0	0	0	0	0	0	None	0	
59	0	0		0	0	0	0	0	0	0	0	None	0	
60	0	0		0	0	0	0	0	0	0	0	None	0	
61	0	0		0	0	0	0	0	0	0	0	None	0	
62	0	0		0	0	0	0	0	0	0	0	None	0	
63	0	0		0	0	0	0	0	0	0	0	None	0	
64	0	0		0	0	0	0	0	0	0	0	None	0	
65	0	0		0	0	0	0	0	0	0	0	None	0	
66	0	0		0	0	0	0	0	0	0	0	None	0	
67	0	0		0	0	0	0	0	0	0	0	None	0	
68	0	0		0	0	0	0	0	0	0	0	None	0	
69	0	0		0	0	0	0	0	0	0	0	None	0	
70	0	0		0	0	0	0	0	0	0	0	None	0	
71	0	0		0	0	0	0	0	0	0	0	None	0	
72	0	0		0	0	0	0	0	0	0	0	None	0	

**VEHICLE DETECTOR PLAN 2**

Det.	Call Phs	Call Ovl	Add'l Call Phases	Switch Phases	Dly	Ext	Que Lmt	No Act	Max Pres	Err Cnts	Fail Time	Failed Recall	Failed Link	Description
1	1	0		0	0	0	0	0	0	0	0	None	0	
2	2	0		0	0	0	0	0	0	0	0	None	0	
3	2	0		0	0	0	0	0	0	0	0	None	0	
4	2	0		0	0	0	0	0	0	0	0	None	0	
5	2	0		0	0	0	0	0	0	0	0	None	0	
6	2	0		0	0	0	0	0	0	0	0	None	0	
7	3	0		0	0	0	0	0	0	0	0	None	0	
8	4	1		0	0	0	0	0	0	0	0	None	0	
9	4	0		0	0	0	0	0	0	0	0	None	0	
10	4	0		0	0	0	0	0	0	0	0	None	0	
11	4	0		0	0	0	0	0	0	0	0	None	0	
12	4	0		0	0	0	0	0	0	0	0	None	0	
13	1	0		0	0	0	0	0	0	0	0	None	0	
14	3	0		0	0	0	0	0	0	0	0	None	0	
15	5	0		0	0	0	0	0	0	0	0	None	0	
16	6	0		0	0	0	0	0	0	0	0	None	0	
17	6	0		0	0	0	0	0	0	0	0	None	0	
18	6	0		0	0	0	0	0	0	0	0	None	0	
19	6	0		0	0	0	0	0	0	0	0	None	0	
20	6	0		0	0	0	0	0	0	0	0	None	0	
21	7	0		0	0	0	0	0	0	0	0	None	0	
22	8	0		0	0	0	0	0	0	0	0	None	0	
23	8	0		0	0	0	0	0	0	0	0	None	0	
24	8	0		0	0	0	0	0	0	0	0	None	0	
25	8	0		0	0	0	0	0	0	0	0	None	0	
26	8	0		0	0	0	0	0	0	0	0	None	0	
27	5	0		0	0	0	0	0	0	0	0	None	0	
28	7	0		0	0	0	0	0	0	0	0	None	0	
29	1	0		0	0	0	0	0	0	0	0	None	0	
30	1	0		0	0	0	0	0	0	0	0	None	0	
31	2	0		0	0	0	0	0	0	0	0	None	0	
32	3	0		0	0	0	0	0	0	0	0	None	0	
33	3	0		0	0	0	0	0	0	0	0	None	0	
34	4	0		0	0	0	0	0	0	0	0	None	0	
35	5	0		0	0	0	0	0	0	0	0	None	0	
36	5	0		0	0	0	0	0	0	0	0	None	0	
37	6	0		0	0	0	0	0	0	0	0	None	0	
38	7	0		0	0	0	0	0	0	0	0	None	0	
39	7	0		0	0	0	0	0	0	0	0	None	0	
40	8	0		0	0	0	0	0	0	0	0	None	0	
41	0	0		0	0	0	0	0	0	0	0	None	0	
42	0	0		0	0	0	0	0	0	0	0	None	0	
43	0	0		0	0	0	0	0	0	0	0	None	0	
44	0	0		0	0	0	0	0	0	0	0	None	0	



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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45	0	0		0	0	0	0	0	0	0	0	0	None	0	
46	0	0		0	0	0	0	0	0	0	0	0	None	0	
47	0	0		0	0	0	0	0	0	0	0	0	None	0	
48	0	0		0	0	0	0	0	0	0	0	0	None	0	
49	0	0		0	0	0	0	0	0	0	0	0	None	0	
50	0	0		0	0	0	0	0	0	0	0	0	None	0	
51	0	0		0	0	0	0	0	0	0	0	0	None	0	
52	0	0		0	0	0	0	0	0	0	0	0	None	0	
53	0	0		0	0	0	0	0	0	0	0	0	None	0	
54	0	0		0	0	0	0	0	0	0	0	0	None	0	
55	0	0		0	0	0	0	0	0	0	0	0	None	0	
56	0	0		0	0	0	0	0	0	0	0	0	None	0	
57	0	0		0	0	0	0	0	0	0	0	0	None	0	
58	0	0		0	0	0	0	0	0	0	0	0	None	0	
59	0	0		0	0	0	0	0	0	0	0	0	None	0	
60	0	0		0	0	0	0	0	0	0	0	0	None	0	
61	0	0		0	0	0	0	0	0	0	0	0	None	0	
62	0	0		0	0	0	0	0	0	0	0	0	None	0	
63	0	0		0	0	0	0	0	0	0	0	0	None	0	
64	0	0		0	0	0	0	0	0	0	0	0	None	0	
65	0	0		0	0	0	0	0	0	0	0	0	None	0	
66	0	0		0	0	0	0	0	0	0	0	0	None	0	
67	0	0		0	0	0	0	0	0	0	0	0	None	0	
68	0	0		0	0	0	0	0	0	0	0	0	None	0	
69	0	0		0	0	0	0	0	0	0	0	0	None	0	
70	0	0		0	0	0	0	0	0	0	0	0	None	0	
71	0	0		0	0	0	0	0	0	0	0	0	None	0	
72	0	0		0	0	0	0	0	0	0	0	0	None	0	

**VOLUME OCCUPANCY DATA COLLECTION**

<b>Data Collection Seconds</b>	0	<b>Number of Periods</b>	1
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**VEHICLE DETECTOR OPTIONS**

Detector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Volume Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Occupancy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yellow Lock Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Red Lock call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Extend	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Added Initial	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Queue	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Terminate	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected Perm	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable Delay Leading	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable TS2 Det Diag	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Detector	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Volume Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Occupancy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yellow Lock Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Red Lock call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Extend	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Added Initial	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Queue	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Terminate	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected Perm	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable Delay Leading	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable TS2 Det Diag	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Detector	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Volume Detector	.	.	.	.	X	X	X	X	X	X	X	X	.	.	.	.	.	.
Occupancy	.	.	.	.	X	X	X	X	X	X	X	X	.	.	.	.	.	.
Yellow Lock Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Red Lock call	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.
Extend	X	X	X	X	.	.	.	.	.	.	.	.	X	X	X	X	X	X
Added Initial	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Queue	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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Terminate	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected Perm	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable Delay Leading	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable TS2 Det Diag	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Detector	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	
Volume Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Occupancy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yellow Lock Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Red Lock call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Extend	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Added Initial	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Queue	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Terminate	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Min Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected Perm	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable Delay Leading	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable TS2 Det Diag	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**GLOBAL PEDESTRIAN DETECTOR PARAMETERS**

<b>Global No Activity</b>	<b>Global Max Presence</b>	<b>Global Erratic Count</b>	<b>Global Failed Recall</b>
0	60	0	

**PEDESTRIAN DETECTOR PLANS**

<b>PEDESTRIAN DETECTOR PLAN 1</b>									
Det.	Call Phase	Call Overlap	Add'l Call Phases	Walk 2 Enable Time	Ped Clear 2 Enable Time	No Activity	Max Presence	Erratic Count	Description
1	0	0		0	0	0	0	0	
2	2	0		0	0	0	0	0	
3	0	0		0	0	0	0	0	
4	4	0		0	0	0	0	0	
5	0	0		0	0	0	0	0	
6	6	0		0	0	0	0	0	
7	0	0		0	0	0	0	0	
8	8	0		0	0	0	0	0	
9	0	0		0	0	0	0	0	
10	0	0		0	0	0	0	0	
11	0	0		0	0	0	0	0	
12	0	0		0	0	0	0	0	
13	0	0		0	0	0	0	0	
14	0	0		0	0	0	0	0	
15	0	0		0	0	0	0	0	
16	0	0		0	0	0	0	0	
17	0	0		0	0	0	0	0	
18	0	0		0	0	0	0	0	
19	0	0		0	0	0	0	0	
20	0	0		0	0	0	0	0	
21	0	0		0	0	0	0	0	
22	0	0		0	0	0	0	0	
23	0	0		0	0	0	0	0	
24	0	0		0	0	0	0	0	
25	0	0		0	0	0	0	0	
26	0	0		0	0	0	0	0	
27	0	0		0	0	0	0	0	
28	0	0		0	0	0	0	0	
29	0	0		0	0	0	0	0	
30	0	0		0	0	0	0	0	
31	0	0		0	0	0	0	0	
32	0	0		0	0	0	0	0	
33	0	0		0	0	0	0	0	
34	0	0		0	0	0	0	0	
35	0	0		0	0	0	0	0	
36	0	0		0	0	0	0	0	
37	0	0		0	0	0	0	0	
38	0	0		0	0	0	0	0	
39	0	0		0	0	0	0	0	
40	0	0		0	0	0	0	0	

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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41	0	0		0	0	0	0	0	
42	0	0		0	0	0	0	0	
43	0	0		0	0	0	0	0	
44	0	0		0	0	0	0	0	
45	0	0		0	0	0	0	0	
46	0	0		0	0	0	0	0	
47	0	0		0	0	0	0	0	
48	0	0		0	0	0	0	0	
49	0	0		0	0	0	0	0	
50	0	0		0	0	0	0	0	
51	0	0		0	0	0	0	0	
52	0	0		0	0	0	0	0	
53	0	0		0	0	0	0	0	
54	0	0		0	0	0	0	0	
55	0	0		0	0	0	0	0	
56	0	0		0	0	0	0	0	
57	0	0		0	0	0	0	0	
58	0	0		0	0	0	0	0	
59	0	0		0	0	0	0	0	
60	0	0		0	0	0	0	0	
61	0	0		0	0	0	0	0	
62	0	0		0	0	0	0	0	
63	0	0		0	0	0	0	0	
64	0	0		0	0	0	0	0	
65	0	0		0	0	0	0	0	
66	0	0		0	0	0	0	0	
67	0	0		0	0	0	0	0	
68	0	0		0	0	0	0	0	
69	0	0		0	0	0	0	0	
70	0	0		0	0	0	0	0	
71	0	0		0	0	0	0	0	
72	0	0		0	0	0	0	0	

PEDESTRIAN DETECTOR PLAN 2									
Det.	Call Phase	Call Overlap	Add'l Call Phases	Walk 2 Enable Time	Ped Clear 2 Enable Time	No Activity	Max Presence	Erratic Count	Description
1		0		0	0	0	0	0	
2	0	0		0	0	0	0	0	
3	0	0		0	0	0	0	0	
4	0	0		0	0	0	0	0	
5	0	0		0	0	0	0	0	
6	0	0		0	0	0	0	0	
7	0	0		0	0	0	0	0	
8	0	0		0	0	0	0	0	
9	0	0		0	0	0	0	0	
10	0	0		0	0	0	0	0	
11	0	0		0	0	0	0	0	
12	0	0		0	0	0	0	0	
13	0	0		0	0	0	0	0	
14	0	0		0	0	0	0	0	
15	0	0		0	0	0	0	0	
16	0	0		0	0	0	0	0	
17	0	0		0	0	0	0	0	
18	0	0		0	0	0	0	0	
19	0	0		0	0	0	0	0	
20	0	0		0	0	0	0	0	
21	0	0		0	0	0	0	0	
22	0	0		0	0	0	0	0	
23	0	0		0	0	0	0	0	
24	0	0		0	0	0	0	0	
25	0	0		0	0	0	0	0	
26	0	0		0	0	0	0	0	
27	0	0		0	0	0	0	0	
28	0	0		0	0	0	0	0	
29	0	0		0	0	0	0	0	
30	0	0		0	0	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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31	0	0		0	0	0	0	0	
32	0	0		0	0	0	0	0	
33	0	0		0	0	0	0	0	
34	0	0		0	0	0	0	0	
35	0	0		0	0	0	0	0	
36	0	0		0	0	0	0	0	
37	0	0		0	0	0	0	0	
38	0	0		0	0	0	0	0	
39	0	0		0	0	0	0	0	
40	0	0		0	0	0	0	0	
41	0	0		0	0	0	0	0	
42	0	0		0	0	0	0	0	
43	0	0		0	0	0	0	0	
44	0	0		0	0	0	0	0	
45	0	0		0	0	0	0	0	
46	0	0		0	0	0	0	0	
47	0	0		0	0	0	0	0	
48	0	0		0	0	0	0	0	
49	0	0		0	0	0	0	0	
50	0	0		0	0	0	0	0	
51	0	0		0	0	0	0	0	
52	0	0		0	0	0	0	0	
53	0	0		0	0	0	0	0	
54	0	0		0	0	0	0	0	
55	0	0		0	0	0	0	0	
56	0	0		0	0	0	0	0	
57	0	0		0	0	0	0	0	
58	0	0		0	0	0	0	0	
59	0	0		0	0	0	0	0	
60	0	0		0	0	0	0	0	
61	0	0		0	0	0	0	0	
62	0	0		0	0	0	0	0	
63	0	0		0	0	0	0	0	
64	0	0		0	0	0	0	0	
65	0	0		0	0	0	0	0	
66	0	0		0	0	0	0	0	
67	0	0		0	0	0	0	0	
68	0	0		0	0	0	0	0	
69	0	0		0	0	0	0	0	
70	0	0		0	0	0	0	0	
71	0	0		0	0	0	0	0	
72	0	0		0	0	0	0	0	

**SPEED DETECTOR CONFIGURATION**

Det.	Enabled	Type	Units	Min Logged	Max Logged	Car Length	Detector Length	Trailing Detector	Trap Length
1	.	Single	Inches	5	80	0	0	0	0
2	.	Single	Inches	5	80	0	0	0	0
3	.	Single	Inches	5	80	0	0	0	0
4	.	Single	Inches	5	80	0	0	0	0
5	.	Single	Inches	5	80	0	0	0	0
6	.	Single	Inches	5	80	0	0	0	0
7	.	Single	Inches	5	80	0	0	0	0
8	.	Single	Inches	5	80	0	0	0	0
9	.	Single	Inches	5	80	0	0	0	0
10	.	Single	Inches	5	80	0	0	0	0
11	.	Single	Inches	5	80	0	0	0	0
12	.	Single	Inches	5	80	0	0	0	0
13	.	Single	Inches	5	80	0	0	0	0
14	.	Single	Inches	5	80	0	0	0	0
15	.	Single	Inches	5	80	0	0	0	0
16	.	Single	Inches	5	80	0	0	0	0
17	.	Single	Inches	5	80	0	0	0	0
18	.	Single	Inches	5	80	0	0	0	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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19	.	Single	Inches	5	80	0	0	0	0
20	.	Single	Inches	5	80	0	0	0	0
21	.	Single	Inches	5	80	0	0	0	0
22	.	Single	Inches	5	80	0	0	0	0
23	.	Single	Inches	5	80	0	0	0	0
24	.	Single	Inches	5	80	0	0	0	0
25	.	Single	Inches	5	80	0	0	0	0
26	.	Single	Inches	5	80	0	0	0	0
27	.	Single	Inches	5	80	0	0	0	0
28	.	Single	Inches	5	80	0	0	0	0
29	.	Single	Inches	5	80	0	0	0	0
30	.	Single	Inches	5	80	0	0	0	0
31	.	Single	Inches	5	80	0	0	0	0
32	.	Single	Inches	5	80	0	0	0	0
33	.	Single	Inches	5	80	0	0	0	0
34	.	Single	Inches	5	80	0	0	0	0
35	.	Single	Inches	5	80	0	0	0	0
36	.	Single	Inches	5	80	0	0	0	0
37	.	Single	Inches	5	80	0	0	0	0
38	.	Single	Inches	5	80	0	0	0	0
39	.	Single	Inches	5	80	0	0	0	0
40	.	Single	Inches	5	80	0	0	0	0
41	.	Single	Inches	5	80	0	0	0	0
42	.	Single	Inches	5	80	0	0	0	0
43	.	Single	Inches	5	80	0	0	0	0
44	.	Single	Inches	5	80	0	0	0	0
45	.	Single	Inches	5	80	0	0	0	0
46	.	Single	Inches	5	80	0	0	0	0
47	.	Single	Inches	5	80	0	0	0	0
48	.	Single	Inches	5	80	0	0	0	0
49	.	Single	Inches	5	80	0	0	0	0
50	.	Single	Inches	5	80	0	0	0	0
51	.	Single	Inches	5	80	0	0	0	0
52	.	Single	Inches	5	80	0	0	0	0
53	.	Single	Inches	5	80	0	0	0	0
54	.	Single	Inches	5	80	0	0	0	0
55	.	Single	Inches	5	80	0	0	0	0
56	.	Single	Inches	5	80	0	0	0	0
57	.	Single	Inches	5	80	0	0	0	0
58	.	Single	Inches	5	80	0	0	0	0
59	.	Single	Inches	5	80	0	0	0	0
60	.	Single	Inches	5	80	0	0	0	0
61	.	Single	Inches	5	80	0	0	0	0
62	.	Single	Inches	5	80	0	0	0	0
63	.	Single	Inches	5	80	0	0	0	0
64	.	Single	Inches	5	80	0	0	0	0
65	.	Single	Inches	5	80	0	0	0	0
66	.	Single	Inches	5	80	0	0	0	0
67	.	Single	Inches	5	80	0	0	0	0
68	.	Single	Inches	5	80	0	0	0	0
69	.	Single	Inches	5	80	0	0	0	0
70	.	Single	Inches	5	80	0	0	0	0
71	.	Single	Inches	5	80	0	0	0	0
72	.	Single	Inches	5	80	0	0	0	0

**PRIORITR AND PREEMPT DETECTOR GLOBAL DIAGNOSTIC**

<b>Global No Activity</b>	<b>Global Max Presence</b>	<b>Global Erratic Count</b>
0	60	0

**PRIPRE DETECTOR PLANS**

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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**Pri/Pre Detector Plan 1**

Det.	Low Call	High Call	Num	Num	Lead/Tail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 2**

Det.	Low Call	High Call	Num	Num	Lead/Tail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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**Pri/Pre Detector Plan 3**

Det.	Low Call	High Call	Num	Num	Lead/Tail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 4**

Det.	Low Call	High Call	Num	Num	Lead/Tail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		

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28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 5**

Det.	Low Call	High Call	Num	Num	Lead/Trail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 6**

Det.	Low Call	High Call	Num	Num	Lead/Trail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		



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23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 7**

Det.	Low Call	High Call	Num	Num	Lead/Trail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 8**

Det.	Low Call	High Call	Num	Num	Lead/Trail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		

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18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 9**

Det.	Low Call	High Call	Num	Num	Lead/Trail	Time	Pri Delay	Delay	Ext	On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		
10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**Pri/Pre Detector Plan 10**

Det.	Low Call	High Call	Low Num	High Num	Lead/Trail	Arrival Time	Pri Delay	Delay	Ext	Min On	Call Overlap	Description
1	None	None	0	0	None	0	0	0	0	0		
2	None	None	0	0	None	0	0	0	0	0		
3	None	None	0	0	None	0	0	0	0	0		
4	None	None	0	0	None	0	0	0	0	0		
5	None	None	0	0	None	0	0	0	0	0		
6	None	None	0	0	None	0	0	0	0	0		
7	None	None	0	0	None	0	0	0	0	0		
8	None	None	0	0	None	0	0	0	0	0		
9	None	None	0	0	None	0	0	0	0	0		

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10	None	None	0	0	None	0	0	0	0	0		
11	None	None	0	0	None	0	0	0	0	0		
12	None	None	0	0	None	0	0	0	0	0		
13	None	None	0	0	None	0	0	0	0	0		
14	None	None	0	0	None	0	0	0	0	0		
15	None	None	0	0	None	0	0	0	0	0		
16	None	None	0	0	None	0	0	0	0	0		
17	None	None	0	0	None	0	0	0	0	0		
18	None	None	0	0	None	0	0	0	0	0		
19	None	None	0	0	None	0	0	0	0	0		
20	None	None	0	0	None	0	0	0	0	0		
21	None	None	0	0	None	0	0	0	0	0		
22	None	None	0	0	None	0	0	0	0	0		
23	None	None	0	0	None	0	0	0	0	0		
24	None	None	0	0	None	0	0	0	0	0		
25	None	None	0	0	None	0	0	0	0	0		
26	None	None	0	0	None	0	0	0	0	0		
27	None	None	0	0	None	0	0	0	0	0		
28	None	None	0	0	None	0	0	0	0	0		
29	None	None	0	0	None	0	0	0	0	0		
30	None	None	0	0	None	0	0	0	0	0		
31	None	None	0	0	None	0	0	0	0	0		
32	None	None	0	0	None	0	0	0	0	0		

**DETECTOR ZONES**

<b>Zone</b>	<b>Sample Interval</b>	<b>Log Per Veh Data</b>	<b>Log Interval Data</b>	<b>Source Device</b>	<b>Source Input</b>	<b>Det Report Index</b>
1	20	Disabled	Enabled	Wavetronix 1	0	0
2	20	Disabled	Enabled	Wavetronix 1	0	0
3	20	Disabled	Enabled	Wavetronix 1	0	0
4	20	Disabled	Enabled	Wavetronix 1	0	0
5	20	Disabled	Enabled	Wavetronix 1	0	0
6	20	Disabled	Enabled	Wavetronix 1	0	0
7	20	Disabled	Enabled	Wavetronix 1	0	0
8	20	Disabled	Enabled	Wavetronix 1	0	0
9	20	Disabled	Enabled	Wavetronix 1	0	0
10	20	Disabled	Enabled	Wavetronix 1	0	0
11	20	Disabled	Enabled	Wavetronix 1	0	0
12	20	Disabled	Enabled	Wavetronix 1	0	0
13	20	Disabled	Enabled	Wavetronix 1	0	0
14	20	Disabled	Enabled	Wavetronix 1	0	0
15	20	Disabled	Enabled	Wavetronix 1	0	0
16	20	Disabled	Enabled	Wavetronix 1	0	0
17	20	Disabled	Enabled	Wavetronix 1	0	0
18	20	Disabled	Enabled	Wavetronix 1	0	0
19	20	Disabled	Enabled	Wavetronix 1	0	0
20	20	Disabled	Enabled	Wavetronix 1	0	0
21	20	Disabled	Enabled	Wavetronix 1	0	0
22	20	Disabled	Enabled	Wavetronix 1	0	0
23	20	Disabled	Enabled	Wavetronix 1	0	0
24	20	Disabled	Enabled	Wavetronix 1	0	0
25	20	Disabled	Enabled	Wavetronix 1	0	0
26	20	Disabled	Enabled	Wavetronix 1	0	0
27	20	Disabled	Enabled	Wavetronix 1	0	0
28	20	Disabled	Enabled	Wavetronix 1	0	0
29	20	Disabled	Enabled	Wavetronix 1	0	0
30	20	Disabled	Enabled	Wavetronix 1	0	0
31	20	Disabled	Enabled	Wavetronix 1	0	0
32	20	Disabled	Enabled	Wavetronix 1	0	0
33	20	Disabled	Enabled	Wavetronix 1	0	0
34	20	Disabled	Enabled	Wavetronix 1	0	0
35	20	Disabled	Enabled	Wavetronix 1	0	0
36	20	Disabled	Enabled	Wavetronix 1	0	0
37	20	Disabled	Enabled	Wavetronix 1	0	0
38	20	Disabled	Enabled	Wavetronix 1	0	0

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39	20	Disabled	Enabled	Wavetronix 1	0	0
40	20	Disabled	Enabled	Wavetronix 1	0	0
41	20	Disabled	Enabled	Wavetronix 1	41	41
42	20	Disabled	Enabled	Wavetronix 1	0	0
43	20	Disabled	Enabled	Wavetronix 1	43	43
44	20	Disabled	Enabled	Wavetronix 1	0	0
45	20	Disabled	Enabled	Wavetronix 1	0	0
46	20	Disabled	Enabled	Wavetronix 1	0	0
47	20	Disabled	Enabled	Wavetronix 1	0	0
48	20	Disabled	Enabled	Wavetronix 1	0	0
49	20	Disabled	Enabled	Wavetronix 1	0	0
50	20	Disabled	Enabled	Wavetronix 1	0	0
51	20	Disabled	Enabled	Wavetronix 1	0	0
52	20	Disabled	Enabled	Wavetronix 1	0	0
53	20	Disabled	Enabled	Wavetronix 1	0	0
54	20	Disabled	Enabled	Wavetronix 1	0	0
55	20	Disabled	Enabled	Wavetronix 1	0	0
56	20	Disabled	Enabled	Wavetronix 1	0	0
57	20	Disabled	Enabled	Wavetronix 1	0	0
58	20	Disabled	Enabled	Wavetronix 1	0	0
59	20	Disabled	Enabled	Wavetronix 1	0	0
60	20	Disabled	Enabled	Wavetronix 1	0	0
61	20	Disabled	Enabled	Wavetronix 1	0	0
62	20	Disabled	Enabled	Wavetronix 1	0	0
63	20	Disabled	Enabled	Wavetronix 1	0	0
64	20	Disabled	Enabled	Wavetronix 1	0	0

**WAVETRONIX HD**

Wavetronix Number	Sensor ID	Serial Server IP	Serial Server TCP
1			
2			
3			
4			

**WAVETRONIX UNIT**

Wavetronix Unit
MPH

**OVERLAP PARAMETER PLANS**

STANDARD OVERLAPS - OVERLAP PLAN 1													
Olp	Enabled	Type	Included Phases	Modifier Phases	Negative Phases	Trail			Walk 1	Ped Clr 1	Delay	Flash	Description
						Grn	Yel	Red					
1	Enabled	FYA - 4 Section	2	1		0	0	0	0	0	3	Off	FYA - 4 Section
2	Enabled	Thru FYA Ped	2			0	0	0	0	0	0	Off	Thru FYA Ped
3	Enabled	FYA - 4 Section	4	3		0	0	0	0	0	3	Off	FYA - 4 Section
4	Enabled	Thru FYA Ped	4			0	0	0	0	0	0	Off	Thru FYA Ped
5	Enabled	FYA - 4 Section	6	5		0	0	0	0	0	3	Off	FYA - 4 Section
6	Enabled	Thru FYA Ped	6			0	0	0	0	0	0	Off	Thru FYA Ped
7	Enabled	FYA - 4 Section	8	7		0	0	0	0	0	3	Off	FYA - 4 Section
8	Enabled	Thru FYA Ped	8			0	0	0	0	0	0	Off	Thru FYA Ped
9	Enabled	Normal	1	8		0	0	0	0	0	0	Off	NBR
10	Enabled	Normal	3	2		0	0	0	0	0	0	Off	WBR
11	Enabled	Off				0	0	0	0	0	0	Off	
12	Enabled	Off				0	0	0	0	0	0	Off	
13	Enabled	Off				0	0	0	0	0	0	Off	
14	Enabled	Off				0	0	0	0	0	0	Off	
15	Enabled	Off				0	0	0	0	0	0	Off	
16	Enabled	Off				0	0	0	0	0	0	Off	
17	Enabled	Off				0	0	0	0	0	0	Off	
18	Enabled	Off				0	0	0	0	0	0	Off	

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19	Enabled	Off				0	0	0	0	0	0	Off	
20	Enabled	Off				0	0	0	0	0	0	Off	
21	Enabled	Off				0	0	0	0	0	0	Off	
22	Enabled	Off				0	0	0	0	0	0	Off	
23	Enabled	Off				0	0	0	0	0	0	Off	
24	Enabled	Off				0	0	0	0	0	0	Off	
25	Enabled	Off				0	0	0	0	0	0	Off	
26	Enabled	Off				0	0	0	0	0	0	Off	
27	Enabled	Off				0	0	0	0	0	0	Off	
28	Enabled	Off				0	0	0	0	0	0	Off	
29	Enabled	Off				0	0	0	0	0	0	Off	
30	Enabled	Off				0	0	0	0	0	0	Off	
31	Enabled	Off				0	0	0	0	0	0	Off	
32	Enabled	Off				0	0	0	0	0	0	Off	

**ADDITIONAL OVERLAP PARAMETERS - OVERLAP PLAN 1**

Olp	Modifier Overlaps	Inhibit Neg Phases	Negative Overlaps	Trail Grn Omit Phs	Negative Peds	Neg Ped Overlaps	Green Suppress Phases	Alt Walk	Alt Ped Clr	Min Green	Min Green Ext	Red Revert	Flash Inact.	Flash Alt	Walk Rest
1					2			0	0	5	0	0	Off	Off	Off
2	1							0	0	10	0	0	Off	Off	Off
3					4			0	0	5	0	0	Off	Off	Off
4	3							0	0	6	0	0	Off	Off	Off
5					6			0	0	5	0	0	Off	Off	Off
6	5							0	0	10	0	0	Off	Off	Off
7					8			0	0	5	0	0	Off	Off	Off
8	7							0	0	6	0	0	Off	Off	Off
9					8			0	0	5	0	0	Off	Off	Off
10					2			0	0	5	0	0	Off	Off	Off
11								0	0	0	0	0	Off	Off	Off
12								0	0	0	0	0	Off	Off	Off
13								0	0	0	0	0	Off	Off	Off
14								0	0	0	0	0	Off	Off	Off
15								0	0	0	0	0	Off	Off	Off
16								0	0	0	0	0	Off	Off	Off
17								0	0	0	0	0	Off	Off	Off
18								0	0	0	0	0	Off	Off	Off
19								0	0	0	0	0	Off	Off	Off
20								0	0	0	0	0	Off	Off	Off
21								0	0	0	0	0	Off	Off	Off
22								0	0	0	0	0	Off	Off	Off
23								0	0	0	0	0	Off	Off	Off
24								0	0	0	0	0	Off	Off	Off
25								0	0	0	0	0	Off	Off	Off
26								0	0	0	0	0	Off	Off	Off
27								0	0	0	0	0	Off	Off	Off
28								0	0	0	0	0	Off	Off	Off
29								0	0	0	0	0	Off	Off	Off
30								0	0	0	0	0	Off	Off	Off
31								0	0	0	0	0	Off	Off	Off
32								0	0	0	0	0	Off	Off	Off

**STANDARD OVERLAPS - OVERLAP PLAN 2**

Olp	Enabled	Type	Included Phases	Modifier Phases	Negative Phases	Trail			Walk 1	Ped Clr 1	Delay	Flash	Description
						Grn	Yel	Red					
1	Enabled	Off	1			0	0	0	0	0	0	Off	
2	Enabled	Off	2			0	0	0	0	0	0	Off	
3	Enabled	Off				0	0	0	0	0	0	Off	
4	Enabled	Off				0	0	0	0	0	0	Off	
5	Enabled	Off	5			0	0	0	0	0	0	Off	
6	Enabled	Off	6			0	0	0	0	0	0	Off	
7	Enabled	Off				0	0	0	0	0	0	Off	
8	Enabled	Off				0	0	0	0	0	0	Off	

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9	Enabled	Off				0	0	0	0	0	0	Off	
10	Enabled	Off				0	0	0	0	0	0	Off	
11	Enabled	Off				0	0	0	0	0	0	Off	
12	Enabled	Off				0	0	0	0	0	0	Off	
13	Enabled	Off				0	0	0	0	0	0	Off	
14	Enabled	Off				0	0	0	0	0	0	Off	
15	Enabled	Off				0	0	0	0	0	0	Off	
16	Enabled	Off				0	0	0	0	0	0	Off	
17	Enabled	Off				0	0	0	0	0	0	Off	
18	Enabled	Off				0	0	0	0	0	0	Off	
19	Enabled	Off				0	0	0	0	0	0	Off	
20	Enabled	Off				0	0	0	0	0	0	Off	
21	Enabled	Off				0	0	0	0	0	0	Off	
22	Enabled	Off				0	0	0	0	0	0	Off	
23	Enabled	Off				0	0	0	0	0	0	Off	
24	Enabled	Off				0	0	0	0	0	0	Off	
25	Enabled	Off				0	0	0	0	0	0	Off	
26	Enabled	Off				0	0	0	0	0	0	Off	
27	Enabled	Off				0	0	0	0	0	0	Off	
28	Enabled	Off				0	0	0	0	0	0	Off	
29	Enabled	Off				0	0	0	0	0	0	Off	
30	Enabled	Off				0	0	0	0	0	0	Off	
31	Enabled	Off				0	0	0	0	0	0	Off	
32	Enabled	Off				0	0	0	0	0	0	Off	

**ADDITIONAL OVERLAP PARAMETERS - OVERLAP PLAN 2**

O/p	Modifier Overlaps	Inhibit Neg Phases	Negative Overlaps	Trail Grn Omit Phs	Negative Peds	Neg Ped Overlaps	Green Suppress Phases	Alt Walk	Alt Ped Clr	Min Green	Min Green Ext	Red Revert	Flash Inact.	Flash Alt	Walk Rest
1								0	0	0	0	0	Off	Off	Off
2								0	0	0	0	0	Off	Off	Off
3								0	0	0	0	0	Off	Off	Off
4								0	0	0	0	0	Off	Off	Off
5								0	0	0	0	0	Off	Off	Off
6								0	0	0	0	0	Off	Off	Off
7								0	0	0	0	0	Off	Off	Off
8								0	0	0	0	0	Off	Off	Off
9								0	0	0	0	0	Off	Off	Off
10								0	0	0	0	0	Off	Off	Off
11								0	0	0	0	0	Off	Off	Off
12								0	0	0	0	0	Off	Off	Off
13								0	0	0	0	0	Off	Off	Off
14								0	0	0	0	0	Off	Off	Off
15								0	0	0	0	0	Off	Off	Off
16								0	0	0	0	0	Off	Off	Off
17								0	0	0	0	0	Off	Off	Off
18								0	0	0	0	0	Off	Off	Off
19								0	0	0	0	0	Off	Off	Off
20								0	0	0	0	0	Off	Off	Off
21								0	0	0	0	0	Off	Off	Off
22								0	0	0	0	0	Off	Off	Off
23								0	0	0	0	0	Off	Off	Off
24								0	0	0	0	0	Off	Off	Off
25								0	0	0	0	0	Off	Off	Off
26								0	0	0	0	0	Off	Off	Off
27								0	0	0	0	0	Off	Off	Off
28								0	0	0	0	0	Off	Off	Off
29								0	0	0	0	0	Off	Off	Off
30								0	0	0	0	0	Off	Off	Off
31								0	0	0	0	0	Off	Off	Off
32								0	0	0	0	0	Off	Off	Off

**OVERLAP OPTION PLANS**

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570
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OVERLAP PLAN 1																	
Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Veh Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
No Hold on Trailing Exit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Yellow Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Bridging	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
LRT Prepare to Go	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Call for Service	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Allow Trail Green Bridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
FYA During Protected Red Clr	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Veh Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
No Hold on Trailing Exit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Yellow Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Bridging	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
LRT Prepare to Go	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Call for Service	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Allow Trail Green Bridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
FYA During Protected Red Clr	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

OVERLAP PLAN 2																	
Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Veh Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
No Hold on Trailing Exit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Yellow Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Bridging	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
LRT Prepare to Go	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Call for Service	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Allow Trail Green Bridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
FYA During Protected Red Clr	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
Startup Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Veh Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
No Hold on Trailing Exit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Ped Recycle	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Yellow Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Disable Bridging	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
LRT Prepare to Go	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Call for Service	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Allow Trail Green Bridge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
FYA During Protected Red Clr	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

**CUSTOM OVERLAP RULES**

Rule	Custom Overlap	Included State	Modifier State	Negative State	Custom Output	Flash
1	Custom 1	Green	Any	Any	Blank	Not Set
2	Disabled	Any	Any	Any	Not Set	Not Set
3	Disabled	Any	Any	Any	Not Set	Not Set
4	Disabled	Any	Any	Any	Not Set	Not Set
5	Disabled	Any	Any	Any	Not Set	Not Set
6	Disabled	Any	Any	Any	Not Set	Not Set
7	Disabled	Any	Any	Any	Not Set	Not Set
8	Disabled	Any	Any	Any	Not Set	Not Set
9	Disabled	Any	Any	Any	Not Set	Not Set
10	Disabled	Any	Any	Any	Not Set	Not Set
11	Disabled	Any	Any	Any	Not Set	Not Set
12	Disabled	Any	Any	Any	Not Set	Not Set
13	Disabled	Any	Any	Any	Not Set	Not Set
14	Disabled	Any	Any	Any	Not Set	Not Set
15	Disabled	Any	Any	Any	Not Set	Not Set

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16	Disabled	Any	Any	Any	Not Set	Not Set
17	Disabled	Any	Any	Any	Not Set	Not Set
18	Disabled	Any	Any	Any	Not Set	Not Set
19	Disabled	Any	Any	Any	Not Set	Not Set
20	Disabled	Any	Any	Any	Not Set	Not Set

**COORDINATION PARAMETERS**

**Control**

Operational Mode.....	:	<u>Manual Free</u>
Coordination Mode.....	:	<u>Auto Permissive</u>
Max Mode.....	:	<u>Per Pattern</u>
Force Mode.....	:	<u>Fixed</u>
Correction Mode.....	:	<u>Shortway (Auto)</u>
Max Cycle Limit %.....	:	<u>20</u>
Min Cycle Limit %.....	:	<u>20</u>
Max Dwell.....	:	<u>0</u>
Transition Ped Mode.....	:	<u>Pattern</u>

**PATTERN PARAMETERS**

**Patterns**

Pattern	Cycle	Offset 1	Offset 2	Offset 3	Split	Sequence	Ref Point	Coord Md	Force Off	Max Mode	Ped Mode
1	0	0	0	0	0	0	Green	Permissive	Fixed	Max 1	None
2	0	0	0	0	0	0	Green	Permissive	Fixed	Max 1	None
3	0	0	0	0	0	0	Green	Permissive	Fixed	Max 1	None
4	0	0	0	0	0	0	Green	Permissive	Fixed	Max 1	None
5	0	0	0	0	0	0	Green	Permissive	Fixed	Max 1	None
6	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
7	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
8	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
9	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
10	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
11	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
12	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
13	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
14	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
15	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
16	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
17	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
18	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
19	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
20	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
21	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
22	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
23	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
24	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
25	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
26	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
27	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
28	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
29	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
30	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
31	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
32	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
33	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
34	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
35	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
36	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
37	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
38	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
39	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
40	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
41	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
42	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase





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108	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
109	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
110	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
111	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
112	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
113	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
114	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
115	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
116	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
117	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
118	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
119	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
120	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
121	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
122	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
123	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
124	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
125	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
126	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
127	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase
128	0	0	0	0	0	0	Yellow	Permissive	Fixed	Max Inhibit	Phase

Pattern	Phase Plan	Det Plan	Ped Plan	Ovl Plan	Pri/Pre Plan	Description
1	1	1	1	1	1	AM Plan
2	1	1	1	1	1	Midday Plan
3	1	1	1	1	1	PM Plan
4	1	1	1	1	1	Weekend Plan
5	1	1	1	1	1	Peak of Peak
6	1	1	1	1	1	
7	1	1	1	1	1	
8	1	1	1	1	1	
9	1	1	1	1	1	
10	1	1	1	1	1	
11	1	1	1	1	1	
12	1	1	1	1	1	
13	1	1	1	1	1	
14	1	1	1	1	1	
15	1	1	1	1	1	
16	1	1	1	1	1	
17	1	1	1	1	1	
18	1	1	1	1	1	
19	1	1	1	1	1	
20	1	1	1	1	1	Free Operation
21	1	1	1	1	1	
22	1	1	1	1	1	
23	1	1	1	1	1	
24	1	1	1	1	1	
25	1	1	1	1	1	
26	1	1	1	1	1	
27	1	1	1	1	1	
28	1	1	1	1	1	
29	1	1	1	1	1	
30	1	1	1	1	1	
31	1	1	1	1	1	
32	1	1	1	1	1	
33	1	1	1	1	1	
34	1	1	1	1	1	
35	1	1	1	1	1	
36	1	1	1	1	1	
37	1	1	1	1	1	
38	1	1	1	1	1	
39	1	1	1	1	1	
40	1	1	1	1	1	
41	1	1	1	1	1	
42	1	1	1	1	1	
43	1	1	1	1	1	

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44	1	1	1	1	1	
45	1	1	1	1	1	
46	1	1	1	1	1	
47	1	1	1	1	1	
48	1	1	1	1	1	
49	1	1	1	1	1	
50	1	1	1	1	1	
51	1	1	1	1	1	
52	1	1	1	1	1	
53	1	1	1	1	1	
54	1	1	1	1	1	
55	1	1	1	1	1	
56	1	1	1	1	1	
57	1	1	1	1	1	
58	1	1	1	1	1	
59	1	1	1	1	1	
60	1	1	1	1	1	
61	1	1	1	1	1	
62	1	1	1	1	1	
63	1	1	1	1	1	
64	1	1	1	1	1	
65	1	1	1	1	1	
66	1	1	1	1	1	
67	1	1	1	1	1	
68	1	1	1	1	1	
69	1	1	1	1	1	
70	1	1	1	1	1	
71	1	1	1	1	1	
72	1	1	1	1	1	
73	1	1	1	1	1	
74	1	1	1	1	1	
75	1	1	1	1	1	
76	1	1	1	1	1	
77	1	1	1	1	1	
78	1	1	1	1	1	
79	1	1	1	1	1	
80	1	1	1	1	1	
81	1	1	1	1	1	
82	1	1	1	1	1	
83	1	1	1	1	1	
84	1	1	1	1	1	
85	1	1	1	1	1	
86	1	1	1	1	1	
87	1	1	1	1	1	
88	1	1	1	1	1	
89	1	1	1	1	1	
90	1	1	1	1	1	
91	1	1	1	1	1	
92	1	1	1	1	1	
93	1	1	1	1	1	
94	1	1	1	1	1	
95	1	1	1	1	1	
96	1	1	1	1	1	
97	1	1	1	1	1	
98	1	1	1	1	1	
99	1	1	1	1	1	
100	1	1	1	1	1	
101	1	1	1	1	1	
102	1	1	1	1	1	
103	1	1	1	1	1	
104	1	1	1	1	1	
105	1	1	1	1	1	
106	1	1	1	1	1	
107	1	1	1	1	1	
108	1	1	1	1	1	

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109	1	1	1	1	1	
110	1	1	1	1	1	
111	1	1	1	1	1	
112	1	1	1	1	1	
113	1	1	1	1	1	
114	1	1	1	1	1	
115	1	1	1	1	1	
116	1	1	1	1	1	
117	1	1	1	1	1	
118	1	1	1	1	1	
119	1	1	1	1	1	
120	1	1	1	1	1	
121	1	1	1	1	1	
122	1	1	1	1	1	
123	1	1	1	1	1	
124	1	1	1	1	1	
125	1	1	1	1	1	
126	1	1	1	1	1	
127	1	1	1	1	1	
128	1	1	1	1	1	

**SPLIT PARAMETERS**

**Split 1**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 2**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 3**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 4**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0

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2		0	0	0	X	X	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	X	X	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 5**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	X	X	_____	Fixed	Min Veh Recall	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 6**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 7**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 8**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 9**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0

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2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 10**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 11**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 12**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 13**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 14**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0

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2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 15**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 16**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 17**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 18**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 19**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
1		0	0	0	.	.	_____	Fixed	None	0	0

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2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**Split 20**

PH.	Description	Time	Min	Max	Coord Phase	Ref. Phase	Trans. Cover Ped	Force Off Mode	Mode	Pri Min	Pri Max
2		0	0	0	.	.	_____	Fixed	None	0	0
3		0	0	0	.	.	_____	Fixed	None	0	0
4		0	0	0	.	.	_____	Fixed	None	0	0
5		0	0	0	.	.	_____	Fixed	None	0	0
6		0	0	0	.	.	_____	Fixed	None	0	0
7		0	0	0	.	.	_____	Fixed	None	0	0
8		0	0	0	.	.	_____	Fixed	None	0	0
9		0	0	0	.	.	_____	Fixed	None	0	0
10		0	0	0	.	.	_____	Fixed	None	0	0

**RING PLANS**

**Ring Plan Table, Ring Plan 1**

Ring	Offset	Early Coord Gapout
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0

**Ring Plan Table, Ring Plan 2**

Ring	Offset	Early Coord Gapout
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0

**ADVANCED COORD OPTIONS**



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ring Plan	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Ring Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Ring Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Ring Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Ring Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
Ring Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Ring Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
Ring Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allow Split Underrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**SCHEDULES**

<b>Schedule</b> 1	<b>Description</b> Weekday Day Plan	<b>Day Plan</b> 1	<b>Enabled</b>																				
<b>Month of Year</b>		<b>Days of Week</b>		<b>Days of Month</b>																			
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	.	X	X	X	X	X	.	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X	X		

<b>Schedule</b> 2	<b>Description</b> Weekend Day Plan	<b>Day Plan</b> 2	<b>Enabled</b>																				
<b>Month of Year</b>		<b>Days of Week</b>		<b>Days of Month</b>																			
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	.	.	.	.	.	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X	X		

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X	X	X	X	X	X	X	X	
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<b>Schedule</b>	3	<b>Description</b>		<b>Day Plan</b>	3	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

<b>Schedule</b>	4	<b>Description</b>		<b>Day Plan</b>	4	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

<b>Schedule</b>	5	<b>Description</b>		<b>Day Plan</b>	5	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

<b>Schedule</b>	6	<b>Description</b>		<b>Day Plan</b>	6	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

<b>Schedule</b>	7	<b>Description</b>		<b>Day Plan</b>	7	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

<b>Schedule</b>	8	<b>Description</b>		<b>Day Plan</b>	8	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

<b>Schedule</b>	9	<b>Description</b>		<b>Day Plan</b>	9	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

<b>Schedule</b>	10	<b>Description</b>		<b>Day Plan</b>	10	<b>Enabled</b>																	
<b>Month of Year</b>		<b>Days of Week</b>				<b>Days of Month</b>																	
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
													23	24	25	26	27	28	29	30	31		
													X	X	X	X	X	X	X	X			

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X	X	X	X	X	X	X	X	
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<b>Schedule</b> 11	<b>Description</b>	<b>Day Plan</b> 0	<b>Enabled</b>																				
<b>Month of Year</b>		<b>Days of Week</b>																					
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.	.
													23	24	25	26	27	28	29	30	31		
													.	.	.	.	.	.	.	.	.	.	.

<b>Schedule</b> 12	<b>Description</b>	<b>Day Plan</b> 0	<b>Enabled</b>																				
<b>Month of Year</b>		<b>Days of Week</b>																					
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.	.
													23	24	25	26	27	28	29	30	31		
													.	.	.	.	.	.	.	.	.	.	.

<b>Schedule</b> 13	<b>Description</b>	<b>Day Plan</b> 0	<b>Enabled</b>																				
<b>Month of Year</b>		<b>Days of Week</b>																					
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.	.
													23	24	25	26	27	28	29	30	31		
													.	.	.	.	.	.	.	.	.	.	.

<b>Schedule</b> 14	<b>Description</b>	<b>Day Plan</b> 0	<b>Enabled</b>																				
<b>Month of Year</b>		<b>Days of Week</b>																					
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.	.
													23	24	25	26	27	28	29	30	31		
													.	.	.	.	.	.	.	.	.	.	.

<b>Schedule</b> 15	<b>Description</b>	<b>Day Plan</b> 0	<b>Enabled</b>																				
<b>Month of Year</b>		<b>Days of Week</b>																					
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								12	13	14	15	16	17	18	19	20	21	22
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.	.
													23	24	25	26	27	28	29	30	31		
													.	.	.	.	.	.	.	.	.	.	.

**DAY PLANS**

<b>Day Plan 1</b>				
Evt.	Hour	Min	Action	Description
1	7	0	20	Go Free
2	8	45	20	
3	9	30	20	
4	14	30	20	
5	16	30	20	
6	18	30	20	
7	19	30	20	
8	0	0	20	
9	0	0	20	
10	0	0		

<b>Day Plan 2</b>				
Evt.	Hour	Min	Action	Description
1	9	0	4	Call Plan 4
2	19	30	20	Go Free
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

<b>Day Plan 3</b>				
Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		

<b>Day Plan 4</b>				
Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		

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7	0	0		
8	0	0		
9	0	0		
10	0	0		

7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 5

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 6

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 7

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 8

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 9

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 10

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 11

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 12

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 13

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**Day Plan** 14

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

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*Day Plan* 15

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

*Day Plan* 16

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

*Day Plan* 17

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

*Day Plan* 18

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

*Day Plan* 19

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

*Day Plan* 20

Evt.	Hour	Min	Action	Description
1	0	0		
2	0	0		
3	0	0		
4	0	0		
5	0	0		
6	0	0		
7	0	0		
8	0	0		
9	0	0		
10	0	0		

**ACTIONS**

<i>Actions</i>		<i>Aux.</i>			<i>Special Functions</i>															
Act.	Pattern	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Pattern 1	.	.	.																
2	Pattern 2	.	.	.																
3	Pattern 3	.	.	.																
4	Pattern 4	.	.	.																
5	Pattern 5	.	.	.																
6	Pattern 6	.	.	.																
7	Pattern 7	.	.	.																
8	Pattern 8	.	.	.																
9	Pattern 9	.	.	.																
10	Pattern 10	.	.	.																
11	None	.	.	.																
12	None	.	.	.																
13	Free	.	.	.																
14	None	.	.	.																
15	None	.	.	.																
16	None	.	.	.																
17	None	.	.	.																
18	None	.	.	.																
19	None	.	.	.																
20	Free	X	.	.																
21	None	.	.	.																
22	None	.	.	.																
23	None	.	.	.																
24	None	.	.	.																
25	None	.	.	.																
26	None	.	.	.																
27	None	.	.	.																
28	None	.	.	.																





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Track 2 Phases								
Track Overlaps								
Track 2 Overlaps								
Dwell Peds								
Dwell Overlaps								
Cycling Phases								
Cycling Peds								
Cycling Overlaps								
Rec. Exit Omit Phs								

**PREEMPT PARAMETERS**

<i>Preempt</i>	1	2	3	4	5	6	7	8
Link	0	0	0	0	0	0	0	0
Delay	0	0	0	0	0	0	0	0
Min Duration	1	1	1	1	0	0	0	0
Min Presence	0	0	0	0	0	0	0	0
Max Presence	255	255	255	255	0	0	0	0
Max Presence Action	Terminate	Terminate	Terminate	Terminate	Terminate	Terminate	Terminate	Terminate
Enter Min Green	5	5	5	5	0	0	0	0
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Enter Min Walk	1	1	1	1	0	0	0	0
Enter Ped Clear	255	255	255	255	255	255	255	255
Track Green	0	0	0	0	0	0	0	0
Max Track Green	0	0	0	0	0	0	0	0
Track Yellow Chg	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track 2 Green	0	0	0	0	0	0	0	0
Track 2 Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track 2 Red	25.5	25.5	25.5	25.5		25.5	25.5	25.5
Track Ext. Gate Down	0	0	0	0	0	0	0	0
Dwell Green	5	5	5	5	0	0	0	0
Exit Ped Clear	255	255	255	255	255	255	255	255
Exit Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Exit Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Dwell Ext Time	0	0	0	0	0	0	0	0
Max Exit Green	0	0	0	0	0	0	0	0
Exit Type	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases
Exit Max Mode	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Exit Max Apply Time	0	0	0	0	0	0	0	0
Veh Exit Calls								
Ped Exit Calls								
<i>Preempt</i>	9	10	11	12	13	14	15	16
Link	0	0	0	0	0	0	0	0
Delay	0	0	0	0	0	0	0	0
Min Duration	0	0	0	0	0	0	0	0
Min Presence	0	0	0	0	0	0	0	0
Max Presence	0	0	0	0	0	0	0	0
Max Presence Action	Terminate	Terminate	Terminate	Terminate	Terminate	Terminate	Terminate	Terminate
Enter Min Green	0	0	0	0	0	0	0	0
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Enter Min Walk	0	0	0	0	0	0	0	0
Enter Ped Clear	255	255	255	255	255	255	255	255
Track Green	0	0	0	0	0	0	0	0
Max Track Green	0	0	0	0	0	0	0	0
Track Yellow Chg	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track 2 Green	0	0	0	0	0	0	0	0
Track 2 Yellow	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Track 2 Red	25.5	25.5	25.5	25.5		25.5	25.5	25.5
Track Ext. Gate Down	0	0	0	0	0	0	0	0
Dwell Green	0	0	0	0	0	0	0	0
Exit Ped Clear	255	255	255	255	255	255	255	255



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Exit Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Exit Red Clear	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Dwell Ext Time	0	0	0	0	0	0	0	0
Max Exit Green	0	0	0	0	0	0	0	0
Exit Type	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases
Exit Max Mode	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Exit Max Apply Time	0	0	0	0	0	0	0	0
Veh Exit Calls								
Ped Exit Calls								

**PREEMPT OPTIONS**

Preempt	1	2	3	4	5	6	7	8
Non Lock Mem	X	X	X	X	.	.	.	.
Not Override Flash	.	.	.	.	.	.	.	.
Not Override Next Pre	X	X	X	X	.	.	.	.
Flash Dwell	.	.	.	.	.	.	.	.
Ped Recycle in Dwell Cyc								
Immediate Ped Clear	.	.	.	.	X	X	X	X
Dwell Only Status Output	.	.	.	.	.	.	.	.
All Red Flash Dwell	.	.	.	.	.	.	.	.
Allow All Overlaps	.	.	.	.	.	.	.	.
Require All Red Entry	.	.	.	.	.	.	.	.
Req. Gate Down Trk Exit	.	.	.	.	.	.	.	.
Req. Gate Up Dwell Exit	.	.	.	.	.	.	.	.
Use Norm On/Norm Off	.	.	.	.	.	.	.	.
Preempt	9	10	11	12	13	14	15	16
Non Lock Mem	.	.	.	.	.	.	.	.
Not Override Flash	.	.	.	.	.	.	.	.
Not Override Next Pre	.	.	.	.	.	.	.	.
Flash Dwell	.	.	.	.	.	.	.	.
Ped Recycle in Dwell Cyc								
Immediate Ped Clear	X	X	X	X	X	X	X	X
Dwell Only Status Output	.	.	.	.	.	.	.	.
All Red Flash Dwell	.	.	.	.	.	.	.	.
Allow All Overlaps	.	.	.	.	.	.	.	.
Require All Red Entry	.	.	.	.	.	.	.	.
Req. Gate Down Trk Exit	.	.	.	.	.	.	.	.
Req. Gate Up Dwell Exit	.	.	.	.	.	.	.	.
Use Norm On/Norm Off	.	.	.	.	.	.	.	.

**PREEMPT FUNCTION OUTPUTS**

Preempt	Aux Functions			Special Functions															
	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**PREEMPT CRC SETTINGS**

Require Preempt CRC      Disabled

Active Preempt CRC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	.	.	.	X	.	.	X	.	X	X	.	.	.	X	X	.

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**ADVANCED I/O  
CHANNEL CONFIGURATION**

**Channel Configuration**

Channel	Control Type	Control Source	MMU Channel Override
1	Overlap	1	1
2	Overlap	2	2
3	Overlap	3	3
4	Overlap	4	4
5	Overlap	5	5
6	Overlap	6	6
7	Overlap	7	7
8	Overlap	8	8
9	Overlap	9	9
10	Overlap	10	10
11	None	11	11
12	None	12	12
13	Phase Ped	2	13
14	Phase Ped	4	14
15	Phase Ped	6	15
16	Phase Ped	8	16
17	None	0	17
18	None	0	18
19	None	0	19
20	None	0	20
21	None	0	21
22	None	0	22
23	None	0	23
24	None	0	24
25	None	0	25
26	None	0	26
27	None	0	27
28	None	0	28
29	None	0	29
30	None	0	30
31	None	0	31
32	None	0	32

**CHANNEL OPTIONS**

**Channel Options**

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Yellow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flash Red	X	X	X	X	X	X	X	X	X	X	X	X	.	.	.	.
Flash Alternate Half Hertz	X	.	.	X	X	.	.	X	X	.	X	.	.	.	.	.
Channel	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Flash Yellow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flash Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flash Alternate Half Hertz	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**CHANNEL CONCURRENCY**

Concurrency Mode
Auto

**Manual Concurrency**

Channel	Concurrency
1	
2	
3	
4	
5	
6	
7	
8	

**Auto Concurrency**

Channel	Concurrency
1	2,15
2	13,15
3	4,16
4	14,16
5	6,13
6	13,15
7	8,14
8	14,16

**Conflict Monitor Card**

Channel	Concurrency
1	
2	
3	
4	
5	
6	
7	
8	

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9	
10	
11	
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13	
14	
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16	
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22	
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24	
25	
26	
27	
28	
29	
30	
31	
32	

9	15
10	16
11	
12	
13	15
14	16
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	

9	
10	
11	
12	
13	
14	
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22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	

**CABINET CONFIGURATION**

<b>IO Modules</b>	
IO Module	Type
1	ODOT 332
2	TS2 MMU
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None

<b>Advanced Cabinet Settings</b>	
Run ITS Cabinet on Port 1	No
Enable TS2 Stop Time	.
Disable TS2 Startup Call	.
Disable TS2 Fault Flash	.
Disable TS2 Cabinet Alarms	X
33X Input Leading Edge Filter	5
33X Input Trailing Edge Filter	5

**INPUT POINTS**

<b>Input Points, IO Module 1</b>			
Input Pt.	Description	Input Control Type	Index
1	C1-39	Vehicle Det Call	2
2	C1-40	Vehicle Det Call	16
3	C1-41	Vehicle Det Call	8
4	C1-42	Vehicle Det Call	22
5	C1-43	Vehicle Det Call	3
6	C1-44	Vehicle Det Call	17
7	C1-45	Vehicle Det Call	9
8	C1-46	Vehicle Det Call	23
9	C1-47	Vehicle Det Call	6
10	C1-48	Vehicle Det Call	20
11	C1-49	Vehicle Det Call	12
12	C1-50	Vehicle Det Call	26

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13	C1-51	Not Active	5
14	C1-52	Preempt Input	6
15	C1-53	Unit Manual Control Enable	1
16	C1-54	Not Active	0
17	C1-55	Vehicle Det Call	15
18	C1-56	Vehicle Det Call	1
19	C1-57	Vehicle Det Call	21
20	C1-58	Vehicle Det Call	7
21	C1-59	Vehicle Det Call	27
22	C1-60	Vehicle Det Call	13
23	C1-61	Vehicle Det Call	28
24	C1-62	Vehicle Det Call	14
25	C11-10	Not Active	31
26	C11-11	Not Active	37
27	C11-12	Not Active	34
28	C11-13	Not Active	40
29	C1-63	Vehicle Det Call	4
30	C1-64	Vehicle Det Call	18
31	C1-65	Vehicle Det Call	10
32	C1-66	Vehicle Det Call	24
33	C1-67	Ped Det Call	2
34	C1-68	Ped Det Call	6
35	C1-69	Ped Det Call	4
36	C1-70	Ped Det Call	8
37	C1-71	Preempt Input	1
38	C1-72	Preempt Input	2
39	C1-73	Preempt Input	3
40	C1-74	Preempt Input	4
41	C1-75	Not Active	0
42	C1-76	Vehicle Det Call	5
43	C1-77	Vehicle Det Call	19
44	C1-78	Vehicle Det Call	11
45	C1-79	Vehicle Det Call	25
46	C1-80	Unit Interval Advance	1
47	C1-81	Unit Local Flash Sense	1
48	C1-82	Unit Stop Time	1
49	C11-15	Not Active	35
50	C11-16	Not Active	29
51	C11-17	Not Active	38
52	C11-18	Not Active	32
53	C11-19	Not Active	36
54	C11-20	Not Active	30
55	C11-21	Not Active	39
56	C11-22	Not Active	33
57	C11-23	Not Active	0
58	C11-24	Not Active	0
59	C11-25	Not Active	0
60	C11-26	Not Active	0
61	C11-27	Not Active	0
62	C11-28	Not Active	0
63	C11-29	Not Active	0
64	C11-30	Not Active	0
65	---	Not Active	0
66	---	Not Active	0
67	---	Not Active	0
68	---	Not Active	0
69	---	Not Active	0
70	---	Not Active	0
71	---	Not Active	0
72	---	Not Active	0
73	---	Not Active	0
74	---	Not Active	0
75	---	Not Active	0
76	---	Not Active	0
77	---	Not Active	0

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78	---	Not Active	0
79	---	Not Active	0
80	---	Not Active	0
81	---	Not Active	0
82	---	Not Active	0
83	---	Not Active	0
84	---	Not Active	0
85	---	Not Active	0
86	---	Not Active	0
87	---	Not Active	0
88	---	Not Active	0
89	---	Not Active	0
90	---	Not Active	0
91	---	Not Active	0
92	---	Not Active	0
93	---	Not Active	0
94	---	Not Active	0
95	---	Not Active	0
96	---	Not Active	0
97	---	Not Active	0
98	---	Not Active	0
99	---	Not Active	0
100	---	Not Active	0
101	---	Not Active	0
102	---	Not Active	0
103	---	Not Active	0
104	---	Not Active	0
105	---	Not Active	0
106	---	Not Active	0
107	---	Not Active	0
108	---	Not Active	0
109	---	Not Active	0
110	---	Not Active	0
111	---	Not Active	0
112	---	Not Active	0
113	---	Not Active	0
114	---	Not Active	0
115	---	Not Active	0
116	---	Not Active	0
117	---	Not Active	0
118	---	Not Active	0
119	---	Not Active	0
120	---	Not Active	0
121	---	Not Active	0
122	---	Not Active	0
123	---	Not Active	0
124	---	Not Active	0
125	---	Not Active	0
126	---	Not Active	0
127	---	Not Active	0
128	---	Not Active	0

**Input Points, IO Module 2**

<i>Input Pt.</i>	<i>Description</i>	<i>Input Control Type</i>	<i>Index</i>
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0

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12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0

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77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 3**

Input Pt.	Description	Input Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 4**

Input Pt.	Description	Input Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 5**

Input Pt.	Description	Input Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 6**

<i>Input Pt.</i>	<i>Description</i>	<i>Input Control Type</i>	<i>Index</i>
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 7**

Input Pt.	Description	Input Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 8**

Input Pt.	Description	Input Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 9**

Input Pt.	Description	Input Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Input Points, IO Module 10**

Input Pt.	Description	Input Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
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56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
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109		Not Active	0
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111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**OUTPUT POINTS**

**Output Points, IO Module 1**

Output Pt.	Description	Output Control Type	Index
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<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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1	C1-2	Channel Red Do Not Walk Driver	14
2	C1-3	Channel Green Walk Driver	14
3	C1-4	Channel Red Do Not Walk Driver	4
4	C1-5	Channel Yellow Ped Clear Driver	4
5	C1-6	Channel Green Walk Driver	4
6	C1-7	Channel Red Do Not Walk Driver	3
7	C1-8	Channel Yellow Ped Clear Driver	3
8	C1-9	Phase Green	3
9	C1-10	Channel Red Do Not Walk Driver	13
10	C1-11	Channel Green Walk Driver	13
11	C1-12	Channel Red Do Not Walk Driver	2
12	C1-13	Channel Yellow Ped Clear Driver	2
13	C1-15	Channel Green Walk Driver	2
14	C1-16	Channel Red Do Not Walk Driver	1
15	C1-17	Channel Yellow Ped Clear Driver	1
16	C1-18	Phase Green	1
17	C1-19	Channel Red Do Not Walk Driver	16
18	C1-20	Channel Green Walk Driver	16
19	C1-21	Channel Red Do Not Walk Driver	8
20	C1-22	Channel Yellow Ped Clear Driver	8
21	C1-23	Channel Green Walk Driver	8
22	C1-24	Channel Red Do Not Walk Driver	7
23	C1-25	Channel Yellow Ped Clear Driver	7
24	C1-26	Phase Green	7
25	C1-27	Channel Red Do Not Walk Driver	15
26	C1-28	Channel Green Walk Driver	15
27	C1-29	Channel Red Do Not Walk Driver	6
28	C1-30	Channel Yellow Ped Clear Driver	6
29	C1-31	Channel Green Walk Driver	6
30	C1-32	Channel Red Do Not Walk Driver	5
31	C1-33	Channel Yellow Ped Clear Driver	5
32	C1-34	Phase Green	5
33	C1-35	Overlap Green	1
34	C1-36	Overlap Green	5
35	C1-37	Overlap Green	3
36	C1-38	Overlap Green	7
37	C1-100	Not Active	0
38	C1-101	Not Active	0
39	C1-102	Unit Automatic Flash Status	1
40	C1-103	Watchdog	0
41	C1-83	Channel Red Do Not Walk Driver	20
42	C1-84	Channel Green Walk Driver	20
43	C1-85	Channel Red Do Not Walk Driver	12
44	C1-86	Channel Yellow Ped Clear Driver	12
45	C1-87	Channel Green Walk Driver	12
46	C1-88	Channel Red Do Not Walk Driver	11
47	C1-89	Channel Yellow Ped Clear Driver	11
48	C1-90	Channel Green Walk Driver	11
49	C1-91	Channel Red Do Not Walk Driver	19
50	C1-93	Channel Green Walk Driver	19
51	C1-94	Channel Red Do Not Walk Driver	10
52	C1-95	Channel Yellow Ped Clear Driver	10
53	C1-96	Channel Green Walk Driver	10
54	C1-97	Channel Red Do Not Walk Driver	9
55	C1-98	Channel Yellow Ped Clear Driver	9
56	C1-99	Channel Green Walk Driver	9
57	C11-1	Not Active	0
58	C11-2	Not Active	0
59	C11-3	Not Active	0
60	C11-4	Not Active	0
61	C11-5	Not Active	0
62	C11-6	Not Active	0
63	C11-7	Not Active	0
64	C11-8	Not Active	0
65	---	Not Active	0



Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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66	---	Not Active	0
67	---	Not Active	0
68	---	Not Active	0
69	---	Not Active	0
70	---	Not Active	0
71	---	Not Active	0
72	---	Not Active	0
73	---	Not Active	0
74	---	Not Active	0
75	---	Not Active	0
76	---	Not Active	0
77	---	Not Active	0
78	---	Not Active	0
79	---	Not Active	0
80	---	Not Active	0
81	---	Not Active	0
82	---	Not Active	0
83	---	Not Active	0
84	---	Not Active	0
85	---	Not Active	0
86	---	Not Active	0
87	---	Not Active	0
88	---	Not Active	0
89	---	Not Active	0
90	---	Not Active	0
91	---	Not Active	0
92	---	Not Active	0
93	---	Not Active	0
94	---	Not Active	0
95	---	Not Active	0
96	---	Not Active	0
97	---	Not Active	0
98	---	Not Active	0
99	---	Not Active	0
100	---	Not Active	0
101	---	Not Active	0
102	---	Not Active	0
103	---	Not Active	0
104	---	Not Active	0
105	---	Not Active	0
106	---	Not Active	0
107	---	Not Active	0
108	---	Not Active	0
109	---	Not Active	0
110	---	Not Active	0
111	---	Not Active	0
112	---	Not Active	0
113	---	Not Active	0
114	---	Not Active	0
115	---	Not Active	0
116	---	Not Active	0
117	---	Not Active	0
118	---	Not Active	0
119	---	Not Active	0
120	---	Not Active	0
121	---	Not Active	0
122	---	Not Active	0
123	---	Not Active	0
124	---	Not Active	0
125	---	Not Active	0
126	---	Not Active	0
127	---	Not Active	0
128	---	Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
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109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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**Output Points, IO Module 3**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
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111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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**Output Points, IO Module 4**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
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109		Not Active	0
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111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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128		Not Active	0
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**Output Points, IO Module 3**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0



Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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127		Not Active	0
128		Not Active	0

**Output Points, IO Module 6**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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126		Not Active	0
127		Not Active	0
128		Not Active	0

**Output Points, IO Module 7**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0
59		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0
124		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Output Points, IO Module 8**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0
58		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0
123		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Output Points, IO Module 9**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0
57		Not Active	0



Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0
122		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**Output Points, IO Module 1**

Output Pt.	Description	Output Control Type	Index
1		Not Active	0
2		Not Active	0
3		Not Active	0
4		Not Active	0
5		Not Active	0
6		Not Active	0
7		Not Active	0
8		Not Active	0
9		Not Active	0
10		Not Active	0
11		Not Active	0
12		Not Active	0
13		Not Active	0
14		Not Active	0
15		Not Active	0
16		Not Active	0
17		Not Active	0
18		Not Active	0
19		Not Active	0
20		Not Active	0
21		Not Active	0
22		Not Active	0
23		Not Active	0
24		Not Active	0
25		Not Active	0
26		Not Active	0
27		Not Active	0
28		Not Active	0
29		Not Active	0
30		Not Active	0
31		Not Active	0
32		Not Active	0
33		Not Active	0
34		Not Active	0
35		Not Active	0
36		Not Active	0
37		Not Active	0
38		Not Active	0
39		Not Active	0
40		Not Active	0
41		Not Active	0
42		Not Active	0
43		Not Active	0
44		Not Active	0
45		Not Active	0
46		Not Active	0
47		Not Active	0
48		Not Active	0
49		Not Active	0
50		Not Active	0
51		Not Active	0
52		Not Active	0
53		Not Active	0
54		Not Active	0
55		Not Active	0
56		Not Active	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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57		Not Active	0
58		Not Active	0
59		Not Active	0
60		Not Active	0
61		Not Active	0
62		Not Active	0
63		Not Active	0
64		Not Active	0
65		Not Active	0
66		Not Active	0
67		Not Active	0
68		Not Active	0
69		Not Active	0
70		Not Active	0
71		Not Active	0
72		Not Active	0
73		Not Active	0
74		Not Active	0
75		Not Active	0
76		Not Active	0
77		Not Active	0
78		Not Active	0
79		Not Active	0
80		Not Active	0
81		Not Active	0
82		Not Active	0
83		Not Active	0
84		Not Active	0
85		Not Active	0
86		Not Active	0
87		Not Active	0
88		Not Active	0
89		Not Active	0
90		Not Active	0
91		Not Active	0
92		Not Active	0
93		Not Active	0
94		Not Active	0
95		Not Active	0
96		Not Active	0
97		Not Active	0
98		Not Active	0
99		Not Active	0
100		Not Active	0
101		Not Active	0
102		Not Active	0
103		Not Active	0
104		Not Active	0
105		Not Active	0
106		Not Active	0
107		Not Active	0
108		Not Active	0
109		Not Active	0
110		Not Active	0
111		Not Active	0
112		Not Active	0
113		Not Active	0
114		Not Active	0
115		Not Active	0
116		Not Active	0
117		Not Active	0
118		Not Active	0
119		Not Active	0
120		Not Active	0
121		Not Active	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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122		Not Active	0
123		Not Active	0
124		Not Active	0
125		Not Active	0
126		Not Active	0
127		Not Active	0
128		Not Active	0

**PHASE INTERVALS**

<b>Phase Intervals</b>					
Interval	Description	Red	Yellow	Green	Type
1	Not Active	On	Off	Off	Red
2	Delay Green	On	Off	Off	Red
3	Pre Green	Off	Off	On	Green
4	Min Green	Off	Off	On	Green
5	Green Extension	Off	Off	On	Green
6	Green Dwell	Off	Off	On	Green
7	Pre Clear	Off	Off	On	Green
8	Yellow Change	Off	On	Off	Yellow
9	Red Clear	On	Off	Off	Red
10	Red Dwell	On	Off	Off	Red
11	Barrier	On	Off	Off	Red

**PEDESTRIAN INTERVALS**

<b>Pedestrian Intervals</b>					
Interval	Description	Dont Walk	Clearance	Walk	Type
1	Not Active	On	Off	Off	Dont Walk
2	Delay Ped	On	Off	Off	Dont Walk
3	Walk	Off	Off	On	Walk
4	Walk Dwell	Off	Off	On	Walk
5	Flash Don't Walk	Flash	On	Off	Ped Clear
6	Don't Walk	On	Off	Off	Dont Walk

**ALARM CONFIGURATION**

<b>Alarm Configuration</b>	
Alarm	Alarm Name
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	

**MANUAL CONTROL PHASE GROUPS**

Group 1	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

Group 2	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

Group 3	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

Group 4	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

Group 5	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

Group 6	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

Group 7	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

Group 8	
Ring	Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

**PRIORITOR CONFIGURATION**

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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<b>Prioritor Configuration</b>	
Enabled	Inactive
Lock-out Time	0

**Prioritor Phase Settings**

Prior	Enabled	Pri	Priority Phases	Skip Phases	Skip Ped	Delay Time	Estimated Travel Time	Max Presence	Reservice Lockout	Free Min Green	Free Max Green	Description
1	Enabled	0				0	0	0	0	Min Green	Max Green	
2	Enabled	0				0	0	0	0	Min Green	Max Green	
3	Enabled	0				0	0	0	0	Min Green	Max Green	
4	Enabled	0				0	0	0	0	Min Green	Max Green	
5	Enabled	0				0	0	0	0	Min Green	Max Green	
6	Enabled	0				0	0	0	0	Min Green	Max Green	
7	Enabled	0				0	0	0	0	Min Green	Max Green	
8	Enabled	0				0	0	0	0	Min Green	Max Green	

**Prioritor Options**

Prioritor Number	1	2	3	4	5	6	7	8
Lockout after First Svc	.	.	.	.	.	.	.	.
Presence Only Check-in	.	.	.	.	.	.	.	.

**PEER CONFIGURATION**

**Peer Intersections**

Controller	Peer ID	IP / Hostname	SNMP Port	HTTP Port	Serial Port	Serial Address	Master Section	P2P Timeout	Description
1	0		161	80	0	0	0	15	
2	0		161	80	0	0	0	15	
3	0		161	80	0	0	0	15	
4	0		161	80	0	0	0	15	
5	0		161	80	0	0	0	15	
6	0		161	80	0	0	0	15	
7	0		161	80	0	0	0	15	
8	0		161	80	0	0	0	15	
9	0		161	80	0	0	0	15	
10	0		161	80	0	0	0	15	
11	0		161	80	0	0	0	15	
12	0		161	80	0	0	0	15	
13	0		161	80	0	0	0	15	
14	0		161	80	0	0	0	15	
15	0		161	80	0	0	0	15	
16	0		161	80	0	0	0	15	
17	0		161	80	0	0	0	15	
18	0		161	80	0	0	0	15	
19	0		161	80	0	0	0	15	
20	0		161	80	0	0	0	15	
21	0		161	80	0	0	0	15	
22	0		161	80	0	0	0	15	
23	0		161	80	0	0	0	15	
24	0		161	80	0	0	0	15	
25	0		161	80	0	0	0	15	
26	0		161	80	0	0	0	15	
27	0		161	80	0	0	0	15	
28	0		161	80	0	0	0	15	
29	0		161	80	0	0	0	15	
30	0		161	80	0	0	0	15	
31	0		161	80	0	0	0	15	
32	0		161	80	0	0	0	15	
33	0		161	80	0	0	0	15	
34	0		161	80	0	0	0	15	
35	0		161	80	0	0	0	15	
36	0		161	80	0	0	0	15	
37	0		161	80	0	0	0	15	
38	0		161	80	0	0	0	15	
39	0		161	80	0	0	0	15	
40	0		161	80	0	0	0	15	
41	0		161	80	0	0	0	15	
42	0		161	80	0	0	0	15	

Intersection Name TSR & Langer			Agency Washington County, OR				Controller ID 570		
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43	0		161	80	0	0	0	15	
44	0		161	80	0	0	0	15	
45	0		161	80	0	0	0	15	
46	0		161	80	0	0	0	15	
47	0		161	80	0	0	0	15	
48	0		161	80	0	0	0	15	
49	0		161	80	0	0	0	15	
50	0		161	80	0	0	0	15	
51	0		161	80	0	0	0	15	
52	0		161	80	0	0	0	15	
53	0		161	80	0	0	0	15	
54	0		161	80	0	0	0	15	
55	0		161	80	0	0	0	15	
56	0		161	80	0	0	0	15	
57	0		161	80	0	0	0	15	
58	0		161	80	0	0	0	15	
59	0		161	80	0	0	0	15	
60	0		161	80	0	0	0	15	
61	0		161	80	0	0	0	15	
62	0		161	80	0	0	0	15	
63	0		161	80	0	0	0	15	
64	0		161	80	0	0	0	15	
65	0		161	80	0	0	0	15	
66	0		161	80	0	0	0	15	
67	0		161	80	0	0	0	15	
68	0		161	80	0	0	0	15	
69	0		161	80	0	0	0	15	
70	0		161	80	0	0	0	15	
71	0		161	80	0	0	0	15	
72	0		161	80	0	0	0	15	
73	0		161	80	0	0	0	15	
74	0		161	80	0	0	0	15	
75	0		161	80	0	0	0	15	
76	0		161	80	0	0	0	15	
77	0		161	80	0	0	0	15	
78	0		161	80	0	0	0	15	
79	0		161	80	0	0	0	15	
80	0		161	80	0	0	0	15	
81	0		161	80	0	0	0	15	
82	0		161	80	0	0	0	15	
83	0		161	80	0	0	0	15	
84	0		161	80	0	0	0	15	
85	0		161	80	0	0	0	15	
86	0		161	80	0	0	0	15	
87	0		161	80	0	0	0	15	
88	0		161	80	0	0	0	15	
89	0		161	80	0	0	0	15	
90	0		161	80	0	0	0	15	
91	0		161	80	0	0	0	15	
92	0		161	80	0	0	0	15	
93	0		161	80	0	0	0	15	
94	0		161	80	0	0	0	15	
95	0		161	80	0	0	0	15	
96	0		161	80	0	0	0	15	
97	0		161	80	0	0	0	15	
98	0		161	80	0	0	0	15	
99	0		161	80	0	0	0	15	
100	0		161	80	0	0	0	15	
101	0		161	80	0	0	0	15	
102	0		161	80	0	0	0	15	
103	0		161	80	0	0	0	15	
104	0		161	80	0	0	0	15	
105	0		161	80	0	0	0	15	
106	0		161	80	0	0	0	15	
107	0		161	80	0	0	0	15	

Intersection Name TSR & Langer			Agency Washington County, OR				Controller ID 570		
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108	0		161	80	0	0	0	15	
109	0		161	80	0	0	0	15	
110	0		161	80	0	0	0	15	
111	0		161	80	0	0	0	15	
112	0		161	80	0	0	0	15	
113	0		161	80	0	0	0	15	
114	0		161	80	0	0	0	15	
115	0		161	80	0	0	0	15	
116	0		161	80	0	0	0	15	
117	0		161	80	0	0	0	15	
118	0		161	80	0	0	0	15	
119	0		161	80	0	0	0	15	
120	0		161	80	0	0	0	15	
121	0		161	80	0	0	0	15	
122	0		161	80	0	0	0	15	
123	0		161	80	0	0	0	15	
124	0		161	80	0	0	0	15	
125	0		161	80	0	0	0	15	
126	0		161	80	0	0	0	15	
127	0		161	80	0	0	0	15	
128	0		161	80	0	0	0	15	
129	0		161	80	0	0	0	15	
130	0		161	80	0	0	0	15	
131	0		161	80	0	0	0	15	
132	0		161	80	0	0	0	15	
133	0		161	80	0	0	0	15	
134	0		161	80	0	0	0	15	
135	0		161	80	0	0	0	15	
136	0		161	80	0	0	0	15	
137	0		161	80	0	0	0	15	
138	0		161	80	0	0	0	15	
139	0		161	80	0	0	0	15	
140	0		161	80	0	0	0	15	
141	0		161	80	0	0	0	15	
142	0		161	80	0	0	0	15	
143	0		161	80	0	0	0	15	
144	0		161	80	0	0	0	15	
145	0		161	80	0	0	0	15	
146	0		161	80	0	0	0	15	
147	0		161	80	0	0	0	15	
148	0		161	80	0	0	0	15	
149	0		161	80	0	0	0	15	
150	0		161	80	0	0	0	15	
151	0		161	80	0	0	0	15	
152	0		161	80	0	0	0	15	
153	0		161	80	0	0	0	15	
154	0		161	80	0	0	0	15	
155	0		161	80	0	0	0	15	
156	0		161	80	0	0	0	15	
157	0		161	80	0	0	0	15	
158	0		161	80	0	0	0	15	
159	0		161	80	0	0	0	15	
160	0		161	80	0	0	0	15	
161	0		161	80	0	0	0	15	
162	0		161	80	0	0	0	15	
163	0		161	80	0	0	0	15	
164	0		161	80	0	0	0	15	
165	0		161	80	0	0	0	15	
166	0		161	80	0	0	0	15	
167	0		161	80	0	0	0	15	
168	0		161	80	0	0	0	15	
169	0		161	80	0	0	0	15	
170	0		161	80	0	0	0	15	
171	0		161	80	0	0	0	15	
172	0		161	80	0	0	0	15	



Intersection Name TSR & Langer			Agency Washington County, OR				Controller ID 570		
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173	0		161	80	0	0	0	15	
174	0		161	80	0	0	0	15	
175	0		161	80	0	0	0	15	
176	0		161	80	0	0	0	15	
177	0		161	80	0	0	0	15	
178	0		161	80	0	0	0	15	
179	0		161	80	0	0	0	15	
180	0		161	80	0	0	0	15	
181	0		161	80	0	0	0	15	
182	0		161	80	0	0	0	15	
183	0		161	80	0	0	0	15	
184	0		161	80	0	0	0	15	
185	0		161	80	0	0	0	15	
186	0		161	80	0	0	0	15	
187	0		161	80	0	0	0	15	
188	0		161	80	0	0	0	15	
189	0		161	80	0	0	0	15	
190	0		161	80	0	0	0	15	
191	0		161	80	0	0	0	15	
192	0		161	80	0	0	0	15	
193	0		161	80	0	0	0	15	
194	0		161	80	0	0	0	15	
195	0		161	80	0	0	0	15	
196	0		161	80	0	0	0	15	
197	0		161	80	0	0	0	15	
198	0		161	80	0	0	0	15	
199	0		161	80	0	0	0	15	
200	0		161	80	0	0	0	15	
201	0		161	80	0	0	0	15	
202	0		161	80	0	0	0	15	
203	0		161	80	0	0	0	15	
204	0		161	80	0	0	0	15	
205	0		161	80	0	0	0	15	
206	0		161	80	0	0	0	15	
207	0		161	80	0	0	0	15	
208	0		161	80	0	0	0	15	
209	0		161	80	0	0	0	15	
210	0		161	80	0	0	0	15	
211	0		161	80	0	0	0	15	
212	0		161	80	0	0	0	15	
213	0		161	80	0	0	0	15	
214	0		161	80	0	0	0	15	
215	0		161	80	0	0	0	15	
216	0		161	80	0	0	0	15	
217	0		161	80	0	0	0	15	
218	0		161	80	0	0	0	15	
219	0		161	80	0	0	0	15	
220	0		161	80	0	0	0	15	
221	0		161	80	0	0	0	15	
222	0		161	80	0	0	0	15	
223	0		161	80	0	0	0	15	
224	0		161	80	0	0	0	15	
225	0		161	80	0	0	0	15	
226	0		161	80	0	0	0	15	
227	0		161	80	0	0	0	15	
228	0		161	80	0	0	0	15	
229	0		161	80	0	0	0	15	
230	0		161	80	0	0	0	15	
231	0		161	80	0	0	0	15	
232	0		161	80	0	0	0	15	
233	0		161	80	0	0	0	15	
234	0		161	80	0	0	0	15	
235	0		161	80	0	0	0	15	
236	0		161	80	0	0	0	15	
237	0		161	80	0	0	0	15	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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238	0		161	80	0	0	0	15	
239	0		161	80	0	0	0	15	
240	0		161	80	0	0	0	15	
241	0		161	80	0	0	0	15	
242	0		161	80	0	0	0	15	
243	0		161	80	0	0	0	15	
244	0		161	80	0	0	0	15	
245	0		161	80	0	0	0	15	
246	0		161	80	0	0	0	15	
247	0		161	80	0	0	0	15	
248	0		161	80	0	0	0	15	
249	0		161	80	0	0	0	15	
250	0		161	80	0	0	0	15	
251	0		161	80	0	0	0	15	
252	0		161	80	0	0	0	15	
253	0		161	80	0	0	0	15	
254	0		161	80	0	0	0	15	
255	0		161	80	0	0	0	15	

**MASTER SECTION CONFIGURATION**

**Section Configuration**

Section	Control	Poll Period	Req. # Controllers	Fail Time	Algorithm Period	Description
1	None	60	1	300	240	
2	None	60	1	300	240	
3	None	60	1	300	240	
4	None	60	1	300	240	
5	None	60	1	300	240	
6	None	60	1	300	240	
7	None	60	1	300	240	
8	None	60	1	300	240	
9	None	60	1	300	240	
10	None	60	1	300	240	
11	None	60	1	300	240	
12	None	60	1	300	240	
13	None	60	1	300	240	
14	None	60	1	300	240	
15	None	60	1	300	240	
16	None	60	1	300	240	

**MASTER SYSTEM DETECTOR CONFIGURATION**

**System Detector Configuration**

Det. Index	Controller	Volume Factor	Source Type	Source Input Index
1	0	10	N/A	0
2	0	10	N/A	0
3	0	10	N/A	0
4	0	10	N/A	0
5	0	10	N/A	0
6	0	10	N/A	0
7	0	10	N/A	0
8	0	10	N/A	0
9	0	10	N/A	0
10	0	10	N/A	0
11	0	10	N/A	0
12	0	10	N/A	0
13	0	10	N/A	0
14	0	10	N/A	0
15	0	10	N/A	0
16	0	10	N/A	0
17	0	10	N/A	0
18	0	10	N/A	0
19	0	10	N/A	0
20	0	10	N/A	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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21	0	10	N/A	0
22	0	10	N/A	0
23	0	10	N/A	0
24	0	10	N/A	0
25	0	10	N/A	0
26	0	10	N/A	0
27	0	10	N/A	0
28	0	10	N/A	0
29	0	10	N/A	0
30	0	10	N/A	0
31	0	10	N/A	0
32	0	10	N/A	0
33	0	10	N/A	0
34	0	10	N/A	0
35	0	10	N/A	0
36	0	10	N/A	0
37	0	10	N/A	0
38	0	10	N/A	0
39	0	10	N/A	0
40	0	10	N/A	0
41	0	10	N/A	0
42	0	10	N/A	0
43	0	10	N/A	0
44	0	10	N/A	0
45	0	10	N/A	0
46	0	10	N/A	0
47	0	10	N/A	0
48	0	10	N/A	0
49	0	10	N/A	0
50	0	10	N/A	0
51	0	10	N/A	0
52	0	10	N/A	0
53	0	10	N/A	0
54	0	10	N/A	0
55	0	10	N/A	0
56	0	10	N/A	0
57	0	10	N/A	0
58	0	10	N/A	0
59	0	10	N/A	0
60	0	10	N/A	0
61	0	10	N/A	0
62	0	10	N/A	0
63	0	10	N/A	0
64	0	10	N/A	0
65	0	10	N/A	0
66	0	10	N/A	0
67	0	10	N/A	0
68	0	10	N/A	0
69	0	10	N/A	0
70	0	10	N/A	0
71	0	10	N/A	0
72	0	10	N/A	0
73	0	10	N/A	0
74	0	10	N/A	0
75	0	10	N/A	0
76	0	10	N/A	0
77	0	10	N/A	0
78	0	10	N/A	0
79	0	10	N/A	0
80	0	10	N/A	0
81	0	10	N/A	0
82	0	10	N/A	0
83	0	10	N/A	0
84	0	10	N/A	0
85	0	10	N/A	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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86	0	10	N/A	0
87	0	10	N/A	0
88	0	10	N/A	0
89	0	10	N/A	0
90	0	10	N/A	0
91	0	10	N/A	0
92	0	10	N/A	0
93	0	10	N/A	0
94	0	10	N/A	0
95	0	10	N/A	0
96	0	10	N/A	0
97	0	10	N/A	0
98	0	10	N/A	0
99	0	10	N/A	0
100	0	10	N/A	0
101	0	10	N/A	0
102	0	10	N/A	0
103	0	10	N/A	0
104	0	10	N/A	0
105	0	10	N/A	0
106	0	10	N/A	0
107	0	10	N/A	0
108	0	10	N/A	0
109	0	10	N/A	0
110	0	10	N/A	0
111	0	10	N/A	0
112	0	10	N/A	0
113	0	10	N/A	0
114	0	10	N/A	0
115	0	10	N/A	0
116	0	10	N/A	0
117	0	10	N/A	0
118	0	10	N/A	0
119	0	10	N/A	0
120	0	10	N/A	0
121	0	10	N/A	0
122	0	10	N/A	0
123	0	10	N/A	0
124	0	10	N/A	0
125	0	10	N/A	0
126	0	10	N/A	0
127	0	10	N/A	0
128	0	10	N/A	0
129	0	10	N/A	0
130	0	10	N/A	0
131	0	10	N/A	0
132	0	10	N/A	0
133	0	10	N/A	0
134	0	10	N/A	0
135	0	10	N/A	0
136	0	10	N/A	0
137	0	10	N/A	0
138	0	10	N/A	0
139	0	10	N/A	0
140	0	10	N/A	0
141	0	10	N/A	0
142	0	10	N/A	0
143	0	10	N/A	0
144	0	10	N/A	0
145	0	10	N/A	0
146	0	10	N/A	0
147	0	10	N/A	0
148	0	10	N/A	0
149	0	10	N/A	0
150	0	10	N/A	0

Intersection Name TSR & Langer	Agency Washington County, OR	Controller ID 570	
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151	0	10	N/A	0
152	0	10	N/A	0
153	0	10	N/A	0
154	0	10	N/A	0
155	0	10	N/A	0
156	0	10	N/A	0
157	0	10	N/A	0
158	0	10	N/A	0
159	0	10	N/A	0
160	0	10	N/A	0
161	0	10	N/A	0
162	0	10	N/A	0
163	0	10	N/A	0
164	0	10	N/A	0
165	0	10	N/A	0
166	0	10	N/A	0
167	0	10	N/A	0
168	0	10	N/A	0
169	0	10	N/A	0
170	0	10	N/A	0
171	0	10	N/A	0
172	0	10	N/A	0
173	0	10	N/A	0
174	0	10	N/A	0
175	0	10	N/A	0
176	0	10	N/A	0
177	0	10	N/A	0
178	0	10	N/A	0
179	0	10	N/A	0
180	0	10	N/A	0
181	0	10	N/A	0
182	0	10	N/A	0
183	0	10	N/A	0
184	0	10	N/A	0
185	0	10	N/A	0
186	0	10	N/A	0
187	0	10	N/A	0
188	0	10	N/A	0
189	0	10	N/A	0
190	0	10	N/A	0
191	0	10	N/A	0
192	0	10	N/A	0
193	0	10	N/A	0
194	0	10	N/A	0
195	0	10	N/A	0
196	0	10	N/A	0
197	0	10	N/A	0
198	0	10	N/A	0
199	0	10	N/A	0
200	0	10	N/A	0
201	0	10	N/A	0
202	0	10	N/A	0
203	0	10	N/A	0
204	0	10	N/A	0
205	0	10	N/A	0
206	0	10	N/A	0
207	0	10	N/A	0
208	0	10	N/A	0
209	0	10	N/A	0
210	0	10	N/A	0
211	0	10	N/A	0
212	0	10	N/A	0
213	0	10	N/A	0
214	0	10	N/A	0
215	0	10	N/A	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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216	0	10	N/A	0
217	0	10	N/A	0
218	0	10	N/A	0
219	0	10	N/A	0
220	0	10	N/A	0
221	0	10	N/A	0
222	0	10	N/A	0
223	0	10	N/A	0
224	0	10	N/A	0
225	0	10	N/A	0
226	0	10	N/A	0
227	0	10	N/A	0
228	0	10	N/A	0
229	0	10	N/A	0
230	0	10	N/A	0
231	0	10	N/A	0
232	0	10	N/A	0
233	0	10	N/A	0
234	0	10	N/A	0
235	0	10	N/A	0
236	0	10	N/A	0
237	0	10	N/A	0
238	0	10	N/A	0
239	0	10	N/A	0
240	0	10	N/A	0
241	0	10	N/A	0
242	0	10	N/A	0
243	0	10	N/A	0
244	0	10	N/A	0
245	0	10	N/A	0
246	0	10	N/A	0
247	0	10	N/A	0
248	0	10	N/A	0
249	0	10	N/A	0
250	0	10	N/A	0
251	0	10	N/A	0
252	0	10	N/A	0
253	0	10	N/A	0
254	0	10	N/A	0
255	0	10	N/A	0

**USER PROGRAMS CONFIGURATION**

**User Programs Info**

Program	Enabled	Description
1	Enabled	
2	Enabled	
3	Enabled	
4	Enabled	
5	Enabled	
6	Enabled	
7	Enabled	
8	Enabled	
9	Enabled	
10	Enabled	
11	Enabled	
12	Enabled	
13	Enabled	
14	Enabled	
15	Enabled	
16	Enabled	
17	Enabled	
18	Enabled	
19	Enabled	
20	Enabled	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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21	Enabled	
22	Enabled	
23	Enabled	
24	Enabled	
25	Enabled	
26	Enabled	
27	Enabled	
28	Enabled	
29	Enabled	
30	Enabled	
31	Enabled	
32	Enabled	

**User Program 1**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	1	None	None	0	None	0	0	0	
2	0	None	0	None	None	2	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 2**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	100	None	None	100	None	1	0	0	
2	0	None	0	None	None	0	None	10	0	0	
3	0	None	0	None	None	0	None	15	0	0	
4	0	None	101	None	None	0	None	0	0	0	
5	0	None	0	None	None	101	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 3**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 4**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer				<b>Agency</b> Washington County, OR				<b>Controller ID</b> 570			
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45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 5**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 6**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer				<b>Agency</b> Washington County, OR				<b>Controller ID</b> 570		
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41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**User Program 7**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 8**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 9**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 10**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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33	0	None	0	None	None	0	None	0	0	0
34	0	None	0	None	None	0	None	0	0	0
35	0	None	0	None	None	0	None	0	0	0
36	0	None	0	None	None	0	None	0	0	0
37	0	None	0	None	None	0	None	0	0	0
38	0	None	0	None	None	0	None	0	0	0
39	0	None	0	None	None	0	None	0	0	0
40	0	None	0	None	None	0	None	0	0	0
41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**User Program 11**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 12**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 13**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 14**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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25	0	None	0	None	None	0	None	0	0	0
26	0	None	0	None	None	0	None	0	0	0
27	0	None	0	None	None	0	None	0	0	0
28	0	None	0	None	None	0	None	0	0	0
29	0	None	0	None	None	0	None	0	0	0
30	0	None	0	None	None	0	None	0	0	0
31	0	None	0	None	None	0	None	0	0	0
32	0	None	0	None	None	0	None	0	0	0
33	0	None	0	None	None	0	None	0	0	0
34	0	None	0	None	None	0	None	0	0	0
35	0	None	0	None	None	0	None	0	0	0
36	0	None	0	None	None	0	None	0	0	0
37	0	None	0	None	None	0	None	0	0	0
38	0	None	0	None	None	0	None	0	0	0
39	0	None	0	None	None	0	None	0	0	0
40	0	None	0	None	None	0	None	0	0	0
41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**User Program 15**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 16**

Stmnt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer				<b>Agency</b> Washington County, OR				<b>Controller ID</b> 570		
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21	0	None	0	None	None	0	None	0	0	0
22	0	None	0	None	None	0	None	0	0	0
23	0	None	0	None	None	0	None	0	0	0
24	0	None	0	None	None	0	None	0	0	0
25	0	None	0	None	None	0	None	0	0	0
26	0	None	0	None	None	0	None	0	0	0
27	0	None	0	None	None	0	None	0	0	0
28	0	None	0	None	None	0	None	0	0	0
29	0	None	0	None	None	0	None	0	0	0
30	0	None	0	None	None	0	None	0	0	0
31	0	None	0	None	None	0	None	0	0	0
32	0	None	0	None	None	0	None	0	0	0
33	0	None	0	None	None	0	None	0	0	0
34	0	None	0	None	None	0	None	0	0	0
35	0	None	0	None	None	0	None	0	0	0
36	0	None	0	None	None	0	None	0	0	0
37	0	None	0	None	None	0	None	0	0	0
38	0	None	0	None	None	0	None	0	0	0
39	0	None	0	None	None	0	None	0	0	0
40	0	None	0	None	None	0	None	0	0	0
41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**User Program 17**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 18**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	



<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 19**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 20**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 21**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 22**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer				<b>Agency</b> Washington County, OR				<b>Controller ID</b> 570		
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9	0	None	0	None	None	0	None	0	0	0
10	0	None	0	None	None	0	None	0	0	0
11	0	None	0	None	None	0	None	0	0	0
12	0	None	0	None	None	0	None	0	0	0
13	0	None	0	None	None	0	None	0	0	0
14	0	None	0	None	None	0	None	0	0	0
15	0	None	0	None	None	0	None	0	0	0
16	0	None	0	None	None	0	None	0	0	0
17	0	None	0	None	None	0	None	0	0	0
18	0	None	0	None	None	0	None	0	0	0
19	0	None	0	None	None	0	None	0	0	0
20	0	None	0	None	None	0	None	0	0	0
21	0	None	0	None	None	0	None	0	0	0
22	0	None	0	None	None	0	None	0	0	0
23	0	None	0	None	None	0	None	0	0	0
24	0	None	0	None	None	0	None	0	0	0
25	0	None	0	None	None	0	None	0	0	0
26	0	None	0	None	None	0	None	0	0	0
27	0	None	0	None	None	0	None	0	0	0
28	0	None	0	None	None	0	None	0	0	0
29	0	None	0	None	None	0	None	0	0	0
30	0	None	0	None	None	0	None	0	0	0
31	0	None	0	None	None	0	None	0	0	0
32	0	None	0	None	None	0	None	0	0	0
33	0	None	0	None	None	0	None	0	0	0
34	0	None	0	None	None	0	None	0	0	0
35	0	None	0	None	None	0	None	0	0	0
36	0	None	0	None	None	0	None	0	0	0
37	0	None	0	None	None	0	None	0	0	0
38	0	None	0	None	None	0	None	0	0	0
39	0	None	0	None	None	0	None	0	0	0
40	0	None	0	None	None	0	None	0	0	0
41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**User Program 23**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 24**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer				<b>Agency</b> Washington County, OR				<b>Controller ID</b> 570		
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5	0	None	0	None	None	0	None	0	0	0
6	0	None	0	None	None	0	None	0	0	0
7	0	None	0	None	None	0	None	0	0	0
8	0	None	0	None	None	0	None	0	0	0
9	0	None	0	None	None	0	None	0	0	0
10	0	None	0	None	None	0	None	0	0	0
11	0	None	0	None	None	0	None	0	0	0
12	0	None	0	None	None	0	None	0	0	0
13	0	None	0	None	None	0	None	0	0	0
14	0	None	0	None	None	0	None	0	0	0
15	0	None	0	None	None	0	None	0	0	0
16	0	None	0	None	None	0	None	0	0	0
17	0	None	0	None	None	0	None	0	0	0
18	0	None	0	None	None	0	None	0	0	0
19	0	None	0	None	None	0	None	0	0	0
20	0	None	0	None	None	0	None	0	0	0
21	0	None	0	None	None	0	None	0	0	0
22	0	None	0	None	None	0	None	0	0	0
23	0	None	0	None	None	0	None	0	0	0
24	0	None	0	None	None	0	None	0	0	0
25	0	None	0	None	None	0	None	0	0	0
26	0	None	0	None	None	0	None	0	0	0
27	0	None	0	None	None	0	None	0	0	0
28	0	None	0	None	None	0	None	0	0	0
29	0	None	0	None	None	0	None	0	0	0
30	0	None	0	None	None	0	None	0	0	0
31	0	None	0	None	None	0	None	0	0	0
32	0	None	0	None	None	0	None	0	0	0
33	0	None	0	None	None	0	None	0	0	0
34	0	None	0	None	None	0	None	0	0	0
35	0	None	0	None	None	0	None	0	0	0
36	0	None	0	None	None	0	None	0	0	0
37	0	None	0	None	None	0	None	0	0	0
38	0	None	0	None	None	0	None	0	0	0
39	0	None	0	None	None	0	None	0	0	0
40	0	None	0	None	None	0	None	0	0	0
41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**User Program 25**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer				<b>Agency</b> Washington County, OR				<b>Controller ID</b> 570		
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3	0	None	0	None	None	0	None	0	0	0
4	0	None	0	None	None	0	None	0	0	0
5	0	None	0	None	None	0	None	0	0	0
6	0	None	0	None	None	0	None	0	0	0
7	0	None	0	None	None	0	None	0	0	0
8	0	None	0	None	None	0	None	0	0	0
9	0	None	0	None	None	0	None	0	0	0
10	0	None	0	None	None	0	None	0	0	0
11	0	None	0	None	None	0	None	0	0	0
12	0	None	0	None	None	0	None	0	0	0
13	0	None	0	None	None	0	None	0	0	0
14	0	None	0	None	None	0	None	0	0	0
15	0	None	0	None	None	0	None	0	0	0
16	0	None	0	None	None	0	None	0	0	0
17	0	None	0	None	None	0	None	0	0	0
18	0	None	0	None	None	0	None	0	0	0
19	0	None	0	None	None	0	None	0	0	0
20	0	None	0	None	None	0	None	0	0	0
21	0	None	0	None	None	0	None	0	0	0
22	0	None	0	None	None	0	None	0	0	0
23	0	None	0	None	None	0	None	0	0	0
24	0	None	0	None	None	0	None	0	0	0
25	0	None	0	None	None	0	None	0	0	0
26	0	None	0	None	None	0	None	0	0	0
27	0	None	0	None	None	0	None	0	0	0
28	0	None	0	None	None	0	None	0	0	0
29	0	None	0	None	None	0	None	0	0	0
30	0	None	0	None	None	0	None	0	0	0
31	0	None	0	None	None	0	None	0	0	0
32	0	None	0	None	None	0	None	0	0	0
33	0	None	0	None	None	0	None	0	0	0
34	0	None	0	None	None	0	None	0	0	0
35	0	None	0	None	None	0	None	0	0	0
36	0	None	0	None	None	0	None	0	0	0
37	0	None	0	None	None	0	None	0	0	0
38	0	None	0	None	None	0	None	0	0	0
39	0	None	0	None	None	0	None	0	0	0
40	0	None	0	None	None	0	None	0	0	0
41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**User Program 26**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
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Intersection Name TSR & Langer				Agency Washington County, OR				Controller ID 570		
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1	0	None	0	None	None	0	None	0	0	0
2	0	None	0	None	None	0	None	0	0	0
3	0	None	0	None	None	0	None	0	0	0
4	0	None	0	None	None	0	None	0	0	0
5	0	None	0	None	None	0	None	0	0	0
6	0	None	0	None	None	0	None	0	0	0
7	0	None	0	None	None	0	None	0	0	0
8	0	None	0	None	None	0	None	0	0	0
9	0	None	0	None	None	0	None	0	0	0
10	0	None	0	None	None	0	None	0	0	0
11	0	None	0	None	None	0	None	0	0	0
12	0	None	0	None	None	0	None	0	0	0
13	0	None	0	None	None	0	None	0	0	0
14	0	None	0	None	None	0	None	0	0	0
15	0	None	0	None	None	0	None	0	0	0
16	0	None	0	None	None	0	None	0	0	0
17	0	None	0	None	None	0	None	0	0	0
18	0	None	0	None	None	0	None	0	0	0
19	0	None	0	None	None	0	None	0	0	0
20	0	None	0	None	None	0	None	0	0	0
21	0	None	0	None	None	0	None	0	0	0
22	0	None	0	None	None	0	None	0	0	0
23	0	None	0	None	None	0	None	0	0	0
24	0	None	0	None	None	0	None	0	0	0
25	0	None	0	None	None	0	None	0	0	0
26	0	None	0	None	None	0	None	0	0	0
27	0	None	0	None	None	0	None	0	0	0
28	0	None	0	None	None	0	None	0	0	0
29	0	None	0	None	None	0	None	0	0	0
30	0	None	0	None	None	0	None	0	0	0
31	0	None	0	None	None	0	None	0	0	0
32	0	None	0	None	None	0	None	0	0	0
33	0	None	0	None	None	0	None	0	0	0
34	0	None	0	None	None	0	None	0	0	0
35	0	None	0	None	None	0	None	0	0	0
36	0	None	0	None	None	0	None	0	0	0
37	0	None	0	None	None	0	None	0	0	0
38	0	None	0	None	None	0	None	0	0	0
39	0	None	0	None	None	0	None	0	0	0
40	0	None	0	None	None	0	None	0	0	0
41	0	None	0	None	None	0	None	0	0	0
42	0	None	0	None	None	0	None	0	0	0
43	0	None	0	None	None	0	None	0	0	0
44	0	None	0	None	None	0	None	0	0	0
45	0	None	0	None	None	0	None	0	0	0
46	0	None	0	None	None	0	None	0	0	0
47	0	None	0	None	None	0	None	0	0	0
48	0	None	0	None	None	0	None	0	0	0
49	0	None	0	None	None	0	None	0	0	0
50	0	None	0	None	None	0	None	0	0	0
51	0	None	0	None	None	0	None	0	0	0
52	0	None	0	None	None	0	None	0	0	0
53	0	None	0	None	None	0	None	0	0	0
54	0	None	0	None	None	0	None	0	0	0
55	0	None	0	None	None	0	None	0	0	0
56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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**User Program 27**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	

Intersection Name TSR & Langer				Agency Washington County, OR				Controller ID 570			
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64	0	None	0	None	None	0	None	0	0	0	
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**User Program 28**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer				<b>Agency</b> Washington County, OR				<b>Controller ID</b> 570			
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62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 29**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 30**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	
56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 31**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
22	0	None	0	None	None	0	None	0	0	0	
23	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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56	0	None	0	None	None	0	None	0	0	0	
57	0	None	0	None	None	0	None	0	0	0	
58	0	None	0	None	None	0	None	0	0	0	
59	0	None	0	None	None	0	None	0	0	0	
60	0	None	0	None	None	0	None	0	0	0	
61	0	None	0	None	None	0	None	0	0	0	
62	0	None	0	None	None	0	None	0	0	0	
63	0	None	0	None	None	0	None	0	0	0	
64	0	None	0	None	None	0	None	0	0	0	

**User Program 32**

Stmt	Result Value	Result	Index	Operation	Parameter A	Index	Parameter B	Index	Delay	Ext.	Description
1	0	None	0	None	None	0	None	0	0	0	
2	0	None	0	None	None	0	None	0	0	0	
3	0	None	0	None	None	0	None	0	0	0	
4	0	None	0	None	None	0	None	0	0	0	
5	0	None	0	None	None	0	None	0	0	0	
6	0	None	0	None	None	0	None	0	0	0	
7	0	None	0	None	None	0	None	0	0	0	
8	0	None	0	None	None	0	None	0	0	0	
9	0	None	0	None	None	0	None	0	0	0	
10	0	None	0	None	None	0	None	0	0	0	
11	0	None	0	None	None	0	None	0	0	0	
12	0	None	0	None	None	0	None	0	0	0	
13	0	None	0	None	None	0	None	0	0	0	
14	0	None	0	None	None	0	None	0	0	0	
15	0	None	0	None	None	0	None	0	0	0	
16	0	None	0	None	None	0	None	0	0	0	
17	0	None	0	None	None	0	None	0	0	0	
18	0	None	0	None	None	0	None	0	0	0	
19	0	None	0	None	None	0	None	0	0	0	
20	0	None	0	None	None	0	None	0	0	0	
21	0	None	0	None	None	0	None	0	0	0	
24	0	None	0	None	None	0	None	0	0	0	
25	0	None	0	None	None	0	None	0	0	0	
26	0	None	0	None	None	0	None	0	0	0	
27	0	None	0	None	None	0	None	0	0	0	
28	0	None	0	None	None	0	None	0	0	0	
29	0	None	0	None	None	0	None	0	0	0	
30	0	None	0	None	None	0	None	0	0	0	
31	0	None	0	None	None	0	None	0	0	0	
32	0	None	0	None	None	0	None	0	0	0	
33	0	None	0	None	None	0	None	0	0	0	
34	0	None	0	None	None	0	None	0	0	0	
35	0	None	0	None	None	0	None	0	0	0	
36	0	None	0	None	None	0	None	0	0	0	
37	0	None	0	None	None	0	None	0	0	0	
38	0	None	0	None	None	0	None	0	0	0	
39	0	None	0	None	None	0	None	0	0	0	
40	0	None	0	None	None	0	None	0	0	0	
41	0	None	0	None	None	0	None	0	0	0	
42	0	None	0	None	None	0	None	0	0	0	
43	0	None	0	None	None	0	None	0	0	0	
44	0	None	0	None	None	0	None	0	0	0	
45	0	None	0	None	None	0	None	0	0	0	
46	0	None	0	None	None	0	None	0	0	0	
47	0	None	0	None	None	0	None	0	0	0	
48	0	None	0	None	None	0	None	0	0	0	
49	0	None	0	None	None	0	None	0	0	0	
50	0	None	0	None	None	0	None	0	0	0	
51	0	None	0	None	None	0	None	0	0	0	
52	0	None	0	None	None	0	None	0	0	0	
53	0	None	0	None	None	0	None	0	0	0	
54	0	None	0	None	None	0	None	0	0	0	
55	0	None	0	None	None	0	None	0	0	0	

<b>Intersection Name</b> TSR & Langer	<b>Agency</b> Washington County, OR	<b>Controller ID</b> 570	
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56	0	None	0	None	None	0	None	0	0	0
57	0	None	0	None	None	0	None	0	0	0
58	0	None	0	None	None	0	None	0	0	0
59	0	None	0	None	None	0	None	0	0	0
60	0	None	0	None	None	0	None	0	0	0
61	0	None	0	None	None	0	None	0	0	0
62	0	None	0	None	None	0	None	0	0	0
63	0	None	0	None	None	0	None	0	0	0
64	0	None	0	None	None	0	None	0	0	0

**QUEUE RESPONSIVE PLANS**

**Signatures**

Plan	Detectors	Vol On (vph)	Vol Off (vph)	Mult Det	Occupancy On	Occupancy Off	Det On Limit
1		0	0	Average	0	0	0
2		0	0	Average	0	0	0
3		0	0	Average	0	0	0
4		0	0	Average	0	0	0
5		0	0	Average	0	0	0
6		0	0	Average	0	0	0
7		0	0	Average	0	0	0
8		0	0	Average	0	0	0

**Actions**

Plan	Enable	Priority	Min Response Time	Max Response Time	Add Time	Add To Phase	Subtract From Phases	Call Phases	Temporary Pattern	Disable Prioritizers
1	Disable	1	0	0	0	0			0	
2	Disable	1	0	0	0	0			0	
3	Disable	1	0	0	0	0			0	
4	Disable	1	0	0	0	0			0	
5	Disable	1	0	0	0	0			0	
6	Disable	1	0	0	0	0			0	
7	Disable	1	0	0	0	0			0	
8	Disable	1	0	0	0	0			0	

**COMMENTS:**

COMMENTS:

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Authorized Signature: \_\_\_\_\_

Date: \_\_\_\_\_



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APPENDIX I  
**OPERATIONS  
CALCULATIONS**

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	689	113	61	491	53	69	88	85	30	50	5
Future Volume (vph)	4	689	113	61	491	53	69	88	85	30	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
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	0.98	1.00	1.00		1.00	1.00	0.98	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	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1681	1495	1687	1486		1656	1776	1559	1503	1725	
Flt Permitted	0.36	1.00	1.00	0.19	1.00		0.59	1.00	1.00	0.69	1.00	
Satd. Flow (perm)	666	1681	1495	332	1486		1029	1776	1559	1099	1725	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	749	123	66	534	58	75	96	92	33	54	5
RTOR Reduction (vph)	0	0	46	0	3	0	0	0	76	0	4	0
Lane Group Flow (vph)	4	749	77	66	589	0	75	96	16	33	55	0
Confl. Peds. (#/hr)			1	1					1	1		
Heavy Vehicles (%)	2%	13%	6%	7%	23%	53%	9%	7%	2%	20%	4%	60%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	48.1	47.4	54.1	55.1	50.9		17.9	11.2	15.4	13.9	9.2	
Effective Green, g (s)	48.1	48.9	54.1	55.1	52.4		17.9	12.2	15.4	13.9	10.2	
Actuated g/C Ratio	0.56	0.57	0.63	0.64	0.61		0.21	0.14	0.18	0.16	0.12	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5	0.2	1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	381	955	940	278	905		263	251	279	199	204	
v/s Ratio Prot	0.00	c0.45	0.01	c0.01	c0.40		c0.02	c0.05	0.00	0.01	0.03	
v/s Ratio Perm	0.01		0.05	0.14			0.04		0.01	0.02		
v/c Ratio	0.01	0.78	0.08	0.24	0.65		0.29	0.38	0.06	0.17	0.27	
Uniform Delay, d1	8.8	14.4	6.2	10.1	10.9		28.3	33.5	29.3	30.9	34.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	4.8	0.0	0.2	2.1		0.2	0.4	0.0	0.1	0.3	
Delay (s)	8.8	19.2	6.3	10.3	12.9		28.5	33.8	29.3	31.0	34.8	
Level of Service	A	B	A	B	B		C	C	C	C	C	
Approach Delay (s)		17.4			12.7			30.7			33.4	
Approach LOS		B			B			C			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			18.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			86.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			61.3%			ICU Level of Service				B		
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary  
 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	689	113	61	491	53	69	88	85	30	50	5
Future Volume (veh/h)	4	689	113	61	491	53	69	88	85	30	50	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1811	1796	1559	1115	1767	1796	1870	1604	1841	1011
Adj Flow Rate, veh/h	4	749	123	66	534	58	75	96	92	33	54	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	6	7	23	53	9	7	2	20	4	60
Cap, veh/h	426	1025	991	334	888	96	258	172	207	213	151	14
Arrive On Green	0.01	0.60	0.58	0.05	0.64	0.62	0.06	0.10	0.08	0.06	0.09	0.08
Sat Flow, veh/h	1781	1707	1533	1711	1382	150	1682	1796	1576	1527	1658	154
Grp Volume(v), veh/h	4	749	123	66	0	592	75	96	92	33	0	59
Grp Sat Flow(s),veh/h/ln	1781	1707	1533	1711	0	1532	1682	1796	1576	1527	0	1812
Q Serve(g_s), s	0.1	25.5	2.5	1.2	0.0	18.4	3.3	4.2	4.4	1.5	0.0	2.5
Cycle Q Clear(g_c), s	0.1	25.5	2.5	1.2	0.0	18.4	3.3	4.2	4.4	1.5	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	426	1025	991	334	0	984	258	172	207	213	0	165
V/C Ratio(X)	0.01	0.73	0.12	0.20	0.00	0.60	0.29	0.56	0.44	0.15	0.00	0.36
Avail Cap(c_a), veh/h	657	1173	1125	484	0	1053	377	353	365	328	0	356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	11.6	5.5	10.3	0.0	8.5	31.3	35.2	32.7	31.0	0.0	34.8
Incr Delay (d2), s/veh	0.0	2.5	0.1	0.1	0.0	1.2	0.2	1.1	0.6	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.7	0.7	0.3	0.0	4.8	1.3	1.8	1.7	0.6	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	14.1	5.6	10.4	0.0	9.8	31.5	36.2	33.2	31.1	0.0	35.3
LnGrp LOS	A	B	A	B	A	A	C	D	C	C	A	D
Approach Vol, veh/h		876			658			263				92
Approach Delay, s/veh		12.9			9.8			33.8				33.8
Approach LOS		B			A			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	52.9	9.3	11.4	4.4	56.4	8.9	11.8				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	3.2	27.5	5.3	4.5	2.1	20.4	3.5	6.4				
Green Ext Time (p_c), s	0.0	20.0	0.0	0.2	0.0	16.1	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	762	2	35	588	2	51
Future Vol, veh/h	762	2	35	588	2	51
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	14	2	17	21	50	6
Mvmt Flow	794	2	36	613	2	53

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	798	0	1482
Stage 1	-	-	-	-	797
Stage 2	-	-	-	-	685
Critical Hdwy	-	-	4.27	-	6.9
Critical Hdwy Stg 1	-	-	-	-	5.9
Critical Hdwy Stg 2	-	-	-	-	5.9
Follow-up Hdwy	-	-	2.353	-	3.95
Pot Cap-1 Maneuver	-	-	762	-	108
Stage 1	-	-	-	-	370
Stage 2	-	-	-	-	422
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	761	-	103
Mov Cap-2 Maneuver	-	-	-	-	223
Stage 1	-	-	-	-	369
Stage 2	-	-	-	-	402

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	223	379	-	-	761	-
HCM Lane V/C Ratio	0.009	0.14	-	-	0.048	-
HCM Control Delay (s)	21.3	16	-	-	10	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0	0.5	-	-	0.2	-

HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	4.2								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	238		106		358		154		
Demand Flow Rate, veh/h	247		110		375		165		
Vehicles Circulating, veh/h	208		358		111		198		
Vehicles Exiting, veh/h	155		128		344		270		
Ped Vol Crossing Leg, #/h	1		0		0		0		
Ped Cap Adj	0.999		1.000		1.000		1.000		
Approach Delay, s/veh	4.2		4.6		4.3		3.9		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.470	0.530	0.873	0.127	0.469	0.531	0.473	0.527	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	116	131	96	14	176	199	78	87	
Cap Entry Lane, veh/h	1115	1190	971	1047	1219	1292	1125	1200	
Entry HV Adj Factor	0.964	0.962	0.982	0.857	0.956	0.953	0.927	0.937	
Flow Entry, veh/h	112	126	94	12	168	190	72	82	
Cap Entry, veh/h	1073	1144	954	898	1165	1231	1043	1125	
V/C Ratio	0.104	0.110	0.099	0.013	0.144	0.154	0.069	0.072	
Control Delay, s/veh	4.3	4.1	4.7	4.1	4.3	4.2	4.1	3.8	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	0	0	1	1	0	0	

HCM 6th TWSC  
4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	0	53	0	0	37
Future Vol, veh/h	0	0	53	0	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	0	0	55	0	0	39

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	94	55	0	0	55	0
Stage 1	55	-	-	-	-	-
Stage 2	39	-	-	-	-	-
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	906	1012	-	-	1550	-
Stage 1	968	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	906	1012	-	-	1550	-
Mov Cap-2 Maneuver	858	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	983	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1550	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	0	0	53	0	0	37
Future Vol, veh/h	0	0	53	0	0	37
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	0	0	55	0	0	39

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	94	55	0	0	55	0
Stage 1	55	-	-	-	-	-
Stage 2	39	-	-	-	-	-
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	906	1012	-	-	1550	-
Stage 1	968	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	906	1012	-	-	1550	-
Mov Cap-2 Maneuver	858	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	983	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1550	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	656	181	142	691	34	141	88	107	35	159	14
Future Volume (vph)	9	656	181	142	691	34	141	88	107	35	159	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
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	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	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1769	1712	1553	1770	1794		1770	1863	1553	1583	1840	
Flt Permitted	0.21	1.00	1.00	0.15	1.00		0.46	1.00	1.00	0.69	1.00	
Satd. Flow (perm)	396	1712	1553	288	1794		860	1863	1553	1142	1840	
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)	9	683	189	148	720	35	147	92	111	36	166	15
RTOR Reduction (vph)	0	0	84	0	1	0	0	0	83	0	2	0
Lane Group Flow (vph)	9	683	105	148	754	0	147	92	28	36	179	0
Confl. Peds. (#/hr)	4					4						
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	11%	4%	2%	5%	6%	2%	2%	4%	14%	2%	2%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)	45.1	44.4	52.5	56.0	51.3		24.3	16.2	23.8	24.5	16.3	
Effective Green, g (s)	45.1	45.9	52.5	56.0	52.8		24.3	17.2	23.8	24.5	17.3	
Actuated g/C Ratio	0.48	0.48	0.55	0.59	0.56		0.26	0.18	0.25	0.26	0.18	
Clearance Time (s)	4.0	5.5	4.0	4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5	0.2	1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	198	828	859	288	998		297	337	389	332	335	
v/s Ratio Prot	0.00	c0.40	0.01	c0.04	c0.42		c0.04	0.05	0.01	0.01	c0.10	
v/s Ratio Perm	0.02		0.06	0.26			0.08		0.01	0.02		
v/c Ratio	0.05	0.82	0.12	0.51	0.76		0.49	0.27	0.07	0.11	0.53	
Uniform Delay, d1	15.2	21.0	10.2	14.6	16.1		28.8	33.5	27.1	26.7	35.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	7.3	0.0	0.6	3.7		0.5	0.2	0.0	0.1	0.8	
Delay (s)	15.2	28.4	10.2	15.2	19.8		29.2	33.6	27.1	26.8	36.0	
Level of Service	B	C	B	B	B		C	C	C	C	D	
Approach Delay (s)		24.3			19.1			29.7			34.4	
Approach LOS		C			B			C			C	

### Intersection Summary

HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	94.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



# HCM 6th Signalized Intersection Summary

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	656	181	142	691	34	141	88	107	35	159	14
Future Volume (veh/h)	9	656	181	142	691	34	141	88	107	35	159	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1737	1841	1870	1826	1811	1870	1870	1841	1693	1870	1870
Adj Flow Rate, veh/h	9	683	189	148	720	35	147	92	111	36	166	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	11	4	2	5	6	2	2	4	14	2	2
Cap, veh/h	295	940	959	327	1013	49	274	313	334	291	222	20
Arrive On Green	0.01	0.54	0.52	0.06	0.59	0.57	0.09	0.17	0.16	0.06	0.13	0.12
Sat Flow, veh/h	1781	1737	1554	1781	1725	84	1781	1870	1560	1612	1690	153
Grp Volume(v), veh/h	9	683	189	148	0	755	147	92	111	36	0	181
Grp Sat Flow(s),veh/h/ln	1781	1737	1554	1781	0	1808	1781	1870	1560	1612	0	1843
Q Serve(g_s), s	0.2	26.7	4.8	3.2	0.0	26.6	6.3	3.9	5.4	1.7	0.0	8.5
Cycle Q Clear(g_c), s	0.2	26.7	4.8	3.2	0.0	26.6	6.3	3.9	5.4	1.7	0.0	8.5
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	295	940	959	327	0	1063	274	313	334	291	0	242
V/C Ratio(X)	0.03	0.73	0.20	0.45	0.00	0.71	0.54	0.29	0.33	0.12	0.00	0.75
Avail Cap(c_a), veh/h	493	1082	1086	442	0	1127	329	333	350	398	0	328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.6	15.6	7.5	13.7	0.0	13.1	29.9	32.8	29.9	31.2	0.0	37.7
Incr Delay (d2), s/veh	0.0	2.7	0.2	0.4	0.0	2.4	0.6	0.2	0.2	0.1	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	10.1	1.5	1.0	0.0	9.5	2.7	1.7	2.0	0.7	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	18.3	7.7	14.0	0.0	15.5	30.5	32.9	30.1	31.3	0.0	41.4
LnGrp LOS	B	B	A	B	A	B	C	C	C	C	A	D
Approach Vol, veh/h		881			903			350			217	
Approach Delay, s/veh		15.9			15.3			31.0			39.8	
Approach LOS		B			B			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	52.6	12.3	15.8	5.0	56.8	9.0	19.1				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	5.2	28.7	8.3	10.5	2.2	28.6	3.7	7.4				
Green Ext Time (p_c), s	0.1	18.4	0.0	0.4	0.0	17.4	0.0	0.4				

### Intersection Summary

HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

### Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	↷
Traffic Vol, veh/h	781	14	170	811	2	40
Future Vol, veh/h	781	14	170	811	2	40
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	11	2	2	6	2	5
Mvmt Flow	822	15	179	854	2	42

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	838	0	2043 831
Stage 1	-	-	-	-	831 -
Stage 2	-	-	-	-	1212 -
Critical Hdwy	-	-	4.12	-	6.42 6.25
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.345
Pot Cap-1 Maneuver	-	-	796	-	62 365
Stage 1	-	-	-	-	428 -
Stage 2	-	-	-	-	282 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	795	-	48 365
Mov Cap-2 Maneuver	-	-	-	-	151 -
Stage 1	-	-	-	-	428 -
Stage 2	-	-	-	-	219 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	151	365	-	-	795	-
HCM Lane V/C Ratio	0.014	0.115	-	-	0.225	-
HCM Control Delay (s)	29.2	16.1	-	-	10.8	-
HCM Lane LOS	D	C	-	-	B	-
HCM 95th %tile Q(veh)	0	0.4	-	-	0.9	-

HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	5.2								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	235		404		342		288		
Demand Flow Rate, veh/h	241		412		351		293		
Vehicles Circulating, veh/h	394		287		113		425		
Vehicles Exiting, veh/h	324		177		522		274		
Ped Vol Crossing Leg, #/h	2		0		3		0		
Ped Cap Adj	0.998		1.000		0.997		1.000		
Approach Delay, s/veh	4.9		6.2		4.1		5.3		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.469	0.531	0.806	0.194	0.470	0.530	0.471	0.529	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	113	128	332	80	165	186	138	155	
Cap Entry Lane, veh/h	939	1016	1037	1113	1217	1290	913	989	
Entry HV Adj Factor	0.976	0.971	0.981	0.975	0.973	0.974	0.980	0.984	
Flow Entry, veh/h	110	124	326	78	161	181	135	153	
Cap Entry, veh/h	915	985	1017	1085	1181	1252	895	974	
V/C Ratio	0.120	0.126	0.320	0.072	0.136	0.145	0.151	0.157	
Control Delay, s/veh	5.1	4.8	6.8	3.9	4.2	4.1	5.5	5.2	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	1	0	0	1	1	1	

HCM 6th TWSC  
4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	0	42	0	0	184
Future Vol, veh/h	0	0	42	0	0	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	0	0	44	0	0	194

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	238	44	0	0	44	0
Stage 1	44	-	-	-	-	-
Stage 2	194	-	-	-	-	-
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	750	1026	-	-	1564	-
Stage 1	978	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	750	1026	-	-	1564	-
Mov Cap-2 Maneuver	743	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	839	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1564	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	0	0	42	0	0	184
Future Vol, veh/h	0	0	42	0	0	184
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	0	0	44	0	0	194

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	238	44	0	0	44	0
Stage 1	44	-	-	-	-	-
Stage 2	194	-	-	-	-	-
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	750	1026	-	-	1564	-
Stage 1	978	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	750	1026	-	-	1564	-
Mov Cap-2 Maneuver	743	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	839	-	-	-	-	-


























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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1564	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (vph)	4	768	123	66	517	58	76	104	104	48	62	5
Future Volume (vph)	4	768	123	66	517	58	76	104	104	48	62	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	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	
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3146		1687	2821		1656	1776	1569	1503	1743	
Flt Permitted	0.41	1.00		0.21	1.00		0.61	1.00	1.00	0.68	1.00	
Satd. Flow (perm)	773	3146		367	2821		1058	1776	1569	1083	1743	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	835	134	72	562	63	83	113	113	52	67	5
RTOR Reduction (vph)	0	11	0	0	6	0	0	0	91	0	3	0
Lane Group Flow (vph)	4	958	0	72	619	0	83	113	22	52	69	0
Confl. Peds. (#/hr)			1	1					1	1		
Heavy Vehicles (%)	2%	13%	6%	7%	23%	53%	9%	7%	2%	20%	4%	60%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	43.0	42.4		50.6	46.2		15.8	11.0	15.4	12.6	9.4	
Effective Green, g (s)	43.0	43.9		50.6	47.7		15.8	12.0	15.4	12.6	10.4	
Actuated g/C Ratio	0.54	0.55		0.64	0.60		0.20	0.15	0.19	0.16	0.13	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	425	1737		306	1692		246	268	303	188	228	
v/s Ratio Prot	0.00	c0.30		c0.01	0.22		c0.02	c0.06	0.00	0.01	0.04	
v/s Ratio Perm	0.01			0.14			0.05		0.01	0.03		
v/c Ratio	0.01	0.55		0.24	0.37		0.34	0.42	0.07	0.28	0.30	
Uniform Delay, d1	8.4	11.5		6.9	8.1		26.9	30.6	26.2	29.2	31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.1	0.2		0.3	0.4	0.0	0.3	0.3	
Delay (s)	8.4	12.0		7.0	8.4		27.2	31.0	26.2	29.4	31.6	
Level of Service	A	B		A	A		C	C	C	C	C	
Approach Delay (s)		12.0			8.2			28.2			30.7	
Approach LOS		B			A			C			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			14.2				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			79.5				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			50.6%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

# HCM 6th Signalized Intersection Summary

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	768	123	66	517	58	76	104	104	48	62	5
Future Volume (veh/h)	4	768	123	66	517	58	76	104	104	48	62	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1811	1796	1559	1115	1767	1796	1870	1604	1841	1011
Adj Flow Rate, veh/h	4	835	134	72	562	63	83	113	113	52	67	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	6	7	23	53	9	7	2	20	4	60
Cap, veh/h	500	1610	258	385	1666	186	274	198	234	224	175	13
Arrive On Green	0.01	0.58	0.56	0.05	0.62	0.60	0.07	0.11	0.10	0.06	0.10	0.09
Sat Flow, veh/h	1781	2799	449	1711	2686	300	1682	1796	1580	1527	1691	126
Grp Volume(v), veh/h	4	484	485	72	309	316	83	113	113	52	0	72
Grp Sat Flow(s),veh/h/ln	1781	1622	1626	1711	1481	1505	1682	1796	1580	1527	0	1818
Q Serve(g_s), s	0.1	14.3	14.4	1.3	7.9	8.1	3.5	4.7	5.2	2.4	0.0	2.9
Cycle Q Clear(g_c), s	0.1	14.3	14.4	1.3	7.9	8.1	3.5	4.7	5.2	2.4	0.0	2.9
Prop In Lane	1.00		0.28	1.00		0.20	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	500	933	936	385	919	933	274	198	234	224	0	188
V/C Ratio(X)	0.01	0.52	0.52	0.19	0.34	0.34	0.30	0.57	0.48	0.23	0.00	0.38
Avail Cap(c_a), veh/h	738	1146	1149	537	1047	1064	392	363	379	340	0	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	10.2	10.3	7.6	7.2	7.3	29.5	33.5	31.0	29.5	0.0	33.2
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.1	0.4	0.4	0.2	1.0	0.6	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	4.6	0.4	2.0	2.0	1.4	2.1	2.0	0.9	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	10.9	11.1	7.7	7.6	7.7	29.7	34.4	31.6	29.7	0.0	33.7
LnGrp LOS	A	B	B	A	A	A	C	C	C	C	A	C
Approach Vol, veh/h		973			697			309			124	
Approach Delay, s/veh		11.0			7.6			32.1			32.0	
Approach LOS		B			A			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	49.6	9.5	12.2	4.4	53.1	8.9	12.7				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	3.3	16.4	5.5	4.9	2.1	10.1	4.4	7.2				
Green Ext Time (p_c), s	0.0	27.7	0.0	0.2	0.0	17.6	0.0	0.5				

### Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

### Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↘
Traffic Vol, veh/h	876	2	44	624	2	58
Future Vol, veh/h	876	2	44	624	2	58
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	14	2	17	21	50	6
Mvmt Flow	913	2	46	650	2	60

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	917	0	1333
Stage 1	-	-	-	-	916
Stage 2	-	-	-	-	417
Critical Hdwy	-	-	4.44	-	7.8
Critical Hdwy Stg 1	-	-	-	-	6.8
Critical Hdwy Stg 2	-	-	-	-	6.8
Follow-up Hdwy	-	-	2.37	-	4
Pot Cap-1 Maneuver	-	-	653	-	96
Stage 1	-	-	-	-	254
Stage 2	-	-	-	-	512
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	652	-	89
Mov Cap-2 Maneuver	-	-	-	-	186
Stage 1	-	-	-	-	253
Stage 2	-	-	-	-	476

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	186	536	-	-	652	-
HCM Lane V/C Ratio	0.011	0.113	-	-	0.07	-
HCM Control Delay (s)	24.6	12.6	-	-	10.9	-
HCM Lane LOS	C	B	-	-	B	-
HCM 95th %tile Q(veh)	0	0.4	-	-	0.2	-



HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	4.4								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	255		119		397		178		
Demand Flow Rate, veh/h	264		125		416		192		
Vehicles Circulating, veh/h	236		399		131		213		
Vehicles Exiting, veh/h	169		148		369		311		
Ped Vol Crossing Leg, #/h	1		0		0		0		
Ped Cap Adj	0.999		1.000		1.000		1.000		
Approach Delay, s/veh	4.3		4.9		4.5		4.1		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.470	0.530	0.824	0.176	0.471	0.529	0.469	0.531	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	124	140	103	22	196	220	90	102	
Cap Entry Lane, veh/h	1086	1162	935	1012	1197	1270	1110	1185	
Entry HV Adj Factor	0.965	0.964	0.982	0.818	0.953	0.957	0.929	0.924	
Flow Entry, veh/h	120	135	101	18	187	211	84	94	
Cap Entry, veh/h	1048	1119	919	828	1140	1216	1031	1095	
V/C Ratio	0.114	0.121	0.110	0.022	0.164	0.173	0.081	0.086	
Control Delay, s/veh	4.4	4.3	5.0	4.6	4.6	4.4	4.2	4.0	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	0	0	1	1	0	0	

HCM 6th TWSC  
4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	0	60	0	0	46
Future Vol, veh/h	0	0	60	0	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	0	0	63	0	0	48

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	111	63	0	0	63	0
Stage 1	63	-	-	-	-	-
Stage 2	48	-	-	-	-	-
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	886	1002	-	-	1540	-
Stage 1	960	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	886	1002	-	-	1540	-
Mov Cap-2 Maneuver	845	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	974	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1540	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	60	0	0	46
Future Vol, veh/h	0	0	60	0	0	46
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	0	0	63	0	0	48

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	111	63	0	0	63	0
Stage 1	63	-	-	-	-	-
Stage 2	48	-	-	-	-	-
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	886	1002	-	-	1540	-
Stage 1	960	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	886	1002	-	-	1540	-
Mov Cap-2 Maneuver	845	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	974	-	-	-	-	-


























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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1540	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (vph)	9	686	190	162	769	51	150	108	114	40	182	14
Future Volume (vph)	9	686	190	162	769	51	150	108	114	40	182	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1769	3190		1770	3398		1770	1863	1553	1583	1842	
Flt Permitted	0.31	1.00		0.18	1.00		0.44	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	570	3190		330	3398		826	1863	1553	1066	1842	
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)	9	715	198	169	801	53	156	112	119	42	190	15
RTOR Reduction (vph)	0	26	0	0	4	0	0	0	86	0	2	0
Lane Group Flow (vph)	9	887	0	169	850	0	156	113	33	42	203	0
Confl. Peds. (#/hr)	4					4						
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	11%	4%	2%	5%	6%	2%	2%	4%	14%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	38.6	37.9		49.9	45.2		24.5	16.5	24.5	25.1	16.8	
Effective Green, g (s)	38.6	39.4		49.9	46.7		24.5	17.5	24.5	25.1	17.8	
Actuated g/C Ratio	0.43	0.44		0.56	0.52		0.27	0.20	0.27	0.28	0.20	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	256	1409		313	1778		311	365	426	348	367	
v/s Ratio Prot	0.00	c0.28		c0.05	0.25		c0.04	0.06	0.01	0.01	c0.11	
v/s Ratio Perm	0.01			0.25			0.09		0.01	0.02		
v/c Ratio	0.04	0.63		0.54	0.48		0.50	0.31	0.08	0.12	0.55	
Uniform Delay, d1	14.5	19.3		12.2	13.5		25.9	30.7	24.0	23.7	32.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.1		0.9	0.4		0.5	0.2	0.0	0.1	1.0	
Delay (s)	14.5	20.4		13.1	13.9		26.4	30.9	24.0	23.7	33.1	
Level of Service	B	C		B	B		C	C	C	C	C	
Approach Delay (s)		20.3			13.7			26.9			31.5	
Approach LOS		C			B			C			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			19.8			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			89.2			Sum of lost time (s)		16.0				
Intersection Capacity Utilization			66.1%			ICU Level of Service			C			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM 6th Signalized Intersection Summary  
 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↑	↗	↗	↘	↘
Traffic Volume (veh/h)	9	686	190	162	769	51	150	108	114	40	182	14
Future Volume (veh/h)	9	686	190	162	769	51	150	108	114	40	182	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1737	1841	1870	1826	1811	1870	1870	1841	1693	1870	1870
Adj Flow Rate, veh/h	9	715	198	169	801	53	156	112	119	42	190	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	11	4	2	5	6	2	2	4	14	2	2
Cap, veh/h	368	1310	363	386	1874	124	282	342	371	297	247	19
Arrive On Green	0.01	0.51	0.50	0.07	0.57	0.55	0.10	0.18	0.17	0.06	0.14	0.13
Sat Flow, veh/h	1781	2550	706	1781	3297	218	1781	1870	1560	1612	1711	135
Grp Volume(v), veh/h	9	463	450	169	421	433	156	112	119	42	0	205
Grp Sat Flow(s),veh/h/ln	1781	1650	1607	1781	1735	1780	1781	1870	1560	1612	0	1846
Q Serve(g_s), s	0.2	16.8	16.9	3.8	12.3	12.3	6.4	4.6	5.6	1.9	0.0	9.5
Cycle Q Clear(g_c), s	0.2	16.8	16.9	3.8	12.3	12.3	6.4	4.6	5.6	1.9	0.0	9.5
Prop In Lane	1.00		0.44	1.00		0.12	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	368	847	825	386	986	1012	282	342	371	297	0	266
V/C Ratio(X)	0.02	0.55	0.55	0.44	0.43	0.43	0.55	0.33	0.32	0.14	0.00	0.77
Avail Cap(c_a), veh/h	569	1044	1016	489	1097	1126	333	342	371	406	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	14.6	14.8	11.2	10.9	10.9	28.5	31.4	27.8	29.9	0.0	36.5
Incr Delay (d2), s/veh	0.0	0.9	1.0	0.3	0.5	0.5	0.6	0.2	0.2	0.1	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.9	5.9	1.3	4.0	4.2	2.7	2.1	2.1	0.7	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	15.5	15.8	11.5	11.4	11.4	29.1	31.6	28.0	30.0	0.0	42.7
LnGrp LOS	B	B	B	B	B	B	C	C	C	C	A	D
Approach Vol, veh/h		922			1023			387			247	
Approach Delay, s/veh		15.6			11.4			29.5			40.5	
Approach LOS		B			B			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	49.5	12.4	16.8	5.0	54.3	9.0	20.2				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	5.8	18.9	8.4	11.5	2.2	14.3	3.9	7.6				
Green Ext Time (p_c), s	0.1	25.0	0.0	0.4	0.0	23.6	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↘
Traffic Vol, veh/h	823	14	178	924	2	47
Future Vol, veh/h	823	14	178	924	2	47
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	11	2	2	6	2	5
Mvmt Flow	866	15	187	973	2	49

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	882	0	1736
Stage 1	-	-	-	-	875
Stage 2	-	-	-	-	861
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	762	-	79
Stage 1	-	-	-	-	368
Stage 2	-	-	-	-	374
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	761	-	59
Mov Cap-2 Maneuver	-	-	-	-	172
Stage 1	-	-	-	-	368
Stage 2	-	-	-	-	282

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	172	554	-	-	761	-
HCM Lane V/C Ratio	0.012	0.089	-	-	0.246	-
HCM Control Delay (s)	26.2	12.1	-	-	11.3	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0	0.3	-	-	1	-

HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	5.5								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	248		422		365		322		
Demand Flow Rate, veh/h	254		430		375		328		
Vehicles Circulating, veh/h	431		309		124		443		
Vehicles Exiting, veh/h	340		190		561		296		
Ped Vol Crossing Leg, #/h	2		0		3		0		
Ped Cap Adj	0.999		1.000		0.997		1.000		
Approach Delay, s/veh	5.2		6.5		4.3		5.6		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.469	0.531	0.798	0.202	0.469	0.531	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	119	135	343	87	176	199	154	174	
Cap Entry Lane, veh/h	908	984	1016	1092	1204	1278	898	974	
Entry HV Adj Factor	0.978	0.972	0.981	0.977	0.976	0.973	0.983	0.981	
Flow Entry, veh/h	116	131	337	85	172	194	151	171	
Cap Entry, veh/h	886	955	997	1067	1172	1240	883	956	
V/C Ratio	0.131	0.137	0.338	0.080	0.147	0.156	0.171	0.179	
Control Delay, s/veh	5.3	5.1	7.1	4.1	4.3	4.2	5.8	5.5	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	2	0	1	1	1	1	

HCM 6th TWSC  
4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	49	0	0	193
Future Vol, veh/h	0	0	49	0	0	193
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	0	0	52	0	0	203

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	255	52	0	0	52	0
Stage 1	52	-	-	-	-	-
Stage 2	203	-	-	-	-	-
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	734	1016	-	-	1554	-
Stage 1	970	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	734	1016	-	-	1554	-
Mov Cap-2 Maneuver	733	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	831	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1554	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0



HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↑
Traffic Vol, veh/h	0	0	49	0	0	193
Future Vol, veh/h	0	0	49	0	0	193
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	0	0	52	0	0	203

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	255	52	0	0	52	0
Stage 1	52	-	-	-	-	-
Stage 2	203	-	-	-	-	-
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	734	1016	-	-	1554	-
Stage 1	970	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	734	1016	-	-	1554	-
Mov Cap-2 Maneuver	733	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	831	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1554	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↔		↔	↕↔		↔	↕	↕↔	↔	↕↔	↔
Traffic Volume (vph)	4	774	123	66	520	58	76	104	104	48	62	5
Future Volume (vph)	4	774	123	66	520	58	76	104	104	48	62	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	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	
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3146		1687	2822		1656	1776	1569	1503	1743	
Flt Permitted	0.41	1.00		0.20	1.00		0.61	1.00	1.00	0.68	1.00	
Satd. Flow (perm)	771	3146		364	2822		1058	1776	1569	1083	1743	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	841	134	72	565	63	83	113	113	52	67	5
RTOR Reduction (vph)	0	11	0	0	6	0	0	0	91	0	3	0
Lane Group Flow (vph)	4	964	0	72	622	0	83	113	22	52	69	0
Confl. Peds. (#/hr)			1	1					1	1		
Heavy Vehicles (%)	2%	13%	6%	7%	23%	53%	9%	7%	2%	20%	4%	60%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	43.1	42.5		50.7	46.3		15.8	11.0	15.4	12.6	9.4	
Effective Green, g (s)	43.1	44.0		50.7	47.8		15.8	12.0	15.4	12.6	10.4	
Actuated g/C Ratio	0.54	0.55		0.64	0.60		0.20	0.15	0.19	0.16	0.13	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	424	1738		304	1694		246	267	303	188	227	
v/s Ratio Prot	0.00	c0.31		c0.01	0.22		c0.02	c0.06	0.00	0.01	0.04	
v/s Ratio Perm	0.01			0.14			0.05		0.01	0.03		
v/c Ratio	0.01	0.55		0.24	0.37		0.34	0.42	0.07	0.28	0.31	
Uniform Delay, d1	8.4	11.5		6.9	8.1		26.9	30.7	26.3	29.2	31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.1	0.2		0.3	0.4	0.0	0.3	0.3	
Delay (s)	8.4	12.0		7.1	8.4		27.2	31.1	26.3	29.5	31.6	
Level of Service	A	B		A	A		C	C	C	C	C	
Approach Delay (s)		12.0			8.2			28.3			30.7	
Approach LOS		B			A			C			C	

Intersection Summary		
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.51	B
Actuated Cycle Length (s)	79.6	Sum of lost time (s)
Intersection Capacity Utilization	50.8%	16.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

HCM 6th Signalized Intersection Summary  
 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	4	774	123	66	520	58	76	104	104	48	62	5
Future Volume (veh/h)	4	774	123	66	520	58	76	104	104	48	62	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1811	1796	1559	1115	1767	1796	1870	1604	1841	1011
Adj Flow Rate, veh/h	4	841	134	72	565	63	83	113	113	52	67	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	6	7	23	53	9	7	2	20	4	60
Cap, veh/h	499	1615	257	384	1669	186	274	198	233	223	175	13
Arrive On Green	0.01	0.58	0.56	0.05	0.62	0.60	0.07	0.11	0.10	0.06	0.10	0.09
Sat Flow, veh/h	1781	2802	446	1711	2687	299	1682	1796	1580	1527	1691	126
Grp Volume(v), veh/h	4	487	488	72	311	317	83	113	113	52	0	72
Grp Sat Flow(s),veh/h/ln	1781	1622	1627	1711	1481	1505	1682	1796	1580	1527	0	1818
Q Serve(g_s), s	0.1	14.4	14.6	1.3	8.0	8.1	3.5	4.7	5.2	2.4	0.0	2.9
Cycle Q Clear(g_c), s	0.1	14.4	14.6	1.3	8.0	8.1	3.5	4.7	5.2	2.4	0.0	2.9
Prop In Lane	1.00		0.27	1.00		0.20	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	499	935	937	384	920	935	274	198	233	223	0	188
V/C Ratio(X)	0.01	0.52	0.52	0.19	0.34	0.34	0.30	0.57	0.48	0.23	0.00	0.38
Avail Cap(c_a), veh/h	736	1143	1146	535	1044	1061	391	362	378	339	0	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.7	10.2	10.3	7.6	7.2	7.3	29.6	33.6	31.1	29.6	0.0	33.3
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.1	0.4	0.4	0.2	1.0	0.6	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	4.6	0.4	2.0	2.1	1.4	2.1	2.0	0.9	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	11.0	11.1	7.7	7.6	7.7	29.8	34.6	31.7	29.8	0.0	33.8
LnGrp LOS	A	B	B	A	A	A	C	C	C	C	A	C
Approach Vol, veh/h		979			700			309			124	
Approach Delay, s/veh		11.0			7.6			32.2			32.1	
Approach LOS		B			A			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	49.8	9.5	12.2	4.4	53.3	8.9	12.7				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	3.3	16.6	5.5	4.9	2.1	10.1	4.4	7.2				
Green Ext Time (p_c), s	0.0	27.7	0.0	0.2	0.0	17.7	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↘
Traffic Vol, veh/h	871	13	56	621	8	68
Future Vol, veh/h	871	13	56	621	8	68
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	14	2	17	21	50	6
Mvmt Flow	907	14	58	647	8	71

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	923	0	1356 463
Stage 1	-	-	-	-	916 -
Stage 2	-	-	-	-	440 -
Critical Hdwy	-	-	4.44	-	7.8 7.02
Critical Hdwy Stg 1	-	-	-	-	6.8 -
Critical Hdwy Stg 2	-	-	-	-	6.8 -
Follow-up Hdwy	-	-	2.37	-	4 3.36
Pot Cap-1 Maneuver	-	-	649	-	92 535
Stage 1	-	-	-	-	254 -
Stage 2	-	-	-	-	496 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	648	-	84 534
Mov Cap-2 Maneuver	-	-	-	-	182 -
Stage 1	-	-	-	-	253 -
Stage 2	-	-	-	-	451 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	182	534	-	-	648	-
HCM Lane V/C Ratio	0.046	0.133	-	-	0.09	-
HCM Control Delay (s)	25.7	12.8	-	-	11.1	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0.3	-

HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	4.5								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	258		121		399		178		
Demand Flow Rate, veh/h	267		127		418		192		
Vehicles Circulating, veh/h	237		399		134		215		
Vehicles Exiting, veh/h	170		153		370		311		
Ped Vol Crossing Leg, #/h	1		0		0		0		
Ped Cap Adj	0.999		1.000		1.000		1.000		
Approach Delay, s/veh	4.4		4.9		4.5		4.1		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.468	0.532	0.827	0.173	0.469	0.531	0.469	0.531	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	125	142	105	22	196	222	90	102	
Cap Entry Lane, veh/h	1085	1161	935	1012	1193	1267	1108	1183	
Entry HV Adj Factor	0.969	0.961	0.982	0.818	0.957	0.953	0.929	0.924	
Flow Entry, veh/h	121	137	103	18	188	212	84	94	
Cap Entry, veh/h	1050	1115	919	828	1143	1208	1029	1093	
V/C Ratio	0.115	0.122	0.112	0.022	0.164	0.175	0.081	0.086	
Control Delay, s/veh	4.4	4.3	5.0	4.6	4.6	4.5	4.2	4.0	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	0	0	1	1	0	0	

HCM 6th TWSC  
4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	8	68	2	11	58
Future Vol, veh/h	1	8	68	2	11	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	1	8	71	2	11	60

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	154	72	0	0	73	0
Stage 1	72	-	-	-	-	-
Stage 2	82	-	-	-	-	-
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	838	990	-	-	1527	-
Stage 1	951	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	832	990	-	-	1527	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	934	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	966	1527
HCM Lane V/C Ratio	-	-	0.01	0.008
HCM Control Delay (s)	-	-	8.8	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	8	62	2	12	47
Future Vol, veh/h	1	8	62	2	12	47
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	1	8	65	2	13	49

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	141	66	0	0	67	0
Stage 1	66	-	-	-	-	-
Stage 2	75	-	-	-	-	-
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	852	998	-	-	1535	-
Stage 1	957	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	845	998	-	-	1535	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	940	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1535
HCM Lane V/C Ratio	-	-	0.01	0.008
HCM Control Delay (s)	-	-	8.7	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	694	190	162	785	51	150	108	114	40	182	14
Future Volume (vph)	9	694	190	162	785	51	150	108	114	40	182	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1769	3191		1770	3399		1770	1863	1553	1583	1842	
Flt Permitted	0.30	1.00		0.18	1.00		0.44	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	556	3191		328	3399		812	1863	1553	1069	1842	
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)	9	723	198	169	818	53	156	112	119	42	190	15
RTOR Reduction (vph)	0	26	0	0	4	0	0	0	87	0	2	0
Lane Group Flow (vph)	9	895	0	169	867	0	156	113	32	42	203	0
Confl. Peds. (#/hr)	4					4						
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	11%	4%	2%	5%	6%	2%	2%	4%	14%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	39.2	38.5		50.5	45.8		24.6	16.5	24.5	25.0	16.7	
Effective Green, g (s)	39.2	40.0		50.5	47.3		24.6	17.5	24.5	25.0	17.7	
Actuated g/C Ratio	0.44	0.45		0.56	0.53		0.27	0.19	0.27	0.28	0.20	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	252	1421		312	1790		308	363	423	345	363	
v/s Ratio Prot	0.00	c0.28		c0.05	0.25		c0.05	0.06	0.01	0.01	c0.11	
v/s Ratio Perm	0.02			0.26			0.09		0.01	0.02		
v/c Ratio	0.04	0.63		0.54	0.48		0.51	0.31	0.08	0.12	0.56	
Uniform Delay, d1	14.4	19.2		12.2	13.5		26.1	31.0	24.2	24.0	32.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.1		1.0	0.4		0.5	0.2	0.0	0.1	1.1	
Delay (s)	14.4	20.3		13.2	13.9		26.6	31.2	24.3	24.1	33.6	
Level of Service	B	C		B	B		C	C	C	C	C	
Approach Delay (s)		20.3			13.7			27.2			32.0	
Approach LOS		C			B			C			C	

### Intersection Summary

HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



HCM 6th Signalized Intersection Summary  
 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗	↗	↗	↗	↘
Traffic Volume (veh/h)	9	694	190	162	785	51	150	108	114	40	182	14
Future Volume (veh/h)	9	694	190	162	785	51	150	108	114	40	182	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1737	1841	1870	1826	1811	1870	1870	1841	1693	1870	1870
Adj Flow Rate, veh/h	9	723	198	169	818	53	156	112	119	42	190	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	11	4	2	5	6	2	2	4	14	2	2
Cap, veh/h	362	1316	360	383	1881	122	281	342	371	296	246	19
Arrive On Green	0.01	0.51	0.50	0.07	0.57	0.55	0.10	0.18	0.17	0.06	0.14	0.13
Sat Flow, veh/h	1781	2557	700	1781	3302	214	1781	1870	1560	1612	1711	135
Grp Volume(v), veh/h	9	466	455	169	430	441	156	112	119	42	0	205
Grp Sat Flow(s),veh/h/ln	1781	1650	1608	1781	1735	1781	1781	1870	1560	1612	0	1846
Q Serve(g_s), s	0.2	17.0	17.2	3.9	12.6	12.6	6.4	4.6	5.6	1.9	0.0	9.5
Cycle Q Clear(g_c), s	0.2	17.0	17.2	3.9	12.6	12.6	6.4	4.6	5.6	1.9	0.0	9.5
Prop In Lane	1.00		0.44	1.00		0.12	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	362	849	827	383	988	1014	281	342	371	296	0	266
V/C Ratio(X)	0.02	0.55	0.55	0.44	0.43	0.44	0.56	0.33	0.32	0.14	0.00	0.77
Avail Cap(c_a), veh/h	562	1040	1013	486	1093	1122	332	342	371	405	0	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	14.6	14.9	11.3	10.9	11.0	28.6	31.6	28.0	30.0	0.0	36.7
Incr Delay (d2), s/veh	0.0	1.0	1.0	0.3	0.5	0.5	0.6	0.2	0.2	0.1	0.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.0	6.0	1.3	4.2	4.3	2.7	2.1	2.1	0.8	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	15.5	15.8	11.6	11.5	11.5	29.2	31.8	28.1	30.1	0.0	43.0
LnGrp LOS	B	B	B	B	B	B	C	C	C	C	A	D
Approach Vol, veh/h		930			1040			387				247
Approach Delay, s/veh		15.6			11.5			29.6				40.8
Approach LOS		B			B			C				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	49.8	12.5	16.8	5.0	54.6	9.0	20.3				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	5.9	19.2	8.4	11.5	2.2	14.6	3.9	7.6				
Green Ext Time (p_c), s	0.1	25.1	0.0	0.4	0.0	23.9	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖	↖
Traffic Vol, veh/h	814	31	204	912	30	82
Future Vol, veh/h	814	31	204	912	30	82
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	11	2	2	6	2	5
Mvmt Flow	857	33	215	960	32	86

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	891	0	1785
Stage 1	-	-	-	-	875
Stage 2	-	-	-	-	910
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	757	-	73
Stage 1	-	-	-	-	368
Stage 2	-	-	-	-	353
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	756	-	52
Mov Cap-2 Maneuver	-	-	-	-	160
Stage 1	-	-	-	-	368
Stage 2	-	-	-	-	253

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	160	551	-	-	756	-
HCM Lane V/C Ratio	0.197	0.157	-	-	0.284	-
HCM Control Delay (s)	33	12.7	-	-	11.6	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.7	0.6	-	-	1.2	-

HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	5.5								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	251		433		368		322		
Demand Flow Rate, veh/h	258		442		378		328		
Vehicles Circulating, veh/h	437		309		128		455		
Vehicles Exiting, veh/h	346		197		567		296		
Ped Vol Crossing Leg, #/h	2		0		3		0		
Ped Cap Adj	0.999		1.000		0.997		1.000		
Approach Delay, s/veh	5.2		6.7		4.3		5.7		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.469	0.531	0.803	0.197	0.471	0.529	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	121	137	355	87	178	200	154	174	
Cap Entry Lane, veh/h	903	979	1016	1092	1200	1274	888	965	
Entry HV Adj Factor	0.977	0.973	0.981	0.977	0.973	0.976	0.983	0.981	
Flow Entry, veh/h	118	133	348	85	173	195	151	171	
Cap Entry, veh/h	881	951	997	1067	1164	1240	873	947	
V/C Ratio	0.134	0.140	0.349	0.080	0.149	0.158	0.173	0.180	
Control Delay, s/veh	5.4	5.1	7.3	4.1	4.4	4.2	5.9	5.5	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	2	0	1	1	1	1	

HCM 6th TWSC  
 4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	35	77	3	24	212
Future Vol, veh/h	5	35	77	3	24	212
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	5	37	81	3	25	223

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	356	83	0	0	84	0
Stage 1	83	-	-	-	-	-
Stage 2	273	-	-	-	-	-
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	642	976	-	-	1513	-
Stage 1	940	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	976	-	-	1513	-
Mov Cap-2 Maneuver	658	-	-	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	920	1513
HCM Lane V/C Ratio	-	-	0.046	0.017
HCM Control Delay (s)	-	-	9.1	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	28	52	3	19	198
Future Vol, veh/h	5	28	52	3	19	198
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	5	29	55	3	20	208

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	305	57	0	0	58
Stage 1	57	-	-	-	-
Stage 2	248	-	-	-	-
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	687	1009	-	-	1546
Stage 1	966	-	-	-	-
Stage 2	793	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	678	1009	-	-	1546
Mov Cap-2 Maneuver	689	-	-	-	-
Stage 1	966	-	-	-	-
Stage 2	783	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	943	1546
HCM Lane V/C Ratio	-	-	0.037	0.013
HCM Control Delay (s)	-	-	9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↔		↔	↕↔		↔	↕	↕↔	↔	↕↔	↔
Traffic Volume (vph)	4	774	123	66	520	58	76	104	104	48	62	5
Future Volume (vph)	4	774	123	66	520	58	76	104	104	48	62	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	0.99	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	
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3146		1687	2822		1656	1776	1569	1503	1743	
Flt Permitted	0.41	1.00		0.20	1.00		0.61	1.00	1.00	0.68	1.00	
Satd. Flow (perm)	771	3146		364	2822		1058	1776	1569	1083	1743	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	841	134	72	565	63	83	113	113	52	67	5
RTOR Reduction (vph)	0	11	0	0	6	0	0	0	91	0	3	0
Lane Group Flow (vph)	4	964	0	72	622	0	83	113	22	52	69	0
Confl. Peds. (#/hr)			1	1					1	1		
Heavy Vehicles (%)	2%	13%	6%	7%	23%	53%	9%	7%	2%	20%	4%	60%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	43.1	42.5		50.7	46.3		15.8	11.0	15.4	12.6	9.4	
Effective Green, g (s)	43.1	44.0		50.7	47.8		15.8	12.0	15.4	12.6	10.4	
Actuated g/C Ratio	0.54	0.55		0.64	0.60		0.20	0.15	0.19	0.16	0.13	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	424	1738		304	1694		246	267	303	188	227	
v/s Ratio Prot	0.00	c0.31		c0.01	0.22		c0.02	c0.06	0.00	0.01	0.04	
v/s Ratio Perm	0.01			0.14			0.05		0.01	0.03		
v/c Ratio	0.01	0.55		0.24	0.37		0.34	0.42	0.07	0.28	0.31	
Uniform Delay, d1	8.4	11.5		6.9	8.1		26.9	30.7	26.3	29.2	31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.1	0.2		0.3	0.4	0.0	0.3	0.3	
Delay (s)	8.4	12.0		7.1	8.4		27.2	31.1	26.3	29.5	31.6	
Level of Service	A	B		A	A		C	C	C	C	C	
Approach Delay (s)		12.0			8.2			28.3			30.7	
Approach LOS		B			A			C			C	

### Intersection Summary

HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	79.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary  
 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	4	774	123	66	520	58	76	104	104	48	62	5
Future Volume (veh/h)	4	774	123	66	520	58	76	104	104	48	62	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1811	1796	1559	1115	1767	1796	1870	1604	1841	1011
Adj Flow Rate, veh/h	4	841	134	72	565	63	83	113	113	52	67	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	13	6	7	23	53	9	7	2	20	4	60
Cap, veh/h	499	1615	257	384	1669	186	274	198	233	223	175	13
Arrive On Green	0.01	0.58	0.56	0.05	0.62	0.60	0.07	0.11	0.10	0.06	0.10	0.09
Sat Flow, veh/h	1781	2802	446	1711	2687	299	1682	1796	1580	1527	1691	126
Grp Volume(v), veh/h	4	487	488	72	311	317	83	113	113	52	0	72
Grp Sat Flow(s),veh/h/ln	1781	1622	1627	1711	1481	1505	1682	1796	1580	1527	0	1818
Q Serve(g_s), s	0.1	14.4	14.6	1.3	8.0	8.1	3.5	4.7	5.2	2.4	0.0	2.9
Cycle Q Clear(g_c), s	0.1	14.4	14.6	1.3	8.0	8.1	3.5	4.7	5.2	2.4	0.0	2.9
Prop In Lane	1.00		0.27	1.00		0.20	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	499	935	937	384	920	935	274	198	233	223	0	188
V/C Ratio(X)	0.01	0.52	0.52	0.19	0.34	0.34	0.30	0.57	0.48	0.23	0.00	0.38
Avail Cap(c_a), veh/h	736	1143	1146	535	1044	1061	391	362	378	339	0	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.7	10.2	10.3	7.6	7.2	7.3	29.6	33.6	31.1	29.6	0.0	33.3
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.1	0.4	0.4	0.2	1.0	0.6	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	4.6	0.4	2.0	2.1	1.4	2.1	2.0	0.9	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	11.0	11.1	7.7	7.6	7.7	29.8	34.6	31.7	29.8	0.0	33.8
LnGrp LOS	A	B	B	A	A	A	C	C	C	C	A	C
Approach Vol, veh/h		979			700			309			124	
Approach Delay, s/veh		11.0			7.6			32.2			32.1	
Approach LOS		B			A			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	49.8	9.5	12.2	4.4	53.3	8.9	12.7				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	3.3	16.6	5.5	4.9	2.1	10.1	4.4	7.2				
Green Ext Time (p_c), s	0.0	27.7	0.0	0.2	0.0	17.7	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↘
Traffic Vol, veh/h	871	13	56	621	8	68
Future Vol, veh/h	871	13	56	621	8	68
Conflicting Peds, #/hr	0	2	2	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	14	2	17	21	50	6
Mvmt Flow	907	14	58	647	8	71

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	923	0
Stage 1	-	-	-	916
Stage 2	-	-	-	440
Critical Hdwy	-	-	4.44	-
Critical Hdwy Stg 1	-	-	-	6.8
Critical Hdwy Stg 2	-	-	-	6.8
Follow-up Hdwy	-	-	2.37	-
Pot Cap-1 Maneuver	-	-	649	-
Stage 1	-	-	-	254
Stage 2	-	-	-	496
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	648	-
Mov Cap-2 Maneuver	-	-	-	182
Stage 1	-	-	-	253
Stage 2	-	-	-	451

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	182	534	-	-	648	-
HCM Lane V/C Ratio	0.046	0.133	-	-	0.09	-
HCM Control Delay (s)	25.7	12.8	-	-	11.1	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0.3	-



HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	4.5								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	258		121		399		178		
Demand Flow Rate, veh/h	267		127		418		192		
Vehicles Circulating, veh/h	237		399		134		215		
Vehicles Exiting, veh/h	170		153		370		311		
Ped Vol Crossing Leg, #/h	1		0		0		0		
Ped Cap Adj	0.999		1.000		1.000		1.000		
Approach Delay, s/veh	4.4		4.9		4.5		4.1		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.468	0.532	0.827	0.173	0.469	0.531	0.469	0.531	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	125	142	105	22	196	222	90	102	
Cap Entry Lane, veh/h	1085	1161	935	1012	1193	1267	1108	1183	
Entry HV Adj Factor	0.969	0.961	0.982	0.818	0.957	0.953	0.929	0.924	
Flow Entry, veh/h	121	137	103	18	188	212	84	94	
Cap Entry, veh/h	1050	1115	919	828	1143	1208	1029	1093	
V/C Ratio	0.115	0.122	0.112	0.022	0.164	0.175	0.081	0.086	
Control Delay, s/veh	4.4	4.3	5.0	4.6	4.6	4.5	4.2	4.0	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	0	0	1	1	0	0	

HCM 6th TWSC  
4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	8	68	2	0	69
Future Vol, veh/h	1	8	68	2	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	1	8	71	2	0	72

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	144	72	0	0	73	0
Stage 1	72	-	-	-	-	-
Stage 2	72	-	-	-	-	-
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	849	990	-	-	1527	-
Stage 1	951	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	849	990	-	-	1527	-
Mov Cap-2 Maneuver	822	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1527
HCM Lane V/C Ratio	-	-	0.01	-
HCM Control Delay (s)	-	-	8.8	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	8	62	2	23	47
Future Vol, veh/h	1	8	62	2	23	47
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	8	2	2	16
Mvmt Flow	1	8	65	2	24	49

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	163	66	0	0	67
Stage 1	66	-	-	-	-
Stage 2	97	-	-	-	-
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	828	998	-	-	1535
Stage 1	957	-	-	-	-
Stage 2	927	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	815	998	-	-	1535
Mov Cap-2 Maneuver	797	-	-	-	-
Stage 1	957	-	-	-	-
Stage 2	912	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	971	1535
HCM Lane V/C Ratio	-	-	0.01	0.016
HCM Control Delay (s)	-	-	8.7	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

# HCM Signalized Intersection Capacity Analysis

## 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗	↗	↗	↘	↘
Traffic Volume (vph)	9	694	190	162	785	51	150	108	114	40	182	14
Future Volume (vph)	9	694	190	162	785	51	150	108	114	40	182	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1769	3191		1770	3399		1770	1863	1553	1583	1842	
Flt Permitted	0.30	1.00		0.18	1.00		0.44	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	556	3191		328	3399		812	1863	1553	1069	1842	
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)	9	723	198	169	818	53	156	112	119	42	190	15
RTOR Reduction (vph)	0	26	0	0	4	0	0	0	87	0	2	0
Lane Group Flow (vph)	9	895	0	169	867	0	156	113	32	42	203	0
Confl. Peds. (#/hr)	4					4						
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	2%	11%	4%	2%	5%	6%	2%	2%	4%	14%	2%	2%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	39.2	38.5		50.5	45.8		24.6	16.5	24.5	25.0	16.7	
Effective Green, g (s)	39.2	40.0		50.5	47.3		24.6	17.5	24.5	25.0	17.7	
Actuated g/C Ratio	0.44	0.45		0.56	0.53		0.27	0.19	0.27	0.28	0.20	
Clearance Time (s)	4.0	5.5		4.0	5.5		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		0.2	1.5	1.5	0.2	1.5	
Lane Grp Cap (vph)	252	1421		312	1790		308	363	423	345	363	
v/s Ratio Prot	0.00	c0.28		c0.05	0.25		c0.05	0.06	0.01	0.01	c0.11	
v/s Ratio Perm	0.02			0.26			0.09		0.01	0.02		
v/c Ratio	0.04	0.63		0.54	0.48		0.51	0.31	0.08	0.12	0.56	
Uniform Delay, d1	14.4	19.2		12.2	13.5		26.1	31.0	24.2	24.0	32.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.1		1.0	0.4		0.5	0.2	0.0	0.1	1.1	
Delay (s)	14.4	20.3		13.2	13.9		26.6	31.2	24.3	24.1	33.6	
Level of Service	B	C		B	B		C	C	C	C	C	
Approach Delay (s)		20.3			13.7			27.2			32.0	
Approach LOS		C			B			C			C	

### Intersection Summary

HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary  
 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road

09/15/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	9	694	190	162	785	51	150	108	114	40	182	14
Future Volume (veh/h)	9	694	190	162	785	51	150	108	114	40	182	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1737	1841	1870	1826	1811	1870	1870	1841	1693	1870	1870
Adj Flow Rate, veh/h	9	723	198	169	818	53	156	112	119	42	190	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	11	4	2	5	6	2	2	4	14	2	2
Cap, veh/h	362	1316	360	383	1881	122	281	342	371	296	246	19
Arrive On Green	0.01	0.51	0.50	0.07	0.57	0.55	0.10	0.18	0.17	0.06	0.14	0.13
Sat Flow, veh/h	1781	2557	700	1781	3302	214	1781	1870	1560	1612	1711	135
Grp Volume(v), veh/h	9	466	455	169	430	441	156	112	119	42	0	205
Grp Sat Flow(s),veh/h/ln	1781	1650	1608	1781	1735	1781	1781	1870	1560	1612	0	1846
Q Serve(g_s), s	0.2	17.0	17.2	3.9	12.6	12.6	6.4	4.6	5.6	1.9	0.0	9.5
Cycle Q Clear(g_c), s	0.2	17.0	17.2	3.9	12.6	12.6	6.4	4.6	5.6	1.9	0.0	9.5
Prop In Lane	1.00		0.44	1.00		0.12	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	362	849	827	383	988	1014	281	342	371	296	0	266
V/C Ratio(X)	0.02	0.55	0.55	0.44	0.43	0.44	0.56	0.33	0.32	0.14	0.00	0.77
Avail Cap(c_a), veh/h	562	1040	1013	486	1093	1122	332	342	371	405	0	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	14.6	14.9	11.3	10.9	11.0	28.6	31.6	28.0	30.0	0.0	36.7
Incr Delay (d2), s/veh	0.0	1.0	1.0	0.3	0.5	0.5	0.6	0.2	0.2	0.1	0.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.0	6.0	1.3	4.2	4.3	2.7	2.1	2.1	0.8	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	15.5	15.8	11.6	11.5	11.5	29.2	31.8	28.1	30.1	0.0	43.0
LnGrp LOS	B	B	B	B	B	B	C	C	C	C	A	D
Approach Vol, veh/h		930			1040			387			247	
Approach Delay, s/veh		15.6			11.5			29.6			40.8	
Approach LOS		B			B			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	49.8	12.5	16.8	5.0	54.6	9.0	20.3				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.0	4.0	5.5	4.0	5.0				
Max Green Setting (Gmax), s	11.0	54.5	11.0	15.0	11.0	54.5	11.0	15.0				
Max Q Clear Time (g_c+I1), s	5.9	19.2	8.4	11.5	2.2	14.6	3.9	7.6				
Green Ext Time (p_c), s	0.1	25.1	0.0	0.4	0.0	23.9	0.0	0.5				

Intersection Summary												
HCM 6th Ctrl Delay				18.5								
HCM 6th LOS				B								

Notes

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

HCM 6th TWSC  
 2: SW Century Drive & SW Tualatin-Sherwood Road

09/15/2022

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↘
Traffic Vol, veh/h	814	31	204	912	30	82
Future Vol, veh/h	814	31	204	912	30	82
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	11	2	2	6	2	5
Mvmt Flow	857	33	215	960	32	86

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	891	0	1785	446
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	910	-
Critical Hdwy	-	-	4.14	-	6.84	7
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.35
Pot Cap-1 Maneuver	-	-	757	-	73	552
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	353	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	756	-	52	551
Mov Cap-2 Maneuver	-	-	-	-	160	-
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	253	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	160	551	-	-	756	-
HCM Lane V/C Ratio	0.197	0.157	-	-	0.284	-
HCM Control Delay (s)	33	12.7	-	-	11.6	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.7	0.6	-	-	1.2	-

HCM 6th Roundabout  
 3: SW Langer Farms Parkway & SW Century Drive

09/15/2022

Intersection									
Intersection Delay, s/veh	5.5								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	251		433		368		322		
Demand Flow Rate, veh/h	258		442		378		328		
Vehicles Circulating, veh/h	437		309		128		455		
Vehicles Exiting, veh/h	346		197		567		296		
Ped Vol Crossing Leg, #/h	2		0		3		0		
Ped Cap Adj	0.999		1.000		0.997		1.000		
Approach Delay, s/veh	5.2		6.7		4.3		5.7		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LTR	R	LTR	R	LT	TR	LT	TR	
Assumed Moves	LTR	R	LT	R	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.469	0.531	0.803	0.197	0.471	0.529	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	121	137	355	87	178	200	154	174	
Cap Entry Lane, veh/h	903	979	1016	1092	1200	1274	888	965	
Entry HV Adj Factor	0.977	0.973	0.981	0.977	0.973	0.976	0.983	0.981	
Flow Entry, veh/h	118	133	348	85	173	195	151	171	
Cap Entry, veh/h	881	951	997	1067	1164	1240	873	947	
V/C Ratio	0.134	0.140	0.349	0.080	0.149	0.158	0.173	0.180	
Control Delay, s/veh	5.4	5.1	7.3	4.1	4.4	4.2	5.9	5.5	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	0	2	0	1	1	1	1	

HCM 6th TWSC  
4: SW Century Drive & Phase 3 North Access

09/15/2022

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	28	84	3	0	236
Future Vol, veh/h	4	28	84	3	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	4	29	88	3	0	248

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	338	90	0	0	91
Stage 1	90	-	-	-	-
Stage 2	248	-	-	-	-
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	658	968	-	-	1504
Stage 1	934	-	-	-	-
Stage 2	793	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	658	968	-	-	1504
Mov Cap-2 Maneuver	683	-	-	-	-
Stage 1	934	-	-	-	-
Stage 2	793	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	920	1504
HCM Lane V/C Ratio	-	-	0.037	-
HCM Control Delay (s)	-	-	9.1	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0



HCM 6th TWSC  
5: SW Century Drive & Phase 3 South Access

09/15/2022

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	6	35	52	3	43	197
Future Vol, veh/h	6	35	52	3	43	197
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	6	37	55	3	45	207

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	354	57	0	0	58	0
Stage 1	57	-	-	-	-	-
Stage 2	297	-	-	-	-	-
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	644	1009	-	-	1546	-
Stage 1	966	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	625	1009	-	-	1546	-
Mov Cap-2 Maneuver	645	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	932	1546
HCM Lane V/C Ratio	-	-	0.046	0.029
HCM Control Delay (s)	-	-	9.1	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1



**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	TR
Maximum Queue (ft)	34	594	180	136	439	119	128	95	90	123
Average Queue (ft)	3	251	30	33	155	48	54	35	28	46
95th Queue (ft)	19	471	103	85	314	100	106	75	72	97
Link Distance (ft)		1950	1950		1470	1026	1026			1775
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	115			100				270	125	
Storage Blk Time (%)		19		1	11				0	0
Queuing Penalty (veh)		1		3	7				0	0

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	5	74	20	87
Average Queue (ft)	0	18	1	34
95th Queue (ft)	4	51	12	70
Link Distance (ft)	1470			226
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100	190	
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	72	59	20	86	18	64	7
Average Queue (ft)	24	20	1	11	1	13	0
95th Queue (ft)	62	52	9	47	12	47	7
Link Distance (ft)	1655		819	292		1026	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		170			125		200
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

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Intersection: 4: SW Century Drive & Phase 3 North Access

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Movement

- Directions Served
- Maximum Queue (ft)
- Average Queue (ft)
- 95th Queue (ft)
- Link Distance (ft)
- Upstream Blk Time (%)
- Queuing Penalty (veh)
- Storage Bay Dist (ft)
- Storage Blk Time (%)
- Queuing Penalty (veh)

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Intersection: 5: SW Century Drive & Phase 3 South Access

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Movement

- Directions Served
- Maximum Queue (ft)
- Average Queue (ft)
- 95th Queue (ft)
- Link Distance (ft)
- Upstream Blk Time (%)
- Queuing Penalty (veh)
- Storage Bay Dist (ft)
- Storage Blk Time (%)
- Queuing Penalty (veh)

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Zone Summary

Zone wide Queuing Penalty: 11

**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	TR
Maximum Queue (ft)	178	587	219	199	600	200	141	149	170	278
Average Queue (ft)	17	301	51	98	280	94	56	52	37	134
95th Queue (ft)	89	515	163	197	516	168	110	110	98	229
Link Distance (ft)		1950	1950		1470	1026	1026			1775
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	115			100				270	125	
Storage Blk Time (%)		29		8	23				0	13
Queuing Penalty (veh)		3		56	32				0	5

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	39	169	182	13	75
Average Queue (ft)	2	61	14	1	30
95th Queue (ft)	18	113	89	10	66
Link Distance (ft)	1470		1372		226
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		190	
Storage Blk Time (%)		3	0		
Queuing Penalty (veh)		21	0		

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	R	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	119	34	171	31	73	44	127	59
Average Queue (ft)	45	2	58	3	15	3	48	6
95th Queue (ft)	93	18	118	18	49	23	98	33
Link Distance (ft)	1655			819	292		1026	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120	170			125		200
Storage Blk Time (%)	0		0					
Queuing Penalty (veh)	0		0					

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Intersection: 4: SW Century Drive & Phase 3 North Access

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Movement

- Directions Served
- Maximum Queue (ft)
- Average Queue (ft)
- 95th Queue (ft)
- Link Distance (ft)
- Upstream Blk Time (%)
- Queuing Penalty (veh)
- Storage Bay Dist (ft)
- Storage Blk Time (%)
- Queuing Penalty (veh)

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Intersection: 5: SW Century Drive & Phase 3 South Access

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Movement

- Directions Served
- Maximum Queue (ft)
- Average Queue (ft)
- 95th Queue (ft)
- Link Distance (ft)
- Upstream Blk Time (%)
- Queuing Penalty (veh)
- Storage Bay Dist (ft)
- Storage Blk Time (%)
- Queuing Penalty (veh)

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Zone Summary

Zone wide Queuing Penalty: 117

**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	26	333	316	93	195	209	133	153	97	129	149
Average Queue (ft)	2	139	148	33	66	78	55	74	44	41	58
95th Queue (ft)	15	250	263	69	140	160	110	134	78	95	117
Link Distance (ft)		1949	1949		1471	1471	1027	1027			1763
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	105			390					270	125	
Storage Blk Time (%)		11								0	1
Queuing Penalty (veh)		0								0	0

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	L	L	R
Maximum Queue (ft)	23	5	89	24	72
Average Queue (ft)	1	0	21	1	36
95th Queue (ft)	12	0	59	15	62
Link Distance (ft)	1471	1471			214
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250	190	
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	R	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	100	26	64	21	55	17	69	26
Average Queue (ft)	35	1	21	2	12	1	17	1
95th Queue (ft)	83	14	54	13	42	9	54	11
Link Distance (ft)	1655			819	292		1027	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120	170			125		200
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

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Intersection: 4: SW Century Drive & Phase 3 North Access

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Intersection: 5: SW Century Drive & Phase 3 South Access

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Zone Summary

Zone wide Queuing Penalty: 1



**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	121	326	328	176	212	249	280	180	82	219	332
Average Queue (ft)	11	172	184	77	105	120	101	76	40	45	143
95th Queue (ft)	62	274	290	139	187	209	198	145	70	132	246
Link Distance (ft)		1949	1949		1471	1471	1027	1027			1763
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	105			390					270	125	
Storage Blk Time (%)		20								0	17
Queuing Penalty (veh)		2								0	7

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	21	129	14	85
Average Queue (ft)	1	51	1	32
95th Queue (ft)	9	97	11	66
Link Distance (ft)	1471			214
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		250	190	
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	R	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	105	37	160	29	76	66	110	78
Average Queue (ft)	47	2	61	4	12	5	47	7
95th Queue (ft)	89	17	125	22	44	31	90	41
Link Distance (ft)	1655			819	292		1027	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120	170			125		200
Storage Blk Time (%)	0		0					
Queuing Penalty (veh)	0		0					

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Intersection: 4: SW Century Drive & Phase 3 North Access

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Movement

- Directions Served
- Maximum Queue (ft)
- Average Queue (ft)
- 95th Queue (ft)
- Link Distance (ft)
- Upstream Blk Time (%)
- Queuing Penalty (veh)
- Storage Bay Dist (ft)
- Storage Blk Time (%)
- Queuing Penalty (veh)

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Intersection: 5: SW Century Drive & Phase 3 South Access

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Movement

- Directions Served
- Maximum Queue (ft)
- Average Queue (ft)
- 95th Queue (ft)
- Link Distance (ft)
- Upstream Blk Time (%)
- Queuing Penalty (veh)
- Storage Bay Dist (ft)
- Storage Blk Time (%)
- Queuing Penalty (veh)

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Zone Summary

Zone wide Queuing Penalty: 9

**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	26	244	289	87	206	195	138	146	87	106	141
Average Queue (ft)	3	129	130	29	64	76	58	67	42	38	52
95th Queue (ft)	18	221	236	66	146	160	112	124	72	88	105
Link Distance (ft)		1949	1949		1471	1471	1027	1027			1763
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	105			390					270	125	
Storage Blk Time (%)		10								0	1
Queuing Penalty (veh)		0								0	0

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	L	L	R
Maximum Queue (ft)	10	10	106	54	81
Average Queue (ft)	1	1	33	8	37
95th Queue (ft)	7	6	77	38	69
Link Distance (ft)	1471	1471			214
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250	190	
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	R	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	91	11	56	28	70	42	70	9
Average Queue (ft)	28	0	21	1	12	1	16	0
95th Queue (ft)	70	8	52	9	47	20	53	7
Link Distance (ft)	1655			819	292		1027	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120	170			125		200
Storage Blk Time (%)	0					0		
Queuing Penalty (veh)	0					0		

**Intersection: 4: SW Century Drive & Phase 3 North Access**

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	40	7
Average Queue (ft)	11	0
95th Queue (ft)	38	5
Link Distance (ft)	314	214
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 5: SW Century Drive & Phase 3 South Access**

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	35	14
Average Queue (ft)	9	0
95th Queue (ft)	33	5
Link Distance (ft)	276	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

**Zone Summary**

Zone wide Queuing Penalty: 1
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**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	33	291	317	157	230	247	186	185	100	219	334
Average Queue (ft)	8	170	190	70	111	124	95	80	44	48	154
95th Queue (ft)	30	264	297	127	201	212	163	142	77	138	275
Link Distance (ft)		1949	1949		1471	1471	1027	1027			1763
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	105			390					270	125	
Storage Blk Time (%)		19								1	20
Queuing Penalty (veh)		2								1	8

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	L	L	R
Maximum Queue (ft)	6	29	164	116	91
Average Queue (ft)	0	4	70	32	42
95th Queue (ft)	4	19	131	83	74
Link Distance (ft)	1471	1471			214
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250	190	
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	R	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	120	40	159	33	62	42	108	53
Average Queue (ft)	49	1	62	6	15	4	50	7
95th Queue (ft)	100	17	128	27	49	25	94	33
Link Distance (ft)	1655			819	292		1027	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120	170			125		200
Storage Blk Time (%)	0		0					
Queuing Penalty (veh)	0		0					

**Intersection: 4: SW Century Drive & Phase 3 North Access**

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	64	50
Average Queue (ft)	31	3
95th Queue (ft)	55	22
Link Distance (ft)	314	214
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

**Intersection: 5: SW Century Drive & Phase 3 South Access**

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	60	28
Average Queue (ft)	24	2
95th Queue (ft)	53	14
Link Distance (ft)	276	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

**Zone Summary**

Zone wide Queuing Penalty: 11

**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	26	300	274	110	174	185	140	181	98	112	129
Average Queue (ft)	3	144	144	38	58	74	55	73	41	39	52
95th Queue (ft)	17	244	235	83	127	154	112	140	76	84	106
Link Distance (ft)		1949	1949		1471	1471	1027	1027			1763
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	105			390					270	125	
Storage Blk Time (%)		11						0		0	1
Queuing Penalty (veh)		0						0		0	0

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	L	L	R
Maximum Queue (ft)	4	5	84	65	98
Average Queue (ft)	0	0	25	11	39
95th Queue (ft)	3	4	61	46	74
Link Distance (ft)	1471	1471			214
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250	190	
Storage Blk Time (%)					
Queuing Penalty (veh)					

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	R	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	89	12	69	40	53	26	71	15
Average Queue (ft)	31	0	20	2	13	1	20	1
95th Queue (ft)	75	9	54	15	43	14	60	10
Link Distance (ft)	1655			819	292		1027	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120	170			125		200
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

**Intersection: 4: SW Century Drive & Phase 3 North Access**

Movement	WB
Directions Served	LR
Maximum Queue (ft)	34
Average Queue (ft)	9
95th Queue (ft)	34
Link Distance (ft)	314
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

**Intersection: 5: SW Century Drive & Phase 3 South Access**

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	34	39
Average Queue (ft)	8	3
95th Queue (ft)	31	18
Link Distance (ft)	276	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

**Zone Summary**

Zone wide Queuing Penalty: 1
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**Intersection: 1: SW Langer Farms Parkway & SW Tualatin-Sherwood Road**

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	84	337	340	181	230	235	211	168	93	137	287
Average Queue (ft)	11	181	195	77	110	119	97	69	43	34	149
95th Queue (ft)	52	297	316	140	190	198	172	134	77	91	251
Link Distance (ft)		1949	1949		1471	1471	1027	1027			1763
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	105			390					270	125	
Storage Blk Time (%)		20								0	18
Queuing Penalty (veh)		2								0	7

**Intersection: 2: SW Century Drive & SW Tualatin-Sherwood Road**

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	25	172	79	107
Average Queue (ft)	2	69	30	43
95th Queue (ft)	13	134	71	82
Link Distance (ft)	1471			214
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		250	190	
Storage Blk Time (%)				
Queuing Penalty (veh)				

**Intersection: 3: SW Langer Farms Parkway & SW Century Drive**

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	R	LTR	R	LT	TR	LT	TR
Maximum Queue (ft)	108	27	165	76	70	33	103	85
Average Queue (ft)	47	2	64	8	16	2	48	5
95th Queue (ft)	91	19	127	39	52	15	89	36
Link Distance (ft)	1655			819	292		1027	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120	170			125		200
Storage Blk Time (%)	0		0					
Queuing Penalty (veh)	0		0					

**Intersection: 4: SW Century Drive & Phase 3 North Access**

Movement	WB
Directions Served	LR
Maximum Queue (ft)	72
Average Queue (ft)	25
95th Queue (ft)	57
Link Distance (ft)	314
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

**Intersection: 5: SW Century Drive & Phase 3 South Access**

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	61	28
Average Queue (ft)	28	3
95th Queue (ft)	55	17
Link Distance (ft)	276	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

**Zone Summary**

Zone wide Queuing Penalty: 9
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