KITTELSON & ASSOCIATES
851 SW 6th AVENUE, SUITE 600
PORTLAND, OR 97204
P 503.228.5230 F 503.273.8169

May 14, 2021

Project #: 25641

Steve Adams, City Engineer
City of Milwaukie
6101 SE Johnson Creek Blvd
Milwaukie, OR 97206

RE: Henley Place Transportation Impact Study

Dear Steve:

Pahlisch Commercial is proposing to redevelop the Kellogg Bowl site at 10306 SE Main Street. Today the site is occupied by a bowling alley with motor vehicle access to SE Main Street. Upon redevelopment, the site will be occupied by up to 178 multifamily units with vehicular parking supply provided both within the building as well as in a surface parking lot. Motor vehicle access will continue to be exclusively via SE Main Street (no vehicular impact to SE 23rd Avenue).

A portion of the northeast corner of the site is zoned R-5 and would require a rezone to accommodate multi-family housing. The R-5 portion of the site is used as a surface parking area today and will continue to do so with the redevelopment. Accordingly, the Applicant proposes to impose a "trip cap" on the rezone portion of the property to avoid the potential for any transportation impacts. This trip cap would limit any future use/redevelopment of the parking area to that which would generate an equivalent number of trips permitted under the existing R-5 zoning. The trip cap is allowable as mitigation to address Oregon's Transportation Planning Rule (TPR) and ensures that impacts are associated with the rezone and/or potential future redevelopment.

This report summarizes the results of the Transportation Impact Study (TIS) prepared to support the redevelopment and proposed rezone. The TIS has been prepared per Milwaukie Title 19.704 requirements and scoping direction provided by DKS Associates (on behalf of the City), the Oregon Department of Transportation (ODOT) and Clackamas County.

As documented herein, the following transportation-related considerations are recommended as part of site development:

- A trip cap equivalent to 18 daily, one weekday AM and two weekday PM peak hour trips should be placed on the 0.2-acre portion of the site that is currently zoned R-5. This trip cap is needed to assure any future development traffic on this site complies with Oregon's Transportation Planning Rule (TPR). If this portion of the site is redeveloped in the future, the need for the trip cap should be re-evaluated relative to TPR requirements.

- Site landscaping, above-ground utilities, and site signage should be located and maintained such that they provide minimum required sight lines within the site as well as at the site driveway on SE Main Street per City requirements.

The details of the study methodology, findings, and recommendations are summarized herein.

INTRODUCTION

Pahlisch Commercial is proposing to replace the existing bowling alley with a six-story apartment building with a leasing office and live/work units or ground-floor commercial. The 178 apartment units will also be served by structured parking within the building as well as the surface parking directly to the east and to the west. This surface parking to the east is property currently zoned R-5 (low density residential). The remainder of the site has a Downtown Mixed Use (DMU) zoning designation that enables the proposed residential building. As part of the redevelopment, the R-5 zoned lands will be rezoned to DMU and a trip cap associated with future redevelopment of the parking lot is proposed. Access to the residences will be provided via the shared access onto SE Main Street that is used today by Kellogg Bowl, Pietro's Pizza, and a veterinary clinic.

Figure 1 illustrates the site vicinity whereas Figure 2 provides the proposed site plan. As currently contemplated, occupancy of the apartments is expected to occur by 2022.

STUDY METHODOLOGY

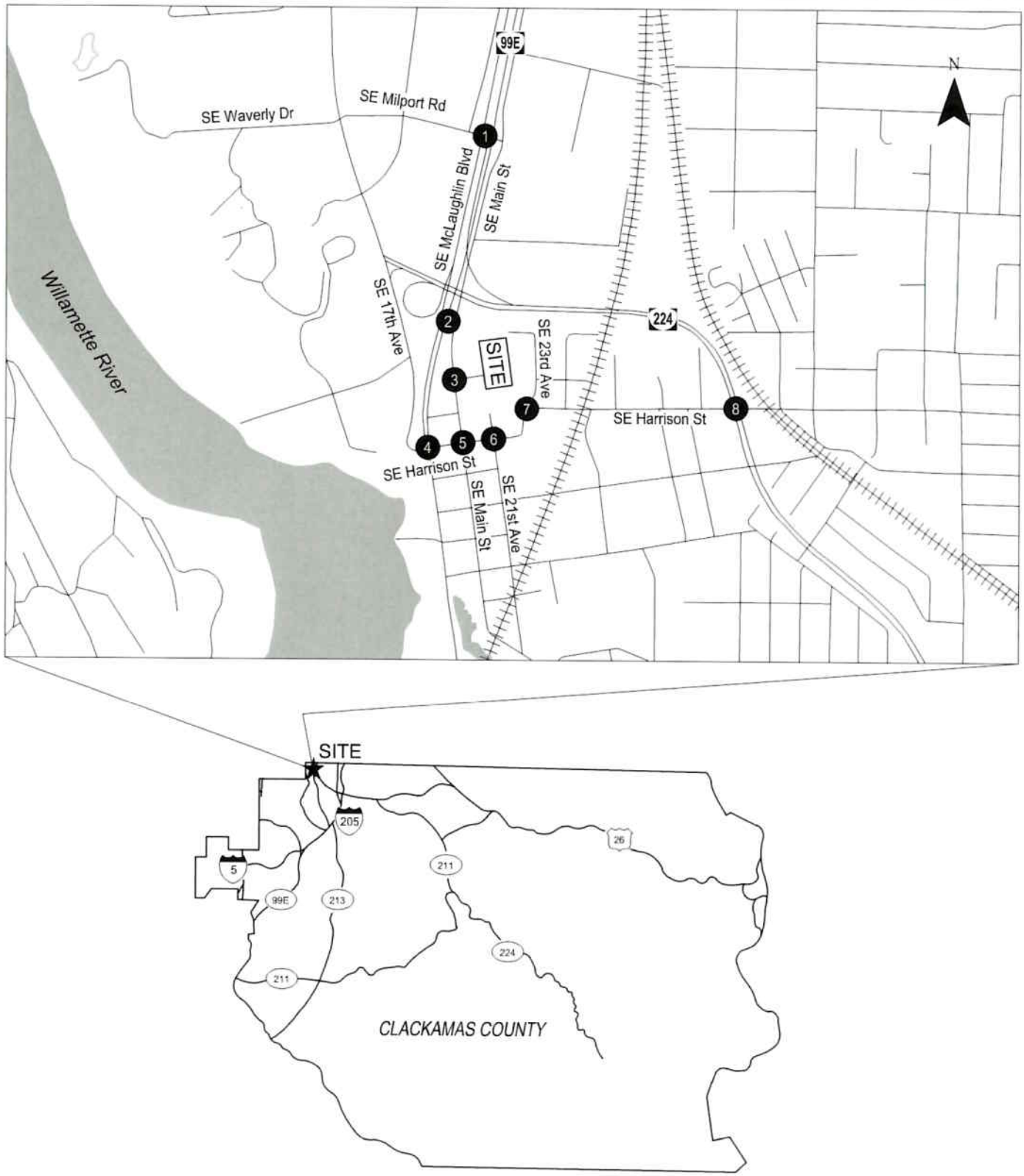
The study intersections were determined based on a review the City's Title 19.704 requirements and policies iterated in the City's Transportation System Plan (TSP) as well as scoping direction provided by DKS Associates (on behalf of the City), ODOT and Clackamas County staff.

Analysis Scenarios

Weekday AM and PM peak hour traffic conditions were assessed for the following analysis scenarios:

- Year 2021 proxy existing conditions
- Year 2022 background conditions (with no site development)
- Year 2022 total conditions (assuming the site redevelops with the proposed apartments)

As part of the proposed rezone to DMU, the applicant is proposing a trip cap on future development of the R-5 zoned land so the study also addresses compliance of this trip cap with the TPR requirements.



(##) - Study Intersections

Site Vicinity Map
Milwaukie, Oregon

Figure
1

H:\25\25641 - milwaukie residential\report\fig\25641-Figures-01.dwg May 13, 2021 - 11:32am - bcullimore Layout Tab: Site Vicinity Map

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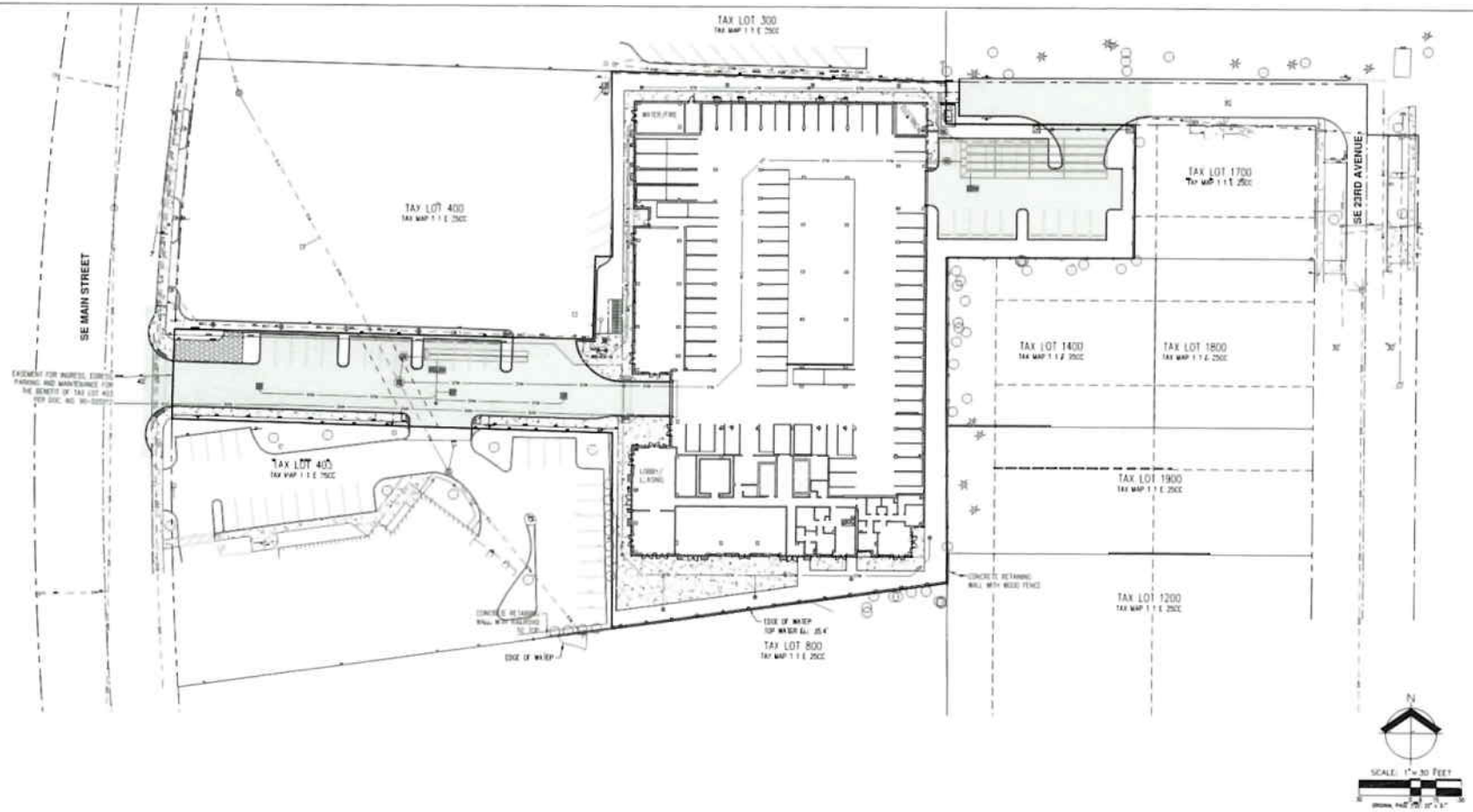


PRELIMINARY DIMENSIONED SITE PLAN
HENLEY PLACE
PAHLISCH COMMERCIAL
MILWAUKIE OREGON

P-10

Proposed Site Plan
Milwaukie, Oregon

Figure
2

Study Intersections

The study intersections are listed below and are identified by a number corresponding with the analysis figures in this report:

1. Milport Road/McLoughlin Boulevard (OR 99E);
2. SE Main Street/McLoughlin Boulevard (OR 99E);
3. Site Access/SE Main Street;
4. SE Harrison Street/McLoughlin Boulevard (OR 99E);
5. SE Main Street/SE Harrison Street;
6. SE 21st Avenue/SE Harrison Street;
7. SE 23rd Avenue/SE Harrison Street; and,
8. SE Harrison Street/OR 224.

Level-of-service analyses described in this report were performed at the intersections in accordance with the procedures stated in the *Highway Capacity Manual, 6th Edition* methodology as well as ODOT's *Analysis Procedures Manual* (APM).

Operating Standards

Per Chapter 8 (Street Network Element[1]) of the City's TSP and the Oregon Highway Plan (OHP), the following performance metrics apply:

- City intersections shall operate at level of service (LOS) D or better. This applies to study intersections not located along OR 99E or OR 224.
- All ODOT intersections (i.e., those along OR 99E and OR 224) are subject to a mobility target equivalent to a volume-to-capacity (V/C) ratio of less than 0.99.

REPORT FORMAT

This report addresses the following transportation issues:

- Existing land use and transportation system conditions within the site vicinity;
- Planned developments and transportation improvements in the study area;
- Forecast year 2022 background traffic conditions during the weekday AM and PM peak hours;
- Weekday AM and PM peak hour site trip generation and distribution estimates;

[1] ch_8_street_network_element_10-20-18.pdf (milwaukieoregon.gov)

- Forecast year 2022 total traffic conditions with site redevelopment during the weekday AM and PM peak hours;
- Vehicle queuing at the study area intersections;
- Facilities for people walking, riding bikes and taking transit;
- Analysis of a proposed trip cap for future redevelopment of the R-5 zoned portion of the site and compliance with the TPR; and,
- Conclusions and recommendations.

EXISTING CONDITIONS

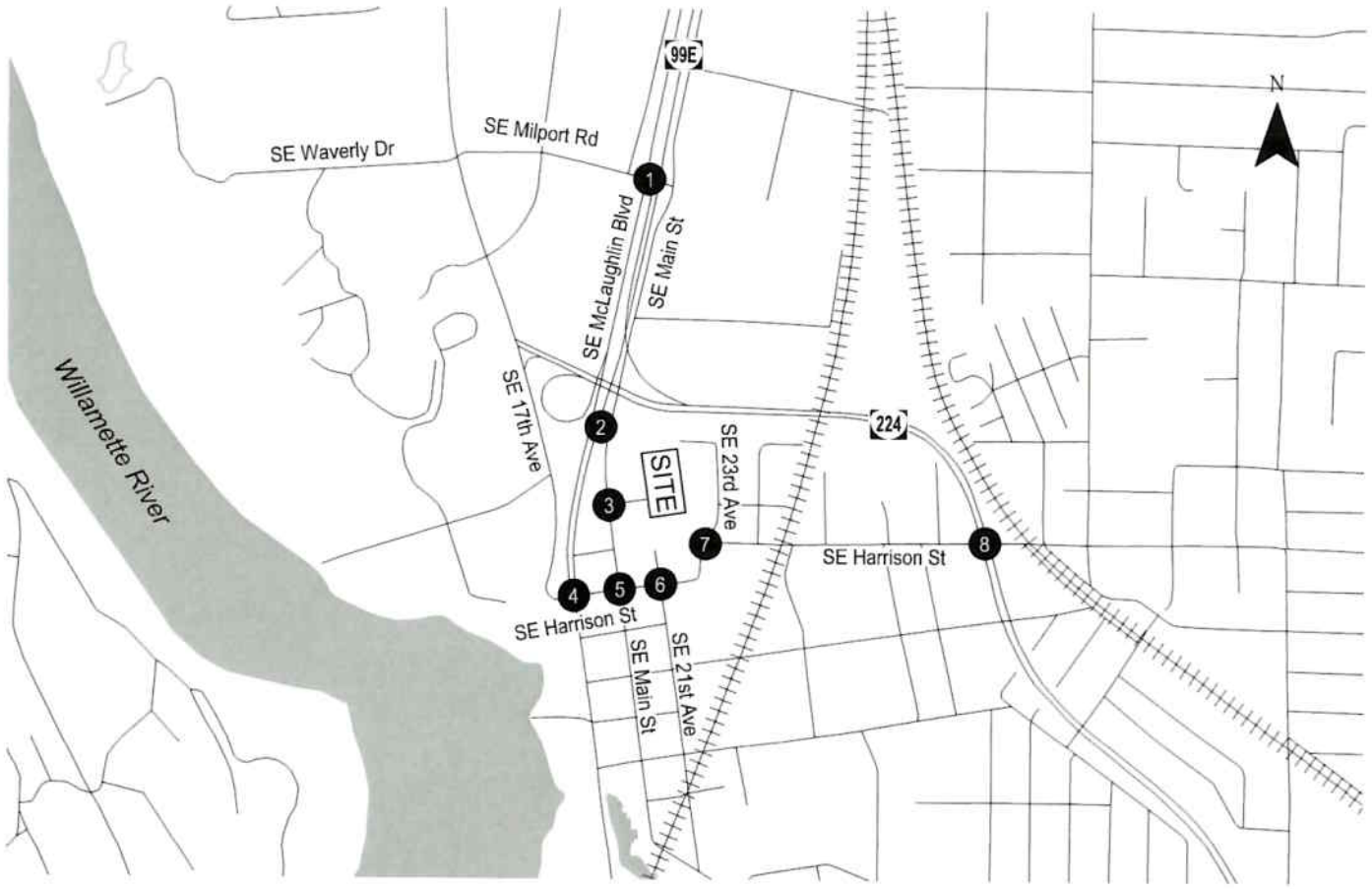
The existing conditions analysis identifies site conditions and the current operational and geometric characteristics of streets and multimodal facilities within the study area. The purpose of this section is to set the stage for a basis of comparison to future conditions.

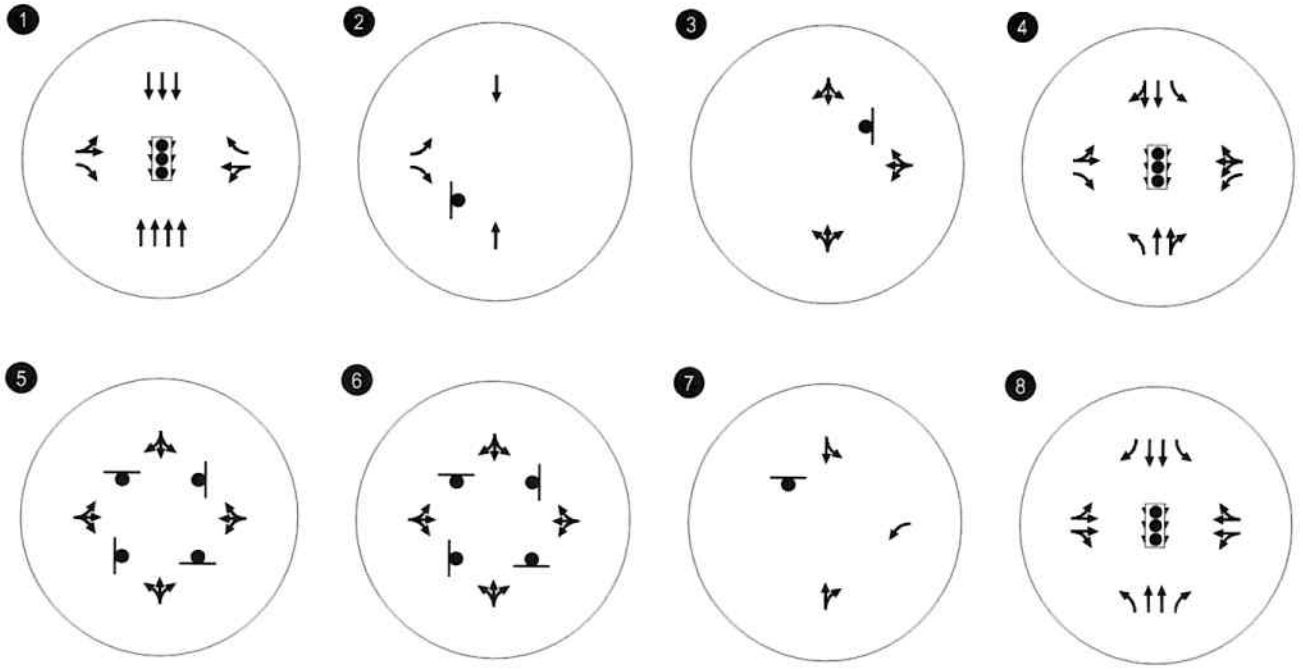
Site Conditions and Adjacent Land Uses

Today, the site is surrounded by various commercial uses to the west and north, single and multi-family residential lands to the east, and Scott Park to the south. The portion of the site housing the existing Kellogg Bowl building (and future residential building, Tax Lot 401) and the vehicular access drive portion of the site (Tax Lot 402) are zoned Downtown Mixed Use (DMU) whereas the surface parking immediately east of the building is zoned R-5 (low density residential). The site shares access onto SE Main Street with Pietro's Pizza and a veterinary clinic.

Transportation Facilities

Table 1 provides a summary of the existing streets near the site. Figure 3 illustrates the existing lane configurations and traffic control devices at the study intersections.





(##) - STUDY INTERSECTIONS
- STOP SIGN
- TRAFFIC SIGNAL

Existing Lane Configurations and Traffic Control Devices
Milwaukie, Oregon

Figure 3

Table 1. Existing Transportation Facilities

Street	Classification[1]	Jurisdiction	Cross-Section	Posted Speed	Sidewalks Present?	Bike Lanes Present?	On-Street Parking Allowed?
SE Main Street	Collector	City	2 lanes	20 mph[2]	Yes	Shared lane designated south of SE Harrison Street	Yes
SE Harrison Street	Arterial; Preferred Minor Freight Route	City	2 lanes	25 mph	Yes	Shared lane designated east of SE 21st Avenue[3]	On south side from SE Main Street to approximately SE 23rd Avenue
McLoughlin Boulevard (OR 99E)	Arterial south of OR 224; Regional Route to the North; Major Regional Freight Route	ODOT	4 – 6 lanes	30 mph[4]	Partial[5]; Trolley Trail parallels OR 99E from SE Harrison Street south	Yes	No
SE 21st Avenue	Arterial	City	2 lanes	NP (25 mph)	Yes	No	Yes
SE 23rd Avenue	Local Street	City	2 lane	NP (25 mph)	Yes	No	Yes
OR 224	Regional Route; Major Regional Freight Route	ODOT	4 lanes	40 mph[6]	Yes[7]	No	No
Milport Road	Local Street	City	2 lanes	NP (25 mph)	No	No	No

[1] Source: Milwaukie TSP, Adopted in 2017 and Amended in 2018
[2] Speed posted at 20 miles per hour (mph) south of OR 224 overcrossing, 35 mph to the north
[3] Striped bicycle lane provided eastbound and westbound between SE 24th Avenue and SE 26th Avenue
[4] Posted speed transitions to 45 mph between Study Intersection #2 and the OR 224 overcrossing
[5] Sidewalk provided on east side of highway between south side of Main Street and SE Washington Street to the south
[6] Posted speed transitions to 50 mph north of SE Harrison Street
[7] Sidewalks provided between SE Harrison Street and SE Oak Street to the south
NP = not posted; assumed to be 25 mph per local street designation

Facilities for People Walking

As shown in Table 1, there are sidewalks along all of the study streets, except the two highways and Milport Road. These sidewalks can connect the future apartment residents to the commercial uses in the downtown, Scott Park, the Portland Waldorf School, transit stops along SE Harrison Street and SE Main Street, and other residential areas.

These sidewalks also provide a connection to the Trolley Trail that extends from downtown Milwaukie south to Gladstone along the west side of McLoughlin Boulevard and north to Portland along the west side of SE 17th Avenue. The City's TSP identifies a long-term desire to improvement pedestrian crossings along SE McLoughlin Boulevard, especially in the downtown but this is shown as a low priority and unfunded in the TSP.

Facilities for People Riding Bikes

As shown in Table 1, people riding bikes share the travel lane with motorists on the study area streets with the exception of McLoughlin Boulevard, where bike lanes are provided south of SE Harrison Street.

The City's TSP identifies a medium-term priority for adding designated bike lanes along SE Harrison Street from McLoughlin Boulevard to SE 21st Avenue.

Transit Facilities

The site is well served by TriMet with the following bus routes having stops within ¼ mile walking distances of the site:

- Line 33 (McLoughlin/King Road) – this frequent service route operates between Clackamas Community College and Clackamas Town Center via downtown Milwaukie. The nearest stop is provided near the SE 24th Avenue/SE Harrison Street intersection.
- Line 34 (Linwood/River Rd) – this route operates between the Oregon City Transit Center and Clackamas Town Center via downtown Milwaukie. The nearest stops are provided on SE Main Street just north of the site as well as near the SE Main Street/SE Scott Street intersection.
- Line 75 (Cesar Chavez/Lombard) – this frequent service route connects Milwaukie to SE Portland, the Hollywood District, North/NE Portland and St. Johns. The nearest stop is provided near the SE 24th Avenue/SE Harrison Street intersection.
- Line 152 (Milwaukie) – this route provides weekday service between Clackamas Town Center and Milwaukie. The nearest stop is provided near the SE 24th Avenue/SE Harrison Street intersection.

The City's TSP identifies the potential for future bus rapid transit (BRT) along OR 224, SE Harrison Street and SE McLoughlin Boulevard as a longer-term priority that is not funded. However, TriMet's Futures Report for Southeast does not identify BRT along these corridors, rather just the need for increased service frequency.

The City's TSP also identifies the need in the medium-term for a bus shelter at the SE 24th Avenue/SE Harrison Street transit stop.

Traffic Safety

ODOT provided reported study intersection crash data for the five-year period of 2014 through 2018. This data is summarized in Table 2 relative to crash type, severity, general conditions, and location to identify potential crash patterns.

Table 2. Intersection Crash History (January 1, 2014 through December 31, 2018)

Location	Collision Type						Severity			Total Crashes
	Rear-end	Turning	Angle	SS-O[1]	Fixed Object	Backing	PDO[2]	Injury	Fatal	
OR 99E/SE Milport Road	15	14	7	2	0	1	19	19	1	39
SE Main Street/SE Milport Road	0	1	0	0	0	0	1	0	0	1
OR 99E/SE Harrison Street	11	7	4	0	0	1	9	14	0	23
SE Main Street/SE Harrison Street	0	3	2	0	0	0	2	3	0	5
SE 21st Avenue/SE Harrison Street	0	3	1	0	0	0	3	1	0	4
SE 23rd Avenue/SE Harrison Street	0	0	0	0	1	0	0	1	0	1
OR 224/SE Harrison Street	11	8	9	1	0	0	11	17	1	29

[1]Sideswipe – Overtaking
[2]PDO – Property damage only

Two of the reported crashes involved fatal injuries, as summarized below.

- A fatal rear-end crash was reported involving a passenger car and a truck tractor (with trailer or mobile home in tow) at the OR 99E (SE McLoughlin Boulevard)/SE Milport Road intersection in 2015. The crash occurred at 3:00 AM on a dry roadway surface under clear conditions.
- A fatal angle crash was reported involving a passenger car and motorcycle at the OR 224 (Milwaukie Expressway)/SE Harrison Street intersection in 2015. The crash occurred at 3:00 PM on a dry roadway surface under clear conditions and was attributed to the passenger vehicle driver disregarding the traffic signal.

There were no reported crashes involving bicycles or pedestrians.

Due in part to the reported fatal crashes, both the OR 99E (SE McLoughlin Boulevard)/SE Milport Road intersection and the OR 224 (Milwaukie Expressway)/SE Harrison Street intersection appear on the ODOT Region 1 2018 Safety Priority Index System (SPIS) list. The OR 224/SE Harrison Street intersection and the OR 99E (SE McLoughlin Blvd)/SE Harrison Street intersection both appear on the Top 10% SPIS list. ODOT uses the SPIS list to prioritize projects for the ODOT All Roads Transportation Safety Program and may identify future changes at either or both intersections. Neither of the reported fatal crashes involve factors that would be impacted by trips associated with the proposed site development.

In addition, intersection crash rates were calculated and compared to statewide crash rate performance thresholds. For this analysis, the critical crash rate was calculated and compared to the 90th percentile crash rates summarized in ODOT's *Analysis Procedures Manual* (APM) for urban

intersections by traffic control and 3- versus 4-legged configurations (as appropriate). This is shown in Table 3.

Table 3. Intersection Crash Rate Assessment

Location	Total Reported Crashes	90th Percentile Crash Rate[1]	Observed Crash Rate at Intersection	Observed Crash Rate>90th Percentile Crash Rate?
OR 99E/SE Milport Road	39	0.860	0.425	No
OR 99E/SE Harrison Street	23	0.860	0.323	No
SE Main Street/SE Harrison Street	5	0.408	0.374	No
SE 21st Avenue/SE Harrison Street	4	0.408	0.357	No
SE 23rd Avenue/SE Harrison Street	1	0.293	0.099	No
OR 224/SE Harrison Street	29	0.860	0.357	No

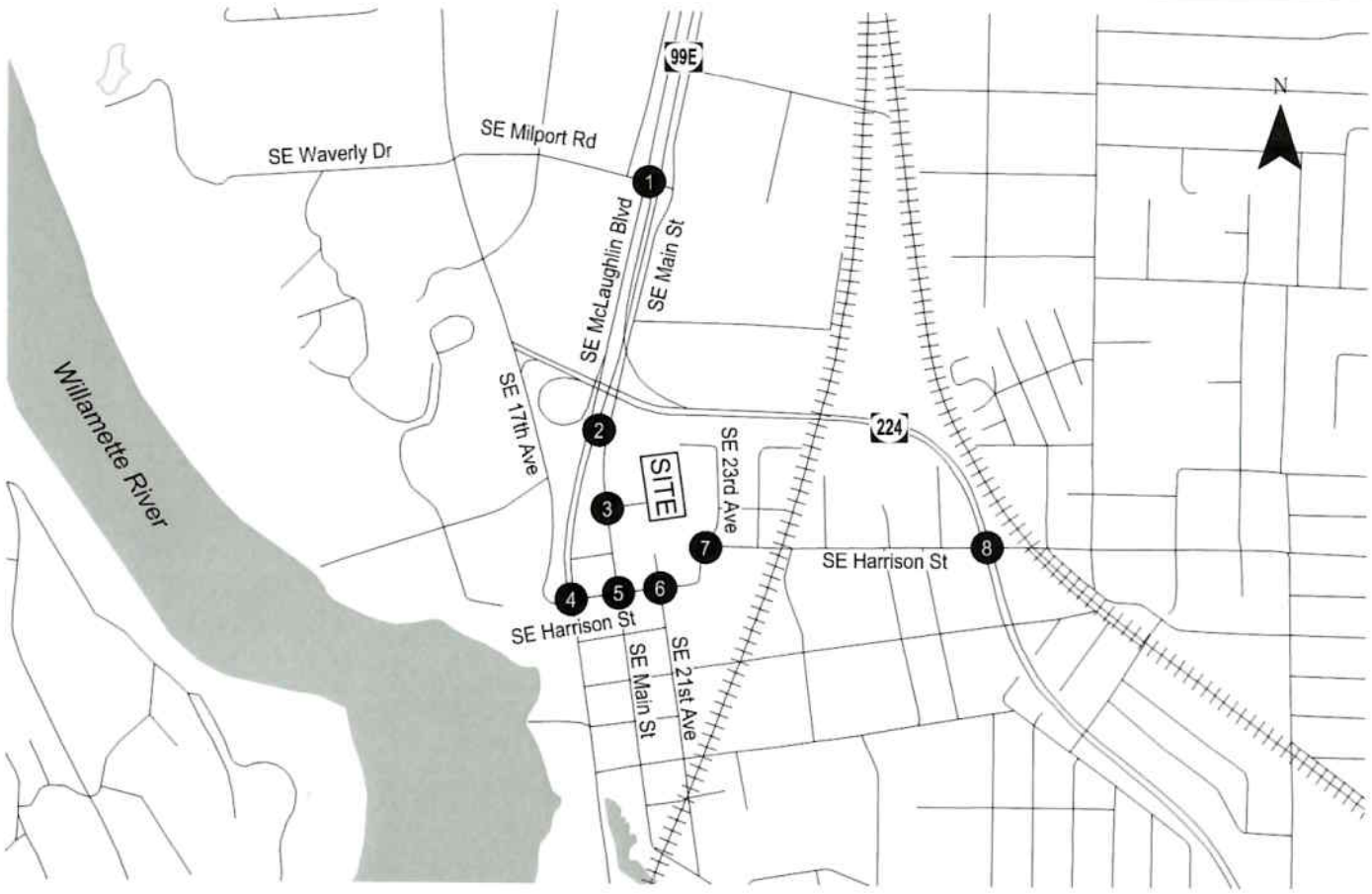
[1]ODOT APM Exhibit 4-1 for urban intersections.

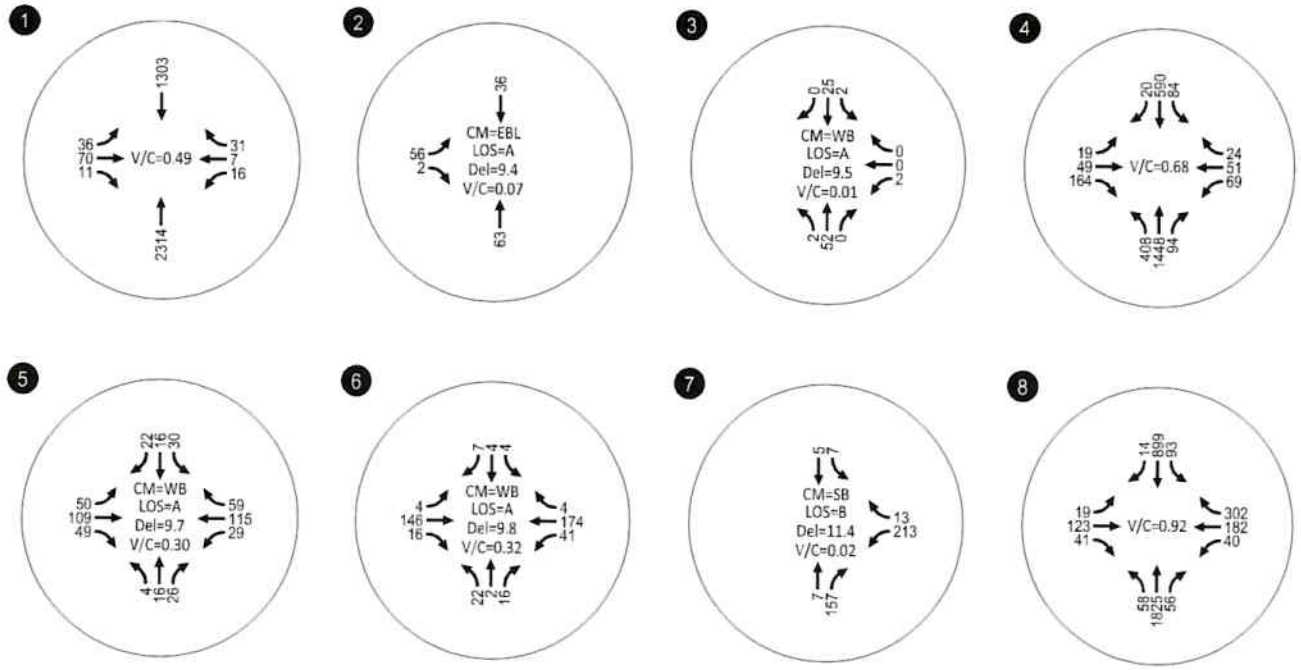
As shown, all study intersections have crash rates below their 90th percentile crash rates. Based on the crash data review, no specific safety-based mitigation needs are recommended as part of the proposed apartment development. *Appendix A* contains the crash data summary as well as crash diagrams prepared for the three ODOT study intersections that may assist ODOT in their on-going monitoring activities.

Traffic Volumes and Peak Hour Operations

With the effect of the ongoing COVID-19 pandemic on "typical" travel patterns, the intersection operational analyses described herein are based on the development of existing proxy counts at the study locations. These proxy volumes were developed based on turning movement volumes previously recorded at the study intersections in various years (where available) and were supplemented by traffic counts collected in 2021 while COVID was still affecting travel patterns. Weekday morning (7:00 – 9:00 AM) and evening (4:00 - 6:00 PM) hours traffic counts were collected at all study intersections in January 2021 to help estimate "proxy" volumes for the existing conditions analyses. *Appendix B* contains the traffic count sheets and details of the 2021 proxy volume derivation.

The weekday AM and PM peak hour traffic volumes and the associated intersection operations are shown in Figures 4 and 5. As shown, the study intersections all are estimated to operate within the applicable agency standards/targets under existing conditions. *Appendix C* includes the existing conditions level-of-service worksheets.





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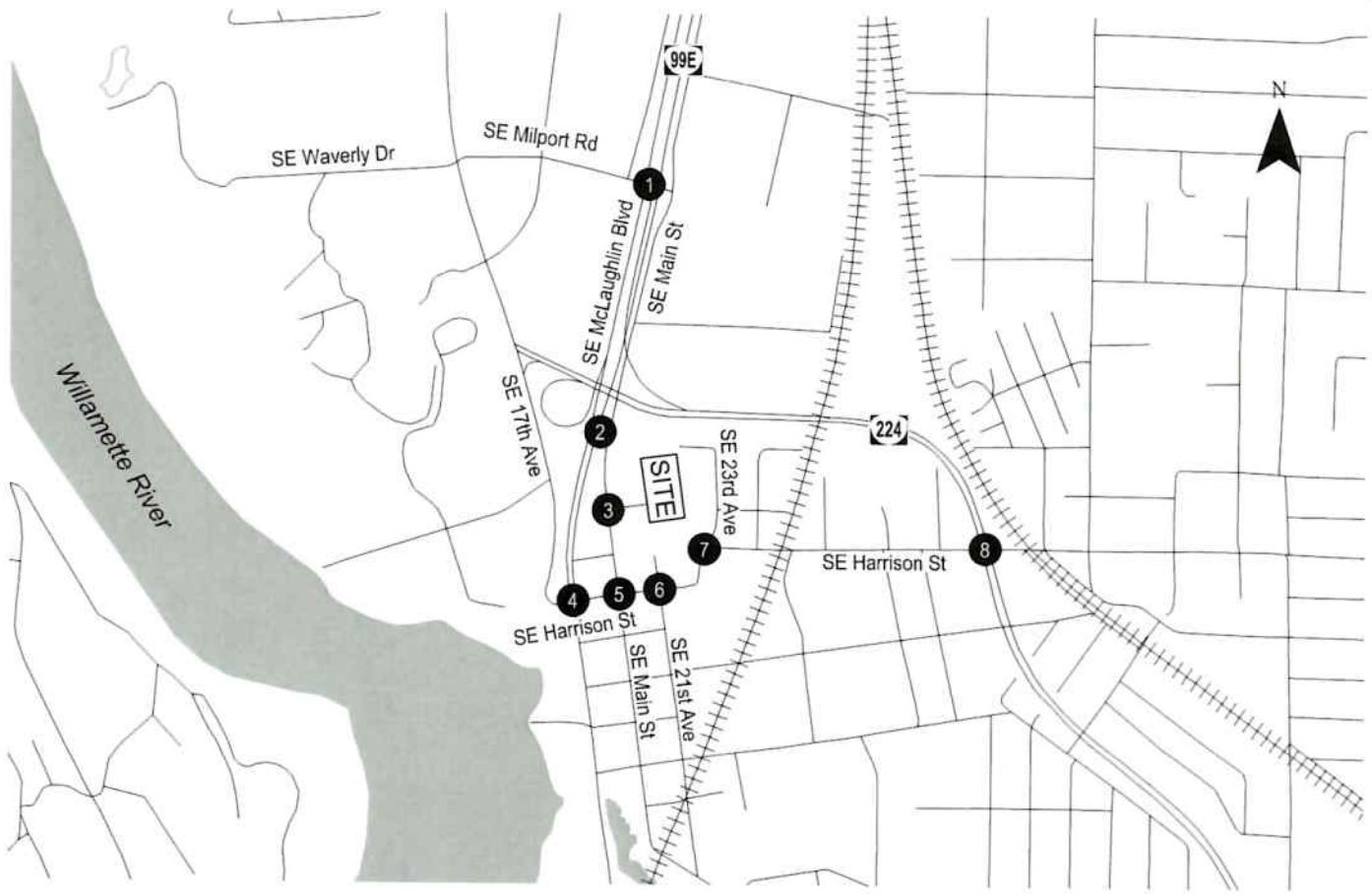
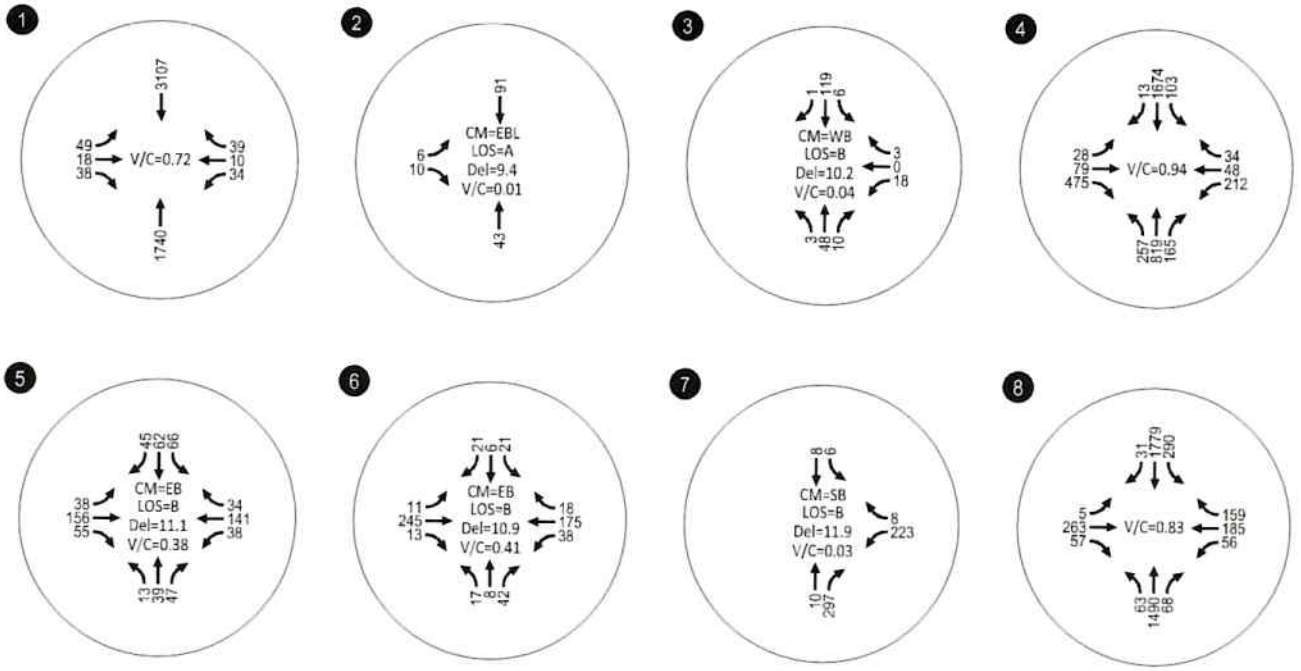
AWSC= ALL-WAY STOP CONTROL

Existing Traffic Conditions Weekday AM Peak Hour Milwaukie, Oregon

Figure 4





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Existing Traffic Conditions Weekday PM Peak Hour Milwaukie, Oregon

Figure 5

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2022 BACKGROUND TRAFFIC CONDITIONS

The year 2022 background traffic analysis identifies how the study intersections will operate prior to the redevelopment of the site as apartments. This analysis includes traffic attributed to planned developments within the study area and to general growth in the region. Because the existing conditions proxy volumes are largely predicated on January 2021 counts, which were completed after the closure of Kellogg Bowl, the 2022 background traffic conditions do not assume re-occupancy of the former site use[2].

Planned Developments & Transportation Improvements

City staff confirmed the following previously approved developments to include in the traffic forecasts for the year 2022:

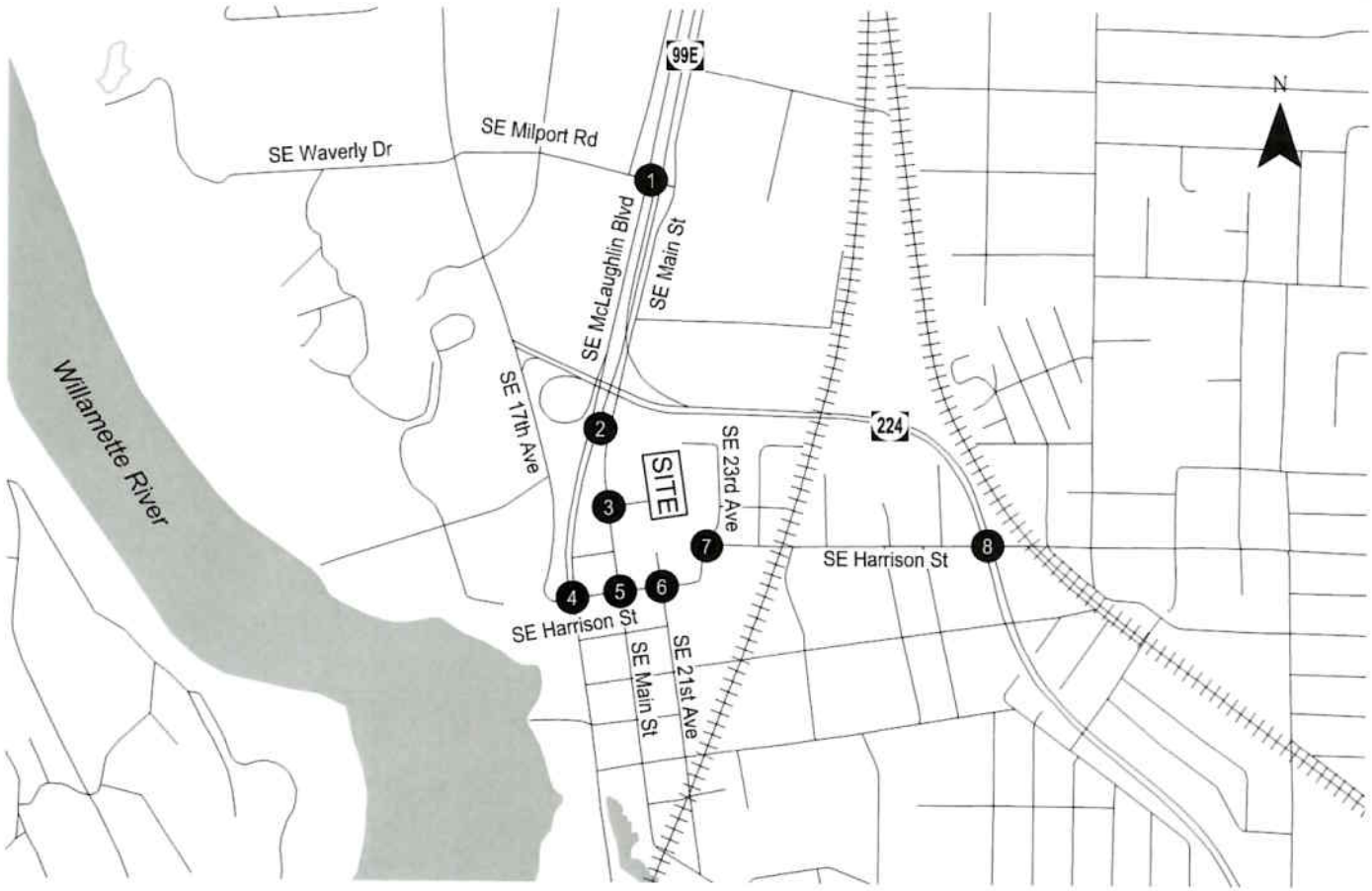
- Hillside Master Plan development to be located north of the SE 32nd Avenue/SE Harrison Street intersection; and,
- Waverley Woods Apartments to be located on SE Waverley Court.

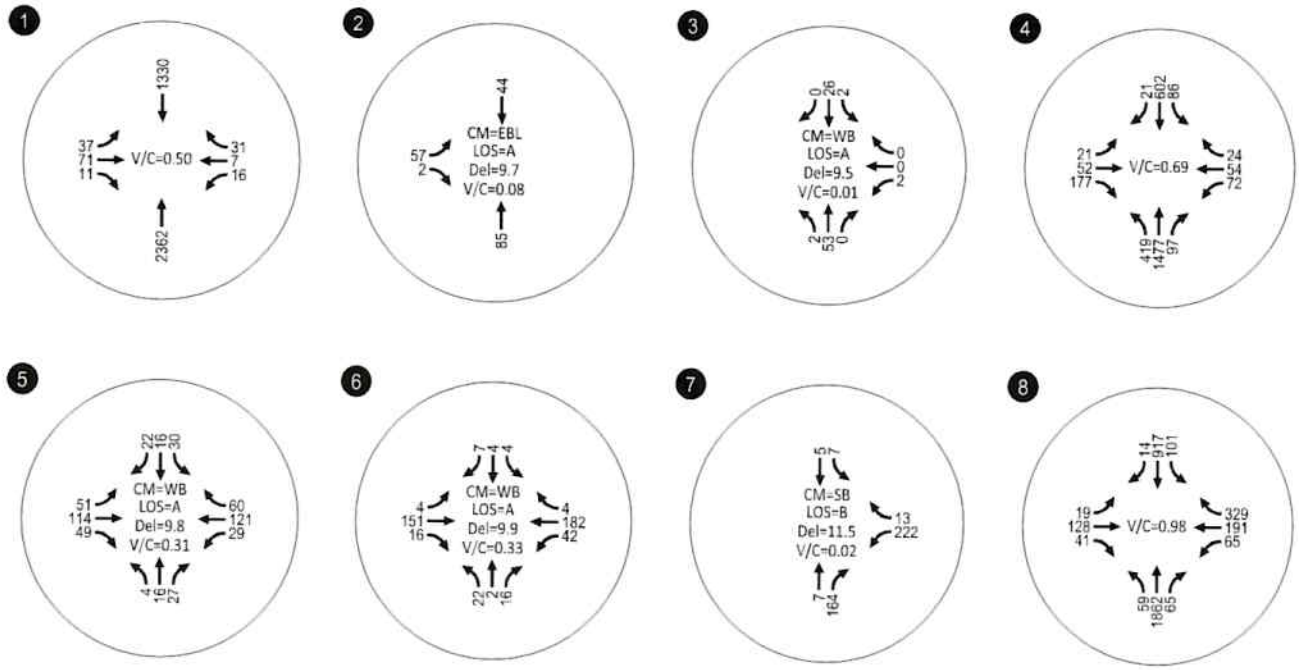
No additional in-process developments were identified by ODOT or Clackamas County staff for inclusion in the analyses. In addition to the "in-process" development traffic, a two percent growth rate was applied to the year 2021 "proxy" volumes to account for continued growth in regional traffic. The trips associated with the in-process traffic are provided in *Appendix D*.

None of the agencies identified funded changes to the study intersections and/or streets within the next two years that will materially affect traffic volumes.

Figures 6 and 7 show the projected 2022 turning movements and associated intersection analyses during the AM and PM peak hours. As shown, all of the study intersections are projected to continue to meet the applicable operating parameters during both peak hours. *Appendix E includes the 2022 background traffic operations worksheets.*

[2] Weekday AM and PM peak hour traffic volumes at the SE Harrison Street/McLoughlin Boulevard (OR 99E) and SE Harrison Street/OR 224 intersections were completed when Kellogg Bowl was in operation. Accordingly, assuming no existing site trips at these locations offers a conservative assessment of future traffic conditions.





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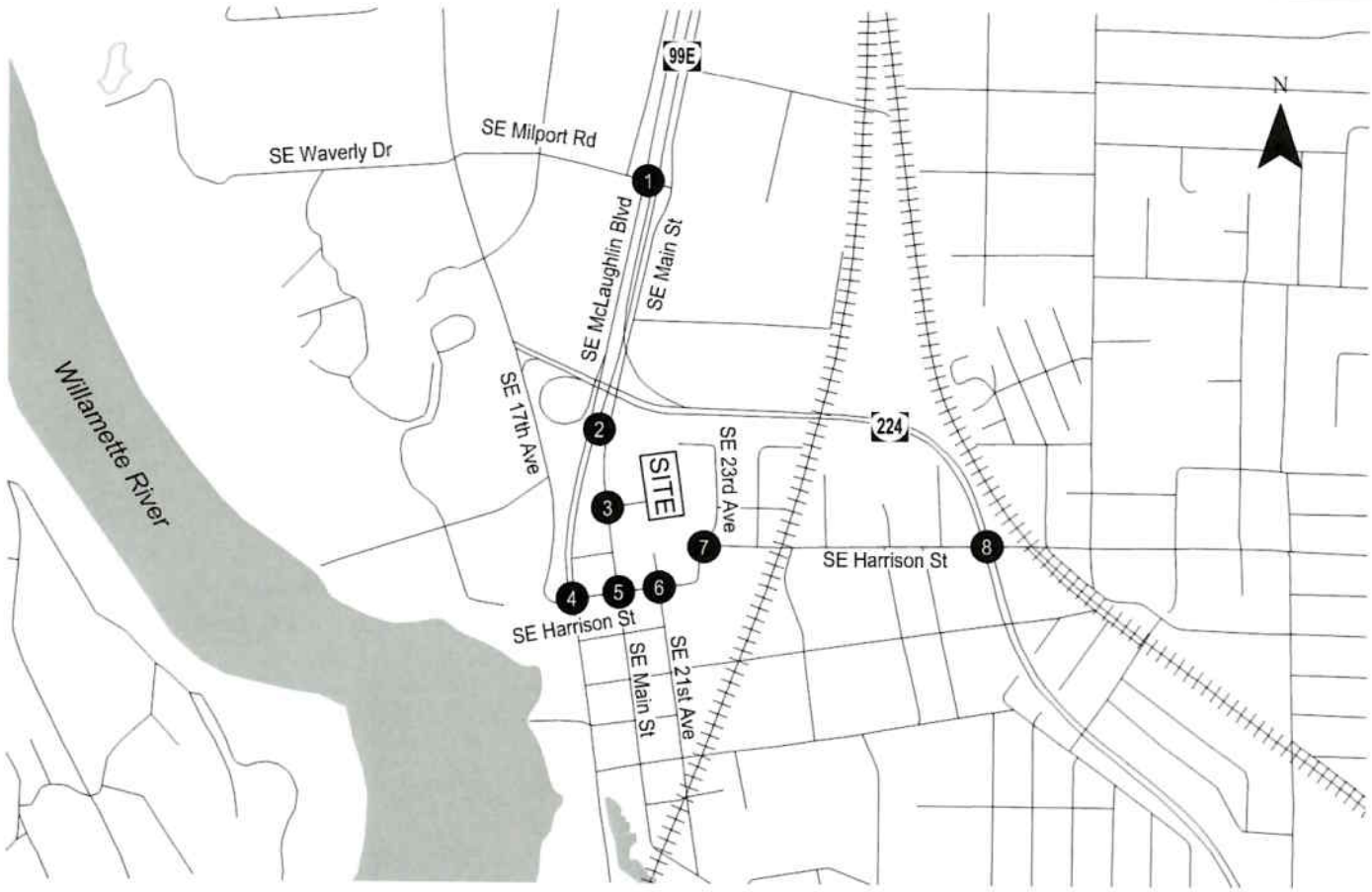
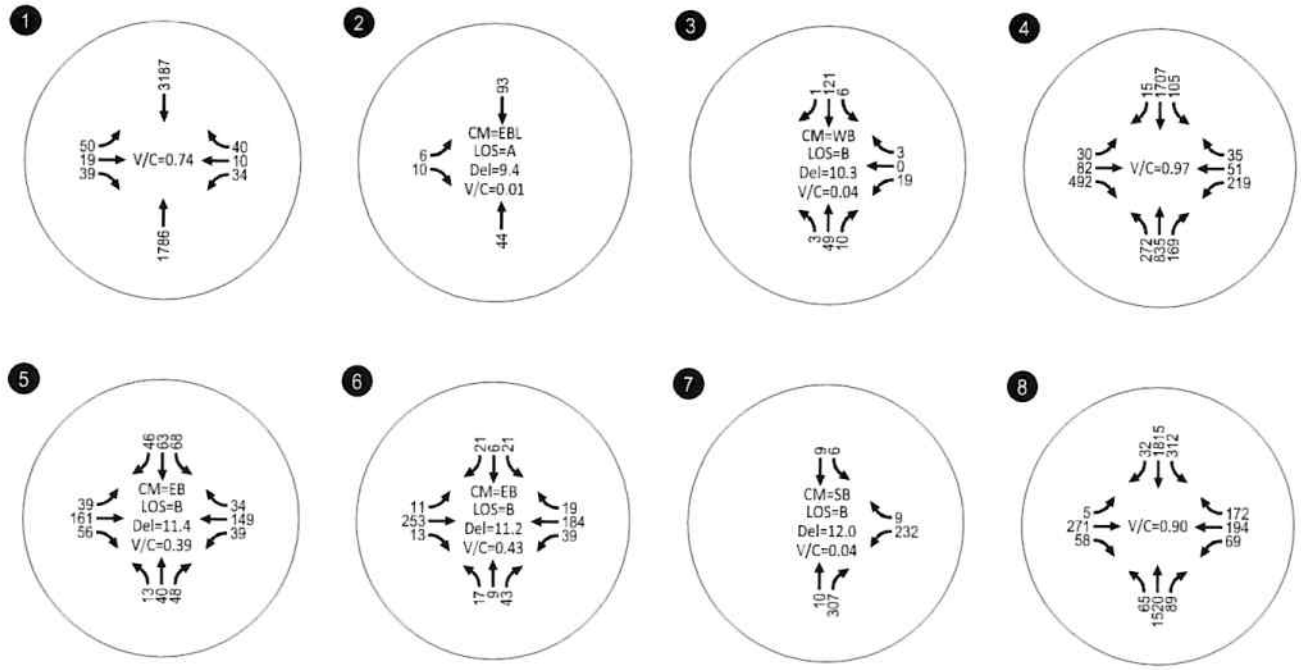
2022 Background Traffic Conditions
Weekday AM Peak Hour
Milwaukie, Oregon

Figure
6





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2022 Background Traffic Conditions
Weekday PM Peak Hour
Milwaukie, Oregon

Figure 7

PROPOSED DEVELOPMENT

As shown in Figure 2, Pahlisch Commercial is proposing to remove the existing bowling alley and replace it with a six-story building housing up to 178 apartments and associated structured parking. The apartment residents will also be served by surface parking on both the westside and eastside of the building. Vehicular access to the apartments will be provided via the shared access onto SE Main Street that is used today by Kellogg Bowl, Pietro's Pizza, and a veterinary clinic. No vehicular connection to SE 23rd Avenue is proposed. The former Kellogg Bowl building located on the site will be removed as part of the redevelopment.

Trip Generation Estimate

The estimated vehicular trips for the existing Kellogg Bowl and the proposed apartments were calculated based on rates contained in the *Trip Generation Manual* (10th Edition, as published by the Institute of Transportation Engineers). Note that the potential live/work units were assessed using market rate housing trip rates due to the lack of live/work trip data. The increase in site trips associated with the redevelopment is reflected in Table 4.

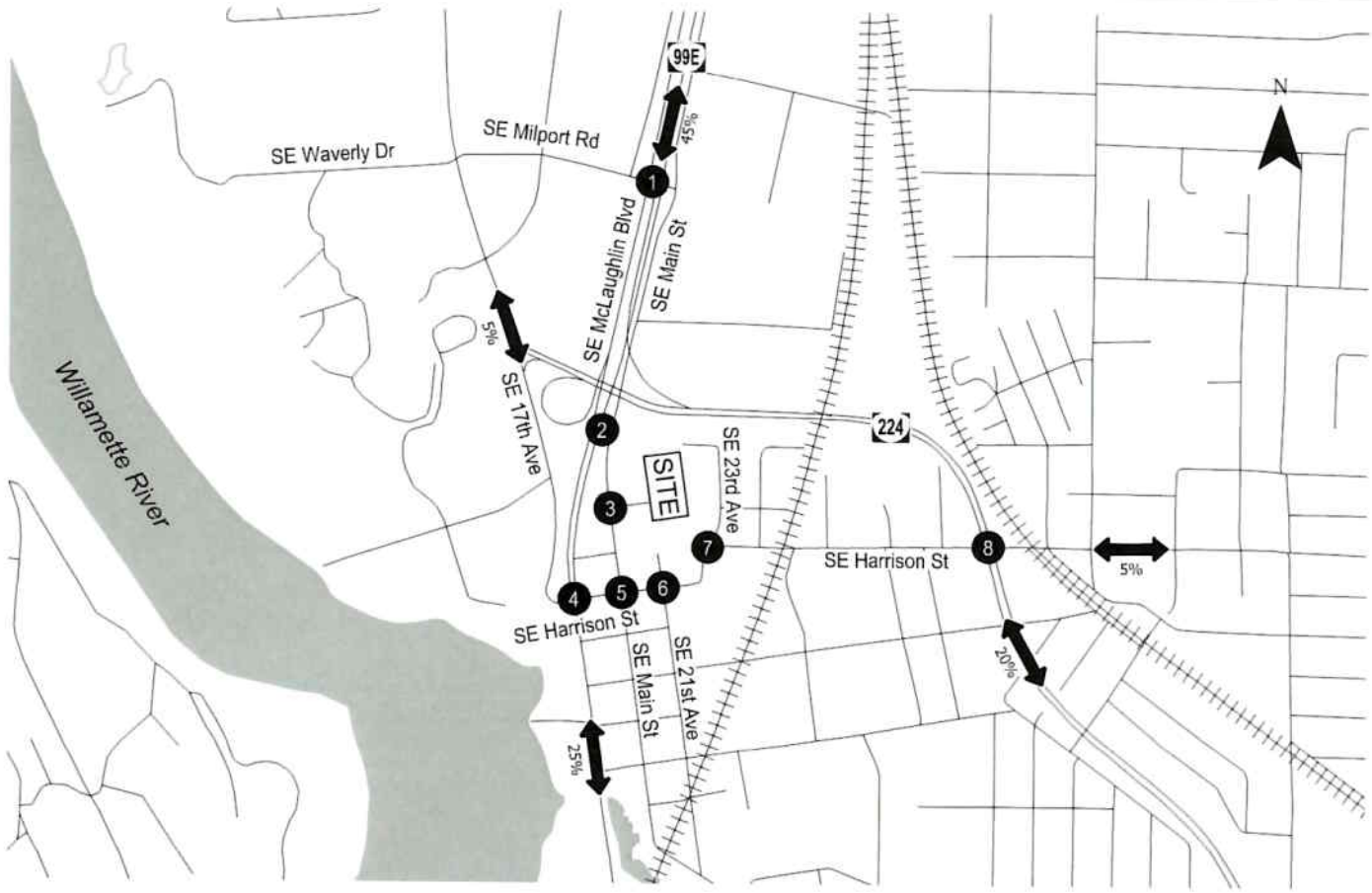
Table 4. Estimated Site Trip Generation

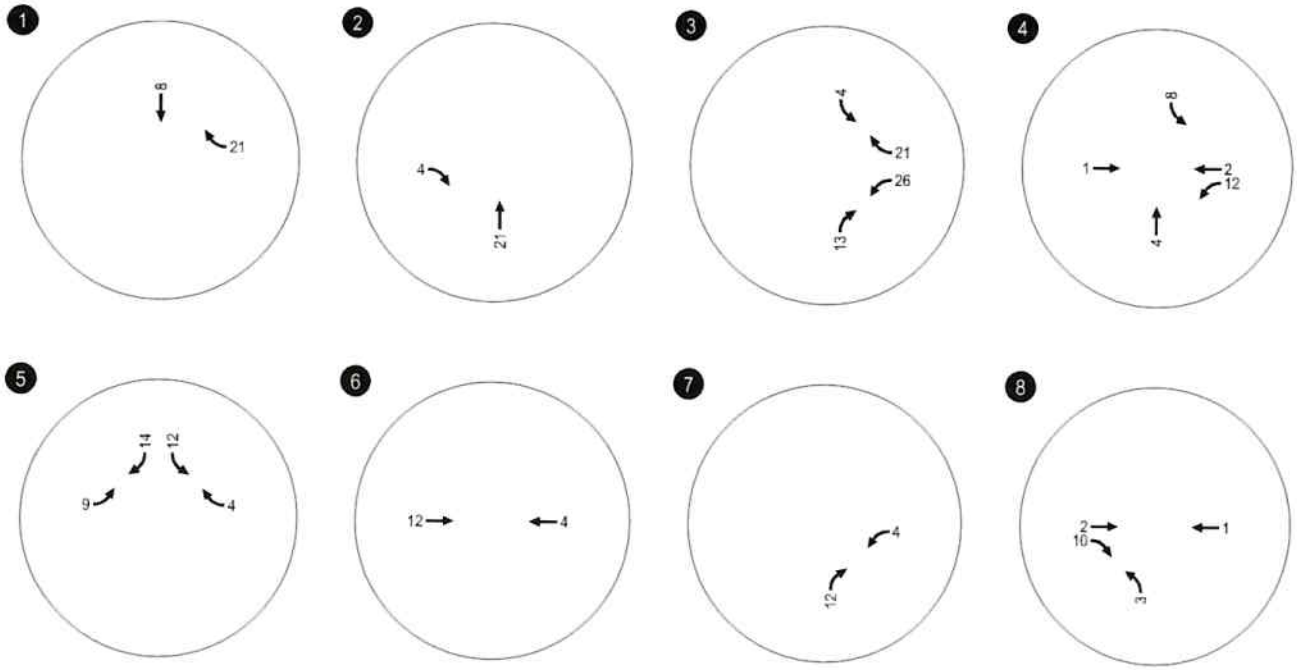
Land Use	ITE Code	Size	Total Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total Trips	In	Out	Total Trips	In	Out
Existing Kellogg Bowl									
Bowling Alley	437	21,307 sq ft	N/A*	17	16	1	25	16	9
Proposed Redevelopment									
Mid-Rise Residential	221	178 units	968	64	17	47	78	48	30
Increase in Site Trips			N/A	+47	+1	+46	+53	+32	+21

As noted previously, Kellogg Bowl was not in operation in January 2021 when many of the study intersections were counted. As such, this study assesses the impact of the proposed apartments assuming all 64 weekday AM peak hour trips and 78 weekday PM peak hour trips are new to the study intersections (conservatively overstating site redevelopment impacts at the SE Harrison Street/McLoughlin Boulevard (OR 99E) and SE Harrison Street/OR 224 intersections given these two locations were counted when Kellogg Bowl was in operation).

Trip Distribution and Assignment

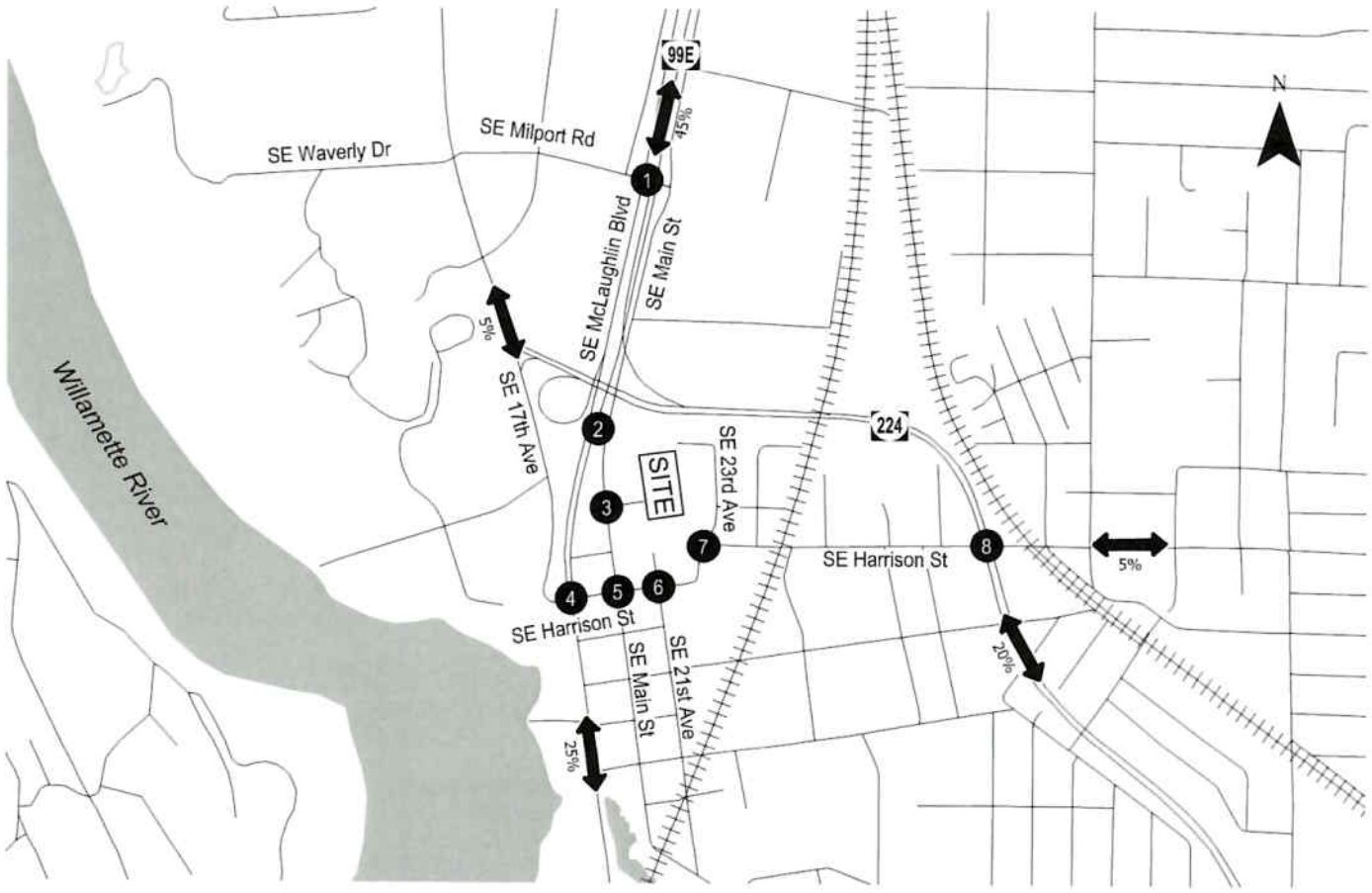
The distribution of the site-generated vehicular trips was estimated based on a review of previously conducted traffic impact studies, guidance provided by DKS Associates on behalf of City staff, and the location of nearby and regional employment and commercial areas. Figures 8 and 9 illustrate the estimated trip distribution pattern and assignment of the site trips (as reflected in Table 4) during the weekday AM and PM peak hours.

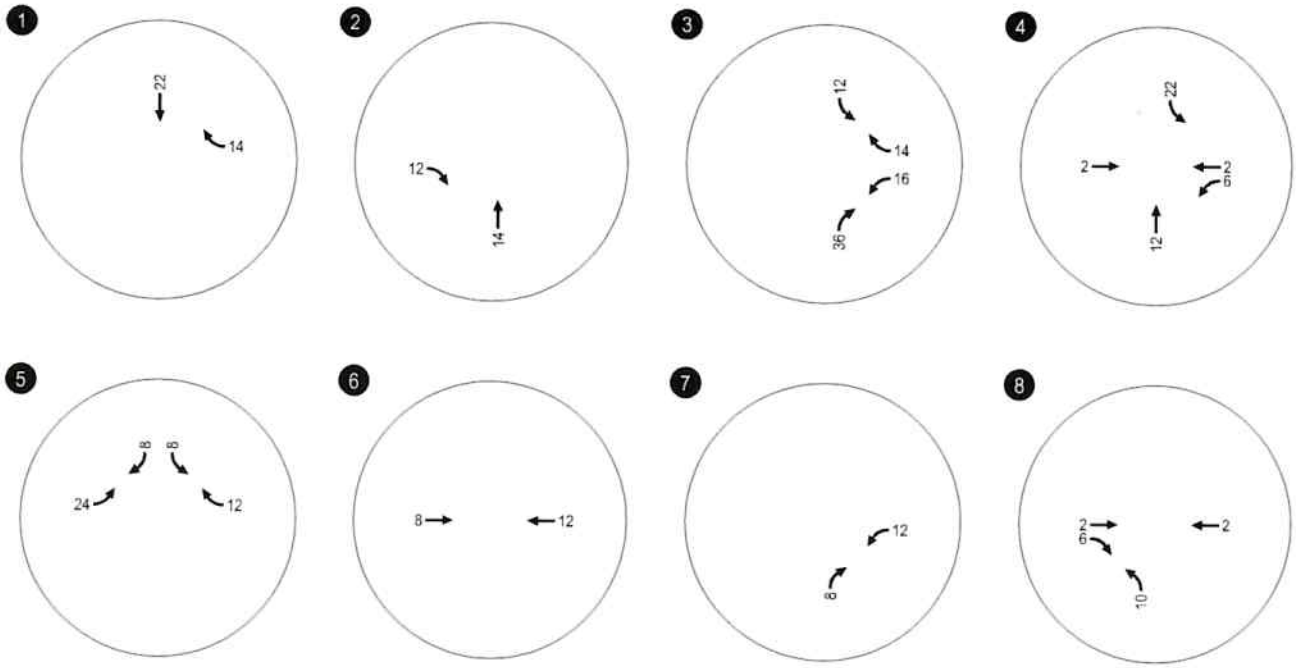




Estimated Trip Distribution Pattern and Site-Generated Trip Assignment, Weekday AM Peak Hour
Milwaukie, Oregon

Figure 8





Estimated Trip Distribution Pattern and Site Generated Trip Assignment, Weekday PM Peak Hour
Milwaukie, Oregon

Figure 9

2022 TOTAL TRAFFIC CONDITIONS

The total traffic conditions analysis forecasts how the study intersections will operate with the traffic associated with occupancy of the proposed apartments. The increase in site-generated trips shown in Figures 8 and 9 were added to the 2022 background traffic volumes reflected in Figures 6 and 7 to arrive at the 2022 total traffic volumes shown in Figures 10 and 11. Figures 10 and 11 also identify the intersection operations under total traffic conditions.

As shown, all study intersections continue to meet the applicable operating standards/targets under both weekday AM and PM peak hour conditions. *Appendix "F" contains the year 2022 total traffic analysis worksheets.*

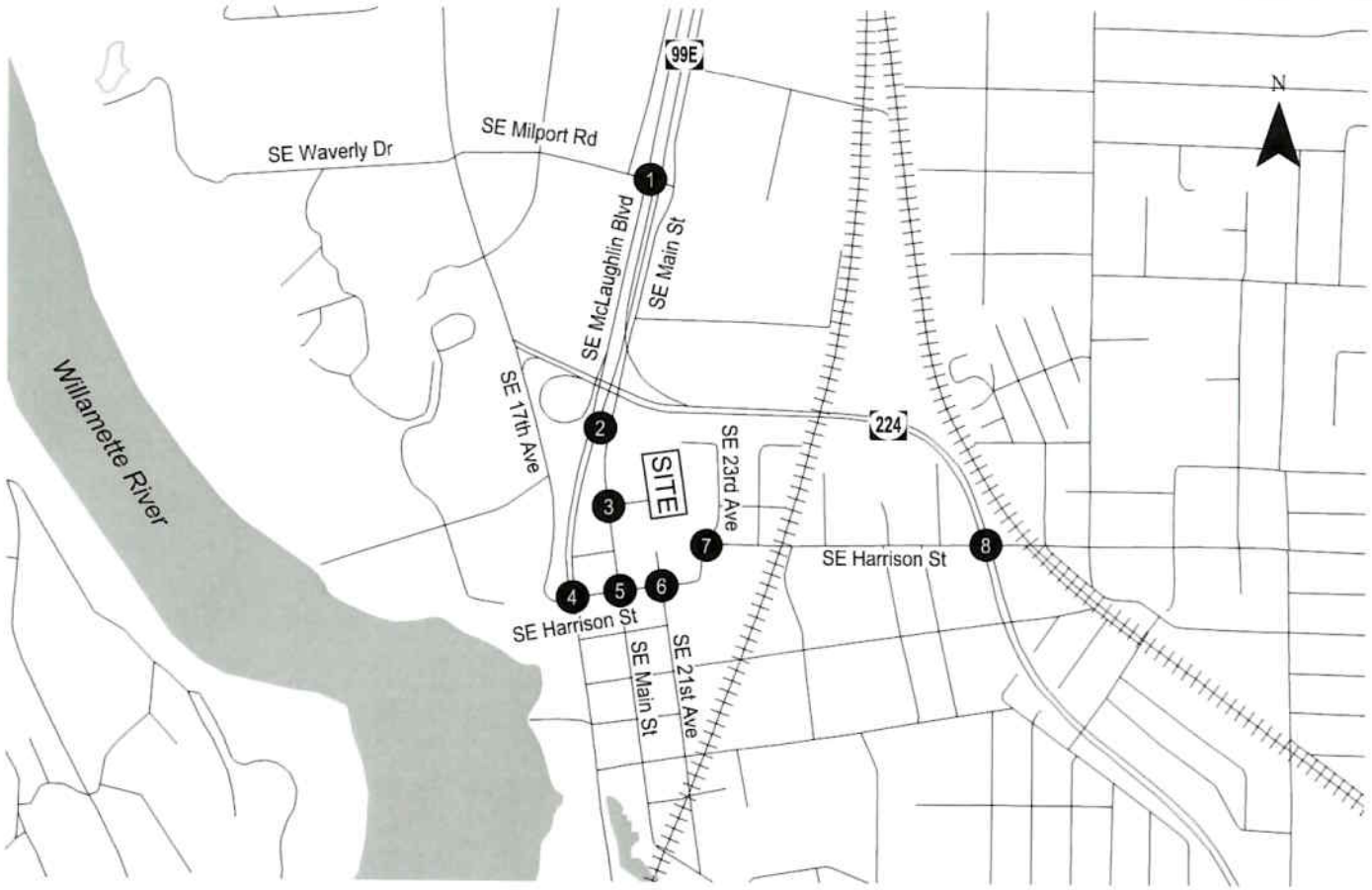
INTERSECTION QUEUING CONSIDERATIONS

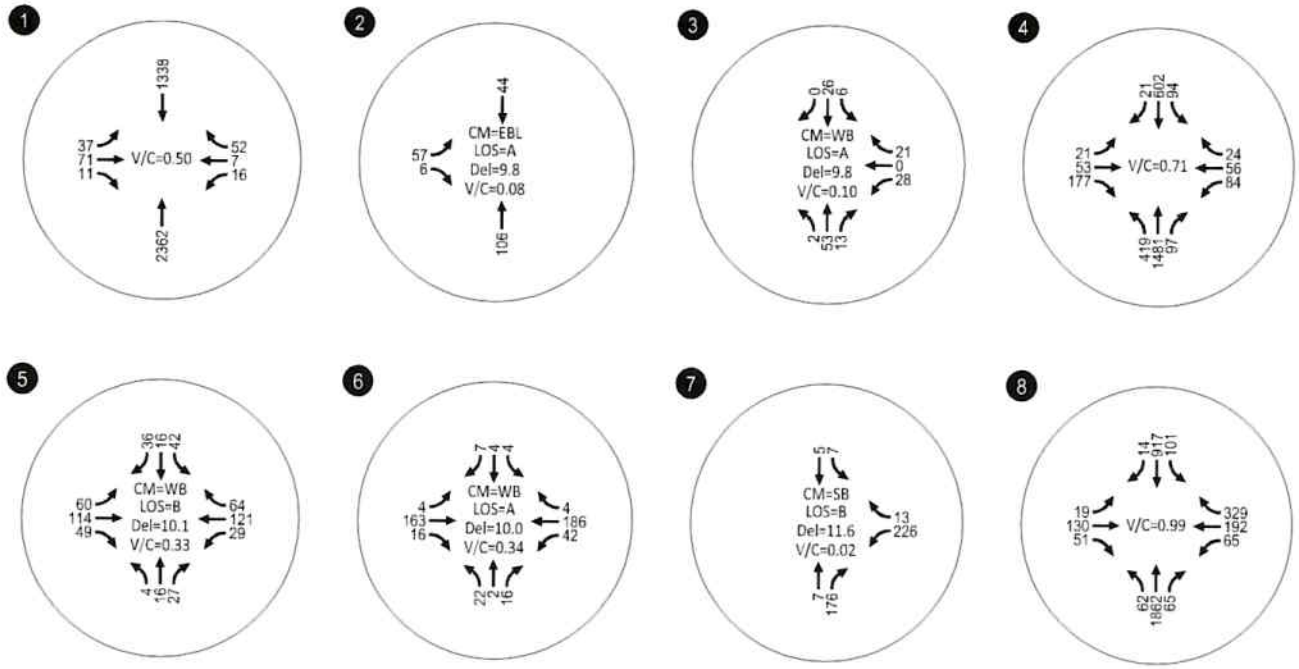
For reference purposes, *Appendix G* summarizes results of projected 95th percentile queuing for the existing, background and total traffic scenarios. As shown, queues can be readily accommodated at most intersections. Two of the ODOT study intersections are projected to have one or movements operating near or above capacity and can be expected to experience long queues as described below. Site trip impacts related to queuing are minimal at each. Further, no credit for existing site trips associated with Kellogg Bowl were assumed at either intersection, though the base traffic counts used in this analysis were completed while the former use was generating trips through both locations.

OR 99E/SE Harrison Street (Intersection 4)

Three movements are projected to exceed the available storage at this intersection regardless of the proposed apartment development.

- The 95th percentile northbound left-turn lane queue on OR 99E at SE Harrison Street is projected to exceed the available storage length on OR 99E during both the weekday AM and PM peak hours under future conditions (this queue is also projected to exceed the available storage under proxy 2021 existing AM peak hour conditions and to be at capacity during the existing PM peak hour). The northbound left-turn queue length is not projected to change between background and total traffic conditions and the proposed apartments are not expected to add any vehicles to the turn movement.
- The 95th percentile eastbound right-turn queue on SE Harrison Street approaching OR 99E is projected to extend into the eastbound through/left lane under existing 2021 proxy weekday PM peak hour conditions as well as future background and total traffic conditions. The right-turn queue length is not projected to change between background and total traffic conditions and the proposed apartments are not expected to add any vehicles to the turn movement.

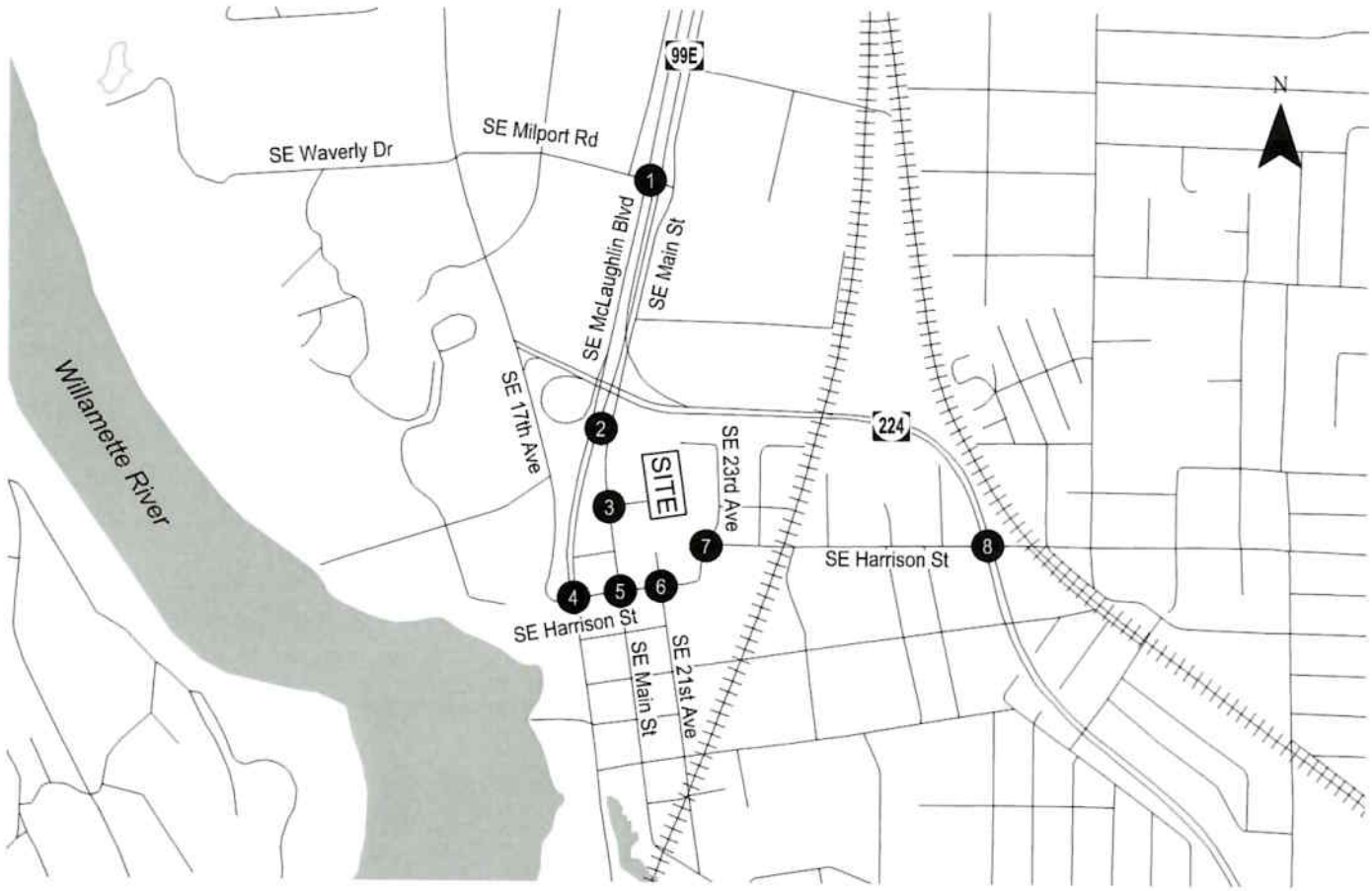


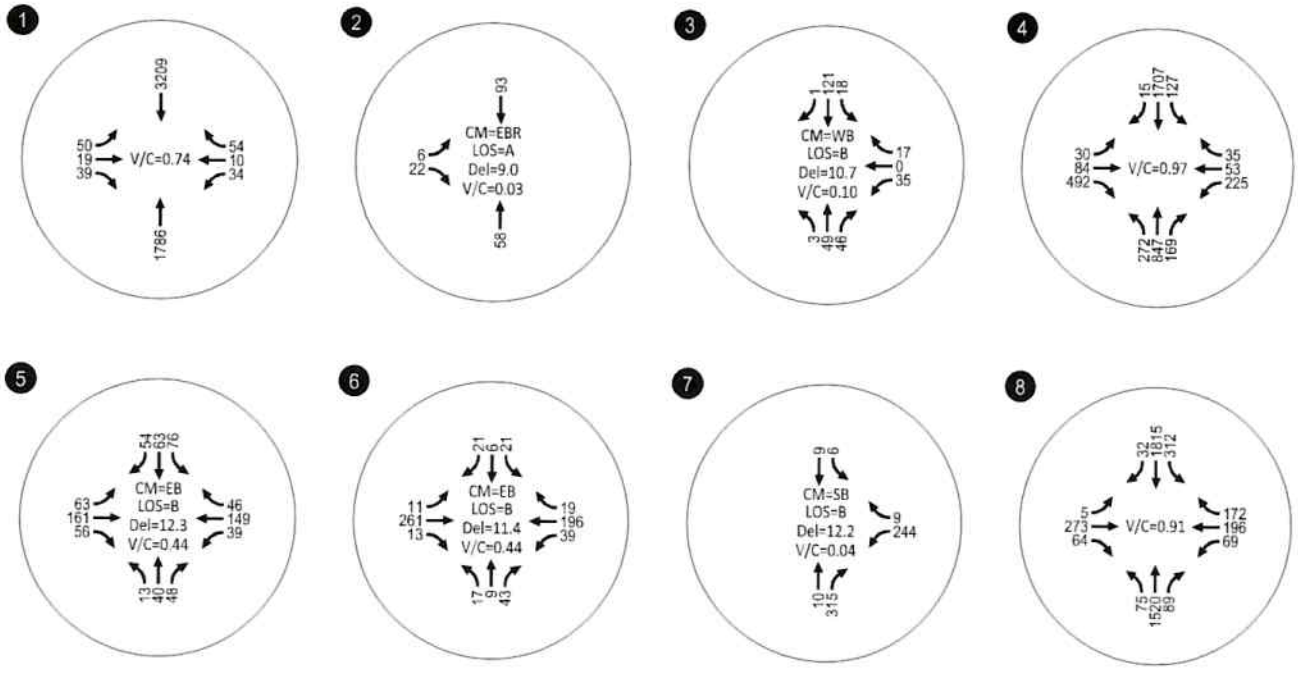


CM = CRITICAL MOVEMENT (TWSC/AWSC)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC/AWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED) / CRITICAL MOVEMENT CONTROL DELAY (TWSC/AWSC)
V/C = INTERSECTION VOLUME-TO-CAPACITY RATIO (SIGNALIZED) / CRITICAL MOVEMENT VOLUME-TO-CAPACITY RATIO (TWSC/AWSC)
TWSC = TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

2022 Total Traffic Conditions
Weekday AM Peak Hour
Milwaukie, Oregon

Figure
10





CM = CRITICAL MOVEMENT (TWSC/AWSC)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC/AWSC)
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TWSC = TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

2022 Total Traffic Conditions
Weekday PM Peak Hour
Milwaukie, Oregon

Figure
11

- The 95th percentile westbound queue on SE Harrison Street approaching OR 99E is projected to extend into the SE Main Street intersection under existing 2021 proxy weekday PM peak hour conditions as well as future background and total traffic conditions. The westbound weekday PM peak hour queue is projected to increase by no more than one car length between background and total traffic conditions. Further, the proposed apartments are projected to add up to 8 vehicles to the approach over the course of the PM peak hour. These site trips could alternatively travel south on SE Main Street to access OR 99E at SE Monroe Street or SE Washington Street instead of at SE Harrison Street.

Based on the considerations above including the incremental site trip generation and impacts on queuing as well as the potential for site trips to use alternative routes to travel south on OR 99E, no queuing-based mitigation is recommended at the intersection.

OR 224/SE Harrison Street

Three movements are projected to exceed the available storage at this intersection regardless of the proposed apartment development.

- The 95th percentile northbound through queue on OR 224 is projected to extend through the SE Monroe Street intersection to the south during both the weekday AM and PM peak hours under proxy 2021 and future traffic conditions. The proposed apartments are not expected to add any vehicles to the through movement.
- The 95th percentile westbound approach queues on SE Harrison Street are projected to extend east through the SE 32nd Avenue intersection during the weekday AM peak hour under proxy 2021 and future traffic conditions. Weekday PM peak hour queues are projected to extend past the railroad crossing east of OR 224. The proposed apartments are projected to add one AM peak hour trip and two PM peak hour trips to the westbound through movement.

The OR 224/SE Harrison Street intersection is projected to operate close to capacity during both peak analysis periods, though the ODOT mobility target is satisfied for the first hour so no second hour analysis was conducted.

Similar to OR 99E/SE Harrison Street, the trip assignment provided in this study conservatively assumes that all site-generated trips destined to/from the south on OR 224 use the OR 224/SE Harrison Street intersection. Those site trips could alternatively access OR 224 via signalized intersections on OR 224 at SE Monroe Street or SE Oak Street.

No queuing-based mitigation is recommended at the intersection with site development recognizing the relative de minimis impact of site trips.

TRANSPORTATION PLANNING RULE (TPR) ANALYSIS

As part of the redevelopment, the applicant is proposing a Zoning Map Amendment for the approximately 0.20-acre portion of the property that is currently zoned R-5. Today, this property is used for surface parking and as proposed, will continue to do so in the future. As part of the redevelopment, the property would be rezoned to DMU (Downtown Mixed Use) like the remainder of the property. Given that the area will only serve surface parking for the residents of the new apartment building, the applicant is proposing a trip cap to address compliance of the proposed rezone with Oregon's Transportation Planning (TPR) Rule (as outlined in Oregon Administrative Rule, OAR, 660.012.0060).

Per the City's Municipal Code, the R-5 zoning relates to low-density residential development. Table 19.301.4 of the Municipal Code specifies a maximum density of 8.7 units per acre. Based on the 0.20-acre size of the parking lot, this would enable up to 2 homes to be developed under the existing zoning. As proposed the 0.20 acres would be rezoned to DMU to address the existing "split zone" nature of the property but the parking area would remain as the only use on-site. As such, the applicant is proposing a trip cap limited to the vehicular trips that could be generated by the existing zoning for any future development of the property (not including the surface parking to serve the proposed apartments).

Oregon Transportation Planning Rule Considerations

Two sections of Oregon's TPR apply to amendments to zoning designations. Per OAR 660-012-0060(1) and (2), the first step in assessing an amendment's potential transportation impact is to compare the trip generation potential of the site assuming a "reasonable worst-case" development scenario under the existing and proposed zoning. If the trip generation potential increases under the proposed zoning, additional analysis is required to assess whether the rezone will "significantly affect" the transportation system. Conversely, if the trip generation under the proposed zoning is equal to or less than that under the existing zoning, no additional analysis is necessary to conclude that the proposal does not "significantly affect" the transportation system.

Proposed Trip Cap

To calculate the trip cap, we used the trip generation potential of the permitted land uses associated with the existing zoning assuming reasonable "worst case" development (i.e., maximum residential density). Per the discussion above, this would equate to no more than 2 homes.

Using the information presented in the *Trip Generation Manual, 10th Edition,* Table 5 presents the proposed trip cap based on the development of the property consistent with the existing zoning.

Table 5. Proposed Trip Cap

Land Use	ITE Code	Size (units)	Total Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total Trips	In	Out	Total Trips	In	Out
Single Family Homes	210	2	18	1	0	1	2	1	1
Trip Cap			18	1	0	1	2	1	1

With the trip cap shown in Table 5 in-place, the proposed rezone would not result in a significant effect on the transportation system, as defined by the TPR.

Summary of Applicable Oregon Administrative Rule Criteria

OAR Section 660-12-0060 of the TPR sets forth the relative criteria for evaluating plan and land use regulation amendments. Table 6 summarizes the criteria in Section 660-012-0060 and the applicability to the proposed Zone Map Amendment application.

Table 6. Summary of Criteria in OAR 660-012-0060

Section	Criteria	Applicable?
1	Describes how to determine if a proposed land use action results in a significant effect.	Yes
2	Describes measures for complying with Criteria #1 where a significant effect is determined.	No
3	Describes measures for complying with Criteria #1 and #2 without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility.	No
4	Determinations under Criteria #1, #2, and #3 are coordinated with other local agencies.	Yes
5	Indicates that the presence of a transportation facility shall not be the basis for an exception to allow development on rural lands.	No
6	Indicates that local agencies should credit developments that provide a reduction in trips.	No
7	Outlines requirements for a local street plan, access management plan, or future street plan.	No
8	Defines a mixed-use, pedestrian-friendly neighborhood.	No
9	A significant effect may not occur if the rezone is identified on the City's Comprehensive Plan and assumed in the adopted Transportation System Plan.	No
10	Agencies may consider measures other than vehicular capacity if within an identified multimodal mixed-use area (MMA).	No
11	Allows agencies to override the finding of a significant effect if the application meets the balancing test.	No

The applicable criteria are provided below in italics along with a compliance assessment shown in standard font.

> *OAR 660-12-0060(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:*

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Compliance Assessment: The proposed rezone with the associated trip cap will restrict any future redevelopment of the parking lot to the trip generation potential shown in Table 5 (i.e., 18 daily trips, 1 weekday AM peak hour and 2 weekday PM peak hour trips). No changes to the City's functional street classification designations or standards are warranted by the trip cap. Accordingly, the proposed rezone does not result in a significant effect on the transportation system, and mitigation is not necessary with the exception of the imposed trip cap.

OAR 660-12-0060 (4) Determinations under sections (1)–(3) of this rule shall be coordinated with affected transportation facility and service providers and other affected local governments.

(a) In determining whether an amendment has a significant effect on an existing or planned transportation facility under subsection (1)(c) of this rule, local governments shall rely on existing transportation facilities and services and on the planned transportation facilities, improvements and services set forth in subsections (b) and (c) below.

(b) Outside of interstate interchange areas, the following are considered planned facilities, improvements and services:

(A) Transportation facilities, improvements or services that are funded for construction or implementation in the Statewide Transportation Improvement Program or a locally or regionally adopted transportation improvement

program or capital improvement plan or program of a transportation service provider.

(B) Transportation facilities, improvements or services that are authorized in a local transportation system plan and for which a funding plan or mechanism is in place or approved. These include, but are not limited to, transportation facilities, improvements or services for which: transportation systems development charge revenues are being collected; a local improvement district or reimbursement district has been established or will be established prior to development; a development agreement has been adopted; or conditions of approval to fund the improvement have been adopted.

(C) Transportation facilities, improvements or services in a metropolitan planning organization (MPO) area that are part of the area's federally-approved, financially constrained regional transportation system plan.

(D) Improvements to state highways that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when ODOT provides a written statement that the improvements are reasonably likely to be provided by the end of the planning period.

(E) Improvements to regional and local roads, streets or other transportation facilities or services that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when the local government(s) or transportation service provider(s) responsible for the facility, improvement or service provides a written statement that the facility, improvement or service is reasonably likely to be provided by the end of the planning period.

(c) Within interstate interchange areas, the improvements included in (b)(A)–(C) are considered planned facilities, improvements and services, except where:

(A) ODOT provides a written statement that the proposed funding and timing of mitigation measures are sufficient to avoid a significant adverse impact on the Interstate Highway system, then local governments may also rely on the improvements identified in paragraphs (b)(D) and (E) of this section; or

(B) There is an adopted interchange area management plan, then local governments may also rely on the improvements identified in that plan and which are also identified in paragraphs (b)(D) and (E) of this section.

(d) As used in this section and section (3):

(A) Planned interchange means new interchanges and relocation of existing interchanges that are authorized in an adopted transportation system plan or comprehensive plan;

(B) Interstate highway means Interstates 5, 82, 84, 105, 205 and 405; and

(C) Interstate interchange area means:

(i) Property within one-quarter mile of the ramp terminal intersection of an existing or planned interchange on an Interstate Highway; or
(ii) The interchange area as defined in the Interchange Area Management Plan adopted as an amendment to the Oregon Highway Plan.

(e) For purposes of this section, a written statement provided pursuant to paragraphs (b)(D), (b)(E) or (c)(A) provided by ODOT, a local government or transportation facility provider, as appropriate, shall be conclusive in determining whether a transportation facility, improvement or service is a planned transportation facility, improvement or service. In the absence of a written statement, a local government can only rely upon planned transportation facilities, improvements and services identified in paragraphs (b)(A)-(C) to determine whether there is a significant effect that requires application of the remedies in section (2).

Compliance Assessment: The traffic impact analysis and TPR analysis for this project have been coordinated with the City of Milwaukie, Clackamas County, and ODOT.

DRIVEWAY SIGHT DISTANCE

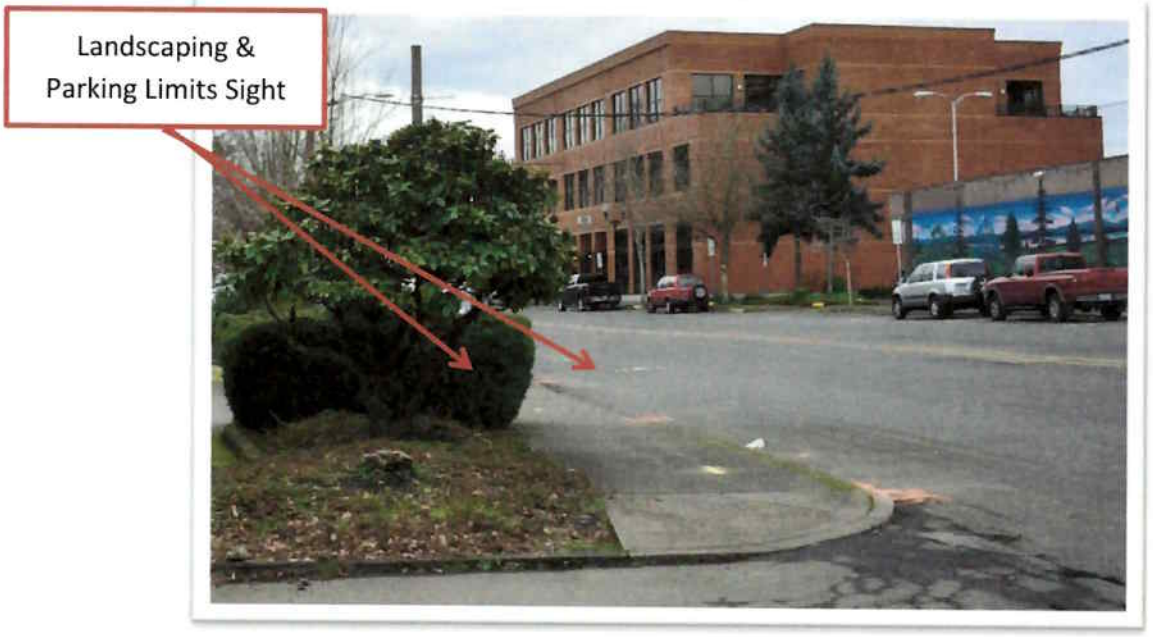
Available intersection sight distance was measured at the existing site driveway using the principles and methods identified in *A Policy on Geometric Design of Highways and Streets, 6th Edition*, 2011 as published by the American Association of State Highway and Transportation Officials (AASHTO). For the analysis, intersection sight distance was measured from an assumed driver viewpoint 14.5 feet behind the travel way and from a height of 3.5 feet above the ground facing an object that is 3.5 feet above the ground.

Using the posted 20 miles per hour (MPH) speed along SE Main Street, Case B1 and Case B2 sight distances were reviewed facing northbound and southbound departing the driveway and entering SE Main Street. Per *A Policy on Geometric Design of Highways and Streets:*

- Case B1 is a left turn from the site driveway and requires at least 225 feet of intersection sight distance for automobiles facing to both the left and right for a two-lane roadway. Available intersection sight distance was observed to be over the desired 225 feet facing in both directions.

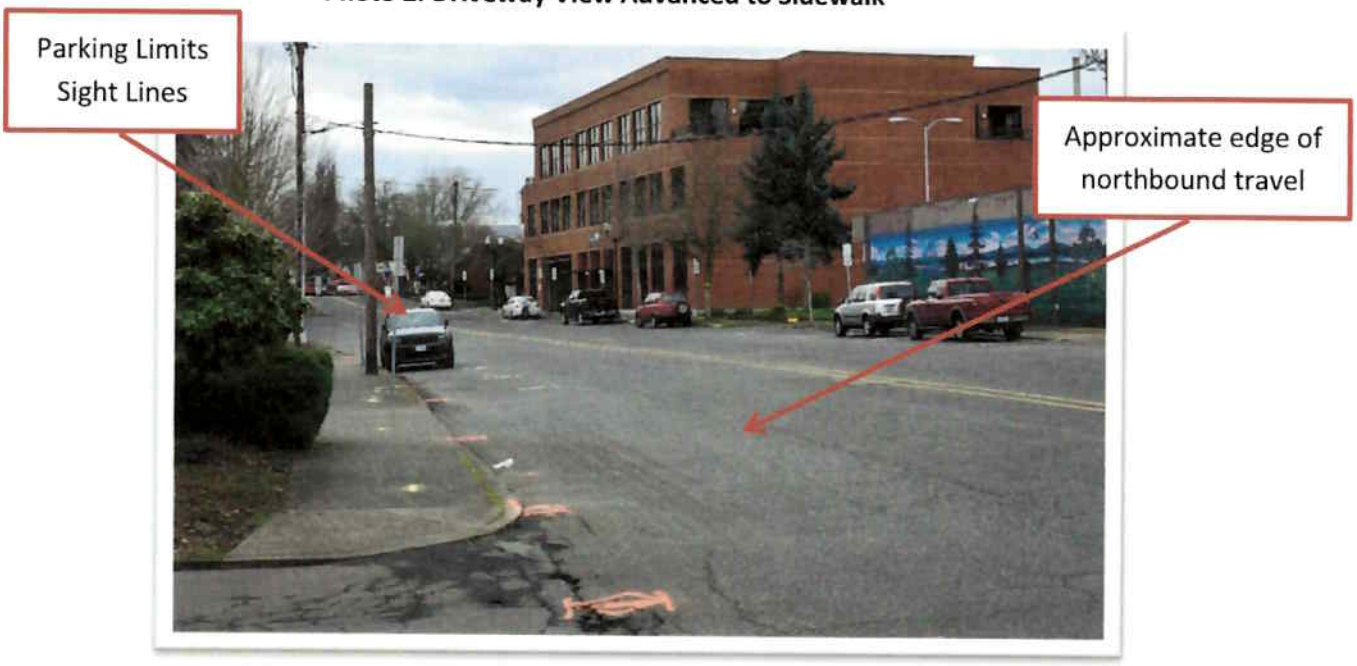
    - On-street parking along SE Main Street south of the proposed access has the potential to limit sight lines, as does existing landscaping located on the property to the south (see Photo 1 below).

Photo 1. Exit Driver View Facing Left 14.5 Feet from Curb



- As drivers departing the site advance to the roadside curb edge, sight lines increase facing to the left (see Photo 2 below). There is potential for a large vehicle (van or truck) parked on-street south of the site driveway to reduce the available sight line to less than 225 feet, consistent with other driveways in the downtown area along SE Main Street.

Photo 2. Driveway View Advanced to Sidewalk



- Stopping sight distance traveling along SE Main Street approaching the site driveway should be at least 115 feet. Available stopping sight distance was observed to exceed 115 feet traveling both north bound and southbound on SE Main Street[3].

Based on the existing sight distance considerations and feedback from City staff, the Applicant proposes to install curb extensions at the SE Main Street site access driveway (refer to the site plan in Figure 2). The curb extensions will allow drivers leaving the site to advance closer to the edge of the travel lane, improving sight lines facing to the north and south similar to the view shown above in Photo 2.

All vegetation, landscaping, and above ground objects adjacent to the site driveway should be placed and maintained to provide adequate minimum sight distance in accordance with City requirements.

SCHOOL WALKING ROUTES

Per North Clackamas School District school boundary mapping[4], the proposed apartment residents will likely be served by:

- Milwaukie El Puente Elementary located at 11250 SE 27th Avenue, approximately 0.7 mile southeast of the apartment site;
- Rowe Middle School located at 3606 SE Lake Road, approximately 1.3 miles southeast of the apartment site; and
- Milwaukie High School and the Milwaukie Academy of the Arts located at 2301 SE Willard Street, approximately 0.5 mile southeast of the apartment site.

The proposed site development includes new sidewalks along the site frontage on SE Main Street that links with on-site sidewalks connecting to each apartment building. Existing sidewalk on the east side of SE Main Street in turn link the site frontage to SE Harrison Street. The site will also connect to existing sidewalk facilities to the east along SE 23rd Avenue.

Figure 12 illustrates one complete potential walking route between the apartment site and each of the respective schools. The figures highlight public street intersections with crosswalks, all-way stop control and/or traffic signals. While not illustrated, pedestrians may choose between multiple potential walking routes. For example, the figure assumes pedestrians access the apartment site via SE 23rd Avenue. The pedestrians could alternatively travel to/from the site directly via SE Main Street to SE

[3] For the analysis, stopping sight distance was measured from an assumed driver height of 3.5 feet above the ground facing an object that is 2.0 feet above the ground.

[4] Source: https://www.nclack.k12.or.us/registration/page/school-boundaries

Figure 12

KITTELSON & ASSOCIATES

Potential School Walk Routes

Harrison Street and then reach each of the schools using sidewalk facilities connecting south along SE Main Street or SE 21st Avenue (both roadways have intersections with all-way stop control to facilitate crossing SE Harrison Street).

North Clackamas School District has indicated to the City that the District will provide bus service to students residing at the proposed apartments who attend Rowe Middle School.

PARKING SUPPLY & DEMAND

The proposed development is subject to the vehicular parking standards in Table 19.605.1 of the Milwaukie Municipal Code (MMC). Per this City requirement, the minimum vehicular parking supply required for multifamily dwellings is 1 space per unit for those units of 800 square feet or less and 1.25 space per unit for those units with more than 800 square feet. Regardless of the unit size, the maximum vehicular parking supply is 2 spaces per unit. Based on the proposed site plan, the minimum parking supply for the 178 multifamily units is 125[5] and the maximum supply allowed is 356. The proposed site plan identifies a parking supply of 173[6] spaces on-site with vehicular parking supply provided both within the building as well as in a surface parking lot. Accordingly, both the minimum and maximum code requirements are satisfied.

ACCESS SPACING

MMC 12.16.040.B.1.b identifies the City's access spacing criteria. Per Code, minimum driveway spacing along collector roadways like SE Main Street is 300 feet measured between the closest edges of driveway aprons where they abut the roadway. None of the existing driveways on SE Main Street between SE Harrison Street and the Milwaukie Expressway to the north satisfy the 300 foot spacing standard, nor do any of the public streets along the downtown grid between SE Scott Street (south of the project site) and SE Washington Street.

The proposed site plan does not meet the minimum 300 feet spacing standard and physically cannot meet this standard due to the limited length of the site frontage (approximately 53 feet). Despite the inability to satisfy the 300-foot minimum access spacing standard, efforts were made to move in the direction of code compliance to the extent practical as described below.

As Figure 2 shows, the project site is a "flag lot" served by a primary access driveway located on the narrow "flag pole" portion of the property situated between the property to the north and the property to the south. The only legal vehicular access available to the site (Tax Lot 402) is the existing site

[5] The site parking supply required could be reduced to 125 spaces through application of up to a 30% parking reduction in the downtown mixed-use zone per MCM Section 19.605.3 (30% of 178 spaces = 53 spaces).

[6] 173 stalls count includes 64 parking stackers, 78 standard stalls in the garage, and 31 surface parking stalls.

driveway on SE Main Street. Shared access is provided to adjacent properties today via an internal driveway connection linking with the property to the north (Pietro's Pizza) and a separate internal driveway connection linking with the property to the south (veterinary clinic); however, there is no reciprocal access on to the north property or the south property for Tax Lot 402.

A one-way entry only driveway to a banking facility is located west and slightly north of the project site access on SE Main Street.

The proposed site plan retains both of the existing on-site shared access points and reconfigures the existing site driveway connection to SE Main Street (refer to the site plan in Figure 2). Compared to the existing condition, the proposed physical driveway connection to SE Main Street:

- is a reduced width from that provided today, which in turn reduces the crossing distance for someone walking along SE Main Street in front of the driveway;
- provides curb extensions to improve sight distance (as previously discussed);
- provides an east-west sidewalk connection that links the proposed apartments with SE Main Street along the south side of the driveway; and
- limits the existing on-site angled parking along both sides of the driveway today to the north side only and removes parking immediately adjacent to SE Main Street.

The internal parking reconfiguration along the drive aisle reduces the potential for on-site parking maneuvers to queue onto SE Main Street compared to the existing condition and responds to MMC 12.16.040.E.3 that prohibits backing maneuvers into the right-of-way (all vehicle backing maneuvers are contained on site).

MMC 12.16.040.D.2 identifies shared access considerations and states:

> *The number of accessways on collector and arterial streets shall be minimized whenever possible through the use of shared accessways and coordinated on-site circulation patterns. Within commercial, industrial, and multifamily areas, shared accessways and internal access between similar uses are required to reduce the number of access points to the higher-classified roadways, to improve internal site circulation, and to reduce local trips or movements on the street system. Shared accessways or internal access between uses shall be established by means of common access easements.*

The proposed site plan provides shared access to the property located both north and south of the project site, continuing existing shared access arrangements. Retention of the primary access to the site is appropriate to avoid out-of-direction Henley Place resident travel through either the restaurant site to the north of the clinic site to the south (forcing all resident vehicle trips through either the restaurant site or the veterinary clinic site would be undesirable from a parking lot and pedestrian interaction perspective). Further, the proposed site plan includes standard sidewalk facilities along the SE Main Street site frontage and extensive on-site facilities that link people walking between the site

and the downtown area. Pedestrian and bicycle connectivity along SE Main Street and both to/through the site is not diminished by the proposed retention of the existing site access direct to SE Main Street.

RECOMMENDATIONS

Subject to approval by the City of Milwaukie, the primary recommendations of this study are summarized below.

- A trip cap equivalent to 18 daily, one weekday AM and two weekday PM peak hour trips should be placed on the 0.2-acre portion of the site that is currently zoned R-5. This trip cap is needed to address any future development traffic on this site complies with Oregon's Transportation Planning Rule (TPR) if the property is rezoned. If this portion of the site is redeveloped in the future, the need for the trip cap should be re-evaluated relative to TPR requirements.
- Site landscaping, above-ground utilities, and site signage should be located and maintained such that they provide minimum required sight lines within the site as well as at the site driveways on SE Main Street per City requirements.

Please let us know if you have any questions regarding our analyses or findings.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Chris Brehmer, PE
Senior Principal Engineer

Julia Kuhn, PE
Senior Principal Engineer

Cc: Amanda Deering & Reah Flisakowski, DKS Associates on behalf of the City of Milwaukie
Avi Tayar, Oregon Department of Transportation Region 1
Marah Danielson, Oregon Department of Transportation Region 1
Christian Snuffin, Clackamas County Department of Transportation & Development
Richard Nys, Clackamas County Department of Transportation & Development
Kathryn Joseph, Pahlisch Commercial

LIST OF APPENDICES

A. ODOT Crash Data
B. Traffic Count Calculations
C. Existing Conditions Analysis Worksheets
D. In-Process Data
E. Year 2022 Background Traffic Conditions Analysis Worksheets
F. Year 2022 Total Traffic Conditions Analysis Worksheets

REGISTERED PROFESSIONAL ENGINEER
62836PE
OREGON
JULY 11, 2000
CHRISTOPHER LYNN BREHMER
Expires: 12-31-2021

G. 95th Percentile Queuing Analysis Summary

Appendix A ODOT Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Crashes on SE Main St, within 400 ft. South of OR-99E Intersection
January 1, 2014 through December 31, 2018

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimers: *Effective 2016,* ***collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants.*** *Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.*

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at SE Main St & OR-99E, Pacific Hwy (#081)
January 1, 2014 through December 31, 2018

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimers: *Effective 2016,* ***collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants.*** *Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.*

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

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

CITY OF MILWAUKIE, CLACKAMAS COUNTY

Intersectional Crashes at SE Main St & SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	SPED	ALC	DRUG/MJ	SCHL	SWORK	DATE / DAY/TIME / LAT/LONG	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	IED LOC	ERROR	ACTN EVENT	CAUSE
00913	N	N	N	N	N	02/25/2016	16	HARRISON ST	INTER	CROSS	N	N	CLR	ANGL-STP	01	NONE 9	TURN-L										08
CITY			N			Thu 6A	0	MAIN ST	SE		STOP SIGN	N	DRY	TURN		N/A	NE SE									015	00
No	45 26 43.84					-122 38 29.92		1	06	0		N	DLIT	PDO		OTH BUS		01	DRVR	NONE	00	U	UNK UNK		000	000	00
															02	NONE 9	STOP									011	00
																N/A	SE NW										
																PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000	00
04727	N	N	N	N	N	10/13/2016	16	HARRISON ST	INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 9	STRGHT										03
CITY			N			Thu 12P	0	MAIN ST	CN		STOP SIGN	N	WET	TURN		N/A	NE SW									000	00
No	45 26 43.84					-122 38 29.92		1	01	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000	00
															02	NONE 9	TURN-L									015	00
																N/A	SW NW										
																SEMI TCW		01	DRVR	NONE	00	U	UNK UNK		000	000	00
00448	N	N	N	N	N	02/07/2018	16	HARRISON ST	INTER	CROSS	N	N	CLR	BIKE	01	NONE 0	STRGHT										02
CITY			N			Wed 2P	0	MAIN ST	CN		STOP SIGN	N	DRY	ANGL		PRVTE	E W									015	00
No	45 26 43.84					-122 38 29.92		1	01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	54	M	OR-Y OR<25		027	000	02
																	STRGHT	01	BIKE	INJB	20	M		02	000	034	00
																	N S										
02535	N	N	N	N	N	07/02/2014	16	HARRISON ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										03
CITY			N			Wed 5P	0	MAIN ST	CN		STOP SIGN	N	DRY	ANGL		PRVTE	NE SW									000	00
No	45 26 43.84					-122 38 29.92		1	02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	37	M	NONE OR<25		021	000	03
															02	NONE 0	STRGHT									015	00
																PRVTE	SE NW										
																PSNGR CAR		02	DRVR	INJB	52	M	OR-Y OR<25		000	000	00
01510	N	N	N	N	N	05/04/2018	16	HARRISON ST	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02
CITY			N			Fri 9P	0	MAIN ST	CN		STOP SIGN	N	DRY	TURN		PRVTE	NE SW									015	00
No	45 26 43.84					-122 38 29.92		1	02	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	58	M	SUSP OR<25		028	000	02
															02	NONE 0	TURN-L									015	00
																PRVTE	SW NW										
																PSNGR CAR		01	DRVR	INJB	18	F	OR-Y OR<25		000	000	00
																		02	PSNG	INJB	18	F			000	000	00

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE 17th Ave / SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D R U G J	S M J	W H K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN EVENT	CAUSE
00440	N	N	N	N	N	02/04/2015	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										35,13
CITY		N				Wed 3P	MILWAUKIE	MN 0	HARRISON ST	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	43	M	OR-Y	045		000	13
No	45 26 43.37 -122 38 33.97							008100100S00	1															OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	N S									000	00
																	PSNGR CAR		01	DRVR	NONE	41	F	OR-Y	045		000	13
																								OR<25				
05280	N	Y	N			12/10/2015	CLACKAMAS	1 14		INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29,07
CITY		N				Thu 2A	MILWAUKIE	MN 0	HARRISON ST	N		L-GRN-SIG	N	WET	REAR		PRVTE	N S									000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	23	M	OR-Y	043,026		000	29,07
No	45 26 43.37 -122 38 33.97							008100100S00	1															OR<25				
																02	NONE 0	STOP										
																	PRVTE	N S									012	00
																	PSNGR CAR		01	DRVR	NONE	51	M	OR-Y	000		000	00
																								OR<25				
84208	N	N	N			06/25/2016	CLACKAMAS	2 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE		N				Sat 9A	MILWAUKIE	MN 0	HARRISON ST	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	49	M	OTH-Y	026		000	29
No	45 26 43.37 -122 38 33.97							008100200S00	1															N-RES				
																02	NONE 0	STOP										
																	PRVTE	N S									011	00
																	PSNGR CAR		01	DRVR	INJC	43	M	OR-Y	000		000	00
																								OR<25				
00401	N	N	N	N	N	01/30/2017	CLACKAMAS	1 14		INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										29
CITY		N				Mon 1P	MILWAUKIE	MN 0	HARRISON ST	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	39	M	OR-Y	026		000	29
No	45 26 43.37 -122 38 33.97							008100100S00	1															OR<25				
																02	NONE 0	STOP										
																	PRVTE	N S									011	00
																	PSNGR CAR		01	DRVR	INJC	63	M	OR-Y	000		000	00
																								OR<25				
02997	N	N	N			07/24/2017	CLACKAMAS	2 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE		N				Mon 5P	MILWAUKIE	MN 0	HARRISON ST	N		TRF SIGNAL	N	DRY	REAR		UNKN	N S									000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	38	F	OR-Y	026		000	29
No	45 26 43.37 -122 38 33.97							008100200S00	1															UNK				

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE 17th Ave / SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	SPEED / ALC / DRUG/MJ / SCHL / WORK (E A / C O; E L M H R; D C J L K)	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL / TRAF-CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE TRLR QTY / OWNER / VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
												02	NONE 0	STOP											
													PRVTE	N S									011		00
													PSNGR CAR		01	DRVR	INJC	47	M	OR-Y		000	000		00
																				OR<25					
04900	N N N N N	11/11/2018	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
CITY	N	Sun 1P	MILWAUKIE	MN 0	MCLOUGHLIN BLVD	N		TRF SIGNAL	N	DRY	REAR		N/A	N S									000		00
			PORTLAND UA	5.72	17TH AVE	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No		45 26 43.38 -122 38 33.98		008100100S00	1															UNK					
												02	NONE 9	STOP											
													N/A	N S									011		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
05142	N N N N N	11/06/2016	CLACKAMAS	2 14		INTER	CROSS	N	N	CLD	S-OTHER	01	NONE 9	TURN-R											27,08
CITY	N	Sun 9P	MILWAUKIE	MN 0	MCLOUGHLIN BLVD	S		TRF SIGNAL	N	WET	TURN		N/A	W S									000		00
			PORTLAND UA	5.72	17TH AVE	05	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No		45 26 43.37 -122 38 33.97		008100200S00	1															UNK					
												02	NONE 9	TURN-R											
													N/A	W S									000		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
03035	N N N	07/26/2017	CLACKAMAS	2 14		INTER	CROSS	N	N	CLR	S-OTHER	01	NONE 9	TURN-L											08,14
NONE	N	Wed 3P	MILWAUKIE	MN 0	HARRISON ST	S		TRF SIGNAL	N	DRY	TURN		N/A	E S									000		00
			PORTLAND UA	5.72	MCLOUGHLIN BLVD	05	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No		45 26 43.37 -122 38 33.97		008100200S00	1															UNK					
												02	NONE 9	TURN-L											
													N/A	E S									000		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
05466	N N N	12/21/2017	CLACKAMAS	2 14		INTER	CROSS	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										013	29
NONE	N	Thu 6P	MILWAUKIE	MN 0	MCLOUGHLIN BLVD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
			PORTLAND UA	5.72	17TH AVE	05	0		N	DARK	INJ		PSNGR CAR		01	DRVR	INJC	33	M	OR-Y		042	000		29
No		45 26 43.37 -122 38 33.97		008100200S00	1															OR<25					
												02	NONE 0	STRGHT											
													PRVTE	N S									000	013	00
													PSNGR CAR		01	DRVR	INJC	62	F	OR-Y		000	000		00
																				OR<25					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE 17th Ave / SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	P E D	A L C	/ M J	C H L	O R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	FED LOC ERROR	ACTN EVENT	CAUSE
																03	NONE 0 PRVTE	STRGHT N S								022	00
																	PSNGR CAR		01	DRVR	NONE	57	F	OR-Y OR<25	000	000	00
01679	N	N	N	N	N	04/13/2016	CLACKAMAS	2 14		INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT									29
CITY		N				Wed 10A	MILWAUKIE	MN 0	HARRISON ST	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S N								000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	64	F	OR-Y OR<25	026	000	29
No	45	26	43.37	-122	38	33.97		008100200S00	1																		
																02	NONE 0 PRVTE	STOP S N								011	00
																	PSNGR CAR		01	DRVR	NONE	38	M	OR-Y OR<25	000	000	00
																			02	PSNG	INJC	38	F		000	000	00
05892	N	N	N			11/29/2016	CLACKAMAS	2 14		INTER	CROSS	N	N	CLR	O-OTHER	01	NONE 9	BACK									10
NONE		N				Tue 1P	MILWAUKIE	MN 0	HARRISON ST	S		TRF SIGNAL	N	DRY	BACK		N/A	N S								000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		TRUCK		01	DRVR	NONE	00	U	UNK UNK	000	000	00
No	45	26	43.37	-122	38	33.97		008100200S00	1																		
																02	NONE 9 N/A	STOP S N								011	00
																	PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
06184	N	N	N			12/28/2016	CLACKAMAS	2 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT									29
NONE		N				Wed 10A	MILWAUKIE	MN 0	HARRISON ST	S		TRF SIGNAL	N	DRY	REAR		N/A	S N								000	00
							PORTLAND UA	5.72	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		UNKNOWN		01	DRVR	NONE	00	U	UNK UNK	000	000	00
No	45	26	43.37	-122	38	33.97		008100200S00	1																		
																02	NONE 9 N/A	STOP S N								011	00
																	PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
00273	N	N	N			01/19/2017	CLACKAMAS	2 14		INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 0	STRGHT									29
NONE		N				Thu 9A	MILWAUKIE	MN 0	MCLOUGHLIN BLVD	S		TRF SIGNAL	N	WET	REAR		PRVTE	S N								000	00
							PORTLAND UA	5.72	17TH AVE	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	26	F	OR-Y OR<25	026	000	29
No	45	26	43.37	-122	38	33.97		008100200S00	1																		
																02	NONE 0 PRVTE	STOP S N								011	00
																	PSNGR CAR		01	DRVR	INJC	38	F	OR-Y OR<25	000	000	00

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE 17th Ave / SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D R U G J	S M L	W H R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
03789	N	N	N	N	N	09/15/2015	CLACKAMAS	1	14		INTER	CROSS	N		N	CLD	O-1 L-TURN	01	NONE	0	STRGHT									04
CITY		N				Tue 7P	MILWAUKIE	MN	0	HARRISON ST	CN		TRF SIGNAL		N	DRY	TURN		PRVTE	N S								000		00
							PORTLAND UA	5.72		MCLOUGHLIN BLVD	01	0			N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	30	M	OR-Y		097	000		00
No						45 26 43.37 -122 38 33.97		008100100S00		1																OR<25					
																		02	NONE	0	TURN-L								
																			PRVTE	S W								000		00
																			PSNGR CAR		01	DRVR	INJC	22	F	SUSP		097	000		00
																										OR<25					
01691	N	N	N			05/18/2018	CLACKAMAS	2	14		INTER	CROSS	N		N	CLR	S-OTHER	01	NONE	9	TURN-L									08
NONE		N				Fri 2P	MILWAUKIE	MN	0	HARRISON ST	CN		L-GRN-SIG		N	DRY	TURN		N/A	E S								000		00
							PORTLAND UA	5.72		MCLOUGHLIN BLVD	01	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No						45 26 43.37 -122 38 33.98		008100200S00		1																UNK					
																		02	NONE	9	TURN-L								
																			N/A	E S								000		00
																			PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																										UNK					
00218	Y	N	N	N	N	01/13/2017	CLACKAMAS	2	14		INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE	0	STRGHT									01,04
CITY		N				Fri 6P	MILWAUKIE	MN	0	HARRISON ST	CN		TRF SIGNAL		N	ICE	TURN		PRVTE	S N								000	124	00
							PORTLAND UA	5.72		MCLOUGHLIN BLVD	02	0			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJB	27	F	OR-Y		047,020	000		01,04
No						45 26 43.37 -122 38 33.97		008100200S00		1																OR<25					
																		02	NONE	0	TURN-R								
																			PUBLC	E N								000		00
																			OTH BUS		01	DRVR	INJC	60	M	OR-Y		000	000		00
																										OR<25					
02771	N	N	N	N	N	07/18/2014	CLACKAMAS	1	14		INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE	0	STRGHT									04
CITY		N				Fri 7P	MILWAUKIE	MN	0	HARRISON ST	CN		TRF SIGNAL		N	DRY	ANGL		PRVTE	N S								000		00
							PORTLAND UA	5.72		MCLOUGHLIN BLVD	03	0			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	60	F	OR-Y		000	000		00
No						45 26 43.37 -122 38 33.97		008100100S00		1																OR<25					
																		02	NONE	0	STRGHT								
																			PRVTE	W E								000		00
																			PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		021	000		04
																										OR<25					
02339	N	N	N			05/24/2016	CLACKAMAS	2	14		INTER	CROSS	N		N	CLR	S-OTHER	01	NONE	9	TURN-L									08
NONE		N				Tue 2P	MILWAUKIE	MN	0	HARRISON ST	CN		TRF SIGNAL		N	DRY	TURN		N/A	E S								000		00
							PORTLAND UA	5.72		MCLOUGHLIN BLVD	03	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No						45 26 43.37 -122 38 33.97		008100200S00		1																UNK					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE 17th Ave / SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D R U G J	S M L	W H K	O R	DATE / DAY/TIME	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
																		02	NONE / N/A	9 TURN-L / E S									000		00
																			PSNGR CAR		01	DRVR	NONE	00	U	UNK / UNK		000	000		00
02013	N	N	N	N	N	N	05/27/2014	CLACKAMAS	1	14		INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE	0 STRGHT											04
CITY		N					Tue 6P	MILWAUKIE	MN 0		HARRISON ST	CN		TRF SIGNAL		N	DRY	ANGL		PRVTE	W E								000		00
								PORTLAND UA	5.72		MCLOUGHLIN BLVD	04	0			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	U	UNK / UNK	020	000			04
No	45	26	43.37	-122	38	33.97			008100100S00		1																					
																		02	NONE	0 STPGHT											00
																			PRVTE	S N									000		
																			PSNGR CAR		01	DRVR	INJC	44	F	OR-Y / OR<25		000	000		00
																					02	PSNG	INJC	09	F			000	000		00
																		03	NONE	0 STOP											00
																			PRVTE	E W									011		
																			PSNGR CAR		01	DRVR	INJC	42	F	OR-Y / OR<25		000	000		00
00490	N	N	N	N	N	N	02/06/2017	CLACKAMAS	2	14		INTER	CROSS	N		N	CLD	O-1 L-TURN	01	NONE	0 STRGHT										013	02,08,04
CITY		N					Mon 1P	MILWAUKIE	MN 0		HARRISON ST	CN		TRF SIGNAL		N	WET	TURN		PRVTE	S N								000		00
								PORTLAND UA	5.72		MCLOUGHLIN BLVD	04	0			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	28	M	OR-Y / OR<25	000	000			00
No	45	26	43.37	-122	38	33.97			008100200S00		1																					
																		02	NONE	0 TURN-L											00
																			PRVTE	N E									000	013	
																			PSNGR CAR		01	DRVR	NONE	30	M	SUSP / OR<25	028,004,020	000			02,08,04
																		03	NONE	0 STOP											00
																			PRVTE	E W									022		
																			PSNGR CAR		01	DRVR	INJB	45	M	OR-Y / OR<25	000	000			00
03046	N	N	N				08/31/2018	CLACKAMAS	2	14		INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE	0 STRGHT											04
NONE			N				Fri 11P	MILWAUKIE	MN 0		MCLOUGHLIN BLVD	CN		TRF SIGNAL		N	DRY	ANGL		PRVTE	W E								000		00
								PORTLAND UA	5.72		17TH AVE	04	0			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	26	F	OR-Y / OR>25	020	000			04
No	45	26	43.36	-122	38	33.97			008100200S00		1																					
																		02	NONE	0 STRGHT											00
																			PRVTE	S N									000		
																			PSNGR CAR		01	DRVR	INJC	59	M	OR-Y / OR<25		000	000		00
																					02	PSNG	INJC	58	F			000	000		00

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

CITY OF MILWAUKIE, CLACKAMAS COUNTY

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE 17th Ave / SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	SPEED	ALC	DRUG / MJ	SCHL	WORK	DATE / DAY/TIME / LAT/LONG	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
02108	N	N	N			05/10/2016	16	HARRISON ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT										006	29
NONE			N			Tue 1P	0	MCLOUGHLIN BLVD	E		TRF SIGNAL	N	DRY	REAR		N/A	E W										000		00
No	45	26	43.37	-122	38	33.97	1	06	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
															02	NONE 9	STOP										011		00
																PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
01805	N	N	N	N	N	04/20/2016	16	MCLOUGHLIN BLVD	INTER	CROSS	N	N	RAIN	BIKE	01	NONE 0	STRGHT											27
CITY			N			Wed 6P	0	17TH AVE	W		TRF SIGNAL	N	WET	ANGL		PRVTE	W E									000		00
No	45	26	43.37	-122	38	33.97	1	06	0			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	36	F	OR-Y OR<25		016,027	038		27
																	STRGHT S N	01	BIKE	INJB	54	M		01	000	035		00

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E R D C / D A L C / G S M J / S H L / W C R K (E A / C O, E L M H R, D C J L K)	DATE / DAY/TIME / LAT LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01382	N N N	04/10/2014	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
NONE	N	Thu 8A	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	DRY	REAR		UNKN	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		UNKNOWN		01	DRVR	NONE	00	U	UNK		026	000		07
No		45 27 10.33 -122 38 28.48		008100100S00	1															UNK					
												02	NONE 0	STOP											
													PRVTE	N S									011	013	00
													PSNGR CAR		01	DRVR	NONE	00	M	OR-Y		000	000		00
																				OR<25					
												03	NONE 0	STOP											
													PRVTE	N S									022		00
													PSNGR CAR		01	DRVR	NONE	31	M	OR-Y		000	000		00
																				OR<25					
02579	N N N	07/05/2014	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										001	29,22
CITY	N	Sat 2A	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		22
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	22	M	OR-Y		026	000		29
No		45 27 10.33 -122 38 28.48		008100100S00	1															OR<25					
												02	NONE 0	STOP											
													PRVTE	N S									011		00
													MTRCYCLE		01	DRVR	INJB	37	M	OR-Y		000	000	001	00
																				OR<25					
															02	PSNG	INJB	38	F			000	000		00
04157	N N N N N	10/18/2014	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,07
CITY	N	Sat 1P	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	41	F	OR-Y		016,043,026	000		27,07
No		45 27 10.33 -122 38 28.48		008100100S00	1															OR<25					
												02	NONE 0	STOP											
													PRVTE	N S									011		00
													PSNGR CAR		01	DRVR	NONE	46	M	OR-Y		000	000		00
																				OR<25					
81415	N Y Y	04/20/2015	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											29
CITY	N	Mon 3A	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DLIT	FAT		PSNGR CAR		01	DRVR	KILL	38	M	OR-Y		042	000		29
No		45 27 10.33 -122 38 28.48		008100100S00	1															OR<25					
												02	NONE 1	STRGHT											
													PRVTE	N S									000		00
													SEMI TOW		01	DRVR	INJC	52	M	OR-Y		000	000		00
																				OR<25					

CDS380 1/25/2021

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	SPEC / EA / ELD / ALC / DRUG / GSW / CHR / WOR / LK	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
81351	N N N	01/28/2016	CLACKAMAS	1 14		INTER	5-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											29
NONE	N	Thu 1P	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	WET	REAR		PRVTE	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJA	27	F	OTH-Y		026	000		29
No		45 27 10.33 -122 38 28.48		008100100S00	1															N-RES					
															02	PSNG	NO<5	01	F			000	000		00
												02	NONE 0	STOP											
													PRVTE	N S									011		00
													PSNGR CAR		01	DRVR	NONE	62	F	OR-Y		000	000		00
																				OR<25					
01329	Y N N N N	03/21/2016	CLACKAMAS	1 14		INTER	5-LEG	N	N	RAIN	S-1STOP	01	NONE 9	STRGHT											01,07
CITY	N	Mon 9A	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	WET	REAR		N/A	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No		45 27 10.33 -122 38 28.48		008100100S00	1															UNK					
												02	NONE 9	STOP											
													N/A	N S									011		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
00100	N N N	01/10/2018	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLD	S-1STOP	01	NONE 9	STRGHT											13,07
CITY	N	Wed 10A	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	WET	REAR		N/A	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No		45 27 10.33 -122 38 28.48		008100100S00	1															UNK					
												02	NONE 9	STOP											
													N/A	N S									011		00
													TRUCK		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
01004	N N N	03/21/2018	CLACKAMAS	1 14		INTER	5-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											27,29
NO RPT	N	Wed 2P	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	WET	REAR		PRVTE	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	20	F	OR-Y		026	038		27,29
No		45 27 10.34 -122 38 28.49		008100100S00	1															OR<25					
												02	NONE 0	STOP											
													PRVTE	N S									011		00
													PSNGR CAR		01	DRVR	INJC	48	F	OR-Y		000	000		00
																				OR<25					
01005	N N N N N	03/21/2018	CLACKAMAS	1 14		INTER	5-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										013	07
CITY	N	Wed 1P	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	WET	REAR		PRVTE	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	78	M	OR-Y		043,026	000		07
No		45 27 10.33 -122 38 28.48		008100100S00	1															OR<25					
															02	PSNG	INJC	77	F			000	000		00

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	E A / C O (S P E E D; A L C; D R U G / M J; S C H L; W O R K)	DATE / DAY/TIME / LAT LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL / TRAF-CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
												02	NONE 0	STOP											
													PRVTE	N S									011	013	00
													PSNGR CAR		01	DRVR	INJC	32	M	OR-Y		000	000		00
																				OR<25					
												03	NONE 0	STOP											
													PRVTE	N S									022		00
													PSNGR CAR		01	DRVR	NONE	74	M	OR-Y		000	000		00
																				OR<25					
															02	PSNG	INJC	73	F			000	000		00
01028	N N N N N	03/23/2018	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLD	S-STRGHT	01	NONE 9	STRGHT											29
CITY	N	Fri 1P	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	WET	REAR		N/A	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No		45 27 10.34 -122 38 28.48		008100100S00	1															UNK					
												02	NONE 9	STRGHT											
													N/A	N S									000		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
02549	N N N N N	07/22/2018	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07,29
CITY	N	Sun 3P	MILWAUKIE	MN 0	MILPORT RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	66	F	OR-Y		043,026	000		07,29
No		45 27 10.34 -122 38 28.48		008100100S00	1															OR<25					
												02	NONE 0	STOP											
													PRVTE	N S									011	013	00
													PSNGR CAR		01	DRVR	INJC	22	F	OR-Y		000	000		00
																				OR<25					
															02	PSNG	INJC	21	F			000	000		00
															03	PSNG	INJC	16	M			000	000		00
												03	NONE 0	STOP											
													PRVTE	N S									022		00
													PSNGR CAR		01	DRVR	INJC	49	M	OR-Y		000	000		00
																				OR>25					
															02	PSNG	INJC	43	F			000	000		00
01715	N N N	05/07/2015	CLACKAMAS	2 14		INTER	5-LEG	N	N	UNK	O-1STOP	01	NONE 0	BACK											10
NONE	N	Thu 3P	MILWAUKIE	MN 0	MILPORT RD	S		TRF SIGNAL	N	UNK	BACK		PRVTE	N S									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	U	UNK		011	000		10
No		45 27 10.18 -122 38 27.50		008100200S00	1															UNK					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# INVEST UNLOC?	S P E A / C O D C J L K (D R U G S W E L M H R)	DATE DAY/TIME LAT/LONG	COUNTY CITY URBAN AREA	RD# FC CMPT/MLG MILEPNT LRS	CONN # FIRST STREET SECOND STREET INTERSECTION SEQ#	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V# SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN EVENT	CAUSE
												02 NONE 0	STOP										
												PRVTE	S N									011	00
												PSNGR CAR		01	DRVR	NONE	68	M	OR-Y		000	000	00
																			OR<25				
05457	N N N	11/23/2016	CLACKAMAS	1 14		INTER	5-LEG	N	N	RAIN	S-1STOP	01 NONE 9	STRGHT										29
NONE	N	Wed 6A	MILWAUKIE	MN 0	MILPORT RD	S		TRF SIGNAL	N	WET	REAR	N/A	S N									000	00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAWN	PDO	PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
No		45 27 10.33 -122 38 28.48		008100100S00	1														UNK				
												02 NONE 9	STOP										
												N/A	S N									011	00
												PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
																			UNK				
03079	N N N N Y	07/28/2017	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	BIKE	01 NONE 0	STRGHT										04,18
CITY	N	Fri 4A	MILWAUKIE	MN 0	MILPORT RD	S		TRF SIGNAL	N	DRY	ANGL	PRVTE	S N									000	00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DLIT	INJ	PSNGR CAR		01	DRVR	NONE	30	M	OR-Y		000	000	00
No		45 27 10.18 -122 38 27.50		008100200S00	1														OR<25				
													STRGHT	01	BIKE	INJB	31	M		01	020	035	04,18
													W E										
00361	N N N	01/29/2018	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	S-1STOP	01 NONE 9	STRGHT										29
NO RPT	N	Mon 9A	MILWAUKIE	MN 0	MILPORT RD	S		TRF SIGNAL	N	DRY	REAR	N/A	S N									000	00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO	PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
No		45 27 10.18 -122 38 27.50		008100200S00	1														UNK				
												02 NONE 9	STOP										
												N/A	S N									011	00
												PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
																			UNK				
02148	N N N N N	06/20/2018	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	S-1STOP	01 NONE 9	STRGHT										27,29
CITY	N	Wed 3P	MILWAUKIE	MN 0	MILPORT RD	S		TRF SIGNAL	N	DRY	REAR	N/A	S N									000	00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	06	0		N	DAY	PDO	PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
No		45 27 10.18 -122 38 27.50		008100200S00	1														UNK				
												02 NONE 9	STOP										
												N/A	S N									011	00
												PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
																			UNK				
80848	N N N	10/05/2015	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLR	ANGL-OTH	01 NONE 0	STRGHT										04
NONE	N	Mon 9A	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	ANGL	PRVTE	N S									000	00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	01	0		N	DAY	PDO	PSNGR CAR		01	DRVR	NONE	63	M	OR-Y		000	000	00
No		45 27 10.33 -122 38 28.48		008100100S00	1														OR<25				

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D R U G J	S W H L K	C O R	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
																02	NONE 0 PRVTE	STRGHT E W									000		00
																	PSNGR CAR		01	DRVR	NONE	56	F	OR-Y OR<25		020	000		04
01766	N	Y	N	N	N	05/17/2018	CLACKAMAS	1 14		INTER	5-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											04
CITY		N				Thu 8P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	N S									000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	01	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJC	53	F	OR-Y OR<25		000	000		00
No	*45 27 10.33 -122 38 28.48*							008100100S00	1																			
																02	NONE 0 PRVTE	STRGHT E W									000		00
																	PSNGR CAR		01	DRVR	NONE	45	M	OR-Y OR<25		020	000		04
03969	N	N	N	N	N	09/26/2015	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	S-1TURN	01	NONE 0	STRGHT											14,08
CITY		N				Sat 8A	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S N									000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	31	M	OR-Y OR<25		000	000		00
No	*45 27 10.18 -122 38 27.50*							008100200S00	1																			
																02	NONE 0 PRVTE	TURN-L S W									000		00
																	PSNGR CAR		01	DRVR	INJB	37	M	OR-Y OR<25		003	000		14,08
01923	N	N	N			04/28/2016	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLD	S-STRGHT	01	NONE 1	STRGHT										044	27,13
CITY		N				Thu 12P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	SS-O		PRVTE	S N									000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	02	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	60	M	OTH-Y N-RES		016,045	000		27,13
No	*45 27 10.18 -122 38 27.50*							008100200S00	1																			
																02	NONE 0 PRVTE	STRGHT S N									000		00
																	PSNGR CAR		01	DRVR	INJC	25	M	OR-Y OR<25		000	000		00
																03	NONE 0 PRVTE	STRGHT S N									007	044	00
																	PSNGR CAR		01	DRVR	NONE	45	M	OR-Y OR<25		000	000		00
01220	N	N	N			03/31/2017	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	S-1TURN	01	NONE 9	STRGHT											08
NONE		N				Fri 8P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	TURN		N/A	S N									000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	02	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 27 10.18 -122 38 27.50*							008100200S00	1																			

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

```
          D
          R
      S   U
      P   G S W                                                                  INT-TYP                                           SPCL USE
SER#   E A / C O DATE       COUNTY           RD#  FC   CONN #                RD CHAR  (MEDIAN) INT-REL OFFRD WTHR  CRASH TYP      TRLR QTY  MOVE                A  S
INVEST E L M H R DAY/TIME   CITY             CMPT/MLG  FIRST  STREET         DIRECT     LEGS   TRAF-   RNDBT SURF  COLL TYP       OWNER     FROM     PRTC INJ   G  E  LICNS PED
UNLOC? D C J L K LAT/LONG   URBAN AREA       MILEPNT   SECOND STREET         LOCTN   (#LANES)  CNTL    DRVWY LIGHT SVRTY      V#  VEH TYPE  TO    P# TYPE SVRTY E  X  RES   LOC ERROR        ACTN EVENT      CAUSE
                                             LRS       INTERSECTION SEQ#
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
                                                                                                                         02 NONE    9 TURN-R
                                                                                                                            N/A       S  E                                                 000             00

                                                                                                                            PSNGR CAR         01 DRVR NONE  00 U UNK        000           000             00
                                                                                                                                                                 UNK

00869 N N N N N 03/01/2014 CLACKAMAS         2    14                     INTER     5-LEG  N         N CLR  O-1 L-TURN 01 NONE    0 STRGHT                                                  08,14
CITY     N      Sat     6P MILWAUKIE         MN    0   MILPORT RD            CN                TRF SIGNAL N DRY  TURN           PRVTE     S  N                                           000             00
                           PORTLAND UA        5.20     MCLOUGHLIN BLVD       03          0              N DLIT INJ            PSNGR CAR         01 DRVR INJB  33 M OR-Y       000           000             00
No    45 27  10.18 -122 38  27.50            008100200S00                1                                                                                       OR<25

                                                                                                                         02 NONE    0 TURN-L
                                                                                                                            PRVTE     N  E                                                 000             00

                                                                                                                            PSNGR CAR         01 DRVR NONE  39 F OR-Y       003,004       000             08,14
                                                                                                                                                                 OR<25

02862 N N N N N 07/26/2014 CLACKAMAS         2    14                     INTER     5-LEG  N         N CLR  S-1TURN    01 NONE    0 TURN-R                                                  08,14
CITY     N      Sat     5P MILWAUKIE         MN    0   MILPORT RD            CN                TRF SIGNAL N DRY  TURN           PRVTE     S  E                                           000             00
                           PORTLAND UA        5.20     MCLOUGHLIN BLVD       04          0              N DAY  PDO            PSNGR CAR         01 DRVR NONE  21 M OTH-Y      006,003       000             08,14
No    45 27  10.18 -122 38  27.50            008100200S00                1                                                                                       OR<25

                                                                                                                         02 NONE    0 STRGHT
                                                                                                                            PRVTE     S  N                                                 000             00

                                                                                                                            PSNGR CAR         01 DRVR NONE  55 M OR-Y       000           000             00
                                                                                                                                                                 OR<25

03005 N N N     08/05/2014 CLACKAMAS         2    14                     INTER     5-LEG  N         N CLR  ANGL-OTH   01 NONE    0 STRGHT                                                  04
NO RPT   N      Tue     4P MILWAUKIE         MN    0   MILPORT RD            CN                TRF SIGNAL N DRY  ANGL           PRVTE     S  N                                           000             00
                           PORTLAND UA        5.20     MCLOUGHLIN BLVD       04          0              N DAY  INJ            PSNGR CAR         01 DRVR INJB  32 M OR-Y       000           000             00
No    45 27  10.18 -122 38  27.50            008100200S00                1                                                                                       OR<25

                                                                                                                         02 NONE    0 STRGHT
                                                                                                                            PRVTE     W  E                                                 000             00

                                                                                                                            PSNGR CAR         01 DRVR NONE  62 M OR-Y       020           000             04
                                                                                                                                                                 OR<25

                                                                                                                         03 NONE    0 STRGHT
                                                                                                                            PRVTE     S  N                                                 000             00

                                                                                                                            PSNGR CAR         01 DRVR NONE  58 M OR-Y       000           000             00
                                                                                                                                                                 OR<25

00263 N N N N N 01/22/2015 CLACKAMAS         2    14                     INTER     5-LEG  N         N CLD  S-1TURN    01 NONE    0 TURN-R                                                  08
CITY     N      Thu     9A MILWAUKIE         MN    0   MILPORT RD            CN                TRF SIGNAL N DRY  TURN           PRVTE     S  E                                           000             00
                           PORTLAND UA        5.20     MCLOUGHLIN BLVD       04          0              N DAY  INJ            PSNGR CAR         01 DRVR INJB  65 M OTH-Y      005,006       000             08
No    45 27  10.18 -122 38  27.50            008100200S00                1                                                                                       N-RES
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081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D U R G J	S W M H L	C O R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN EVENT	CAUSE
																02	NONE 0 PRVTE	STRGHT S N									000	00
																	PSNGR CAR		01	DRVR	INJC	31	F	OR-Y OR<25		000	000	00
00290	N	N	N			01/23/2015	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLD	S-1TURN	01	NONE 0	TURN-L										08,04
CITY		N				Fri 7A	MILWAUKIE	MN 0	MILPORT RD	CN		REG-SIGN	N	DRY	TURN		PRVTE	S W									000	00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DAWN	PDO		PSNGR CAR		01	DRVR	NONE	48	F	OTH-Y N-RES	006		000	08,04
No	*45 27 10.18*					*-122 38 27.50*		008100200S00	1																			
																02	NONE 0 PRVTE	STRGHT S N									000	00
																	PSNGR CAR		01	DRVR	NONE	40	M	OR-Y OR<25	000		000	00
00345	N	N	N	N	N	01/28/2015	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	S-1TURN	01	NONE 0	TURN-R										08,14
CITY		N				Wed 10A	MILWAUKIE	MN 0	MILPORT RD	CN		REG-SIGN	N	DRY	TURN		PRVTE	S NE									000	00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	60	F	OTH-Y N-RES	003,006		000	08,14
No	*45 27 10.18*					*-122 38 27.50*		008100200S00	1																			
																02	NONE 0 PRVTE	STRGHT S N									000	00
																	PSNGR CAR		01	DRVR	NONE	23	F	OR-Y OR<25	000		000	00
00708	Y	N	N	N	N	02/26/2015	CLACKAMAS	2 14		INTER	5-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT										01,04
CITY		N				Thu 11P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	WET	ANGL		PRVTE	S N									000	00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	19	M	OTH-Y N-RES	047,020		000	01,04
No	*45 27 10.18*					*-122 38 27.50*		008100200S00	1																			
																02	NONE 1 PRVTE	STRGHT W E									000	00
																	SEMI TOW		01	DRVR	NONE	31	M	OTH-Y N-RES	000		000	00
01230	N	N	N	N	N	03/16/2016	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	S-1TURN	01	NONE 9	TURN-L										08
CITY		N				Wed 2P	MILWAUKIE	MN 0	MILPORT RD	CN		REG-SIGN	N	DRY	TURN		N/A	S W									000	00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000		000	00
No	*45 27 10.18*					*-122 38 27.50*		008100200S00	1																			
																02	NONE 9 N/A	STRGHT S N									000	00
																	PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000		000	00

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D U R G J	S M H K	W O R	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	PD# CMPT/MLG MILEPNT LRS	FC CONN # FIRST STREET SECOND STREET INTERSECTION	SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
04530	N	N	N	N		10/02/2016	CLACKAMAS	2 14			INTER	5-LEG	N	N	CLD	O-1 L-TURN	01	NONE 9	STRGHT											14,08
CITY		N				Sun 6P	MILWAUKIE	MN 0	MILPORT RD		CN		TRF SIGNAL	N	DRY	TURN		N/A	S N								000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD		04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No						45 27 10.18 -122 38 27.50		008100200S00		1															UNK					
																	02	NONE 9	TURN-L											
																		N/A	N E								000		09
																		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																									UNK					
00240	N	N	N	N	N	01/16/2017	CLACKAMAS	2 14			INTER	5-LEG	N	N	CLR	S-STRGHT	01	NONE 9	STRGHT										124	13
CITY		N				Mon 9A	MILWAUKIE	MN 0	MILPORT RD		CN		TRF SIGNAL	N	ICE	SS-O		N/A	S N								000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD		04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No						45 27 10.18 -122 38 27.50		008100200S00		1															UNK					
																	02	NONE 9	STRGHT											
																		N/A	S N								000		00
																		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																									UNK					
02362	N	N	N	N	N	06/16/2017	CLACKAMAS	2 14			INTER	5-LEG	N	N	CLD	S-1TURN	01	NONE 0	TURN-R											08,14
CITY		N				Fri 5P	MILWAUKIE	MN 0	MILPORT RD		CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S E								000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD		04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	58	F	OR-Y		020,006	000		08,14
No						45 27 10.18 -122 38 27.50		008100200S00		1															OR<25					
																	02	NONE 0	STRGHT											
																		PRVTE	S N								000		00
																		PSNGR CAR		01	DRVR	INJC	37	F	OR-Y		000	000		00
																									OR<25					
03813	N	N	N	N	N	09/16/2017	CLACKAMAS	2 14			INTER	5-LEG	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT											14,08
CITY		N				Sat 5A	MILWAUKIE	MN 0	MILPORT RD		CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S N								000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD		04	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	INJC	54	F	OR-Y		000	000		00
No						45 27 10.18 -122 38 27.50		008100200S00		1															OR<25					
																	02	NONE 0	TURN-L											
																		PRVTE	N E								000		00
																		PSNGR CAR		01	DRVR	INJC	24	M	OR-Y		003,004	000		14,08
																									OR<25					
04687	N	N	N	N	N	11/08/2017	CLACKAMAS	2 14			INTER	5-LEG	N	N	RAIN	S-1TURN	01	NONE 0	STRGHT										058	04,08
CITY		N				Wed 2P	MILWAUKIE	MN 0	MILPORT RD		CN		TRF SIGNAL	N	WET	TURN		PRVTE	S N								000		00
							PORTLAND UA	5.20	MCLOUGHLIN BLVD		04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	46	M	OTH-Y		000	000		00
No						45 27 10.18 -122 38 27.50		008100200S00		1															N-RES					
																					02	PSNG	INJC	65	M			000	000		00

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E E D / A L C / D R U G M J / S H R L / W O R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
												02	NONE 0	TURN-R											
													PRVTE	S E									000		00
													PSNGR CAR		01	DRVR	INJC	57	M	OR-Y		020,003	000		04,08
																				OR<25					
															02	PSNG	INJC	27	M			000	000		00
01659	N N N N N	05/16/2018	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLD	S-1TURN	01	NONE 0	TURN-R										013	14,08
CITY	N	Wed 3P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	TURN		RENTL	S E									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	39	M	OTH-Y		003,006	000		14,08
No		45 27 10.19 -122 38 27.51		008100200S00	1															N-RES					
												02	NONE 0	STRGHT											
													PRVTE	S N									000	013	00
													PSNGR CAR		01	DRVR	INJC	21	M	OR-Y		000	000		00
																				OR<25					
												03	NONE 0	STRGHT											
													PRVTE	S N									022		00
													PSNGR CAR		01	DRVR	NONE	53	M	OR-Y		000	000		00
																				OR<25					
02087	N N N	06/17/2018	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT											27,02
CITY	N	Sun 6P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	WET	ANGL		PRVTE	S N									052		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	47	F	OR-Y		028	000		27,02
No		45 27 10.19 -122 38 27.51		008100200S00	1															OR<25					
												02	NONE 0	STRGHT											
													PRVTE	W E									000		00
													PSNGR CAR		01	DRVR	INJC	49	M	OR-Y		000	000		00
																				OR<25					
02727	N N N N N	08/06/2018	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLR	S-1TURN	01	NONE 0	STRGHT											14,08
CITY	N	Mon 4P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S N									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	57	M	OR-Y		000	000		00
No		45 27 10.19 -122 38 27.50		008100200S00	1															OR<25					
												02	NONE 0	TURN-R											
													PRVTE	S E									000		00
													PSNGR CAR		01	DRVR	NONE	51	F	OR-Y		003,006	000		14,08
																				OR<25					
03490	N N N	09/29/2018	CLACKAMAS	2 14		INTER	5-LEG	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT											04
CITY	N	Sat 7P	MILWAUKIE	MN 0	MILPORT RD	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	S N									000		00
			PORTLAND UA	5.20	MCLOUGHLIN BLVD	04	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJC	35	F	OR-Y		000	000		00
No		45 27 10.18 -122 38 27.51		008100200S00	1															OR<25					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	C P E D	A L C	D R U M J	G H L	S W O R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD WTHR / RNDBT SURF / DRVWY LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S X	LICNS RES	PED LOC	ERROR	ACTN EVENT	CAUSE
															02	NONE PRVTE	0 STRGHT W E									000	00
																TRUCK		01	DRVR	INJB	48 M		OR-Y OR<25		020	000	04

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF MILWAUKIE, CLACKAMAS COUNTY

Intersectional Crashes at OR-99E, Pacific Hwy (#081) & SE Milport Rd

January 1, 2014 through December 31, 2018

SER# INVEST UNLOC?	SPEED	ALC	DRUG / MJ	SCHL	WORK	DATE DAY/TIME LAT/LONG	FC DISTNC	CITY STREET FIRST STREET SECOND STREET INTERSECTION SEQ #	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CONTL	OFF-RD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
02630	N	N	N	N	N	06/18/2015	14	MILPORT RD	INTER	5-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,29,32
CITY			N			Thu 3P	0	MCLOUGHLIN BLVD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W E									000		00
No						45 27 10.33 -122 38 28.46		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	25	M	SUSP OR<25		026,052	038		27,29,32
															02	NONE 0	STOP											
																PRVTE	W E									011		00
																PSNGR CAR		01	DRVR	NONE	36	M	OR-Y OR<25		000	000		00

CITY OF MILWAUKIE, CLACKAMAS COUNTY

Intersectional Crashes at SE 21st Ave & SE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	F A L C	D R U G / M J	S C H L	W O R K	DATE / DAY/TIME / LAT/LONG	FC / DISTFC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00303	N	N	N	N	N	01/24/2015	16	HARRISON ST	INTER	CROSS	N	N	CLR	BIKE	01	NONE 0	STRGHT										03,08,05
CITY			N			Sat 3P	0	21ST AVE	CN		STOP SIGN	N	DRY	TURN		PRVTE	NE SW									015	00
No						45 26 44.38 -122 38 25.97		1	01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	38	M	OTH-Y N-RES		000	000		00
																	TURN-L SW NW	01	BIKE	INJA	40	F		02	021,004,006	000		03,08,35
04487	N	N	N			10/30/2015	16	HARRISON ST	INTER	CROSS	N	N	UNK	ANGL-OTH	01	NONE 0	STRGHT										02
NONE			N			Fri 4P	0	21ST AVE	CN		STOP SIGN	N	WET	ANGL		PRVTE	NE SW									015	00
No						45 26 44.38 -122 38 25.97		1	02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y OR<25		028	000		02
															02	NONE 0	STRGHT										
																PRVTE	SE NW									015	00
																PSNGR CAR		01	DRVR	NONE	44	F	OR-Y OR<25		000	000		00
00401	N	N	N			02/02/2018	16	HARRISON ST	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT										02,08
NONE			N			Fri 4P	0	21ST AVE	CN		STOP SIGN	N	DRY	TURN		N/A	NE SW									015	00
No						45 26 44.38 -122 38 25.97		1	02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
															02	NONE 9	TURN-L										
																N/A	SW NW									015	00
																PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
03333	N	N	N	N	N	07/24/2016	16	HARRISON ST	INTER	CROSS	N	N	CLR	O-OTHER	01	NONE 9	TURN-R										08
CITY			N			Sun 11A	0	21ST AVE	CN		STOP SIGN	N	DRY	TURN		N/A	SE NE									015	00
No						45 26 44.38 -122 38 25.97		1	04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
															02	NONE 9	TURN-L										
																N/A	NW NE									015	00
																PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00

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

CITY OF MILWAUKIE, CLACKAMAS COUNTY

Intersectional Crashes at SE 23rd Ave & GE Harrison St
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	SPEED	ALC	DUI	SCHL	WORK	DATE / DAY/TIME / LAT/LONG	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
04012	N	N	N	N	N	09/01/2016	16	HARRISON ST	INTER	3-LEG	N	Y	CLD	FIX OBJ	01	NONE 0	STRGHT										091	17
CITY			N			Thu 1P	0	23RD AVE	W		NONE	N	DRY	FIX		PRVTE	E W									000	091	00
No	49 26 46.74 -122 38 21.96						1		05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	75	M	OR-Y OR<25		081	028		17

171 CLACKAMAS

Intersectional Crashes at SE Harrison St & OR-224, Clackamas Hwy (#171)
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	D R U G A L C	S C M J	W O H K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / MPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
89450	N	N N	N		09/12/2014	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE		N			Fri 11A	MILWAUKIE	MN 0	CLACKAMAS HY	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
						PORTLAND UA	0.68	HARRISON ST	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	20	M	OR-Y		026	000		29
No	45 26	47.55	-122 37	56.24			017100100S00	1															OR<25				
															02	NONE 0	STOP										
																PRVTE	N S									011	00
																PSNGR CAR		01	DRVR	INJB	71	F	OR-Y		000	000	00
																							OR<25				
01258	Y	Y N	N	N	04/14/2018	CLACKAMAS	1 12		INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											01,13,29
CITY		N			Sat 4P	MILWAUKIE	MN 0	CLACKAMAS HY	N		TRF SIGNAL	N	WET	REAR		PRVTE	N S									000		00
						PORTLAND UA	0.68	HARRISON ST	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	20	M	OR-Y		047,026,045	000		01,13,29
No	45 26	47.55	-122 37	56.24			017100100S00	1															OR<25				
															02	NONE 0	STRGHT										
																PRVTE	N S									011	00
																PSNGR CAR		01	DRVR	INJC	68	M	OR-Y		000	000	00
																							OR<25				
																		02	PSNG	INJC	61	F			000	000	00
01900	N	N N	N	N	06/03/2018	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	BIKE													110	04
CITY		N			Sun 3P	MILWAUKIE	MN 0	CLACKAMAS HY	N		TRF SIGNAL	N	DRY	ANGL														
						PORTLAND UA	0.68	HARRISON ST	06	0		N	DAY	INJ			STRGHT	01	BIKE	INJB	68	M		01	020	035	110	04
No	45 26	47.55	-122 37	56.23			017100100S00	1									E W										
															01	NONE 0	STRGHT										
																PRVTE	N S									000	00
																PSNGR CAR		01	DRVR	NONE	36	M	OR-Y		000	000	00
																							OR<25				
02097	N	N N	N		06/17/2018	CLACKAMAS	1 12		INTER	CROSS	N	N	UNK	BIKE	01	NONE 0	STRGHT											04,18,19
CITY		N			Sun 8P	MILWAUKIE	MN 0	CLACKAMAS HY	N		TRF SIGNAL	N	WET	ANGL		PRVTE	N S									000		00
						PORTLAND UA	0.68	HARRISON ST	06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	76	M	OR-Y		000	000		00
No	45 26	47.55	-122 37	56.23			017100100S00	1															OR<25				
																	STRGHT	01	BIKE	INJC	57	M		01	020	035		04,18,19
																	E W										
84017	N	N N	N		04/18/2017	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NO RPT		N			Tue 12P	MILWAUKIE	MN 0	CLACKAMAS HY	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E W									000		00
						PORTLAND UA	0.68	HARRISON ST	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	38	M	OTH-Y		026	000		23
No	45 26	47.55	-122 37	56.24			017100100S00	1															N-RES				
															02	NONE 0	STOP										
																PRVTE	E W									011	00
																PSNGR CAR		01	DRVR	INJC	64	M	OR-Y		000	000	00
																							OR>25				

171 CLACKAMAS

Intersectional Crashes at SE Harrison St & OR-224, Clackamas Hwy (#171)
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D R U G / M J	S H L	W C O K	DATE / DAY/TIME / LAT LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MILEPNT / LRS	FC / MIL / SEQ#	CONN # / FIRST STREET / SECOND STREET / INTERSECTION	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
02530	N	N	N	N	N	06/26/2017	CLACKAMAS	1	12		INTER	CROSS	N		N	CLR	S-1STOP	01	NONE 0	STRGHT											29
CITY		N				Mon 1P	MILWAUKIE	MN	0	CLACKAMAS HY	S		TRF SIGNAL		N	DRY	REAR		PRVTE	S N									000		00
							PORTLAND UA	0.68		HARRISON ST	06	0			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y		026	000		29
No						45 26 47.55 -122 37 56.24		017100100S00		1																OR<25					
																		02	NONE 0	STOP											
																			PRVTE	S N									011		00
																			PSNGR CAR		01	DRVR	INJC	38	F	OR-Y		000	000		00
																										OR<25					
																					02	PSNG	INJC	37	M			000	000		00
04572	Y	Y	N	N	N	11/01/2017	CLACKAMAS	1	12		INTER	CROSS	N		N	CLD	S-1STOP	01	NONE 0	STRGHT											04,06,01
CITY		N				Wed 8P	MILWAUKIE	MN	0	CLACKAMAS HY	S		TRF SIGNAL		N	DRY	SS-O		PRVTE	S N									000		00
							PORTLAND UA	0.68		HARRISON ST	06	0			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	38	M	SUSP		020,032,047	000		04,06,01
No						45 26 47.55 -122 37 56.24		017100100S00		1																OR<25					
																		02	NONE 0	STOP											
																			PRVTE	S N									011		00
																			PSNGR CAR		01	DRVR	INJC	35	F	OR-Y		000	000		00
																										OR<25					
																		03	NONE 0	STOP											
																			PRVTE	S N									011		00
																			PSNGR CAR		01	DRVR	NONE	25	M	OR-Y		000	000		00
																										OR<25					
																					02	PSNG	NO<5	02	M			000	000		00
02121	N	N	N	N	N	06/19/2018	CLACKAMAS	1	12		INTER	CROSS	N		N	CLR	S-1STOP	01	NONE 9	STRGHT											29
CITY		N				Tue 7A	MILWAUKIE	MN	0	CLACKAMAS HY	S		TRF SIGNAL		N	DRY	REAR		N/A	S N									000		00
							PORTLAND UA	0.68		HARRISON ST	06	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No						45 26 47.55 -122 37 56.24		017100100S00		1																UNK					
																		02	NONE 9	STOP											
																			N/A	S N									011		00
																			PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																										UNK					
02296	N	N	N			05/21/2016	CLACKAMAS	1	12		INTER	CROSS	N		N	RAIN	S-1STOP	01	NONE 9	STRGHT											29
NONE		N				Sat 12A	MILWAUKIE	MN	0	CLACKAMAS HY	W		TRF SIGNAL		N	WET	REAR		N/A	W E									000		00
							PORTLAND UA	0.68		HARRISON ST	06	0			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No						45 26 47.55 -122 37 56.24		017100100S00		1																UNK					
																		02	NONE 9	STOP											
																			N/A	W E									011		00
																			PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																										UNK					

171 CLACKAMAS

Intersectional Crashes at SE Harrison St & OR-224, Clackamas Hwy (#171)
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	J P E D	A L C	D R U G M J	S H K	W R	O	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN EVENT	CAUSE
05468	N	Y	N			N	11/24/2016	CLACKAMAS	1 12			INTER	CROSS	N		N	UNK	S-1STOP	01	NONE 0	STRGHT									29
CITY			N				Thu 1A	MILWAUKIE	MN 0		CLACKAMAS HY	W		TRF SIGNAL		N	UNK	REAR		PRVTE	W E								000	00
								PORTLAND UA	0.68		HARRISON ST	06	0			N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	26	M	OR-Y	026	000	29
No	45	26	47.55	-122	37	56.24			017100100S00		1																OR<25			
																						02	PSNG	INJC	27	M		000	000	00
																			02	NONE 0	STOP									
																				PRVTE	W E								011	00
																				TRUCK		01	DRVR	NONE	49	M	OR-Y	000	000	00
																											OR<25			
04813	N	N	N			N	11/26/2014	CLACKAMAS	1 12			INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE 0	STRGHT									04
CITY			N				Wed 2P	MILWAUKIE	MN 0		CLACKAMAS HY	CN		TRF SIGNAL		N	DRY	ANGL		PRVTE	N S								000	00
								PORTLAND UA	0.68		HARRISON ST	01	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	58	F	OR-Y	000	000	00
No	45	26	47.55	-122	37	56.24			017100100S00		1																OR<25			
																			02	NONE 0	STRGHT									
																				PRVTE	E W								000	00
																				PSNGR CAR		01	DRVR	NONE	78	F	OR-Y	020	000	04
																											OR<25			
04092	N	N	N			N	09/06/2016	CLACKAMAS	1 12			INTER	CROSS	N		N	CLR	O-1 L-TURN	01	NONE 0	STRGHT									02
CITY			N				Tue 12P	MILWAUKIE	MN 0		CLACKAMAS HY	CN		TRF SIGNAL		N	DRY	TURN		PRVTE	N S								000	00
								PORTLAND UA	0.68		HARRISON ST	01	0			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	46	M	OR-Y	000	000	00
No	45	26	47.55	-122	37	56.24			017100100S00		1																OR<25			
																						02	PSNG	INJC	21	F		000	000	00
																			02	NONE 0	TURN-L									
																				PRVTE	S W								000	00
																				PSNGR CAR		01	DRVR	NONE	29	F	OR-Y	028,004	000	02
																											OR<25			
00650	N	N	N	N	N	N	02/18/2017	CLACKAMAS	1 12			INTER	CROSS	N		N	RAIN	ANGL-OTH	01	NONE 0	STRGHT									04
CITY			N				Sat 8P	MILWAUKIE	MN 0		CLACKAMAS HY	CN		TRF SIGNAL		N	WET	ANGL		PRVTE	E W								000	00
								PORTLAND UA	0.68		HARRISON ST	01	0			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	21	F	OR-Y	000	000	00
No	45	26	47.55	-122	37	56.24			017100100S00		1																OR<25			
																						02	PSNG	INJC	21	M		000	000	00
																						03	PSNG	INJC	23	M		000	000	00
																			02	NONE 0	STRGHT									
																				PRVTE	N S								000	00
																				PSNGR CAR		01	DRVR	NONE	36	M	OR-Y	020	000	04
																											OR<25			

171 CLACKAMAS

Intersectional Crashes at SE Harrison St & OR-224, Clackamas Hwy (#171)
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D R U G J	S M H L	W R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
03992	N	N	N			09/26/2017	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 9	TURN-L										02,08
NONE		N				Tue 6A	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	TURN		N/A	W N									000		00
							PORTLAND UA	0.68	HARRISON ST	01	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000		000		00
No						45 26 47.55 -122 37 56.24		017100100S00	1															UNK					
																02	NONE 9	STRGHT											
																	N/A	E W									000		00
																	PSNGR CAR		01	DRVR	NONE	00	U	UNK	000		000		09
																								UNK					
00101	N	N	N			01/09/2015	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02
NONE		N				Fri 7A	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E W									000		00
							PORTLAND UA	0.68	HARRISON ST	02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	48	F	OR-Y	000		000		00
No						45 26 47.55 -122 37 56.24		017100100S00	1															OR<25					
																02	NONE 0	TURN-L											
																	UNKN	W N									000		00
																	UNKNOWN		01	DRVR	NONE	00	M	UNK	028,004		000		02
																								UNK					
01129	N	N	N	N	N	03/31/2015	CLACKAMAS	1 12		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 0	STRGHT										04
CITY		N				Tue 4P	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	WET	TURN		PRVTE	S N									000		00
							PORTLAND UA	0.68	HARRISON ST	02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	84	F	OR-Y	020		000		04
No						45 26 47.55 -122 37 56.24		017100100S00	1															OR<25					
																			02	PSNG	INJB	72	F		000		000		00
																02	NONE 0	TURN-L											
																	PRVTE	N E									000		00
																	PSNGR CAR		01	DRVR	INJC	55	M	OR-Y	000		000		00
																								OR<25					
01895	N	N	N			05/18/2015	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	TURN-R										29
NONE		N				Mon 3P	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	REAR		PRVTE	E N									000	004	00
							PORTLAND UA	0.68	HARRISON ST	02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	39	M	OR-Y	026		000		29
No						45 26 47.55 -122 37 56.24		017100100S00	1															OR<25					
																02	NONE 0	STOP											
																	PRVTE	E N									013	004	00
																	PSNGR CAR		01	DRVR	INJC	53	M	OR-Y	000		000		00
																								OR<25					
																			02	PSNG	INJC	59	F		000		000		00
05819	N	N	N			12/14/2016	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT										04
NO RPT		N				Wed 8A	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	ANGL		N/A	E W									000	093	00
							PORTLAND UA	0.68	HARRISON ST	02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000		000		00
No						45 26 47.55 -122 37 56.24		017100100S00	1															UNK					

171 CLACKAMAS

Intersectional Crashes at SE Harrison St & OR-224, Clackamas Hwy (#171)
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D	A L C	D R U G J	S M H L	W C O R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN EVENT	CAUSE
																02	NONE 9 N/A	STRGHT S N									000	00
																	PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000	00
02869	N	N	N			08/16/2018	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT										04
NONE		N				Thu 6A	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	ANGL		N/A	E W									000	00
							PORTLAND UA	0.68	HARRISON ST	02	0		N	DAWN	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000	00
No	45	26	47.58	-122	37	56.25		017100100S00	1																			
																02	NONE 9 N/A	STRGHT S N									000	00
																	PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000	00
02620	N	N	N			07/08/2014	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0 PRVTE	TURN-R W S										29
NONE		N				Tue 6P	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	REAR												000	00
							PORTLAND UA	0.68	HARRISON ST	03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	27	F	OR-Y OR<25	026	000	29
No	45	26	47.55	-122	37	56.24		017100100S00	1																			
																02	NONE 0 PRVTE	STOP W E									011	00
																	PSNGR CAR		01	DRVR	NONE	47	M	OR-Y OR<25	000	000	00
00489	N	N	N	N	N	01/25/2015	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										04
CITY		N				Sun 3P	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	N S									000	00
							PORTLAND UA	0.68	HARRISON ST	03	0		N	DAY	FAT		PSNGR CAR		01	DRVR	NONE	37	M	OR-Y OR<25	020	000	04
No	45	26	47.55	-122	37	56.24		017100100S00	1																			
																02	NONE 0 PRVTE	STRGHT W E									000	00
																	MTRCYCLE		01	DRVR	KILL	42	M	OR-Y OR<25	000	000	00
00458	N	N	N			01/27/2016	CLACKAMAS	1 12		INTER	CROSS	N	N	CLR	S-1TURN	01	NONE 9	TURN-R										08
NONE		N				Wed 10A	MILWAUKIE	MN 0	CLACKAMAS HY	CN		TRF SIGNAL	N	DRY	TURN		N/A	W S									000	00
							PORTLAND UA	0.68	HARRISON ST	03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
No	45	26	47.55	-122	37	56.24		017100100S00	1																			
																02	NONE 9 N/A	STRGHT W E									000	00
																	PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00

171 CLACKAMAS

Intersectional Crashes at SE Harrison St & OR-224, Clackamas Hwy (#171)
January 1, 2014 through December 31, 2018

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              D
              R
        S     U
        F   G S W                                  RD#  FC   CONN #                                  INT-TYP                                              SPCL USE
SER#    E A / C O  DATE           COUNTY           CMPT/MLG  FIRST  STREET        RD CHAR  (MEDIAN)  INT-REL  OFFRD WTHR  CRASH TYP      TRLR QTY   MOVE                          A  S
INVEST  E L M H R  DAY/TIME       CITY             MILEPNT   SECOND STREET        DIRECT     LEGS    TRAF-    RNDBT SURF  COLL TYP       OWNER      FROM          PRTC  INJ       G  E  LICNS  PED
UNLOC?  D C J L K  LAT/LONG       URBAN AREA       LRS       INTERSECTION SEQ#    LOCTN    (#LANES)  CNTL     DRVWY LIGHT SVRTY     V#   VEH TYPE   TO        P#  TYPE  SVRTY     E  X  RES    LOC  ERROR      ACTN EVENT      CAUSE

00923  N N N N N 02/26/2016  CLACKAMAS        1    12                           INTER     CROSS  N          N RAIN  O-1 L-TURN  01  NONE     9  TURN-L                                                                  02
CITY        N     Fri     9P  MILWAUKIE        MN    0    CLACKAMAS HY           CN                TRF SIGNAL  N WET   TURN            N/A         E  S                                                   000         00
                              PORTLAND UA       0.68      HARRISON ST            03          0                  N DLIT  PDO             PSNGR CAR            01  DRVR  NONE   00  U  UNK         000        000         00
No      45 26  47.55 -122 37  56.24            017100100S00              1                                                                                                   UNK

                                                                                                                                02  NONE     9  STRGHT
                                                                                                                                    N/A         W  E                                                   000         00
                                                                                                                                    PSNGR CAR            01  DRVR  NONE   00  U  UNK         000        000         00
                                                                                                                                                                             UNK

05942  N N N       12/18/2016  CLACKAMAS        1    12                           INTER     CROSS  N          N CLR   O-1 L-TURN  01  NONE     0  STRGHT                                                                  02
NONE        N     Sun     6P  MILWAUKIE        MN    0    CLACKAMAS HY           CN                TRF SIGNAL  N ICE   TURN            PRVTE       W  E                                                   000         00
                              PORTLAND UA       0.68      HARRISON ST            03          0                  N DLIT  INJ             PSNGR CAR            01  DRVR  NONE   24  M  OR-Y        000        000         00
No      45 26  47.55 -122 37  56.24            017100100S00              1                                                                                                   OR<25
                                                                                                                                                         02  PSNG  INJC   45  F              000        000         00

                                                                                                                                02  NONE     0  TURN-L
                                                                                                                                    PRVTE       E  S                                                   000         00
                                                                                                                                    PSNGR CAR            01  DRVR  NONE   19  F  OR-Y        028,004    000         02
                                                                                                                                                                             OR<25

03832  N N N N N 10/22/2018  CLACKAMAS        1    12                           INTER     CROSS  N          N CLR   ANGL-OTH    01  NONE     0  STRGHT                                                                  04
CITY        N     Mon    10A  MILWAUKIE        MN    0    CLACKAMAS HY           CN                TRF SIGNAL  N DRY   ANGL            PRVTE       N  S                                                   000         00
                              PORTLAND UA       0.68      HARRISON ST            03          0                  N DAY   INJ             PSNGR CAR            01  DRVR  NONE   43  M  OR-Y        020        000         04
No      45 26  47.55 -122 37  56.24            017100100S00              1                                                                                                   OR<25

                                                                                                                                02  NONE     1  STRGHT
                                                                                                                                    PRVTE       W  E                                                   000         00
                                                                                                                                    PSNGR CAR            01  DRVR  INJC   69  M  OR-Y        000        000         00
                                                                                                                                                                             OR<25

01634  N N N N N 04/10/2016  CLACKAMAS        1    12                           INTER     CROSS  N          N CLR   O-1 L-TURN  01  NONE     0  STRGHT                                                                  04
CITY        N     Sun    10P  MILWAUKIE        MN    0    CLACKAMAS HY           CN                TRF SIGNAL  N DRY   TURN            PRVTE       S  N                                                   000         00
                              PORTLAND UA       0.68      HARRISON ST            04          0                  N DLIT  INJ             PSNGR CAR            01  DRVR  INJC   23  F  OR-Y        020        000         04
No      45 26  47.55 -122 37  56.24            017100100S00              1                                                                                                   OR<25

                                                                                                                                02  NONE     0  TURN-L
                                                                                                                                    PRVTE       N  E                                                   000         00
                                                                                                                                    PSNGR CAR            01  DRVR  INJA   25  M  OTH-Y       000        000         00
                                                                                                                                                                             N-RES

02402  N N N       06/18/2017  CLACKAMAS        1    12                           INTER     CROSS  N          N CLR   ANGL-OTH    01  NONE     9  STRGHT                                                                  02
NONE        N     Sun     8A  MILWAUKIE        MN    0    CLACKAMAS HY           CN                TRF SIGNAL  N DRY   ANGL            N/A         S  N                                                   000         00
                              PORTLAND UA       0.68      HARRISON ST            04          0                  N DAY   PDO             PSNGR CAR            01  DRVR  NONE   00  U  UNK         000        000         00
No      45 26  47.55 -122 37  56.24            017100100S00              1                                                                                                   UNK
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171 CLACKAMAS

Intersectional Crashes at SE Harrison St & OR-224, Clackamas Hwy (#171)
January 1, 2014 through December 31, 2018

SER# / INVEST / UNLOC?	S P E D / A L C / D R U G / S C H L / W O R K	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# FC / CMPT/MLG / MILEPNT / LRS	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL / TRAF-CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
												02	NONE 9	STRGHT											
													N/A	W E									000		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
01148	N N N	04/02/2015	CLACKAMAS	1 16	1	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	29
NONE	N	Thu 10A	MILWAUKIE	CN 0	CLACKAMAS HY	E		TRF SIGNAL	N	DRY	REAR		PRVTF	E W									000		00
			PORTLAND UA	0.68	HARRISON ST	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	41	F	OR-Y		026	000		29
No		45 26 47.55 -122 37 56.24		0171AB100S00	1															OR<25					
												02	NONE 0	STOP											
													PRVTE	E W									011	004	00
													PSNGR CAR		01	DRVR	INJC	20	F	OR-Y		000	000		00
																				OR<25					
00686	N N N	02/24/2015	CLACKAMAS	1 16	1	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	29
NO RPT	N	Tue 7A	MILWAUKIE	CN 0	CLACKAMAS HY	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W E									000		00
			PORTLAND UA	0.68	HARRISON ST	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	47	M	OR-Y		026	000		29
No		45 26 47.55 -122 37 56.24		0171AB100S00	1															OR<25					
												02	NONE 0	STOP											
													PRVTE	W E									011	004	00
													PSNGR CAR		01	DRVR	INJC	26	F	OR-Y		000	000		00
																				OR<25					

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED CR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCIRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING CR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY CR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN,ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNED FROM WRONG LANE
007	TO WRONG	TURNED INTO WRONG LANE
008	ILLEG U	U-TURNED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHI(
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL CCC	INJURED CCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUPLET
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYA
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFCR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS
099	UNKNOWN	UNKNOWN OR NOT DEFINITE

VEHICLE TYPE CODE TRANSLATION LIST

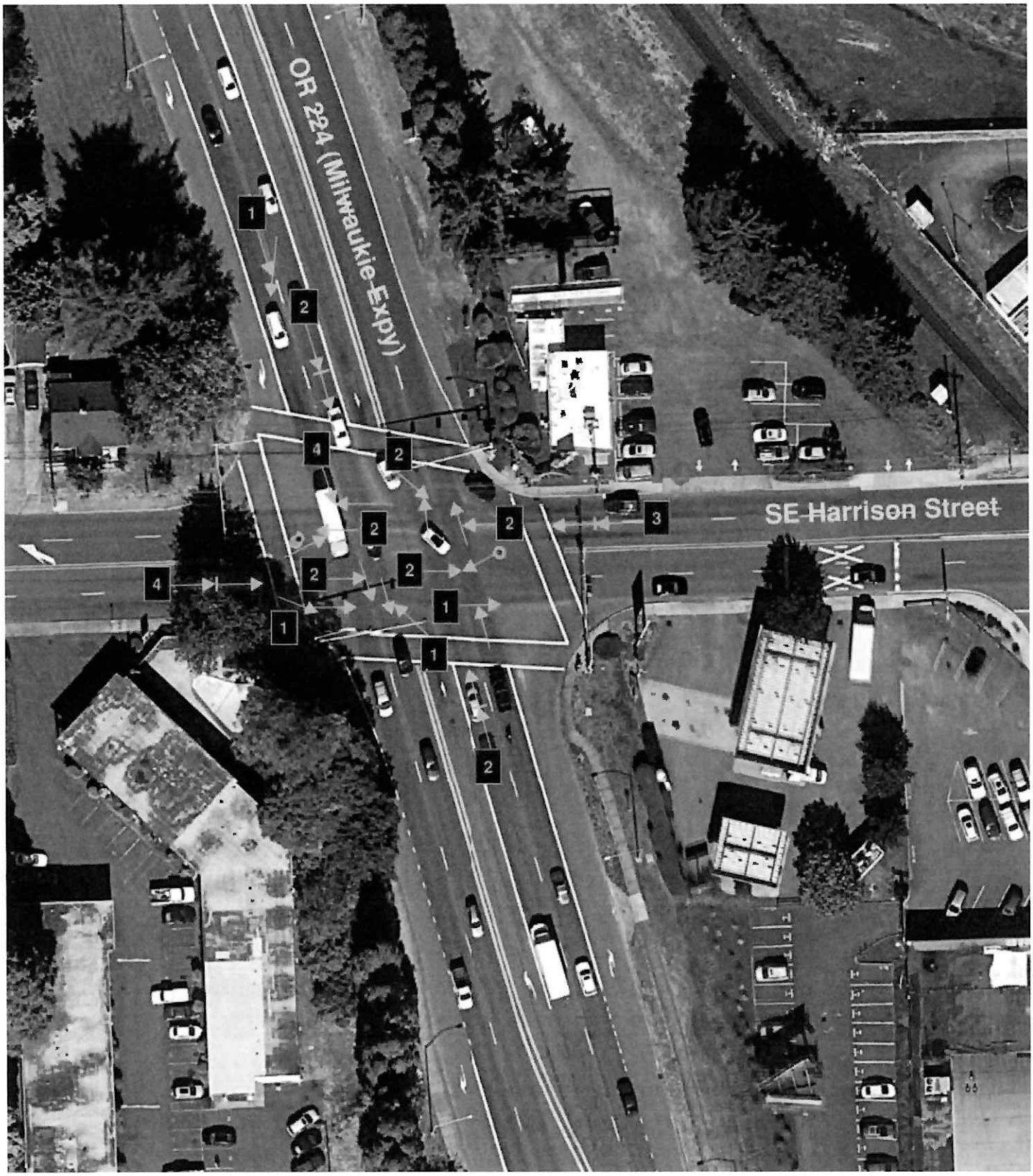
CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

OR 224 (Milwaukie Expy) / SE Harrison Street Crash Diagram

Reported Crashes: January 1, 2014 to December 31, 2018

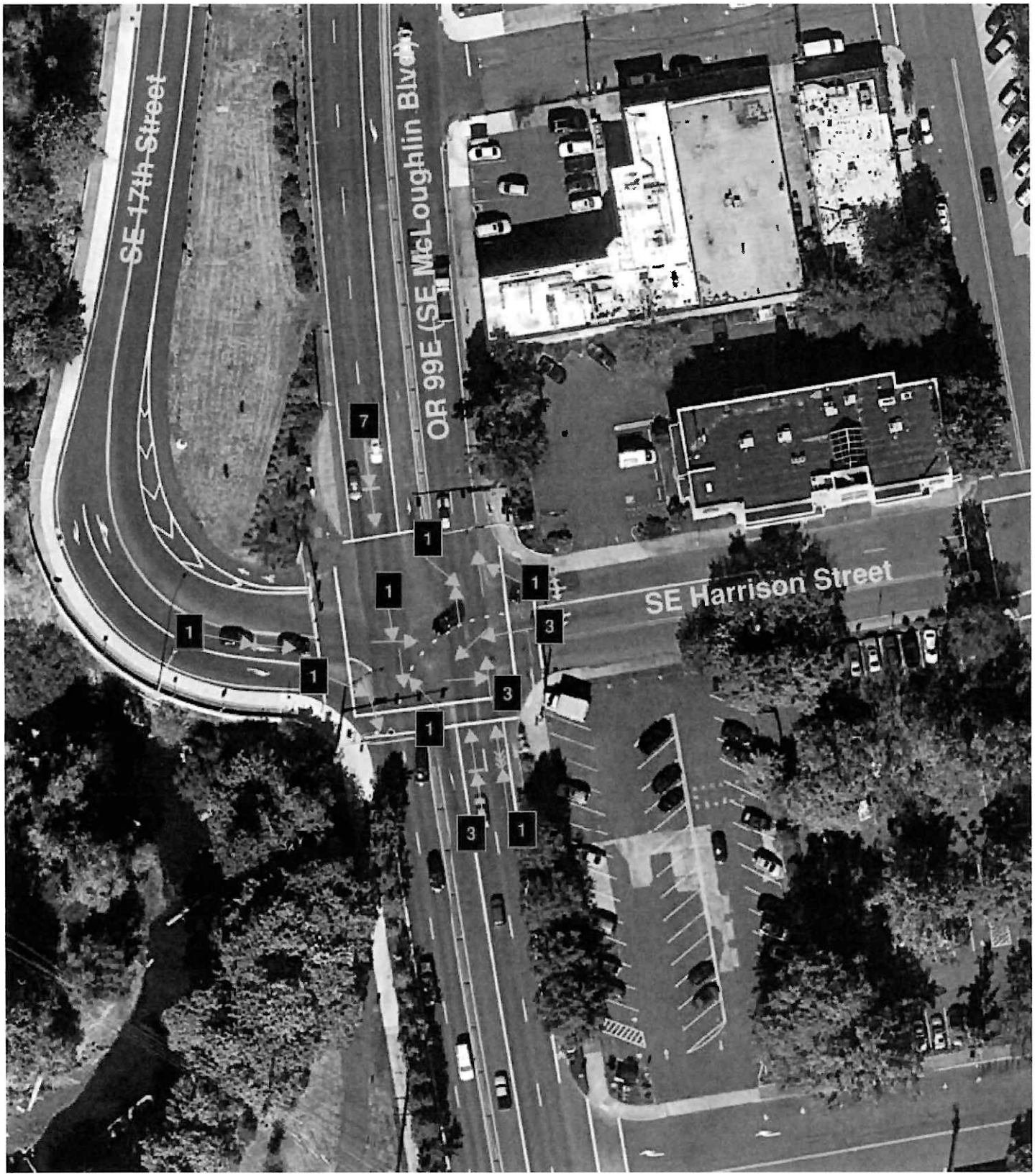


OR 99E (SE McLoughlin Boulevard) / SE Milport Road Crash Diagram

Reported Crashes: January 1, 2014 to December 31, 2018

OR 99E (SE McLoughlin Boulevard) / SE Harrison Street Crash Diagram

Reported Crashes: January 1, 2014 to December 31, 2018



Appendix B Traffic Count Calculations

PROXY COUNT DEVELOPMENT

Documentation of prior traffic counts at the study intersections was requested from the City, ODOT, and Clackamas County as well as the data collection firm Quality Counts. Table B-1 summarizes the data that was subsequently identified.

Table B-1. Previous Traffic Counts[1]

Location	Identified Previous Count Data
Milport Road/OR 99E	No historic data identified
SE Main Street/OR 99E	No historic data identified
Site Access/SE Main Street	No historic data identified
SE Harrison Street/OR 99E	2020 Proxy AM & PM peak hour turn movement data found in *Waverly Woods Apartments Transportation Impact Analysis*, volumes based on combination of historic count and ODOT traffic signal controller traffic count data
SE Main Street/SE Harrison Street	No historic data identified
SE 21st Avenue/SE Harrison Street	2017 Weekday AM & PM peak hour turn movement counts
SE 23rd Avenue/SE Harrison Street	No historic data identified
SE Harrison Street/OR 224	2019 weekday AM & PM peak hour turn movement counts

[1]Some additional traffic count data was available within the City's 2006 TSP (for the intersections of SE Harrison Street/OR 99E, SE Main Street/SE Harrison Street and SE Harrison Street/OR 224); however, that data is now over 15 years old and pre-dates the arrival of TriMet light rail service in Milwaukie.

The traffic count data collected at the study intersections in January 2021 was compared to the historic count data summarized in Table B-1 above. The comparison suggested that, on balance, multiplying the existing turn movement volumes on City streets by a factor of 1.787 for the AM peak hour[5] and 1.4 for the PM peak hour would be appropriate to estimate proxy volumes where no historic count data was available. Table B-2 summarizes how the 2021 proxy volumes were developed at each study intersection.

[5] The 1.787 factor for the AM peak hour was previously identified in the January 2021 Hillside Master Plan Transportation Impact Study based on comparison of September 2018 and July 2020 traffic counts at the nearby SE Harrison Street/SE 32nd Avenue intersection.

Table B-2. Proxy Turn Movement Volume Derivation Methodology

Location	2021 Proxy Volume Methodology Applied
Milport Road/ OR 99E	AM Peak: Applied a factor of 1.787 to 2021 Milport turn movements & 1.4 to 2021 OR 99E through movements PM Peak: Applied a factor of 1.4 to 2021 traffic volumes
SE Main Street/ OR 99E	AM Peak: Applied a factor of 1.787 to 2021 traffic volumes PM Peak: Applied a factor of 1.4 to 2021 traffic volumes
Site Access/ SE Main Street	AM Peak: Applied a factor of 1.787 to 2021 traffic volumes PM Peak: Applied a factor of 1.4 to 2021 traffic volumes
SE Harrison Street/ OR 99E	Used 2020 Proxy AM & PM peak hour counts from Waverly Woods Apartments Transportation Impact Analysis as-is recognizing no growth has occurred between 2020 and 2021 due to COVID pandemic
SE Main Street/ SE Harrison Street	AM Peak: Applied a factor of 1.787 to 2021 traffic volumes PM Peak: Applied a factor of 1.4 to 2021 traffic volumes
SE 21st Avenue/ SE Harrison Street	AM Peak: Applied a factor of 1.787 to 2021 traffic volumes PM Peak: Applied a factor of 1.4 to 2021 traffic volumes
SE 23rd Avenue/ SE Harrison Street	AM Peak: Applied a factor of 1.787 to 2021 traffic volumes PM Peak: Applied a factor of 1.4 to 2021 traffic volumes
SE Harrison Street/ OR 224	Applied a factor of 1.04 to 2019 weekday AM and PM peak hour turn movement counts (reflects assumption of 2% growth/year)

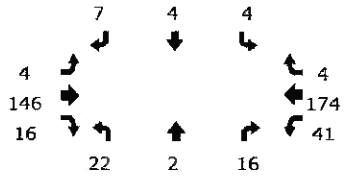
The proxy count methodology was also previewed with DKS Associates staff during preparation of this study and judged to be reasonable given the limited data available.

For illustrative purposes, the 2021 proxy counts for the SE 21st Avenue/SE Harrison Street intersection were compared to the 2017 traffic counts conducted at the intersection as shown in Exhibit B-1 and were judged to be reasonable.

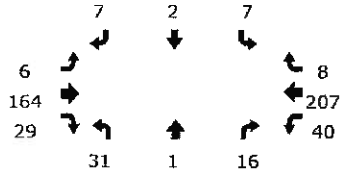
Exhibit B-1: Comparison of 2021 Proxy Count and 2017 Turn Movement Counts at SE 21st Avenue/SE Harrison Street

Weekday AM Peak Hour

21st/Harrison AM Peak Hour
2021 Proxy Counts (after 1.79 factor applied)

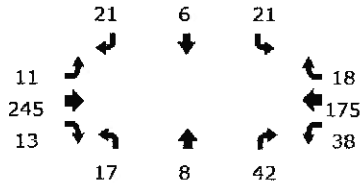


April 4 2017 Traffic Count



Weekday PM Peak Hour

2021 Proxy Counts (after 1.4 factor applied)



2017 Traffic Count

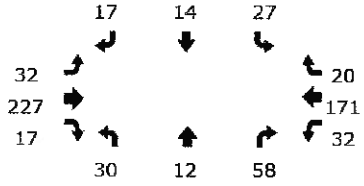
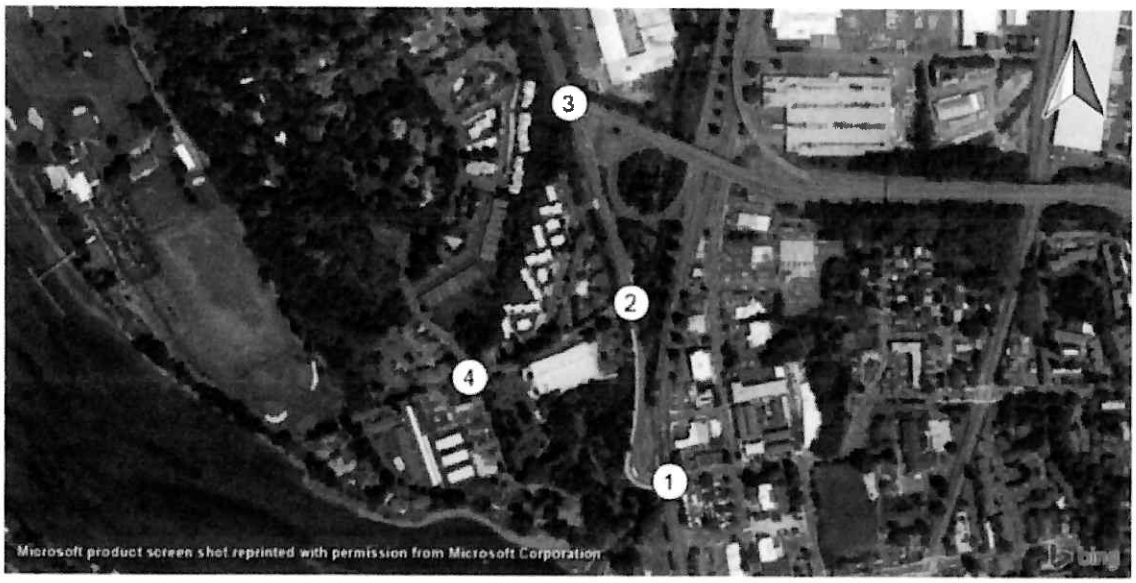
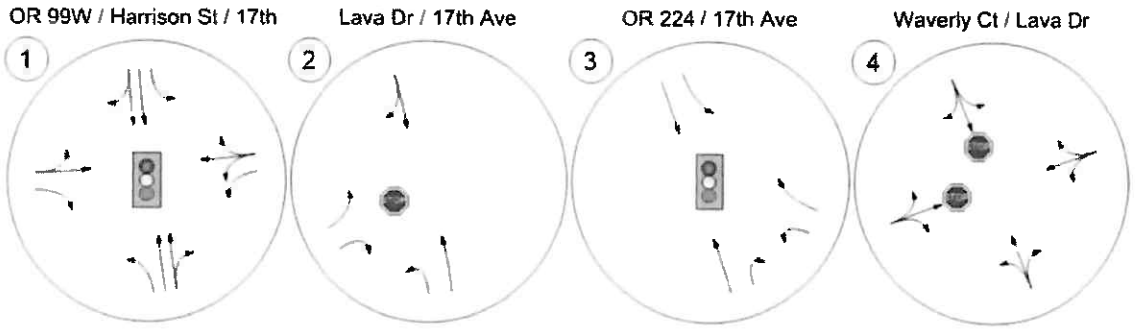


Exhibit 2 shows existing lane configurations, traffic control devices, and existing traffic volumes at the study intersections.

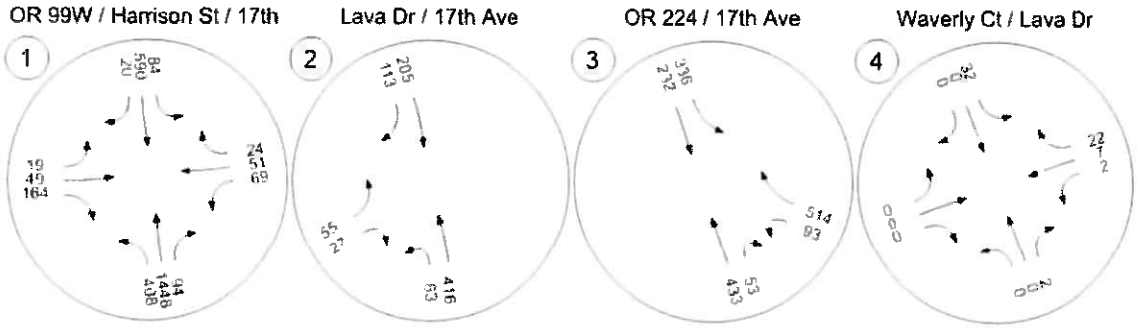
Exhibit 2. Existing Lane Configurations, Traffic Control Devices, and Traffic Volumes



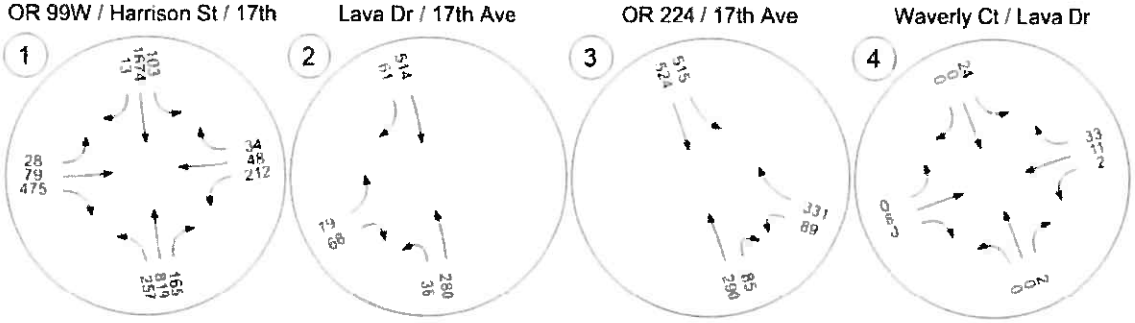
LANE CONFIGURATION & CONTROL DEVICES



WEEKDAY AM PEAK HOUR VOLUMES



WEEKDAY PM PEAK HOUR VOLUMES



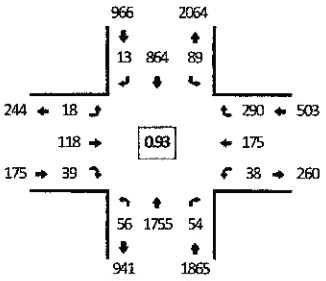
Type of peak hour being reported: Intersection Peak

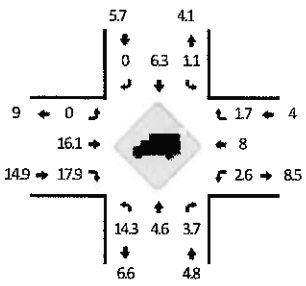
Method for determining peak hour: Total Entering Volume

LOCATION: Milwaukie Expy -- SE Harrison St
CITY/STATE: Clackamas, OR

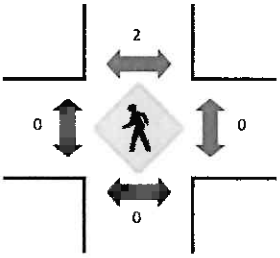
QC JOB #: 14894501
DATE: Thu, Feb 7 2019

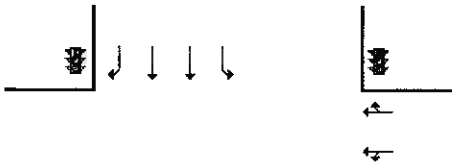
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:25 AM -- 7:40 AM

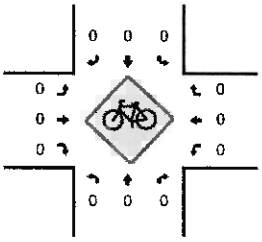


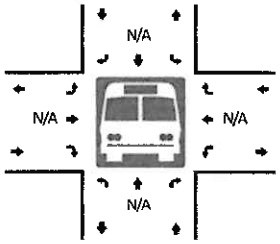


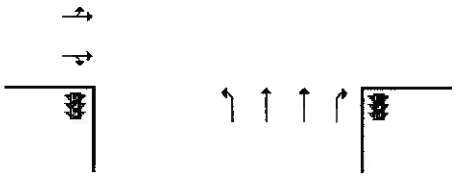
Quality Counts
DATA THAT DRIVES COMMUNITIES

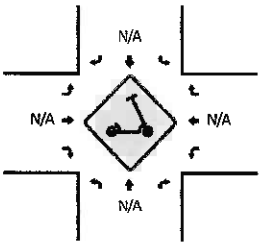












5-Min Count Period Beginning At	Milwaukie Expy (Northbound)				Milwaukie Expy (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	149	1	0	2	65	0	0	1	5	6	0	6	18	28	0	286	
7:05 AM	3	177	3	0	3	63	0	0	1	7	2	0	4	4	21	0	288	
7:10 AM	8	127	0	0	2	56	3	0	2	9	2	0	2	9	36	0	256	
7:15 AM	2	163	8	0	13	77	0	0	4	13	1	0	4	9	18	0	312	
7:20 AM	7	144	0	0	5	68	1	0	1	10	1	0	2	8	28	0	275	
7:25 AM	3	181	2	0	2	76	0	0	2	7	1	0	1	16	36	0	327	
7:30 AM	6	136	4	0	7	62	0	1	1	12	3	0	2	18	29	0	281	
7:35 AM	4	182	10	0	11	85	3	0	0	9	5	0	2	7	21	0	339	
7:40 AM	6	118	4	0	7	64	2	0	0	7	5	0	3	10	26	0	252	
7:45 AM	3	165	7	0	4	82	0	0	3	13	8	0	8	10	28	0	331	
7:50 AM	3	107	4	0	11	73	1	0	3	9	2	0	7	29	22	0	271	
7:55 AM	5	144	5	0	6	78	1	0	0	6	3	0	1	15	17	0	281	3499
8:00 AM	5	110	5	0	10	74	2	0	1	11	4	0	2	19	21	0	264	3477
8:05 AM	6	149	4	0	4	64	3	0	1	8	0	0	5	14	19	0	277	3466
8:10 AM	6	156	1	0	8	61	0	0	2	13	6	0	1	20	25	0	299	3509
8:15 AM	3	144	5	0	9	46	1	0	2	11	6	0	4	11	14	0	256	3453
8:20 AM	9	118	2	0	9	58	2	0	2	16	8	0	2	24	23	0	273	3451
8:25 AM	3	161	6	0	5	83	0	0	2	7	5	0	3	15	18	0	308	3432
8:30 AM	5	126	4	0	5	53	2	0	3	11	3	0	3	18	17	0	250	3401
8:35 AM	6	156	6	0	6	66	0	0	0	10	3	0	2	13	15	0	283	3345
8:40 AM	5	98	7	0	6	57	2	0	0	14	4	0	7	14	19	0	233	3326
8:45 AM	6	121	5	0	4	62	4	0	0	11	3	0	3	17	15	0	251	3246
8:50 AM	8	85	9	0	12	39	2	0	1	25	5	0	5	24	17	0	232	3207
8:55 AM	9	119	6	0	11	66	0	0	0	5	3	0	4	10	14	0	247	3173

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	52	1996	64	0	80	892	12	4	12	112	36	0	20	164	344	0	3788
Heavy Trucks	4	48	4		0	52	0		0	16	4		0	20	8		156
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 1/12/2021 12:56 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

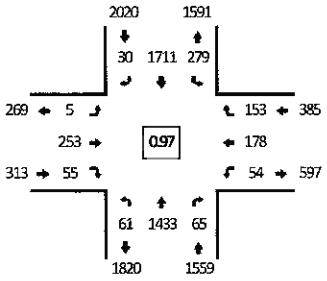
Type of peak hour being reported: Intersection Peak

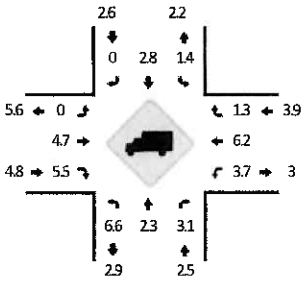
Method for determining peak hour: Total Entering Volume

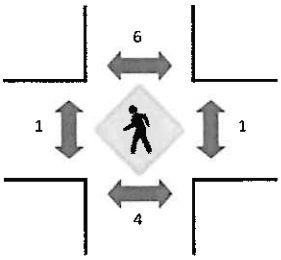
LOCATION: Milwaukie Expy -- SE Harrison St
CITY/STATE: Clackamas, OR

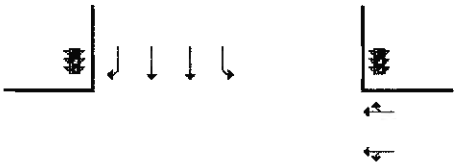
QC JOB #: 14894502
DATE: Thu, Feb 7 2019

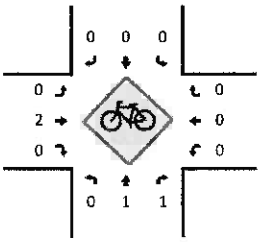
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

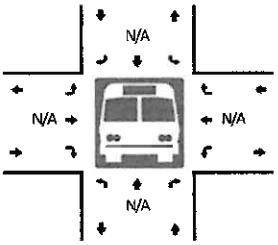


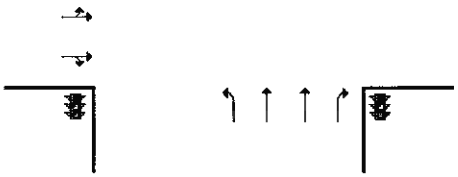


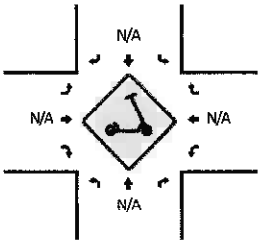












5-Min Count Period Beginning At	Milwaukie Expy (Northbound)				Milwaukie Expy (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	107	5	0	18	120	2	0	0	25	3	0	8	10	10	0	316	
4:05 PM	5	105	1	0	18	118	2	0	2	23	13	0	2	8	9	0	306	
4:10 PM	4	139	10	0	19	143	1	0	0	18	3	0	1	13	17	0	368	
4:15 PM	7	94	3	0	15	117	1	0	0	25	6	0	1	16	13	0	298	
4:20 PM	4	115	9	0	8	144	2	0	0	16	4	0	4	17	3	0	326	
4:25 PM	4	120	9	0	32	155	2	0	1	17	6	0	5	10	14	0	375	
4:30 PM	6	99	4	0	26	128	0	0	0	21	4	0	6	16	10	0	320	
4:35 PM	3	105	3	0	27	128	3	0	0	16	5	0	8	18	17	0	333	
4:40 PM	4	147	9	0	7	182	2	0	0	0	2	0	5	5	3	0	366	
4:45 PM	4	105	4	0	12	155	2	0	1	18	4	0	2	8	7	0	322	
4:50 PM	4	103	3	0	23	131	3	0	0	36	8	0	8	23	14	0	356	
4:55 PM	3	105	3	0	32	149	2	0	0	11	6	0	7	19	22	0	359	4045
5:00 PM	3	147	5	0	17	140	3	0	0	14	1	0	4	20	13	0	367	4096
5:05 PM	7	125	12	0	17	113	2	0	1	39	5	0	3	15	12	0	351	4141
5:10 PM	5	108	8	0	30	140	3	0	1	29	5	0	6	17	13	0	365	4138
5:15 PM	5	126	7	0	26	153	2	0	1	16	7	0	7	12	16	0	378	4218
5:20 PM	6	126	4	0	25	140	1	0	0	25	1	0	2	13	14	0	357	4249
5:25 PM	6	111	3	0	24	119	4	0	0	30	6	0	3	16	16	0	338	4212
5:30 PM	6	117	4	0	39	153	1	0	0	16	4	0	6	19	12	0	377	4269
5:35 PM	8	113	3	0	27	136	5	0	1	19	6	0	1	11	11	0	341	4277
5:40 PM	7	81	5	0	25	128	3	0	1	26	7	0	7	13	18	0	321	4232
5:45 PM	9	73	7	0	32	148	3	0	0	14	6	0	4	10	10	0	316	4226
5:50 PM	7	101	5	0	24	145	0	0	0	13	6	0	7	12	11	0	331	4201
5:55 PM	6	71	5	0	24	110	1	0	0	21	6	0	4	22	11	0	281	4123

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	64	1440	76	0	324	1732	24	0	8	280	52	0	60	168	172	0	4400
Heavy Trucks	12	36	4		0	52	0		0	12	8		0	4	0		128
Buses																	
Pedestrians		16				12				4				0			32
Bicycles	0	0	4		0	0	0		0	4	0		0	0	0		8
Scooters																	

Comments:

Report generated on 1/12/2021 12:56 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

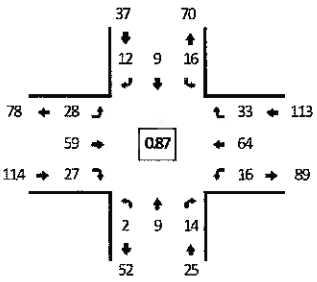
Type of peak hour being reported: User-Defined

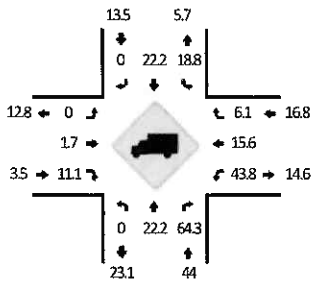
Method for determining peak hour: Total Entering Volume

LOCATION: SE Main St -- SE Harrison St
CITY/STATE: Milwaukie, OR

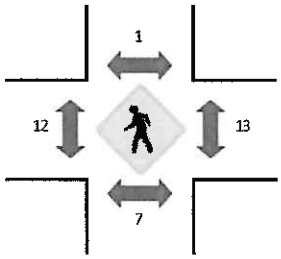
QC JOB #: 15350905
DATE: Thu, Jan 28 2021

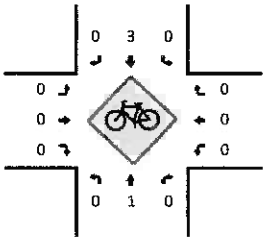
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

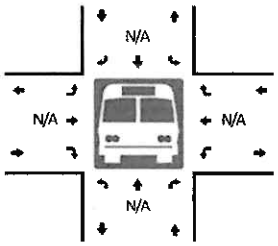


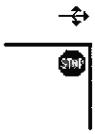


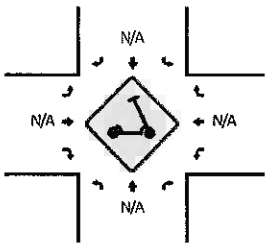
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	SE Main St (Northbound)				SE Main St (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (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	1	0	0	0	0	0	1	4	3	0	1	5	3	0	18	
7:05 AM	0	1	1	0	0	1	0	0	1	5	0	0	2	4	4	0	19	
7:10 AM	1	0	1	0	2	1	0	0	0	3	0	0	0	7	1	0	16	
7:15 AM	0	1	1	0	1	0	1	0	3	3	0	0	0	5	2	0	17	
7:20 AM	0	1	0	0	1	1	1	0	2	4	1	0	1	4	2	0	18	
7:25 AM	1	0	1	0	1	0	0	0	3	3	0	0	2	3	2	0	16	
7:30 AM	0	2	1	0	1	0	1	0	3	2	1	0	1	5	2	0	19	
7:35 AM	0	0	1	0	0	0	1	0	1	2	1	0	1	8	3	0	18	
7:40 AM	0	2	2	0	0	2	0	0	1	5	2	0	0	9	4	0	27	
7:45 AM	0	2	1	0	0	2	0	0	1	4	1	0	1	8	6	0	26	
7:50 AM	0	1	0	0	0	0	0	0	2	5	3	0	2	3	3	0	19	
7:55 AM	1	2	2	0	1	2	2	0	1	2	2	0	4	4	2	0	25	238
8:00 AM	0	0	1	0	4	0	0	0	2	4	2	0	0	4	4	0	21	241
8:05 AM	0	2	1	0	0	0	2	0	5	5	0	0	0	4	3	0	22	244
8:10 AM	0	1	2	0	2	2	0	0	2	4	1	0	1	5	1	0	21	249
8:15 AM	0	0	1	0	0	0	1	0	5	4	1	0	1	7	2	0	22	254
8:20 AM	0	2	0	0	2	1	2	0	2	2	1	0	1	6	5	0	24	260
8:25 AM	0	1	1	0	2	0	0	0	2	6	1	0	3	5	6	0	27	271
8:30 AM	1	0	2	0	3	0	1	0	3	6	2	0	0	2	1	0	21	273
8:35 AM	0	0	0	0	1	3	2	0	3	5	3	0	1	5	3	0	26	281
8:40 AM	0	2	2	0	0	1	2	0	1	5	1	0	1	6	1	0	22	276
8:45 AM	0	1	1	0	1	1	2	0	2	8	3	0	0	5	1	0	25	275
8:50 AM	0	0	1	0	1	1	0	0	1	2	7	0	7	8	3	0	31	287
8:55 AM	1	0	2	0	0	0	0	0	0	8	5	0	1	7	3	0	27	289

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	4	4	16	0	8	8	8	0	12	72	60	0	32	80	28	0	332
Heavy Trucks	0	4	8		0	4	0		0	0	4		12	4	4		40
Buses																	
Pedestrians		16				0				8				8			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/26/2021 12:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

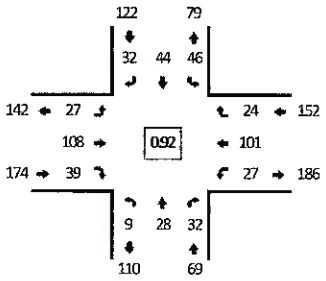
Type of peak hour being reported: User-Defined

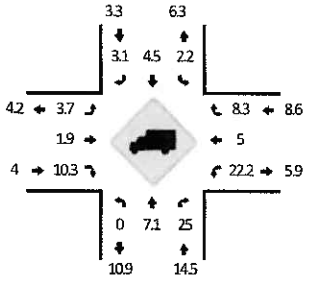
Method for determining peak hour: Total Entering Volume

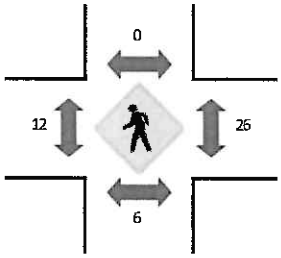
LOCATION: SE Main St -- SE Harrison St
CITY/STATE: Milwaukie, OR

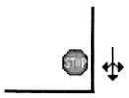
QC JOB #: 15350906
DATE: Thu, Jan 28 2021

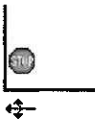
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

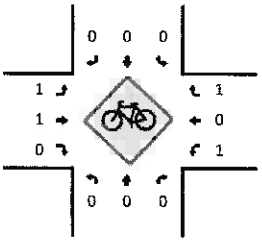


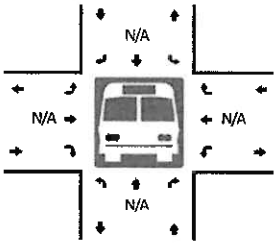


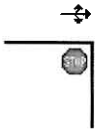


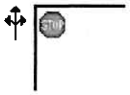


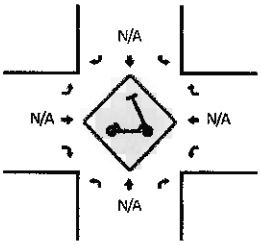












5-Min Count Period Beginning At	SE Main St (Northbound)				SE Main St (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	4	0	4	2	5	0	3	10	4	0	0	15	2	0	50	
4:05 PM	0	3	5	0	4	2	6	0	3	16	6	0	5	12	0	0	62	
4:10 PM	0	2	4	0	2	0	1	0	2	7	1	0	1	7	2	0	29	
4:15 PM	1	2	1	0	2	4	1	0	1	6	5	0	3	10	2	0	38	
4:20 PM	0	2	2	0	1	5	0	0	3	6	4	0	2	4	2	0	31	
4:25 PM	2	0	3	0	1	5	5	0	2	9	3	0	3	7	4	0	44	
4:30 PM	2	2	0	0	5	2	3	0	1	10	4	0	1	14	2	0	46	
4:35 PM	0	3	2	0	6	6	3	0	3	10	4	0	2	5	2	0	46	
4:40 PM	0	4	1	0	5	4	1	0	3	10	4	0	2	7	3	0	44	
4:45 PM	2	2	2	0	6	4	4	0	2	11	1	0	3	11	3	0	51	
4:50 PM	1	2	4	0	8	7	1	0	2	8	2	0	4	4	0	0	43	
4:55 PM	0	6	4	0	2	3	2	0	2	5	1	0	1	5	2	0	33	517
5:00 PM	0	3	3	0	3	10	4	0	2	9	2	0	0	2	1	0	39	506
5:05 PM	2	2	3	0	4	4	1	0	2	8	1	0	3	8	3	0	41	485
5:10 PM	0	1	2	0	4	3	1	0	2	8	6	0	0	6	2	0	35	491
5:15 PM	0	2	0	0	5	4	3	0	1	11	1	0	2	11	2	0	42	495
5:20 PM	0	1	3	0	1	3	1	0	1	10	3	0	2	5	2	0	32	496
5:25 PM	2	4	3	0	1	2	2	0	1	12	2	0	0	8	2	0	39	491
5:30 PM	0	0	2	0	8	3	3	0	2	8	4	0	1	6	5	0	42	487
5:35 PM	0	2	2	0	3	4	4	0	1	15	3	0	1	9	4	0	48	489
5:40 PM	0	3	1	0	6	6	6	0	3	17	2	1	3	4	0	0	52	497
5:45 PM	0	0	1	0	2	2	4	0	0	6	4	0	1	5	2	0	27	473
5:50 PM	3	2	3	0	2	1	2	0	3	8	1	0	1	7	2	0	35	465
5:55 PM	0	1	3	0	4	2	3	0	1	6	1	0	1	6	4	0	32	464

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	4	20	52	0	40	16	48	0	32	132	44	0	24	136	16	0	564
Heavy Trucks	0	0	8		0	4	0		4	0	4		8	4	4		36
Buses																	
Pedestrians		4				0				20				16			40
Bicycles	0	0	0		0	0	0		0	0	0		4	0	0		4
Scooters																	

Comments:

Report generated on 2/26/2021 12:06 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

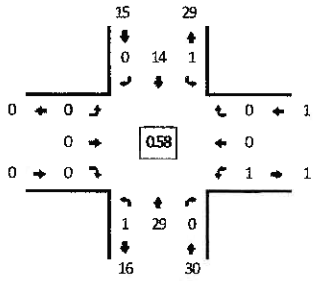
Type of peak hour being reported: User-Defined

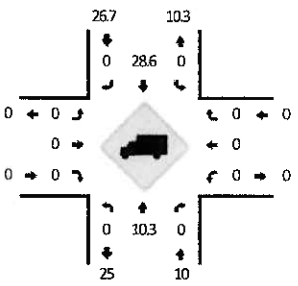
Method for determining peak hour: Total Entering Volume

LOCATION: SE Main St -- Kellogg Bowl Dwy
CITY/STATE: Milwaukie, OR

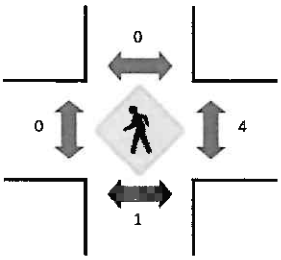
QC JOB #: 15350907
DATE: Thu, Jan 28 2021

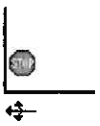
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

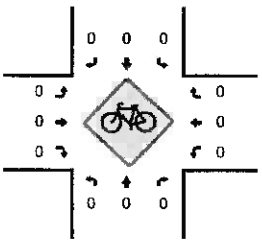


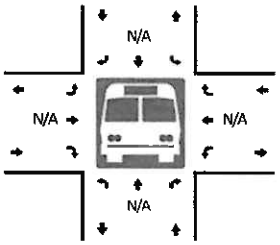


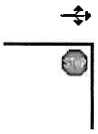
Quality Counts
DATA THAT DRIVES COMMUNITIES

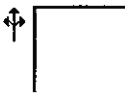


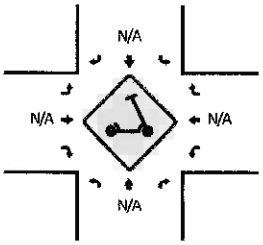












5-Min Count Period Beginning At	SE Main St (Northbound)				SE Main St (Southbound)				Kellogg Bowl Dwy (Eastbound)				Kellogg Bowl Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7:05 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	
7:10 AM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	
7:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:20 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	
7:25 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7:30 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:35 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:40 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10	
7:45 AM	0	4	0	1	1	1	0	0	0	0	0	0	1	0	0	0	8	
7:50 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	
7:55 AM	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	46
8:00 AM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6	50
8:05 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	51
8:10 AM	0	1	1	0	0	5	0	0	0	0	0	0	0	0	1	0	8	54
8:15 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	54
8:20 AM	0	6	0	0	0	6	0	0	0	0	0	0	1	0	0	0	13	65
8:25 AM	1	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6	69
8:30 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	69
8:35 AM	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4	72
8:40 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	64
8:45 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	1	0	6	62
8:50 AM	0	2	1	0	0	1	0	0	0	0	0	0	1	0	1	0	6	66
8:55 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	61

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	40	0	4	4	28	0	0	0	0	0	0	4	0	0	0	80
Heavy Trucks	0	4	0		0	4	0		0	0	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: Need to treat this as a 4-legged intersections (driveways to North and South need to be in count)

Report generated on 2/26/2021 12:07 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

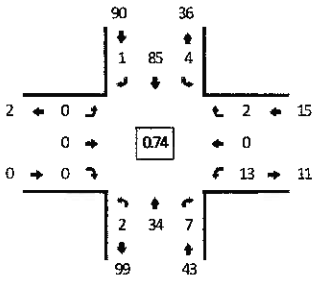
Type of peak hour being reported: User-Defined

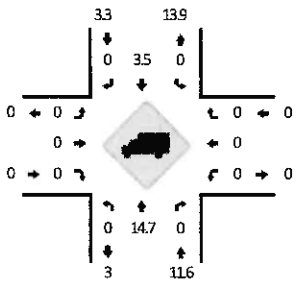
Method for determining peak hour: Total Entering Volume

LOCATION: SE Main St -- Kellogg Bowl Dwy
CITY/STATE: Milwaukie, OR

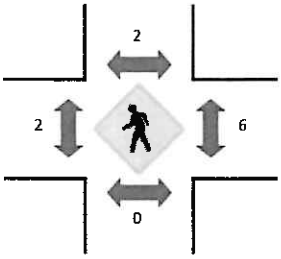
QC JOB #: 15350908
DATE: Thu, Jan 28 2021

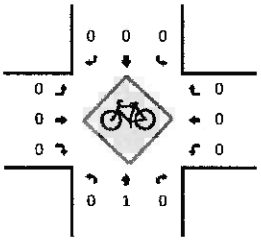
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

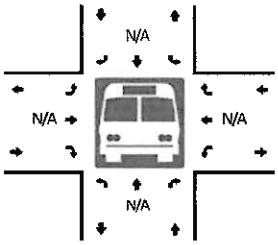


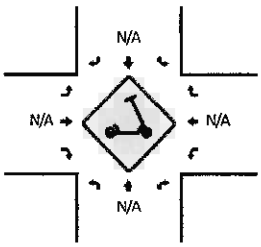


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	SE Main St (Northbound)				SE Main St (Southbound)				Kellogg Bowl Dwy (Eastbound)				Kellogg Bowl Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	1	1	0	0	9	0	0	0	0	0	0	1	0	0	0	12	
4:05 PM	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	8	
4:10 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	
4:15 PM	0	2	0	0	1	7	0	0	0	0	0	0	1	0	0	0	11	
4:20 PM	0	2	1	0	0	4	0	0	0	0	0	0	1	0	0	0	8	
4:25 PM	1	1	2	1	0	11	0	0	0	0	0	0	2	0	0	0	18	
4:30 PM	0	3	1	0	1	4	0	0	0	0	0	0	0	0	0	0	9	
4:35 PM	0	3	0	0	0	8	0	0	0	0	0	0	1	0	1	0	13	
4:40 PM	0	4	2	0	0	5	0	0	0	0	0	0	1	0	0	0	12	
4:45 PM	0	4	0	0	0	13	0	0	0	0	0	0	2	0	0	0	19	
4:50 PM	0	4	1	0	2	8	0	0	0	0	0	0	1	0	0	0	16	
4:55 PM	0	4	0	0	0	8	1	0	0	0	0	0	1	0	1	0	15	144
5:00 PM	0	3	0	0	0	10	0	0	0	0	0	0	3	0	0	0	16	148
5:05 PM	0	5	0	0	0	2	0	0	0	0	0	0	2	0	1	0	10	150
5:10 PM	0	2	1	1	0	7	1	0	0	0	0	0	1	0	0	0	13	160
5:15 PM	0	0	0	1	0	6	0	0	0	0	0	0	0	0	0	0	7	156
5:20 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	151
5:25 PM	0	2	0	1	0	1	0	0	0	0	0	0	0	0	1	0	5	138
5:30 PM	0	2	1	0	0	4	0	0	0	0	0	0	2	0	0	0	9	138
5:35 PM	0	3	2	0	0	3	0	0	0	0	0	0	4	0	0	0	12	137
5:40 PM	0	2	1	0	0	2	0	0	0	0	0	0	1	0	0	0	6	131
5:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	3	115
5:50 PM	0	5	1	1	0	1	0	0	0	0	0	0	1	0	0	0	9	108
5:55 PM	0	1	0	0	1	2	0	0	0	0	0	0	2	0	0	0	6	99

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	48	4	0	8	116	4	0	0	0	0	0	16	0	4	0	200
Heavy Trucks	0	4	0		0	4	0		0	0	0		0	0	0		8
Buses																	
Pedestrians		0				0				4				20			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: Need to treat this as a 4-legged intersections (driveways to North and South need to be in count)

Report generated on 2/26/2021 12:07 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

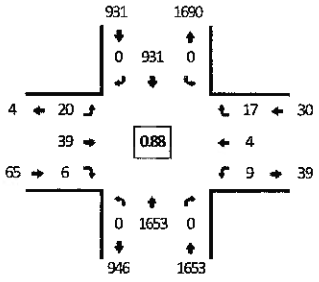
Type of peak hour being reported: User-Defined

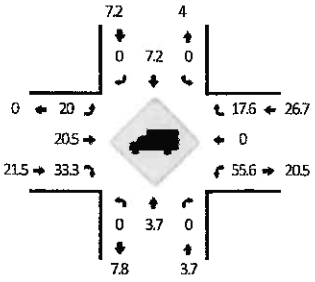
Method for determining peak hour: Total Entering Volume

LOCATION: SE McLoughlin Blvd -- SE Milport Rd
CITY/STATE: Milwaukie, OR

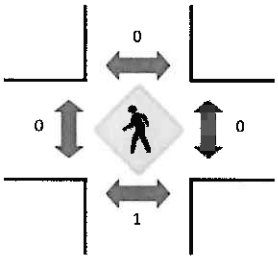
QC JOB #: 15350909
DATE: Thu, Jan 28 2021

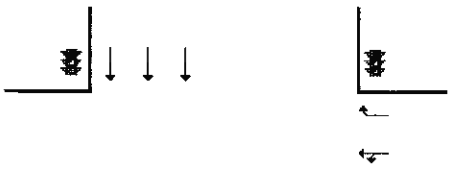
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

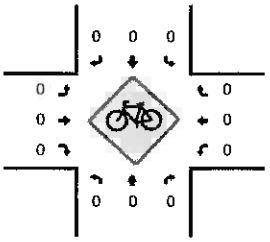


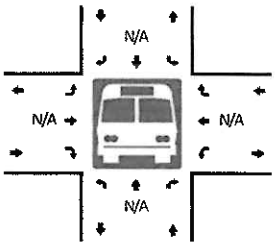


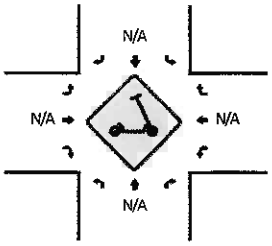
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	SE McLoughlin Blvd (Northbound)				SE McLoughlin Blvd (Southbound)				SE Milport Rd (Eastbound)				SE Milport 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	101	0	0	0	39	0	0	1	9	1	0	0	1	1	0	153	
7:05 AM	0	134	0	0	0	48	0	0	0	4	1	0	1	2	0	0	190	
7:10 AM	0	130	0	0	0	57	0	0	0	4	0	0	1	0	0	0	192	
7:15 AM	0	136	0	0	0	64	0	0	0	1	0	0	0	0	1	0	202	
7:20 AM	0	139	0	0	0	64	0	0	1	4	0	0	1	0	0	0	209	
7:25 AM	0	130	0	0	0	69	0	0	0	2	0	0	0	0	0	0	201	
7:30 AM	0	130	0	0	0	70	0	0	2	3	0	0	1	0	3	0	209	
7:35 AM	0	142	0	0	0	74	0	0	2	2	0	0	2	1	0	0	223	
7:40 AM	0	141	0	0	0	57	0	0	3	6	0	0	0	0	1	0	208	
7:45 AM	0	193	0	0	0	100	0	0	2	4	0	0	0	0	1	0	300	
7:50 AM	0	121	0	0	0	87	0	0	3	6	1	0	0	0	1	0	219	
7:55 AM	0	139	0	0	0	90	0	0	2	4	1	0	1	1	0	0	238	2544
8:00 AM	0	110	0	0	0	65	0	0	1	4	0	0	0	1	0	0	181	2572
8:05 AM	0	142	0	0	0	78	0	0	0	1	0	0	2	0	2	0	225	2607
8:10 AM	0	137	0	0	0	75	0	0	1	3	0	0	0	0	3	0	219	2634
8:15 AM	0	125	0	0	0	82	0	0	1	1	3	0	0	0	0	0	212	2644
8:20 AM	0	110	0	0	0	61	0	0	1	2	1	0	2	1	2	0	180	2615
8:25 AM	0	163	0	0	0	92	0	0	2	3	0	0	1	0	4	0	265	2679
8:30 AM	0	80	0	0	0	69	0	0	1	5	1	0	2	0	3	0	161	2631
8:35 AM	0	148	0	0	0	84	0	0	0	2	0	0	0	0	4	0	238	2646
8:40 AM	0	100	0	0	0	62	0	0	0	4	0	0	2	0	3	0	171	2609
8:45 AM	0	148	0	0	0	86	0	0	0	4	0	0	1	0	3	0	242	2551
8:50 AM	0	99	0	0	0	78	0	0	0	2	0	0	2	0	3	0	184	2516
8:55 AM	0	109	0	0	0	88	0	0	1	2	3	0	1	0	1	0	205	2483

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	1812	0	0	0	1108	0	0	28	56	8	0	4	4	8	0	3028
Heavy Trucks	0	32	0		0	72	0		8	8	0		0	0	0		120
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/26/2021 12:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

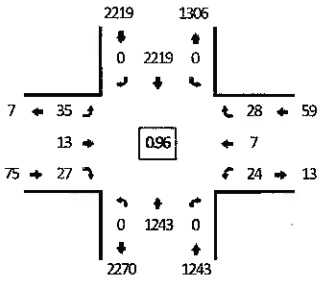
Type of peak hour being reported: User-Defined

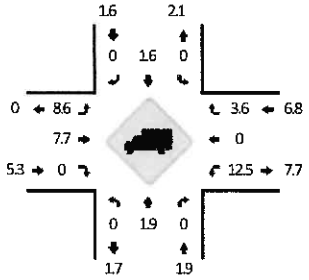
Method for determining peak hour: Total Entering Volume

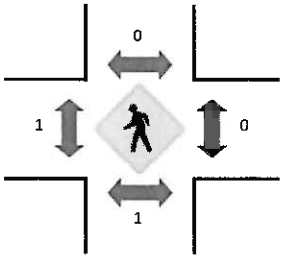
LOCATION: SE McLoughlin Blvd -- SE Milport Rd
CITY/STATE: Milwaukie, OR

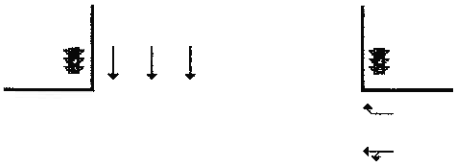
QC JOB #: 15350910
DATE: Thu, Jan 28 2021

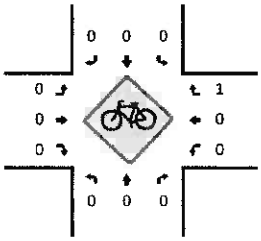
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

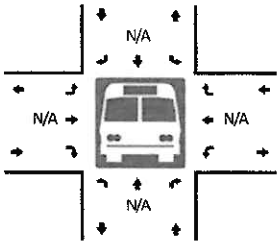


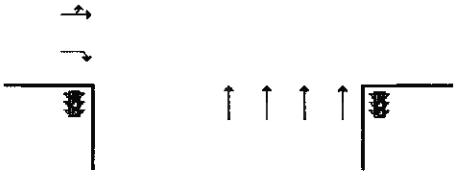


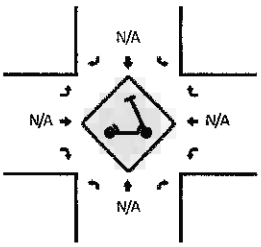












5-Min Count Period Beginning At	SE McLoughlin Blvd (Northbound)				SE McLoughlin Blvd (Southbound)				SE Milport Rd (Eastbound)				SE Milport Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	90	0	0	0	164	0	0	1	0	1	0	1	1	4	0	262	
4:05 PM	0	97	0	0	0	160	0	0	6	0	4	0	3	0	2	0	272	
4:10 PM	0	109	0	0	0	168	0	0	0	0	1	0	2	0	1	0	281	
4:15 PM	0	105	0	0	0	202	0	0	5	0	2	0	2	0	6	0	322	
4:20 PM	0	107	1	0	0	195	0	0	2	2	1	0	3	0	2	0	313	
4:25 PM	0	86	0	0	0	189	0	0	1	1	1	0	3	0	1	0	282	
4:30 PM	0	102	0	0	0	172	0	0	2	2	2	0	1	1	3	0	285	
4:35 PM	0	104	0	0	0	199	0	0	3	1	10	0	2	1	4	0	324	
4:40 PM	0	103	0	0	0	193	0	0	3	1	3	0	2	0	3	0	308	
4:45 PM	0	95	0	0	0	178	0	0	1	4	3	0	2	0	1	0	284	
4:50 PM	0	107	0	0	0	200	0	0	2	1	1	0	1	0	3	0	315	
4:55 PM	0	79	0	0	0	179	0	0	3	1	1	0	3	1	6	0	273	3521
5:00 PM	0	112	0	0	0	178	0	0	2	0	0	0	4	2	1	0	299	3558
5:05 PM	0	88	0	0	0	170	0	0	2	1	1	0	2	1	2	0	267	3553
5:10 PM	0	123	0	0	0	176	0	0	4	1	2	0	2	1	3	0	312	3584
5:15 PM	0	113	0	0	0	189	0	0	6	0	1	0	1	0	0	0	310	3572
5:20 PM	0	121	0	0	0	183	0	0	2	0	1	0	2	0	1	0	310	3569
5:25 PM	0	96	0	0	0	202	0	0	5	1	2	0	2	0	1	0	309	3596
5:30 PM	0	110	0	0	0	141	0	0	2	1	3	0	0	0	0	0	257	3568
5:35 PM	0	83	0	0	0	153	0	0	1	2	0	0	0	0	3	0	242	3486
5:40 PM	0	93	0	0	0	151	0	0	1	0	1	0	0	0	1	0	247	3425
5:45 PM	0	75	0	0	0	198	0	0	0	1	3	0	0	0	1	0	278	3419
5:50 PM	0	82	0	0	0	143	0	0	2	1	2	0	0	0	3	0	233	3337
5:55 PM	0	68	0	0	0	101	0	0	2	1	0	0	0	0	1	0	173	3237

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	1428	0	0	0	2192	0	0	48	4	16	0	20	4	16	0	3728
Heavy Trucks	0	16	0		0	40	0		0	0	0		8	0	0		64
Buses																	
Pedestrians		4				0				4				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	4		4
Scooters																	

Comments:

Report generated on 2/26/2021 12:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

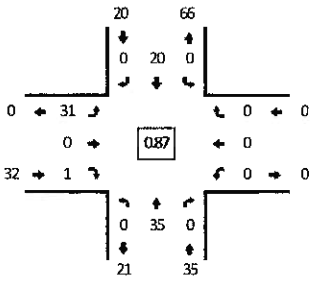
Type of peak hour being reported: User-Defined

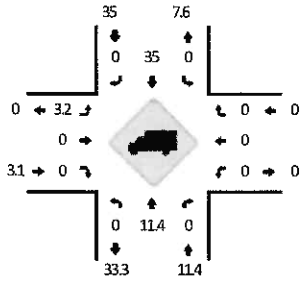
Method for determining peak hour: Total Entering Volume

LOCATION: SE Main St -- SE McLoughlin Blvd Ramp
CITY/STATE: Milwaukie, OR

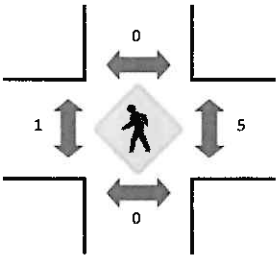
QC JOB #: 15350913
DATE: Wed, Feb 3 2021

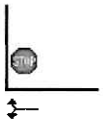
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

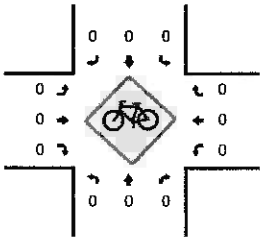


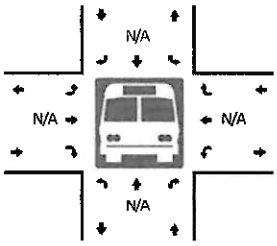


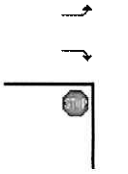
Quality Counts
DATA THAT DRIVES COMMUNITIES

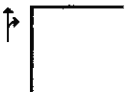


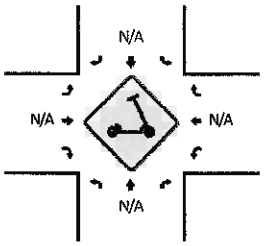












5-Min Count Period Beginning At	SE Main St (Northbound)				SE Main St (Southbound)				SE McLoughlin Blvd Ramp (Eastbound)				SE McLoughlin Blvd Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	0	0	0	2	0	0	3	0	0	0	0	0	0	0	6	
7:05 AM	0	2	0	0	0	4	0	0	2	0	0	0	0	0	0	0	8	
7:10 AM	0	2	0	0	0	3	0	0	4	0	0	0	0	0	0	0	9	
7:15 AM	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	
7:20 AM	0	3	0	0	0	1	0	0	3	0	0	0	0	0	0	0	7	
7:25 AM	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	
7:30 AM	0	4	0	0	0	2	0	0	3	0	0	0	0	0	0	0	9	
7:35 AM	0	4	0	0	0	1	0	0	1	0	0	0	0	0	0	0	6	
7:40 AM	0	2	0	0	0	2	0	0	3	0	0	0	0	0	0	0	7	
7:45 AM	0	5	0	0	0	0	0	0	2	0	0	0	0	0	0	0	7	
7:50 AM	0	2	0	0	0	2	0	0	3	0	0	0	0	0	0	0	7	
7:55 AM	0	3	0	0	0	3	0	0	4	0	1	0	0	0	0	0	11	87
8:00 AM	0	1	0	0	0	1	0	0	1	0	2	0	0	0	0	0	5	86
8:05 AM	0	3	0	0	0	1	0	0	3	0	0	0	0	0	0	0	7	85
8:10 AM	0	3	0	0	0	3	0	0	1	0	0	0	0	0	0	0	7	83
8:15 AM	0	1	0	0	0	3	0	0	1	0	0	0	0	0	0	0	5	84
8:20 AM	0	4	0	0	0	3	0	0	0	0	1	0	0	0	0	0	8	85
8:25 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	81
8:30 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	77
8:35 AM	0	1	0	0	0	3	0	0	1	0	0	0	0	0	0	0	5	76
8:40 AM	0	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4	73
8:45 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	70
8:50 AM	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	7	70
8:55 AM	0	1	0	0	0	3	0	0	1	0	0	0	0	0	0	0	5	64

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	40	0	0	0	20	0	0	36	0	4	0	0	0	0	0	100
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				12			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: Need to count turns on and off 99E and to driveway to Odd Fellows (probably none?)

Report generated on 2/26/2021 12:09 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

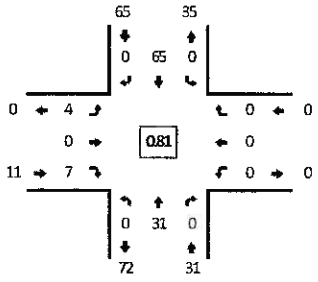
Type of peak hour being reported: User-Defined

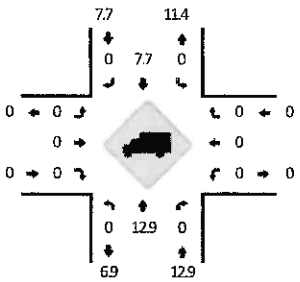
Method for determining peak hour: Total Entering Volume

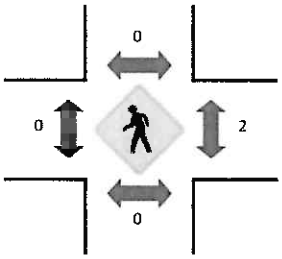
LOCATION: SE Main St -- SE McLoughlin Blvd Ramp
CITY/STATE: Milwaukie, OR

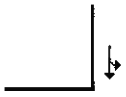
QC JOB #: 15350914
DATE: Tue, Feb 2 2021

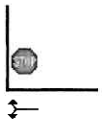
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:25 PM -- 4:40 PM

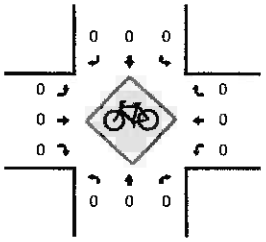


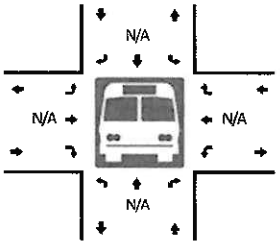


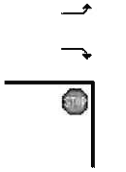


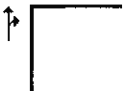


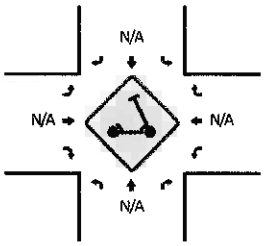












5-Min Count Period Beginning At	SE Main St (Northbound)				SE Main St (Southbound)				SE McLoughlin Blvd Ramp (Eastbound)				SE McLoughlin Blvd Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	
4:05 PM	0	3	0	0	0	8	0	0	0	0	1	0	0	0	0	0	12	
4:10 PM	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5	
4:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	
4:20 PM	0	3	0	0	0	8	0	0	0	0	1	0	0	0	0	0	12	
4:25 PM	0	3	0	0	0	4	0	0	1	0	0	0	0	0	0	0	8	
4:30 PM	0	3	0	0	0	6	0	0	0	0	1	0	0	0	0	0	10	
4:35 PM	0	4	0	0	0	9	0	0	1	0	1	0	0	0	0	0	15	
4:40 PM	0	1	0	0	0	4	0	0	0	0	3	0	0	0	0	0	8	
4:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	
4:50 PM	0	2	0	0	0	2	0	0	1	0	0	0	0	0	0	0	5	
4:55 PM	0	2	0	0	0	9	0	0	0	0	0	0	0	0	0	0	11	99
5:00 PM	0	5	0	0	0	7	0	0	1	0	0	0	0	0	0	0	13	107
5:05 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	97
5:10 PM	0	2	0	0	0	2	0	0	0	0	3	0	0	0	0	0	7	99
5:15 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	100
5:20 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	89
5:25 PM	0	3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5	86
5:30 PM	0	4	0	0	0	2	0	0	1	0	0	0	0	0	0	0	7	83
5:35 PM	0	3	0	0	0	2	0	0	0	0	1	0	0	0	0	0	6	74
5:40 PM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	70
5:45 PM	0	3	0	0	0	0	0	0	2	0	1	0	0	0	0	0	6	72
5:50 PM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6	73
5:55 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	67

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	40	0	0	0	76	0	0	8	0	8	0	0	0	0	0	132
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: Need to count turns on and off 99E and to driveway to Odd Fellows (probably none?)

Report generated on 2/26/2021 12:10 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

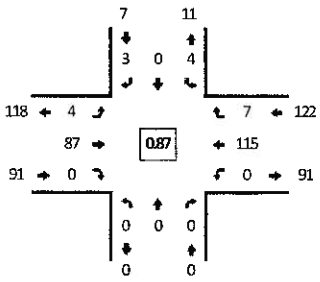
Type of peak hour being reported: User-Defined

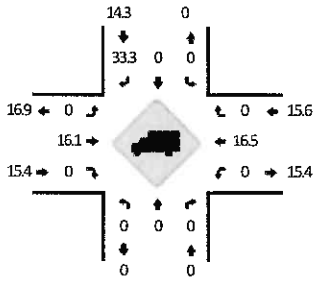
Method for determining peak hour: Total Entering Volume

LOCATION: SE 23rd Ave -- SE Harrison St
CITY/STATE: Milwaukie, OR

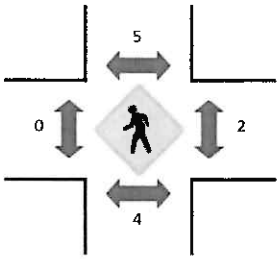
QC JOB #: 15350915
DATE: Thu, Jan 28 2021

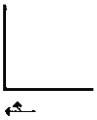
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

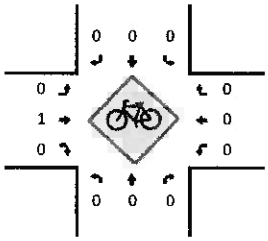


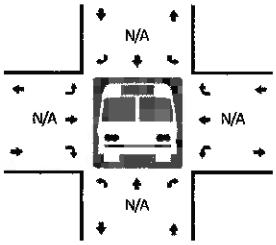


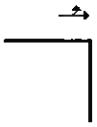
Quality Counts
DATA THAT DRIVES COMMUNITIES

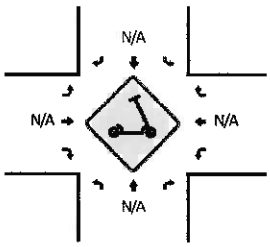












5-Min Count Period Beginning At	SE 23rd Ave (Northbound)				SE 23rd Ave (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	1	0	0	6	0	0	0	12	0	0	19	
7:05 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	0	10	
7:10 AM	0	0	0	0	1	0	0	0	0	9	0	0	0	10	1	0	21	
7:15 AM	0	0	0	0	0	0	1	0	0	4	0	0	0	4	0	0	9	
7:20 AM	0	0	0	0	0	0	0	0	1	4	0	0	0	10	0	0	15	
7:25 AM	0	0	0	0	0	0	2	0	0	5	0	0	0	9	0	0	16	
7:30 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	8	0	0	15	
7:35 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	14	0	0	16	
7:40 AM	0	0	0	0	0	0	0	0	2	6	0	0	0	14	0	0	22	
7:45 AM	0	0	0	0	0	0	1	0	0	6	0	0	0	9	0	0	16	
7:50 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	11	0	0	14	
7:55 AM	0	0	0	0	1	0	1	0	0	7	0	0	0	10	1	0	20	193
8:00 AM	0	0	0	0	1	0	0	0	0	8	0	0	0	7	0	0	16	190
8:05 AM	0	0	0	0	0	0	1	0	0	5	0	0	0	4	1	0	11	191
8:10 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	14	0	0	21	191
8:15 AM	0	0	0	0	2	0	0	0	0	5	0	0	0	8	1	0	16	198
8:20 AM	0	0	0	0	0	0	1	0	0	6	0	0	0	14	0	0	21	204
8:25 AM	0	0	0	0	0	0	1	0	0	10	0	0	0	9	0	0	20	208
8:30 AM	0	0	0	0	0	0	0	0	1	8	0	0	0	10	0	0	19	212
8:35 AM	0	0	0	0	0	0	0	0	1	5	0	0	0	9	3	0	18	214
8:40 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	6	1	0	15	207
8:45 AM	0	0	0	0	0	0	0	0	1	9	0	0	0	10	0	0	20	211
8:50 AM	0	0	0	0	1	0	0	0	0	3	0	0	0	15	0	0	19	216
8:55 AM	0	0	0	0	0	0	0	0	1	13	0	0	0	9	1	0	24	220

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	0	0	4	0	0	0	8	100	0	0	0	136	4	0	252
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	20	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/26/2021 12:10 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

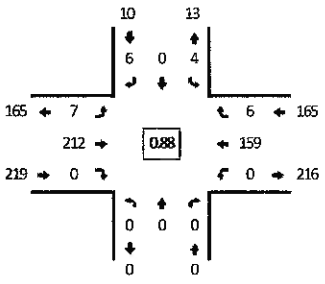
Type of peak hour being reported: User-Defined

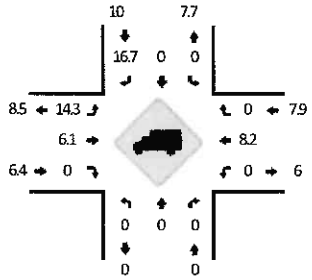
Method for determining peak hour: Total Entering Volume

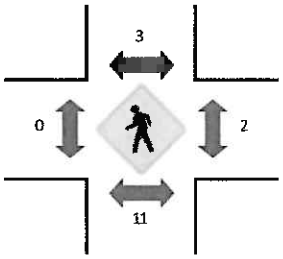
LOCATION: SE 23rd Ave -- SE Harrison St
CITY/STATE: Milwaukie, OR

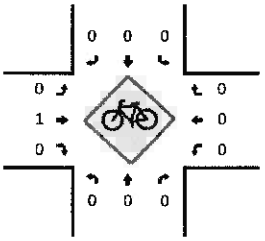
QC JOB #: 15350916
DATE: Thu, Jan 28 2021

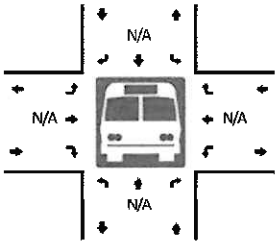
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:25 PM -- 4:40 PM

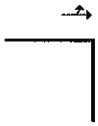


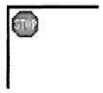


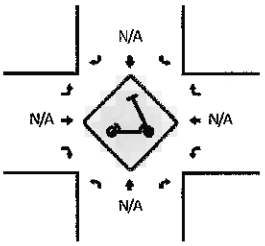












5-Min Count Period Beginning At	SE 23rd Ave (Northbound)				SE 23rd Ave (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	1	0	2	21	0	0	0	15	0	0	39	
4:05 PM	0	0	0	0	0	0	0	0	0	23	0	0	0	9	0	0	32	
4:10 PM	0	0	0	0	0	0	2	0	0	16	0	0	0	13	0	0	31	
4:15 PM	0	0	0	0	1	0	0	0	0	10	0	0	0	12	1	0	24	
4:20 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	15	2	0	27	
4:25 PM	0	0	0	0	0	0	1	0	0	21	0	0	0	16	0	0	38	
4:30 PM	0	0	0	0	0	0	1	0	1	16	0	0	0	18	0	0	36	
4:35 PM	0	0	0	0	1	0	0	0	1	22	0	0	0	13	1	0	38	
4:40 PM	0	0	0	0	0	0	0	0	1	20	0	0	0	14	0	0	35	
4:45 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	17	2	0	38	
4:50 PM	0	0	0	0	1	0	1	0	2	18	0	0	0	9	0	0	31	
4:55 PM	0	0	0	0	1	0	0	0	0	16	0	0	0	8	0	0	25	394
5:00 PM	0	0	0	0	0	0	1	0	0	16	0	0	0	13	0	0	30	385
5:05 PM	0	0	0	0	1	0	0	0	2	16	0	0	0	8	0	0	27	380
5:10 PM	0	0	0	0	0	0	0	0	1	19	0	0	0	13	0	0	33	382
5:15 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	8	0	0	21	379
5:20 PM	0	0	0	0	0	0	1	0	0	17	0	0	0	14	1	0	33	385
5:25 PM	0	0	0	0	2	0	0	0	2	19	0	0	0	11	1	0	35	382
5:30 PM	0	0	0	0	0	0	1	0	2	21	0	0	0	10	1	0	35	381
5:35 PM	0	0	0	0	0	0	0	0	0	27	0	0	0	9	0	0	36	379
5:40 PM	0	0	0	0	1	0	1	0	1	15	0	0	0	9	0	0	27	371
5:45 PM	0	0	0	0	1	0	0	0	1	10	0	0	0	7	0	0	19	352
5:50 PM	0	0	0	0	0	0	0	0	1	14	0	0	0	13	2	0	30	351
5:55 PM	0	0	0	0	1	0	1	0	2	15	0	0	0	15	1	0	35	361

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	0	0	4	0	8	0	8	236	0	0	0	188	4	0	448
Heavy Trucks	0	0	0		0	0	0		0	16	0		0	16	0		32
Buses																	
Pedestrians		16				0				0				4			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/26/2021 12:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

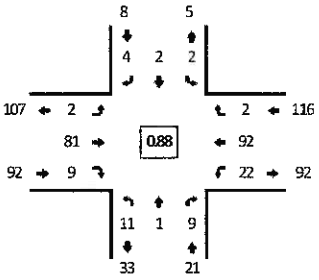
Type of peak hour being reported: User-Defined

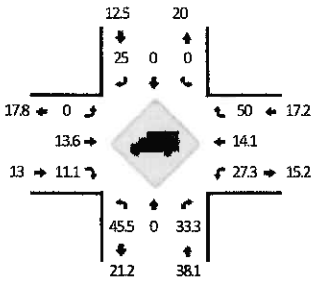
Method for determining peak hour: Total Entering Volume

LOCATION: SE 21st Ave -- SE Harrison St
CITY/STATE: Milwaukie, OR

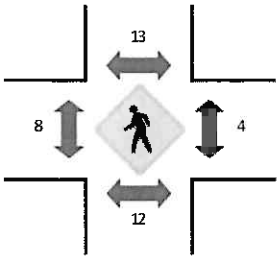
QC JOB #: 15350917
DATE: Thu, Jan 28 2021

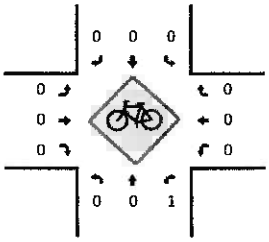
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

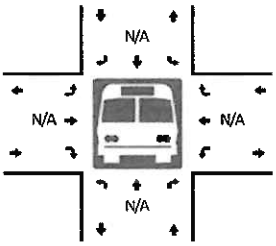


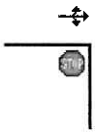


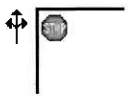
Quality Counts
DATA THAT DRIVES COMMUNITIES

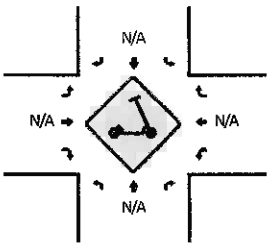












5-Min Count Period Beginning At	SE 21st Ave (Northbound)				SE 21st Ave (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	0	0	0	0	0	0	0	6	0	0	3	11	0	0	22	
7:05 AM	0	0	0	0	0	0	0	0	0	4	0	0	1	6	0	0	11	
7:10 AM	1	0	2	0	0	0	0	0	0	7	0	0	2	8	0	0	20	
7:15 AM	1	0	0	0	0	0	0	0	0	4	0	0	1	5	0	0	11	
7:20 AM	1	0	0	0	0	0	0	0	1	5	0	0	1	9	0	0	17	
7:25 AM	1	0	1	0	0	0	0	0	0	4	0	0	1	6	0	0	13	
7:30 AM	0	0	3	0	0	0	0	0	0	4	1	0	1	6	0	0	15	
7:35 AM	0	0	0	0	0	0	0	0	0	2	1	0	1	13	0	0	17	
7:40 AM	1	0	0	0	0	0	0	0	0	7	1	0	1	11	0	0	21	
7:45 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	14	0	0	20	
7:50 AM	1	0	0	0	1	0	0	0	0	2	0	0	2	8	0	0	14	
7:55 AM	0	0	1	0	0	0	0	0	0	6	0	0	0	12	0	0	19	200
8:00 AM	1	0	0	0	0	0	1	0	0	8	1	0	3	3	0	0	17	195
8:05 AM	1	0	0	0	0	0	0	0	0	5	2	0	1	4	1	0	14	198
8:10 AM	0	0	1	0	0	0	1	0	0	7	0	0	3	8	0	0	20	198
8:15 AM	2	1	1	0	0	0	0	0	1	4	0	0	2	7	1	0	19	206
8:20 AM	1	0	1	0	1	0	1	0	0	4	0	0	1	10	0	0	19	208
8:25 AM	1	0	0	0	0	0	0	0	0	10	1	0	2	9	0	0	23	218
8:30 AM	0	0	2	0	0	1	0	0	0	7	3	0	1	4	0	0	18	221
8:35 AM	1	0	1	0	0	1	0	0	0	5	0	0	4	10	0	0	22	226
8:40 AM	1	0	1	0	1	0	1	0	1	6	1	0	1	5	0	0	18	223
8:45 AM	1	0	1	0	0	0	0	0	0	9	0	0	2	6	0	0	19	222
8:50 AM	1	0	0	0	0	0	0	0	0	3	0	0	2	17	0	0	23	231
8:55 AM	1	0	1	0	0	0	0	0	0	13	1	0	0	9	0	0	25	237

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	12	0	8	0	0	0	0	0	0	100	4	0	16	128	0	0	268
Heavy Trucks	4	0	4		0	0	0		0	8	0		4	16	0		36
Buses																	
Pedestrians		20				16				8				0			44
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/26/2021 12:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

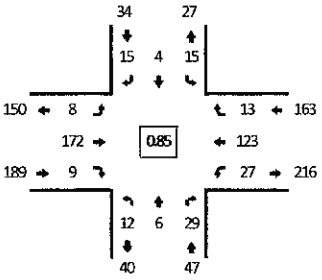
Type of peak hour being reported: User-Defined

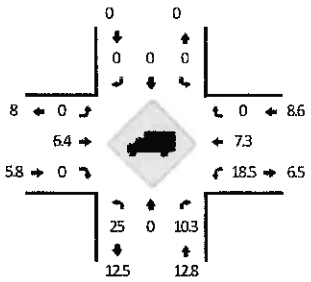
Method for determining peak hour: Total Entering Volume

LOCATION: SE 21st Ave -- SE Harrison St
CITY/STATE: Milwaukie, OR

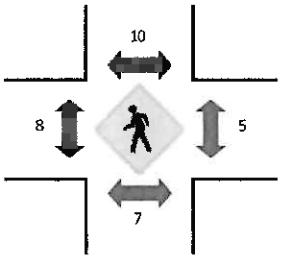
QC JOB #: 15350918
DATE: Thu, Jan 28 2021

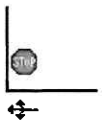
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

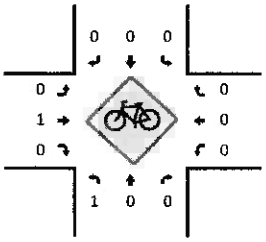


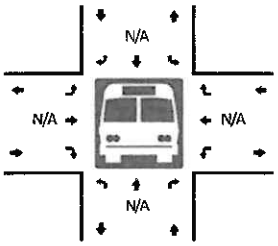


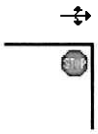
Quality Counts
DATA THAT DRIVES COMMUNITIES

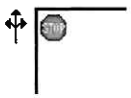


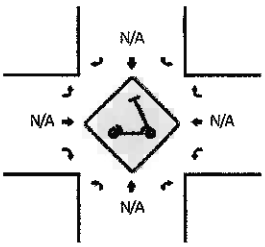












5-Min Count Period Beginning At	SE 21st Ave (Northbound)				SE 21st Ave (Southbound)				SE Harrison St (Eastbound)				SE Harrison St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	4	0	1	0	4	0	2	20	2	0	0	14	2	0	50	
4:05 PM	0	1	5	0	3	0	1	0	3	14	4	0	3	11	0	0	45	
4:10 PM	0	1	2	0	0	0	3	0	0	14	0	0	1	10	2	0	33	
4:15 PM	1	1	1	0	1	1	2	0	0	9	0	0	2	12	0	0	30	
4:20 PM	1	2	2	0	1	1	0	0	1	6	0	0	0	9	0	0	23	
4:25 PM	3	0	0	0	1	0	0	0	0	18	0	0	5	15	0	0	42	
4:30 PM	1	1	3	0	4	0	1	0	1	9	0	0	2	12	3	0	37	
4:35 PM	1	0	4	0	2	0	1	0	0	17	1	0	6	5	2	0	39	
4:40 PM	0	0	3	0	0	1	3	0	1	18	2	0	2	10	1	0	41	
4:45 PM	1	0	2	0	1	1	0	0	0	17	0	0	3	14	1	0	40	
4:50 PM	2	0	2	0	0	0	0	0	0	17	0	0	2	8	2	0	33	
4:55 PM	1	0	1	0	1	0	0	0	0	13	0	0	1	3	0	0	20	433
5:00 PM	0	0	2	0	1	0	0	0	1	14	0	0	0	7	3	0	28	411
5:05 PM	2	0	5	0	2	1	0	0	2	11	0	0	3	10	1	0	37	403
5:10 PM	2	1	3	0	3	0	2	0	1	14	0	0	1	8	1	0	36	406
5:15 PM	0	1	1	0	0	0	1	0	0	12	0	0	1	8	0	0	24	400
5:20 PM	1	0	2	0	1	1	1	0	1	13	1	0	1	12	3	0	37	414
5:25 PM	0	0	3	0	2	1	0	0	0	17	0	0	2	10	1	0	36	408
5:30 PM	3	0	4	0	1	1	1	0	1	18	0	0	2	9	0	0	40	411
5:35 PM	2	0	4	0	1	0	0	0	1	22	1	0	0	10	0	0	41	413
5:40 PM	0	0	0	0	0	1	0	0	2	16	2	0	1	7	0	0	29	401
5:45 PM	0	0	2	0	0	1	0	0	0	9	0	0	2	7	0	0	21	382
5:50 PM	0	0	0	0	2	0	0	0	1	14	0	0	1	12	0	0	30	379
5:55 PM	1	0	3	0	0	0	0	0	0	13	0	0	2	8	0	0	27	386

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	4	8	44	0	16	0	32	0	20	192	24	0	16	140	16	0	512
Heavy Trucks	0	0	8		0	0	0		0	12	0		0	16	0		36
Buses																	
Pedestrians		4				0				0				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/26/2021 12:12 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix C Existing Conditions Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: OR 99E (SE McLoughlin Blvd)/SE Milport Rd

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

Intersection Setup

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Base Volume Input [veh/h]	0	2314	0	0	1303	0	36	70	11	16	7	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	7.00	2.00	20.00	21.00	33.00	56.00	0.00	18.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2314	0	0	1303	0	36	70	11	16	7	31
Peak Hour Factor	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	643	0	0	362	0	10	19	3	4	2	9
Total Analysis Volume [veh/h]	0	2571	0	0	1448	0	40	78	12	18	8	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	6	0	0	6	0
Maximum Green [s]	0	40	0	0	40	0	0	25	0	0	25	0
Amber [s]	0.0	4.7	0.0	0.0	4.7	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	98	0	0	98	0	0	22	0	0	22	0
Vehicle Extension [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	0	0	0	12	0	0	9	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	14	0	0	38	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	98	98	12	12	12	12
g / C, Green / Cycle	0.81	0.81	0.10	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.38	0.30	0.08	0.01	0.02	0.02
s, saturation flow rate [veh/h]	6683	4889	1474	1190	1159	1385
c, Capacity [veh/h]	5438	3979	187	118	166	138
d1, Uniform Delay [s]	3.38	2.95	52.66	49.08	49.35	49.81
k, delay calibration	0.50	0.50	0.15	0.15	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.26	4.94	0.53	0.62	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.36	0.63	0.10	0.16	0.25
d, Delay for Lane Group [s/veh]	3.67	3.21	57.61	49.61	49.97	51.13
Lane Group LOS	A	A	E	D	D	D
Critical Lane Group	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.87	1.90	3.70	0.34	0.74	0.99
50th-Percentile Queue Length [ft/ln]	71.64	47.57	92.52	8.58	18.50	24.68
95th-Percentile Queue Length [veh/ln]	5.16	3.43	6.66	0.62	1.33	1.78
95th-Percentile Queue Length [ft/ln]	128.96	85.63	166.54	15.45	33.29	44.43

Movement, Approach, & Intersection Results

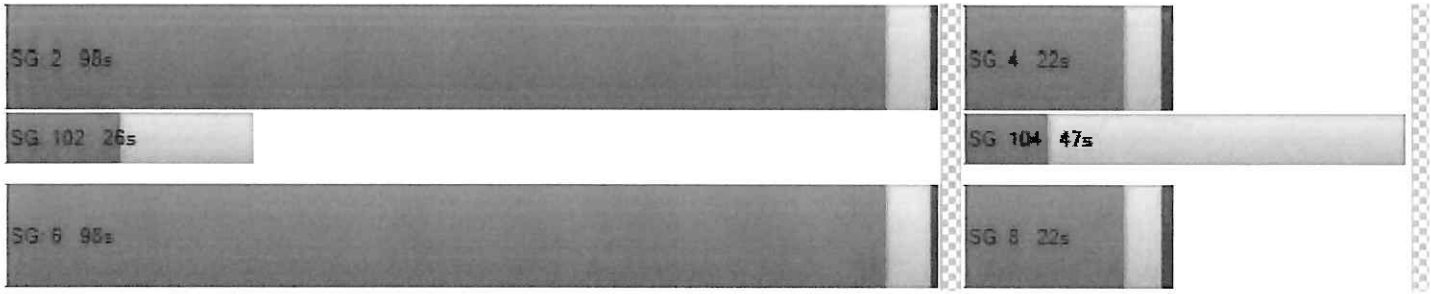
d_M, Delay for Movement [s/veh]	0.00	3.67	0.00	0.00	3.21	0.00	57.61	57.61	49.61	49.97	49.97	51.13
Movement LOS		A			A		E	E	D	D	D	D
d_A, Approach Delay [s/veh]	3.67			3.21			56.87			50.62		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	5.83											
Intersection LOS	A											
Intersection V/C	0.489											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	0.0	16.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	12323.74	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	0.00	45.07	0.00
l_p,int, Pedestrian LOS Score for Intersection	3.478	0.000	2.003	0.000
Crosswalk LOS	C	F	B	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1543	1543	283	283
d_b, Bicycle Delay [s]	3.13	3.13	44.20	44.20
l_b,int, Bicycle LOS Score for Intersection	2.620	2.356	1.774	1.659
Bicycle LOS	B	B	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: SE Main St/OR 99E

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.073

Intersection Setup

Name	SE Main St		SE Main St		OR 99E	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Main St		SE Main St		OR 99E	
Base Volume Input [veh/h]	0	63	36	0	56	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	11.00	35.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	63	36	0	56	2
Peak Hour Factor	1.0000	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	18	10	0	16	1
Total Analysis Volume [veh/h]	0	72	41	0	64	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	9.41	8.48
Movement LOS		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.23	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	5.86	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		9.38	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.46					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: SE Main St/Site Access

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			30.00			10.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

Volumes

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Base Volume Input [veh/h]	2	52	0	2	25	0	0	0	0	2	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	10.00	0.00	0.00	29.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	52	0	2	25	0	0	0	0	2	0	0
Peak Hour Factor	0.5700	0.5700	0.5700	0.5700	0.5700	0.5700	1.0000	1.0000	1.0000	0.5700	0.5700	0.5700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	23	0	1	11	0	0	0	0	1	0	0
Total Analysis Volume [veh/h]	4	91	0	4	44	0	0	0	0	4	0	0
Pedestrian Volume [ped/h]	0			0			0			4		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	7.40	0.00	0.00	0.00	0.00	0.00	9.47	9.93	8.76
Movement LOS	A	A	A	A	A	A				A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.19	0.19	0.19	0.20	0.20	0.20	0.00	0.00	0.00	0.37	0.37	0.37
d_A, Approach Delay [s/veh]	0.31			0.62			0.00			9.47		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: OR 99E (SE McLoughlin Blvd)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

Intersection Setup

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	370.00	100.00	100.00	375.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	408	1448	94	84	590	20	19	49	164	69	51	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	5.00	11.00	7.00	2.00	6.00	10.00	4.00	7.00	11.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	82	0	0	0
Total Hourly Volume [veh/h]	408	1448	94	84	590	20	19	49	82	69	51	24
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	369	24	21	151	5	5	13	21	18	13	6
Total Analysis Volume [veh/h]	416	1478	96	86	602	20	19	50	84	70	52	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	15			0			15			0		
v_di, Inbound Pedestrian Volume crossing major street [	15			0			15			0		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			0			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	10			0			13			8		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	93.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Split	Split	Overla	Split	Split	Split
Signal Group	1	6		5	2			8	1		4	
Auxiliary Signal Groups									1,8			
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	4	10		6	10			6	4		6	
Maximum Green [s]	30	63		16	49			11	30		14	
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	0.0	3.5	3.5	0.0	4.0	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.0	0.5	0.5	0.0	0.5	0.0
Split [s]	34	56		20	42			26	34		18	
Vehicle Extension [s]	2.3	6.1	0.0	2.3	6.1	0.0	0.0	2.3	2.3	0.0	2.3	0.0
Walk [s]		7			11			8			0	
Pedestrian Clearance [s]		17			18			21			0	
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.5	0.0
Minimum Recall	No	Yes		No	Yes			No	No		No	
Maximum Recall	No	No		No	No			No	No		No	
Pedestrian Recall	No	No		No	No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.50	2.50
g_i, Effective Green Time [s]	30	72	72	8	49	49	15	63	9	9
g / C, Green / Cycle	0.25	0.60	0.60	0.06	0.41	0.41	0.13	0.52	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.24	0.43	0.44	0.05	0.17	0.17	0.04	0.05	0.04	0.06
s, saturation flow rate [veh/h]	1752	1840	1794	1652	1795	1775	1726	1549	1360	1596
c, Capacity [veh/h]	436	1096	1068	108	739	731	222	809	141	151
d1, Uniform Delay [s]	39.41	7.54	7.70	55.29	25.13	25.14	47.46	14.52	55.44	54.52
k, delay calibration	0.40	0.50	0.50	0.07	0.50	0.50	0.07	0.07	0.07	0.07
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.85	4.06	4.54	7.92	1.77	1.79	0.48	0.03	1.17	2.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.72	0.74	0.80	0.42	0.42	0.31	0.10	0.41	0.59
d, Delay for Lane Group [s/veh]	68.26	11.60	12.24	63.21	26.90	26.93	47.94	14.55	56.60	56.71
Lane Group LOS	E	B	B	E	C	C	D	B	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	14.71	6.72	7.03	2.80	6.69	6.63	1.89	1.15	1.79	2.75
50th-Percentile Queue Length [ft/ln]	367.75	168.00	175.64	70.09	167.27	165.66	47.33	28.71	44.75	68.80
95th-Percentile Queue Length [veh/ln]	21.00	10.97	11.37	5.05	10.93	10.85	3.41	2.07	3.22	4.95
95th-Percentile Queue Length [ft/ln]	525.00	274.29	284.31	126.16	273.32	271.20	85.20	51.67	80.56	123.84

Movement, Approach, & Intersection Results

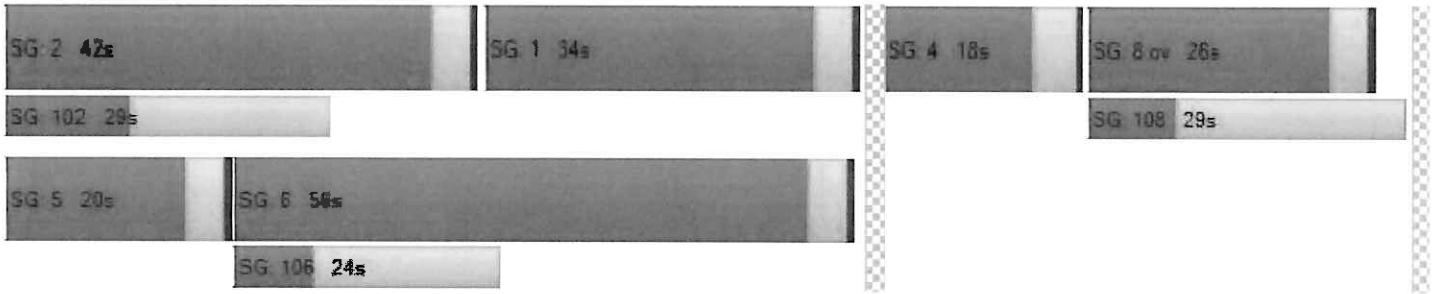
d_M, Delay for Movement [s/veh]	68.26	11.90	12.24	63.21	26.92	26.93	47.94	47.94	14.55	56.60	56.71	56.71
Movement LOS	E	B	B	E	C	C	D	D	B	E	E	E
d_A, Approach Delay [s/veh]	23.70			31.33			29.61			56.67		
Approach LOS	C			C			C			E		
d_I, Intersection Delay [s/veh]	27.41											
Intersection LOS	C											
Intersection V/C	0.676											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	0.0	15.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	282.03	0.00	0.00	3971.81
d_p, Pedestrian Delay [s]	48.60	0.00	45.94	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.981	0.000	2.342	2.036
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	867	633	367	225
d_b, Bicycle Delay [s]	19.36	28.02	40.28	47.45
l_b,int, Bicycle LOS Score for Intersection	3.201	2.144	1.947	1.801
Bicycle LOS	C	B	A	A

Sequence

Ring 1	2	1	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: SE Main St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.303

Intersection Setup

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	4	16	26	30	16	22	50	109	49	29	115	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	22.00	64.00	19.00	22.00	0.00	0.00	2.00	11.00	44.00	16.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	16	26	30	16	22	50	109	49	29	115	59
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	7	9	5	6	14	31	14	8	33	17
Total Analysis Volume [veh/h]	5	18	30	34	18	25	57	125	56	33	132	68
Pedestrian Volume [ped/h]	7			1			12			13		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	648	690	798	769
Degree of Utilization, x	0.08	0.11	0.30	0.30

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.27	0.37	1.25	1.28
95th-Percentile Queue Length [ft]	6.65	9.37	31.30	31.99
Approach Delay [s/veh]	9.05	8.87	9.41	9.70
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.42			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 6: SE 21st St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.320

Intersection Setup

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	22	2	16	4	4	7	4	146	16	41	174	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	45.00	0.00	33.00	0.00	0.00	25.00	0.00	14.00	11.00	27.00	14.00	50.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	2	16	4	4	7	4	146	16	41	174	4
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	1	5	1	1	2	1	41	5	12	49	1
Total Analysis Volume [veh/h]	25	2	18	5	5	8	5	166	18	47	198	5
Pedestrian Volume [ped/h]	12			13			8			4		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	657	723	795	782
Degree of Utilization, x	0.07	0.02	0.24	0.32

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.22	0.08	0.92	1.38
95th-Percentile Queue Length [ft]	5.50	1.91	23.12	34.52
Approach Delay [s/veh]	8.88	8.11	8.94	9.75
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.31			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: SE 23rd St/SE Harrison St

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		No	

Volumes

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Base Volume Input [veh/h]	7	157	7	5	213	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	16.00	0.00	33.00	17.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	157	7	5	213	13
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	45	2	1	61	4
Total Analysis Volume [veh/h]	8	180	8	6	245	15
Pedestrian Volume [ped/h]	0		5		0	

Intersection Settings

Priority Scheme	Free	Stop	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance		No	
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.76	0.00	11.47	11.21	0.00	0.00
Movement LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh/ln]	0.50	0.50	0.07	0.07	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.49	12.49	1.85	1.85	0.00	0.00
d_A, Approach Delay [s/veh]	0.33		11.36		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	0.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: OR 224 (Milwaukie Expy)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	37.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.918

Intersection Setup

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	160.00	100.00	160.00	615.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	58	1825	56	93	899	14	19	123	41	40	182	302
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	14.00	5.00	4.00	1.00	6.00	0.00	0.00	16.00	18.00	3.00	8.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	1825	56	93	899	14	19	123	41	40	182	302
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	491	15	25	242	4	5	33	11	11	49	81
Total Analysis Volume [veh/h]	62	1962	60	100	967	15	20	132	44	43	196	325
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	10	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			2			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			2		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	1	6		5	2			8			4	
Auxiliary Signal Groups												
Lead / Lag	Lag			Lead								
Minimum Green [s]	4	10		4	10			6			6	
Maximum Green [s]	15	50		15	50			20			20	
Amber [s]	3.5	5.0		3.5	5.0			3.5			3.5	
All red [s]	0.5	2.0		0.5	2.0			1.5			1.5	
Split [s]	15	77		15	77			28			28	
Vehicle Extension [s]	2.3	3.9		2.3	3.9			2.5			2.5	
Walk [s]		7			10			9			8	
Pedestrian Clearance [s]		18			22			29			27	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0			0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0			2.0	
I2, Clearance Lost Time [s]	2.0	5.0		2.0	5.0			3.0			3.0	
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	7.00	7.00	4.00	7.00	7.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	5.00	5.00	2.00	5.00	5.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	6	68	68	8	70	70	28	28	28	28
g / C, Green / Cycle	0.05	0.56	0.56	0.07	0.58	0.58	0.23	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.56	0.04	0.06	0.28	0.01	10000.00	0.13	0.20	0.24
s, saturation flow rate [veh/h]	1609	3475	1564	1795	3446	1615	0	1389	1201	1373
c, Capacity [veh/h]	77	1957	881	124	2014	944	60	325	317	322
d1, Uniform Delay [s]	55.59	14.94	6.68	55.04	14.40	10.46	59.98	40.27	44.45	45.93
k, delay calibration	0.07	0.50	0.50	0.07	0.50	0.50	0.08	0.15	0.30	0.42
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.22	20.98	0.15	7.31	0.82	0.03	2.38	1.95	9.69	48.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	1.00	0.07	0.81	0.48	0.02	0.33	0.54	0.75	1.01
d, Delay for Lane Group [s/veh]	66.82	35.92	6.83	62.35	15.22	10.49	62.37	42.22	54.14	94.63
Lane Group LOS	E	F	A	E	B	B	E	D	D	F
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.04	20.93	0.43	3.18	7.31	0.17	0.65	4.78	7.82	13.95
50th-Percentile Queue Length [ft/ln]	50.99	523.24	10.76	79.60	182.70	4.19	16.33	119.50	195.57	348.80
95th-Percentile Queue Length [veh/ln]	3.67	28.49	0.77	5.73	11.74	0.30	1.18	8.37	12.41	20.19
95th-Percentile Queue Length [ft/ln]	91.77	712.36	19.37	143.28	293.53	7.54	29.39	209.14	310.25	504.85

Movement, Approach, & Intersection Results

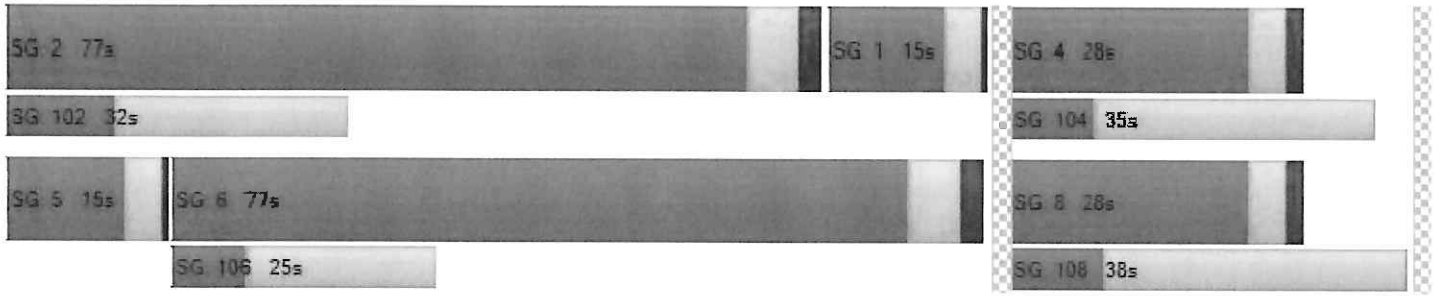
d_M, Delay for Movement [s/veh]	66.82	35.92	6.83	62.35	15.22	10.49	62.37	42.22	42.22	54.14	54.14	94.63
Movement LOS	E	F	A	E	B	B	E	D	D	D	D	F
d_A, Approach Delay [s/veh]	36.01			19.51			44.28			77.47		
Approach LOS	D			B			D			E		
d_I, Intersection Delay [s/veh]	37.83											
Intersection LOS	D											
Intersection V/C	0.918											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	14.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	3589.38	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	48.60	46.82	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.206	3.229	2.238	2.319
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	1167	383	383
d_b, Bicycle Delay [s]	10.42	10.42	39.20	39.20
l_b,int, Bicycle LOS Score for Intersection	3.279	2.452	1.721	2.025
Bicycle LOS	,C	B	A	B

Sequence

Ring 1	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: OR 99E (SE McLoughlin Blvd)/SE Milport Rd

Control Type:	Signalized	Delay (sec / veh):	3.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

Intersection Setup

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Base Volume Input [veh/h]	0	1740	0	0	3107	0	49	18	38	34	10	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	9.00	8.00	0.00	12.00	0.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1740	0	0	3107	0	49	18	38	34	10	39
Peak Hour Factor	1.0000	0.9600	1.0000	1.0000	0.9600	1.0000	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	453	0	0	809	0	13	5	10	9	3	10
Total Analysis Volume [veh/h]	0	1813	0	0	3236	0	51	19	40	35	10	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	6	0	0	6	0
Maximum Green [s]	0	40	0	0	40	0	0	25	0	0	25	0
Amber [s]	0.0	4.7	0.0	0.0	4.7	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	98	0	0	98	0	0	22	0	0	22	0
Vehicle Extension [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	0	0	0	12	0	0	9	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	14	0	0	38	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	102	102	8	8	8	8
g / C, Green / Cycle	0.85	0.85	0.06	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.27	0.64	0.05	0.02	0.03	0.03
s, saturation flow rate [veh/h]	6792	5094	1535	1607	1497	1540
c, Capacity [veh/h]	5764	4323	151	103	150	99
d1, Uniform Delay [s]	1.87	0.00	54.76	53.70	53.89	53.78
k, delay calibration	0.50	0.50	0.15	0.15	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	1.23	3.14	3.33	1.58	3.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.33	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.75	0.46	0.39	0.30	0.41
d, Delay for Lane Group [s/veh]	2.01	1.23	57.90	57.03	55.47	57.66
Lane Group LOS	A	A	E	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.98	0.49	2.18	1.24	1.36	1.29
50th-Percentile Queue Length [ft/ln]	24.41	12.27	54.56	31.12	34.10	32.16
95th-Percentile Queue Length [veh/ln]	1.76	0.88	3.93	2.24	2.46	2.32
95th-Percentile Queue Length [ft/ln]	43.94	22.09	98.20	56.01	61.39	57.89

Movement, Approach, & Intersection Results

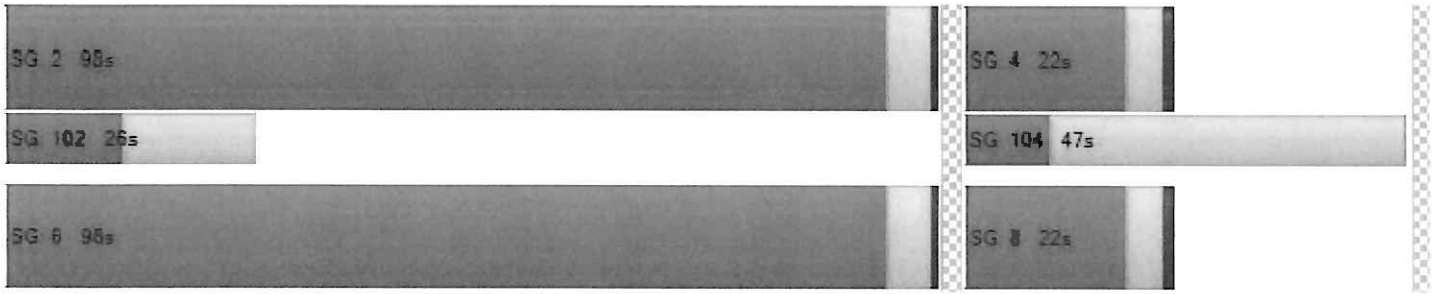
d_M, Delay for Movement [s/veh]	0.00	2.01	0.00	0.00	1.23	0.00	57.90	57.90	57.03	55.47	55.47	57.66
Movement LOS		A			A		E	E	E	E	E	E
d_A, Approach Delay [s/veh]	2.01			1.23			57.58			56.52		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	3.59											
Intersection LOS	A											
Intersection V/C	0.717											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	0.0	16.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	11895.83	0.00	13719.37	0.00
d_p, Pedestrian Delay [s]	47.70	0.00	45.07	0.00
l_p,int, Pedestrian LOS Score for Intersection	3.727	0.000	1.996	0.000
Crosswalk LOS	D	F	A	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1543	1543	283	283
d_b, Bicycle Delay [s]	3.13	3.13	44.20	44.23
l_b,int, Bicycle LOS Score for Intersection	2.307	3.339	1.741	1.702
Bicycle LOS	B	C	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: SE Main St/OR 99E

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	SE Main St		SE Main St		OR 99E	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Main St		SE Main St		OR 99E	
Base Volume Input [veh/h]	0	43	91	0	6	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	13.00	8.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	43	91	0	6	10
Peak Hour Factor	1.0000	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	28	0	2	3
Total Analysis Volume [veh/h]	0	53	112	0	7	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	9.37	8.85
Movement LOS		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.64	0.96
d_A, Approach Delay [s/veh]	0.00		0.00		9.04	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: SE Main St/Site Access

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			30.00			10.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

Volumes

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Base Volume Input [veh/h]	3	48	10	6	119	1	0	0	0	18	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	15.00	0.00	0.00	4.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	48	10	6	119	1	0	0	0	18	0	3
Peak Hour Factor	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	1.0000	1.0000	1.0000	0.7400	0.7400	0.7400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	16	3	2	40	0	0	0	0	6	0	1
Total Analysis Volume [veh/h]	4	65	14	8	161	1	0	0	0	24	0	4
Pedestrian Volume [ped/h]	0			0			0			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	7.39	0.00	0.00	0.00	0.00	0.00	10.47	10.87	8.87
Movement LOS	A	A	A	A	A	A				B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.21	0.21	0.21	0.40	0.40	0.40	0.00	0.00	0.00	3.05	3.05	3.05
d_A, Approach Delay [s/veh]	0.36			0.35			0.00			10.24		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	1.34											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: OR 99E (SE McLoughlin Blvd)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.935

Intersection Setup

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	370.00	100.00	100.00	375.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	257	819	165	103	1674	13	28	79	475	212	48	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	4.00	1.00	2.00	2.00	0.00	6.00	1.00	2.00	9.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	0	0	0	238	0	0	22
Total Hourly Volume [veh/h]	257	819	157	103	1674	13	28	79	237	212	48	12
Peak Hour Factor	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	207	40	26	423	3	7	20	60	54	12	3
Total Analysis Volume [veh/h]	260	827	159	104	1691	13	28	80	239	214	48	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	12			0			12			0		
v_di, Inbound Pedestrian Volume crossing major street [	12			0			12			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			13			6		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Split	Split	Overla	Split	Split	Split
Signal Group	1	6		5	2			8	1		4	
Auxiliary Signal Groups									1,8			
Lead / Lag	Lead			Lag								
Minimum Green [s]	4	10		6	10			6	4		6	
Maximum Green [s]	19	66		15	62			10	19		15	
Amber [s]	3.5	3.5		3.5	3.5			3.5	3.5		4.0	
All red [s]	0.5	0.5		0.5	0.5			0.5	0.5		0.5	
Split [s]	23	60		19	56			26	23		15	
Vehicle Extension [s]	2.3	6.1		2.3	6.1			2.3	2.3		2.3	
Walk [s]		7			11			8			0	
Pedestrian Clearance [s]		17			18			21			0	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0	2.0		2.0	
I2, Clearance Lost Time [s]	2.0	2.0		2.0	2.0			2.0	2.0		2.5	
Minimum Recall	No	Yes		No	Yes			No	No		No	
Maximum Recall	No	No		No	No			No	No		No	
Pedestrian Recall	No	No		No	No			No	No		No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.50	2.50
g_i, Effective Green Time [s]	19	69	69	9	58	58	16	39	11	11
g / C, Green / Cycle	0.16	0.57	0.57	0.07	0.48	0.48	0.13	0.32	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.15	0.27	0.28	0.06	0.46	0.46	0.06	0.15	0.08	0.08
s, saturation flow rate [veh/h]	1781	1840	1724	1795	1870	1865	1787	1571	1781	1692
c, Capacity [veh/h]	282	1049	983	131	907	905	233	505	158	150
d1, Uniform Delay [s]	46.65	7.69	7.72	54.74	29.25	29.30	48.30	32.42	54.14	54.14
k, delay calibration	0.36	0.50	0.50	0.07	0.50	0.50	0.07	0.39	0.10	0.10
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.44	1.59	1.73	6.40	18.40	18.70	0.87	2.45	14.67	15.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.48	0.49	0.79	0.94	0.94	0.46	0.47	0.89	0.89
d, Delay for Lane Group [s/veh]	76.09	9.28	9.46	61.14	47.65	48.00	49.17	34.87	68.81	69.26
Lane Group LOS	E	A	A	E	D	D	D	C	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	9.56	4.27	4.09	3.33	27.02	27.10	3.03	5.81	4.91	4.68
50th-Percentile Queue Length [ft/ln]	238.90	106.65	102.27	83.24	675.41	677.55	75.72	145.31	122.84	117.02
95th-Percentile Queue Length [veh/ln]	14.63	7.65	7.36	5.99	35.54	35.64	5.45	9.77	8.55	8.23
95th-Percentile Queue Length [ft/ln]	365.64	191.33	184.08	149.82	888.52	890.99	136.29	244.16	213.72	205.72

Movement, Approach, & Intersection Results

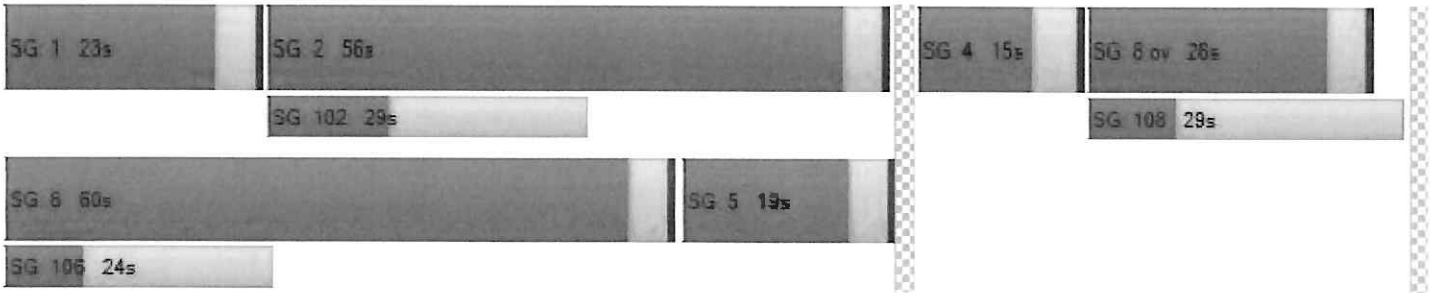
d_M, Delay for Movement [s/veh]	76.09	9.35	9.46	61.14	47.82	48.00	49.17	49.17	34.87	68.97	69.26	69.26
Movement LOS	E	A	A	E	D	D	D	D	C	E	E	E
d_A, Approach Delay [s/veh]	23.29			48.59			39.32			69.03		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	40.66											
Intersection LOS	D											
Intersection V/C	0.935											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	0.0	15.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	306.51	0.00	0.00	6739.17
d_p, Pedestrian Delay [s]	48.60	0.00	45.94	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.033	0.000	2.633	2.125
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	867	367	175
d_b, Bicycle Delay [s]	17.08	19.27	40.28	50.11
l_b,int, Bicycle LOS Score for Intersection	2.594	3.051	2.525	2.048
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: SE Main St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.380

Intersection Setup

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	13	39	47	66	62	45	38	156	55	38	141	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	7.00	25.00	2.00	5.00	3.00	4.00	2.00	10.00	22.00	5.00	8.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	39	47	66	62	45	38	156	55	38	141	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	11	13	18	17	12	10	42	15	10	38	9
Total Analysis Volume [veh/h]	14	42	51	72	67	49	41	170	60	41	153	37
Pedestrian Volume [ped/h]	6			0			12			26		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	650	669	713	690
Degree of Utilization, x	0.16	0.28	0.38	0.33

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.59	1.15	1.78	1.47
95th-Percentile Queue Length [ft]	14.65	28.75	44.57	36.80
Approach Delay [s/veh]	9.63	10.47	11.12	10.82
Approach LOS	A	B	B	B
Intersection Delay [s/veh]	10.68			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 6: SE 21st St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

Intersection Setup

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	17	8	42	21	6	21	11	245	13	38	175	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	25.00	0.00	10.00	0.00	0.00	0.00	0.00	6.00	0.00	19.00	7.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	8	42	21	6	21	11	245	13	38	175	18
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	2	12	6	2	6	3	72	4	11	51	5
Total Analysis Volume [veh/h]	20	9	49	25	7	25	13	288	15	45	206	21
Pedestrian Volume [ped/h]	7			10			8			5		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	682	685	770	754
Degree of Utilization, x	0.11	0.08	0.41	0.36

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.39	0.27	2.02	1.65
95th-Percentile Queue Length [ft]	9.64	6.78	50.39	41.23
Approach Delay [s/veh]	8.96	8.73	10.89	10.45
Approach LOS	A	A	B	B
Intersection Delay [s/veh]	10.34			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 7: SE 23rd St/SE Harrison St

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		No	

Volumes

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Base Volume Input [veh/h]	10	297	6	8	223	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	14.00	6.00	0.00	17.00	8.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	297	6	8	223	8
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	84	2	2	63	2
Total Analysis Volume [veh/h]	11	338	7	9	253	9
Pedestrian Volume [ped/h]	0		3		0	

Intersection Settings

Priority Scheme	Free	Stop	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance		No	
Number of Storage Spaces in Median	0	0	0

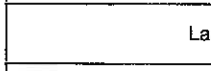
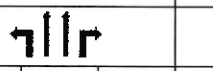
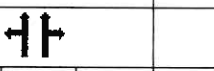
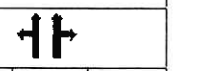
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.94	0.00	13.05	11.04	0.00	0.00
Movement LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh/ln]	1.17	1.17	0.09	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	29.27	29.27	2.30	2.30	0.00	0.00
d_A, Approach Delay [s/veh]	0.25		11.92		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: OR 224 (Milwaukie Expy)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	33.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.830

Intersection Setup

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	160.00	100.00	160.00	615.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	63	1490	68	290	1779	31	5	263	57	56	185	159
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	7.00	2.00	3.00	1.00	3.00	0.00	0.00	5.00	6.00	4.00	6.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	1490	68	290	1779	31	5	263	57	56	185	159
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	384	18	75	459	8	1	68	15	14	48	41
Total Analysis Volume [veh/h]	65	1536	70	299	1834	32	5	271	59	58	191	164
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	10	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	4			6			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			4			6		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			1			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			2			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	72.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	4	10	0	4	10	0	0	6	0	0	6	0
Maximum Green [s]	15	50	0	15	50	0	0	20	0	0	20	0
Amber [s]	3.5	5.0	0.0	3.5	5.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
All red [s]	0.5	2.0	0.0	0.5	2.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	15	70	0	30	85	0	0	30	0	0	30	0
Vehicle Extension [s]	2.3	3.9	0.0	2.3	3.9	0.0	0.0	2.5	0.0	0.0	2.5	0.0
Walk [s]	0	7	0	5	10	0	0	9	0	0	8	0
Pedestrian Clearance [s]	0	18	0	10	22	0	0	29	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	5.0	0.0	2.0	5.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	7.00	7.00	4.00	7.00	7.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	5.00	5.00	2.00	5.00	5.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	6	63	63	23	80	80	28	28	28	28
g / C, Green / Cycle	0.05	0.48	0.48	0.18	0.62	0.62	0.21	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.43	0.05	0.17	0.52	0.02	0.11	0.11	0.18	0.17
s, saturation flow rate [veh/h]	1709	3560	1555	1795	3532	1614	1579	1488	926	1465
c, Capacity [veh/h]	82	1718	751	323	2171	992	367	319	236	314
d1, Uniform Delay [s]	60.21	20.39	12.39	52.41	20.06	9.84	44.32	45.14	51.33	48.23
k, delay calibration	0.07	0.50	0.50	0.30	0.50	0.50	0.08	0.09	0.26	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.03	7.62	0.25	24.12	4.25	0.06	0.68	1.11	9.13	8.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.89	0.09	0.92	0.84	0.03	0.46	0.52	0.71	0.78
d, Delay for Lane Group [s/veh]	70.24	28.01	12.63	76.54	24.31	9.90	44.99	46.25	60.46	56.62
Lane Group LOS	E	C	B	E	C	A	D	D	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.29	17.03	0.81	11.59	21.43	0.36	4.89	4.87	5.98	8.33
50th-Percentile Queue Length [ft/ln]	57.23	425.85	20.36	289.76	535.79	9.04	122.35	121.77	149.56	208.27
95th-Percentile Queue Length [veh/ln]	4.12	23.80	1.47	17.17	29.02	0.65	8.52	8.49	9.99	13.06
95th-Percentile Queue Length [ft/ln]	103.02	595.06	36.65	429.35	725.60	16.27	213.05	212.26	249.84	326.61

Movement, Approach, & Intersection Results

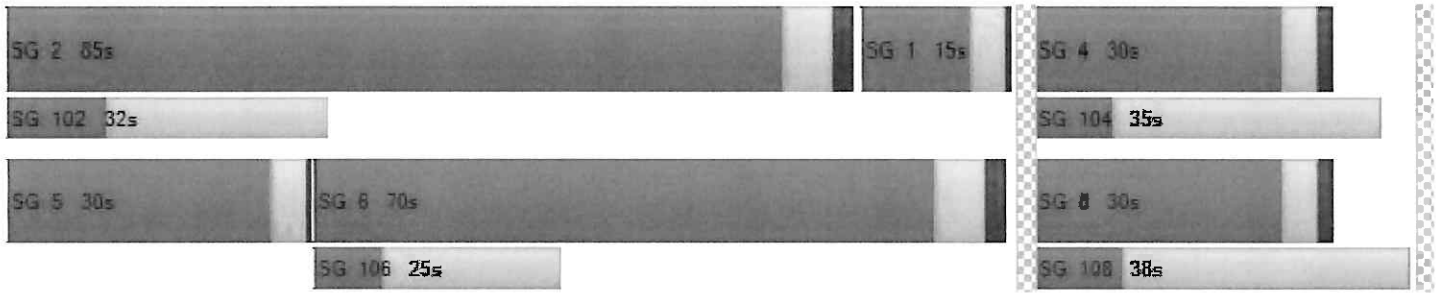
d_M, Delay for Movement [s/veh]	70.24	28.01	12.63	76.54	24.31	9.90	44.99	45.49	46.25	60.46	58.81	56.62
Movement LOS	E	C	B	E	C	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	29.01			31.31			45.61			58.17		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	33.94											
Intersection LOS	C											
Intersection V/C	0.830											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	14.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	2502.48	1405.43	11541.18	7913.35
d_p, Pedestrian Delay [s]	52.65	53.55	51.75	54.47
l_p,int, Pedestrian LOS Score for Intersection	3.336	3.315	2.273	2.363
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	969	1200	385	385
d_b, Bicycle Delay [s]	17.28	10.40	42.45	42.40
l_b,int, Bicycle LOS Score for Intersection	2.938	3.346	1.836	1.900
Bicycle LOS	C	C	A	A

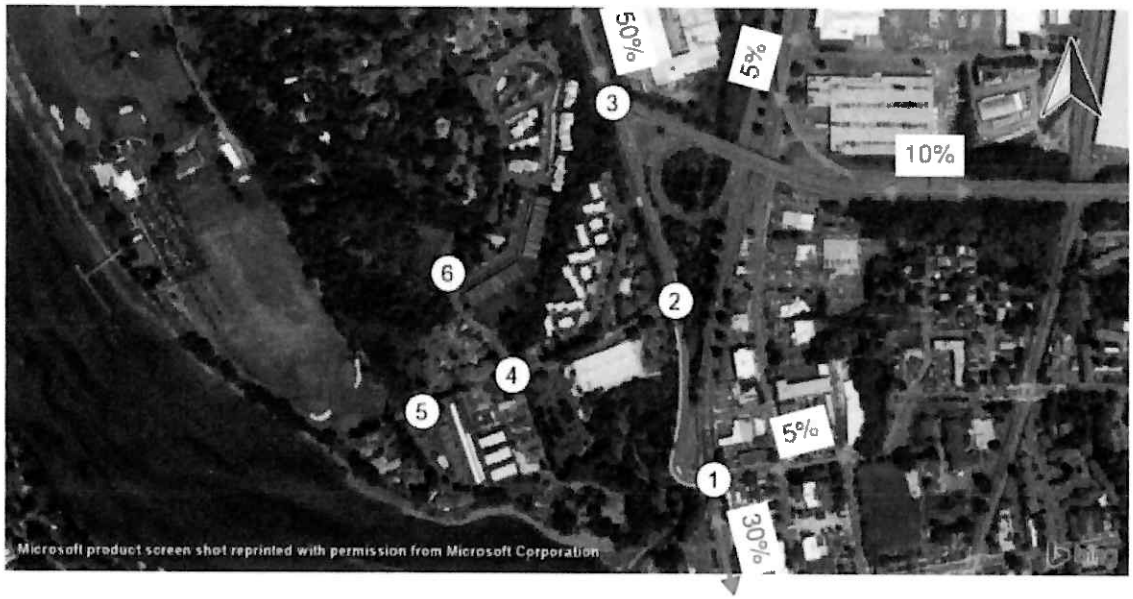
Sequence

Ring 1	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

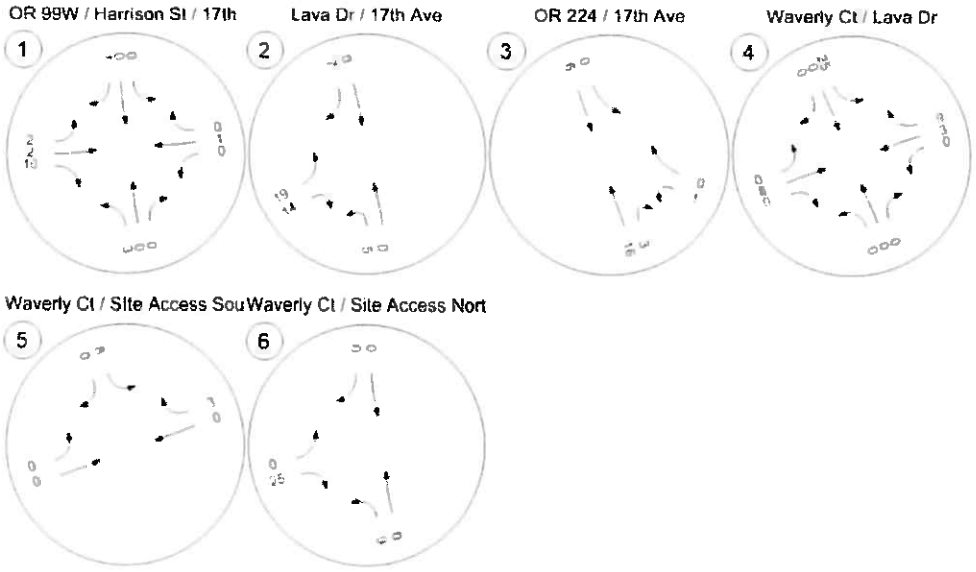


Appendix D In-Process Data

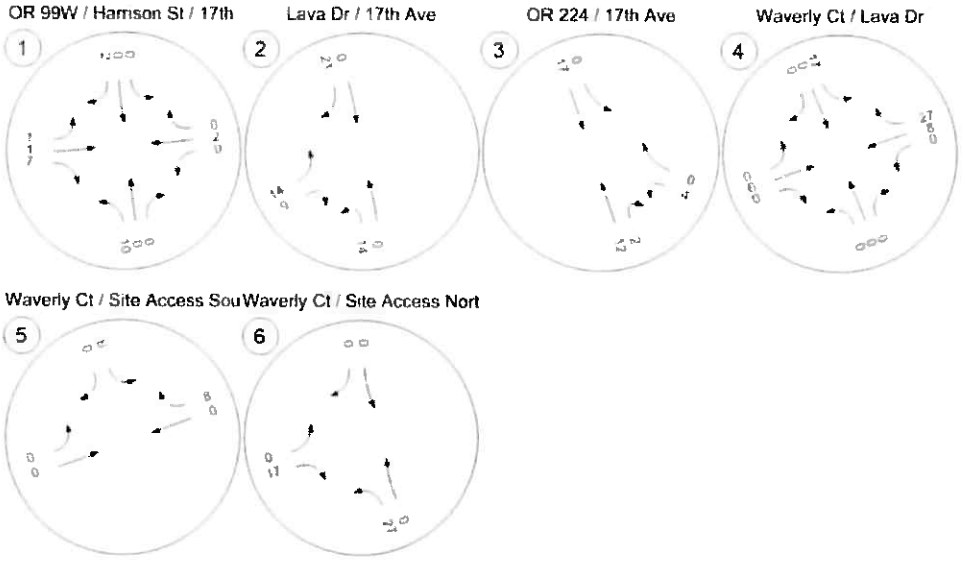
Exhibit 4. Site Generated Trip Distribution Pattern and Site Trip Assignments

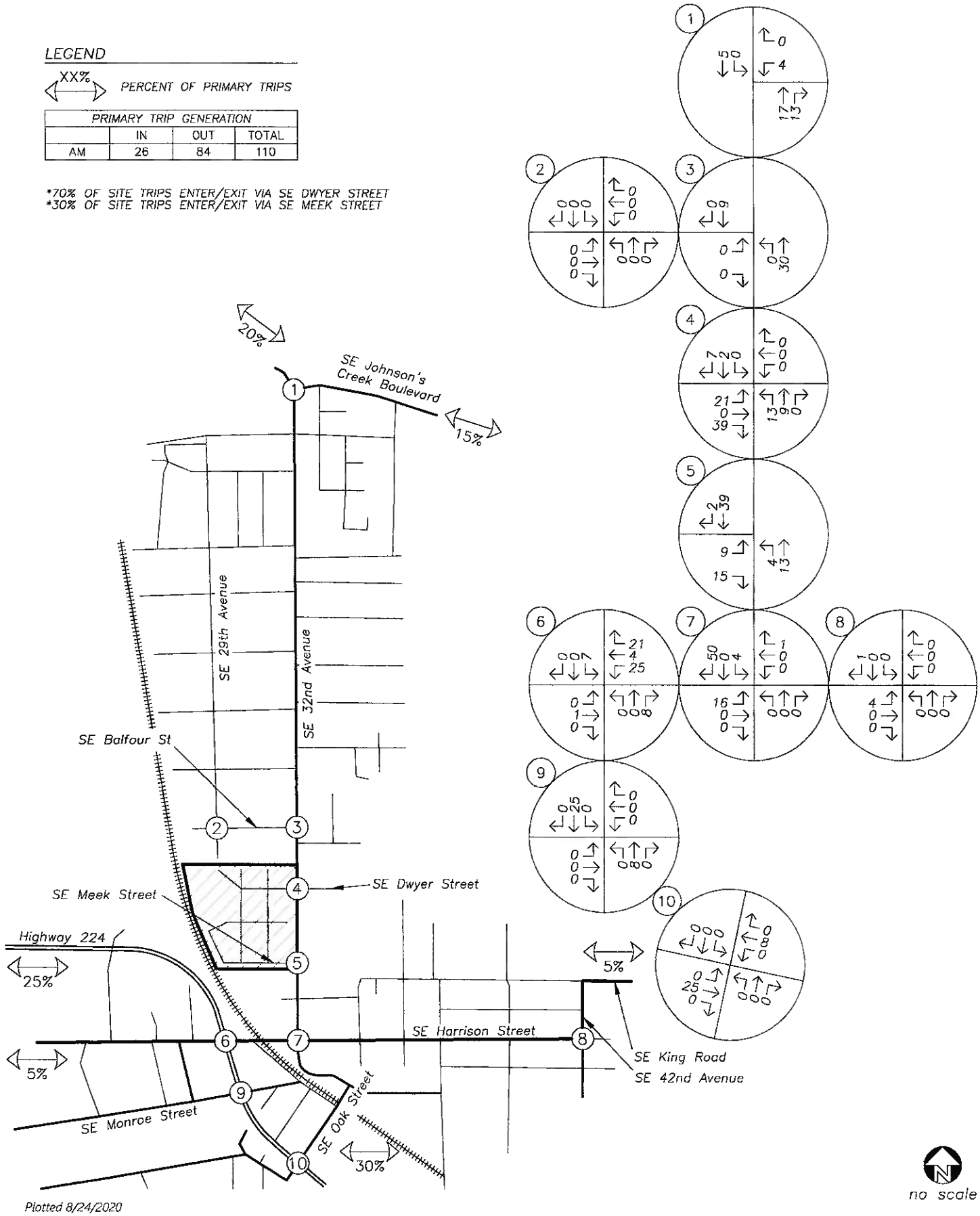


WEEKDAY AM PEAK HOUR TRIP ASSIGNMENT



WEEKDAY PM PEAK HOUR TRIP ASSIGNMENT





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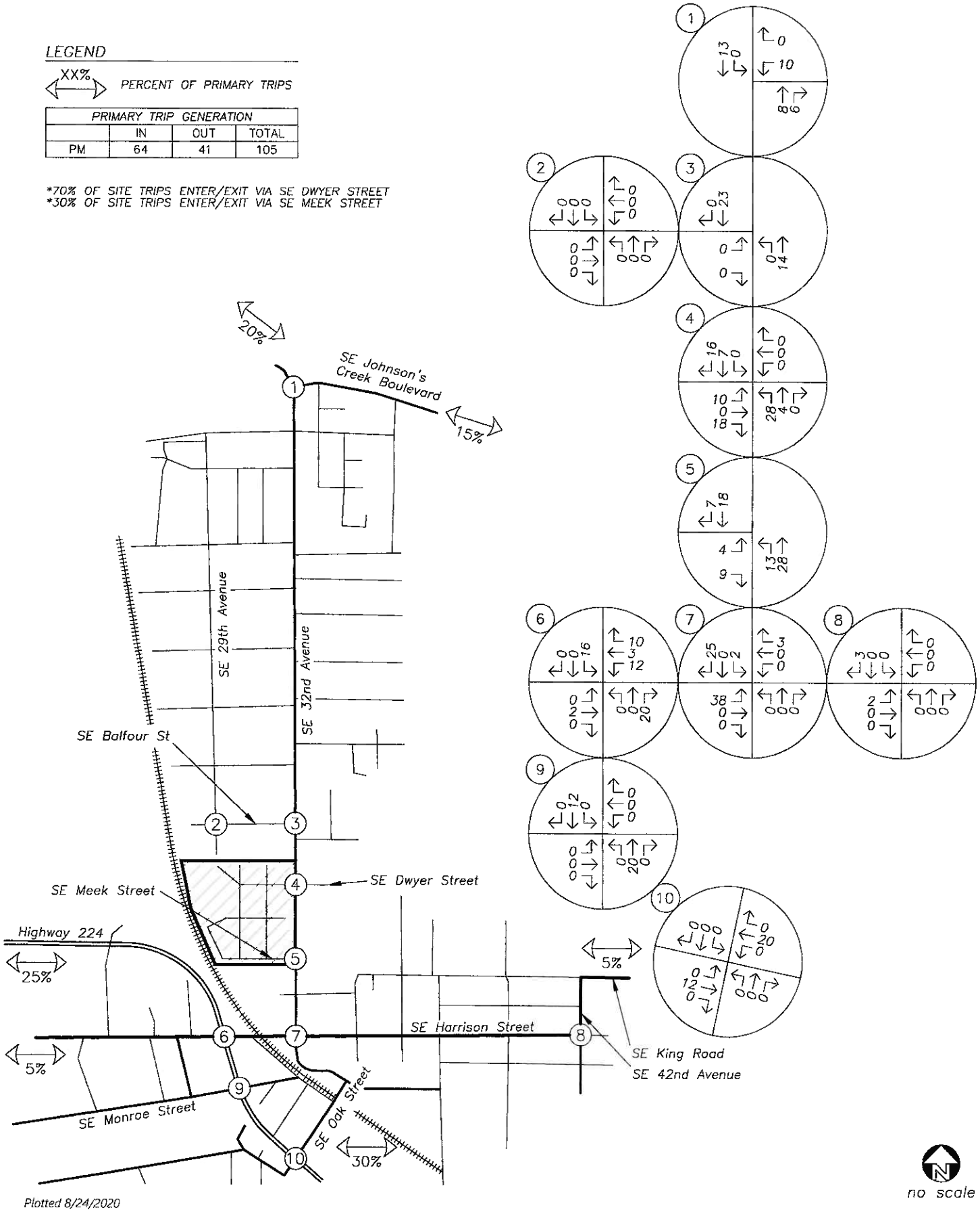
SITE TRIP DISTRIBUTION & ASSIGNMENT

Proposed Development Plan - Site Trips
AM Peak Hour

Figure 2

Hillside Master Plan



SITE TRIP DISTRIBUTION & ASSIGNMENT

Proposed Development Plan - Site Trips
PM Peak Hour

Figure 3
Hillside Master Plan

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Appendix E Year 2022 Background Traffic Conditions Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: OR 99E (SE McLoughlin Blvd)/SE Milport Rd

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Base Volume Input [veh/h]	0	2362	0	0	1330	0	37	71	11	16	7	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	7.00	2.00	20.00	21.00	33.00	56.00	0.00	18.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2362	0	0	1330	0	37	71	11	16	7	31
Peak Hour Factor	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	656	0	0	369	0	10	20	3	4	2	9
Total Analysis Volume [veh/h]	0	2624	0	0	1478	0	41	79	12	18	8	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	6	0	0	6	0
Maximum Green [s]	0	40	0	0	40	0	0	25	0	0	25	0
Amber [s]	0.0	4.7	0.0	0.0	4.7	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	98	0	0	98	0	0	22	0	0	22	0
Vehicle Extension [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	0	0	0	12	0	0	9	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	14	0	0	38	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	97	97	12	12	12	12
g / C, Green / Cycle	0.81	0.81	0.10	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.39	0.30	0.08	0.01	0.02	0.02
s, saturation flow rate [veh/h]	6683	4889	1472	1190	1153	1385
c, Capacity [veh/h]	5429	3972	189	120	167	140
d1, Uniform Delay [s]	3.47	3.02	52.58	48.93	49.20	49.65
k, delay calibration	0.50	0.50	0.15	0.15	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.27	4.97	0.51	0.61	1.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.37	0.64	0.10	0.16	0.24
d, Delay for Lane Group [s/veh]	3.78	3.29	57.54	49.44	49.81	50.92
Lane Group LOS	A	A	E	D	D	D
Critical Lane Group	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.02	1.99	3.76	0.34	0.74	0.98
50th-Percentile Queue Length [ft/ln]	75.39	49.85	94.07	8.56	18.46	24.62
95th-Percentile Queue Length [veh/ln]	5.43	3.59	6.77	0.62	1.33	1.77
95th-Percentile Queue Length [ft/ln]	135.71	89.72	169.32	15.41	33.23	44.32

Movement, Approach, & Intersection Results

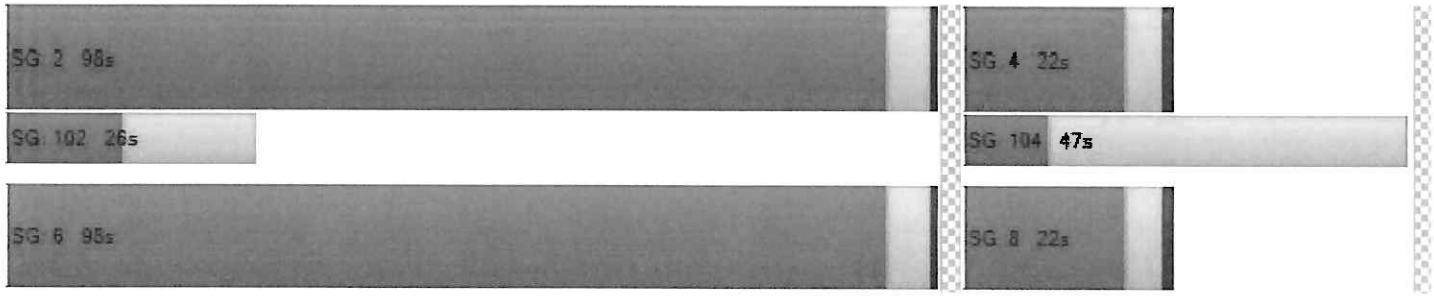
d_M, Delay for Movement [s/veh]	0.00	3.78	0.00	0.00	3.29	0.00	57.54	57.54	49.44	49.81	49.81	50.92
Movement LOS		A			A		E	E	D	D	D	D
d_A, Approach Delay [s/veh]	3.78			3.29			56.81			50.44		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	5.90											
Intersection LOS	A											
Intersection V/C	0.499											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	0.0	16.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	12323.74	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	0.00	45.07	0.00
l_p,int, Pedestrian LOS Score for Intersection	3.495	0.000	2.003	0.000
Crosswalk LOS	C	F	B	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1543	1543	283	283
d_b, Bicycle Delay [s]	3.13	3.13	44.20	44.20
l_b,int, Bicycle LOS Score for Intersection	2.642	2.373	1.777	1.659
Bicycle LOS	B	B	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: SE Main St/OR 99E

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.079

Intersection Setup

Name	SE Main St		SE Main St		OR 99E	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Main St		SE Main St		OR 99E	
Base Volume Input [veh/h]	0	85	44	0	57	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	11.00	35.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	85	44	0	57	2
Peak Hour Factor	1.0000	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	24	13	0	16	1
Total Analysis Volume [veh/h]	0	98	51	0	66	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	9.65	8.53
Movement LOS		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.25	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.37	0.15
d_A, Approach Delay [s/veh]	0.00		0.00		9.61	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: SE Main St/Site Access

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			30.00			10.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

Volumes

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Base Volume Input [veh/h]	2	53	0	2	26	0	0	0	0	2	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	10.00	0.00	0.00	29.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	53	0	2	26	0	0	0	0	2	0	0
Peak Hour Factor	0.5700	0.5700	0.5700	0.5700	0.5700	0.5700	1.0000	1.0000	1.0000	0.5700	0.5700	0.5700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	23	0	1	11	0	0	0	0	1	0	0
Total Analysis Volume [veh/h]	4	93	0	4	46	0	0	0	0	4	0	0
Pedestrian Volume [ped/h]	0			0			0			4		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	7.40	0.00	0.00	0.00	0.00	0.00	9.50	9.95	8.77
Movement LOS	A	A	A	A	A	A				A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.19	0.19	0.19	0.20	0.20	0.20	0.00	0.00	0.00	0.38	0.38	0.38
d_A, Approach Delay [s/veh]	0.30			0.59			0.00			9.50		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.64											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: OR 99E (SE McLoughlin Blvd)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	370.00	100.00	100.00	375.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	419	1477	97	86	602	21	21	52	177	72	54	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	5.00	11.00	7.00	2.00	6.00	10.00	4.00	7.00	11.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	89	0	0	0
Total Hourly Volume [veh/h]	419	1477	97	86	602	21	21	52	88	72	54	24
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	107	377	25	22	154	5	5	13	22	18	14	6
Total Analysis Volume [veh/h]	428	1507	99	88	614	21	21	53	90	73	55	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	15			0			15			0		
v_di, Inbound Pedestrian Volume crossing major street [	15			0			15			0		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			0			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	10			0			13			8		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	93.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Split	Split	Overla	Split	Split	Split
Signal Group	1	6		5	2			8	1		4	
Auxiliary Signal Groups									1,8			
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	4	10		6	10			6	4		6	
Maximum Green [s]	30	63		16	49			11	30		14	
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	0.0	3.5	3.5	0.0	4.0	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.0	0.5	0.5	0.0	0.5	0.0
Split [s]	34	56		20	42			26	34		18	
Vehicle Extension [s]	2.3	6.1	0.0	2.3	6.1	0.0	0.0	2.3	2.3	0.0	2.3	0.0
Walk [s]		7			11			8			0	
Pedestrian Clearance [s]		17			18			21			0	
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.5	0.0
Minimum Recall	No	Yes		No	Yes			No	No		No	
Maximum Recall	No	No		No	No			No	No		No	
Pedestrian Recall	No	No		No	No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.50	2.50
g_i, Effective Green Time [s]	30	71	71	8	49	49	16	63	9	9
g / C, Green / Cycle	0.25	0.59	0.59	0.07	0.41	0.41	0.13	0.53	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.24	0.44	0.45	0.05	0.18	0.18	0.04	0.06	0.04	0.06
s, saturation flow rate [veh/h]	1752	1840	1793	1652	1795	1774	1725	1549	1360	1600
c, Capacity [veh/h]	438	1086	1059	110	730	722	225	816	144	155
d1, Uniform Delay [s]	39.66	8.08	8.26	55.20	25.67	25.67	47.42	14.28	55.29	54.38
k, delay calibration	0.43	0.50	0.50	0.07	0.50	0.50	0.07	0.07	0.07	0.07
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.45	4.53	5.10	7.85	1.90	1.92	0.52	0.04	1.18	2.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.98	0.74	0.76	0.80	0.44	0.44	0.33	0.11	0.42	0.59
d, Delay for Lane Group [s/veh]	74.12	12.61	13.37	63.05	27.57	27.60	47.93	14.32	56.47	56.60
Lane Group LOS	E	B	B	E	C	C	D	B	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	15.86	7.55	7.92	2.87	6.94	6.87	2.03	1.22	1.87	2.86
50th-Percentile Queue Length [ft/ln]	396.42	188.84	197.99	71.63	173.42	171.68	50.81	30.50	46.65	71.53
95th-Percentile Queue Length [veh/ln]	22.39	12.06	12.53	5.16	11.26	11.17	3.66	2.20	3.36	5.15
95th-Percentile Queue Length [ft/ln]	559.68	301.52	313.37	128.94	281.41	279.13	91.46	54.89	83.97	128.75

Movement, Approach, & Intersection Results

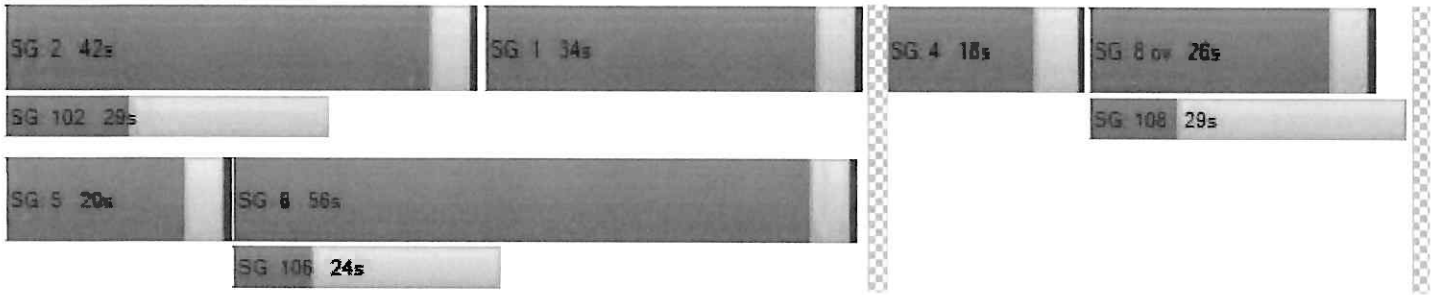
d_M, Delay for Movement [s/veh]	74.12	12.96	13.37	63.05	27.58	27.60	47.93	47.93	14.32	56.47	56.60	56.60
Movement LOS	E	B	B	E	C	C	D	D	B	E	E	E
d_A, Approach Delay [s/veh]	25.85			31.90			29.49			56.55		
Approach LOS	C			C			C			E		
d_I, Intersection Delay [s/veh]	28.99											
Intersection LOS	C											
Intersection V/C	0.694											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	0.0	15.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	277.18	0.00	0.00	3943.13
d_p, Pedestrian Delay [s]	48.60	0.00	45.94	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.000	0.000	2.365	2.039
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	867	633	367	225
d_b, Bicycle Delay [s]	19.36	28.02	40.28	47.45
l_b,int, Bicycle LOS Score for Intersection	3.238	2.156	1.977	1.810
Bicycle LOS	C	B	A	A

Sequence

Ring 1	2	1	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: SE Main St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.315

Intersection Setup

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	4	16	27	30	16	22	51	114	49	29	121	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	22.00	64.00	19.00	22.00	0.00	0.00	2.00	11.00	44.00	16.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	16	27	30	16	22	51	114	49	29	121	60
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	8	9	5	6	15	33	14	8	35	17
Total Analysis Volume [veh/h]	5	18	31	34	18	25	59	131	56	33	139	69
Pedestrian Volume [ped/h]	7			1			12			13		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	643	684	795	766
Degree of Utilization, x	0.08	0.11	0.31	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.27	0.38	1.32	1.35
95th-Percentile Queue Length [ft]	6.85	9.46	32.99	33.72
Approach Delay [s/veh]	9.11	8.93	9.55	9.84
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.55			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 6: SE 21st St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.333

Intersection Setup

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	22	2	16	4	4	7	4	151	16	42	182	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	45.00	0.00	33.00	0.00	0.00	25.00	0.00	14.00	11.00	27.00	14.00	50.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	2	16	4	4	7	4	151	16	42	182	4
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	1	5	1	1	2	1	43	5	12	52	1
Total Analysis Volume [veh/h]	25	2	18	5	5	8	5	172	18	48	207	5
Pedestrian Volume [ped/h]	12			13			8			4		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	653	717	792	781
Degree of Utilization, x	0.07	0.03	0.25	0.33

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.22	0.08	0.97	1.46
95th-Percentile Queue Length [ft]	5.54	1.93	24.18	36.61
Approach Delay [s/veh]	8.93	8.15	9.02	9.89
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.42			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: SE 23rd St/SE Harrison St

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		No	

Volumes

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Base Volume Input [veh/h]	7	164	7	5	222	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	16.00	0.00	33.00	17.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	164	7	5	222	13
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	47	2	1	64	4
Total Analysis Volume [veh/h]	8	189	8	6	255	15
Pedestrian Volume [ped/h]	0		5		0	

Intersection Settings

Priority Scheme	Free	Stop	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance		No	
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.78	0.00	11.64	11.30	0.00	0.00
Movement LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh/ln]	0.53	0.53	0.08	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.32	13.32	1.89	1.89	0.00	0.00
d_A, Approach Delay [s/veh]	0.32		11.49		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: OR 224 (Milwaukie Expy)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	50.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.978

Intersection Setup

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	160.00	100.00	160.00	615.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	59	1862	65	101	917	14	19	128	41	65	191	329
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	14.00	5.00	4.00	1.00	6.00	0.00	0.00	16.00	18.00	3.00	8.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	1862	65	101	917	14	19	128	41	65	191	329
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	501	17	27	247	4	5	34	11	17	51	88
Total Analysis Volume [veh/h]	63	2002	70	109	986	15	20	138	44	70	205	354
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	10	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			2			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			2		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	1	6		5	2			8			4	
Auxiliary Signal Groups												
Lead / Lag	Lag			Lead								
Minimum Green [s]	4	10		4	10			6			6	
Maximum Green [s]	15	50		15	50			20			20	
Amber [s]	3.5	5.0		3.5	5.0			3.5			3.5	
All red [s]	0.5	2.0		0.5	2.0			1.5			1.5	
Split [s]	15	77		15	77			28			28	
Vehicle Extension [s]	2.3	3.9		2.3	3.9			2.5			2.5	
Walk [s]		7			10			9			8	
Pedestrian Clearance [s]		18			22			29			27	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0			0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0			2.0	
I2, Clearance Lost Time [s]	2.0	5.0		2.0	5.0			3.0			3.0	
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	7.00	7.00	4.00	7.00	7.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	5.00	5.00	2.00	5.00	5.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	6	67	67	9	70	70	28	28	28	28
g / C, Green / Cycle	0.05	0.56	0.56	0.07	0.58	0.58	0.23	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.58	0.04	0.06	0.29	0.01	10000.00	0.13	0.28	0.27
s, saturation flow rate [veh/h]	1609	3475	1564	1795	3446	1615	0	1391	945	1381
c, Capacity [veh/h]	78	1940	873	134	2014	944	60	325	259	323
d1, Uniform Delay [s]	55.53	15.32	6.95	54.69	14.52	10.46	59.98	40.53	49.80	45.97
k, delay calibration	0.07	0.50	0.50	0.07	0.50	0.50	0.08	0.17	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.08	29.10	0.18	7.16	0.85	0.03	2.38	2.33	58.03	93.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	1.03	0.08	0.81	0.49	0.02	0.33	0.56	1.01	1.14
d, Delay for Lane Group [s/veh]	66.61	44.42	7.13	61.85	15.37	10.49	62.37	42.87	107.83	139.84
Lane Group LOS	E	F	A	E	B	B	E	D	F	F
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.07	23.36	0.52	3.46	7.51	0.17	0.65	5.00	12.11	18.04
50th-Percentile Queue Length [ft/ln]	51.70	584.02	12.95	86.45	187.81	4.19	16.33	124.97	302.65	451.10
95th-Percentile Queue Length [veh/ln]	3.72	32.09	0.93	6.22	12.01	0.30	1.18	8.67	17.89	26.86
95th-Percentile Queue Length [ft/ln]	93.07	802.22	23.31	155.62	300.19	7.54	29.39	216.64	447.34	671.60

Movement, Approach, & Intersection Results

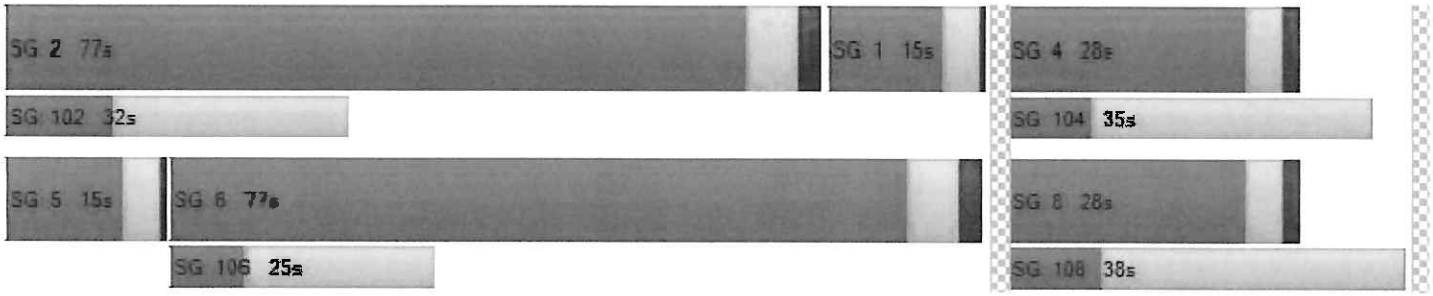
d_M, Delay for Movement [s/veh]	66.61	44.42	7.13	61.85	15.37	10.49	62.37	42.87	42.87	107.83	110.04	139.84
Movement LOS	E	F	A	E	B	B	E	D	D	F	F	F
d_A, Approach Delay [s/veh]	43.85			19.87			44.80			126.57		
Approach LOS	D			B			D			F		
d_I, Intersection Delay [s/veh]	50.13											
Intersection LOS	D											
Intersection V/C	0.978											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	14.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	3413.25	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	48.60	46.82	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.266	3.250	2.241	2.337
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	1167	383	383
d_b, Bicycle Delay [s]	10.42	10.42	39.20	39.20
l_b,int, Bicycle LOS Score for Intersection	3.321	2.475	1.726	2.079
Bicycle LOS	C	B	A	B

Sequence

Ring 1	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: OR 99E (SE McLoughlin Blvd)/SE Milport Rd

Control Type:	Signalized	Delay (sec / veh):	3.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

Intersection Setup

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Base Volume Input [veh/h]	0	1786	0	0	3187	0	50	19	39	34	10	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	9.00	8.00	0.00	12.00	0.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1786	0	0	3187	0	50	19	39	34	10	40
Peak Hour Factor	1.0000	0.9600	1.0000	1.0000	0.9600	1.0000	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	465	0	0	830	0	13	5	10	9	3	10
Total Analysis Volume [veh/h]	0	1860	0	0	3320	0	52	20	41	35	10	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	6	0	0	6	0
Maximum Green [s]	0	40	0	0	40	0	0	25	0	0	25	0
Amber [s]	0.0	4.7	0.0	0.0	4.7	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	98	0	0	98	0	0	22	0	0	22	0
Vehicle Extension [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	0	0	0	12	0	0	9	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	14	0	0	38	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	101	101	8	8	8	8
g / C, Green / Cycle	0.85	0.85	0.07	0.07	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.27	0.65	0.05	0.03	0.03	0.03
s, saturation flow rate [veh/h]	6792	5094	1532	1608	1479	1540
c, Capacity [veh/h]	5754	4316	153	106	151	101
d1, Uniform Delay [s]	1.92	0.00	54.66	53.57	53.74	53.65
k, delay calibration	0.50	0.50	0.15	0.15	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	1.37	3.20	3.27	1.55	3.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.33	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.77	0.47	0.39	0.30	0.41
d, Delay for Lane Group [s/veh]	2.07	1.37	57.86	56.84	55.29	57.46
Lane Group LOS	A	A	E	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.04	0.55	2.24	1.27	1.36	1.31
50th-Percentile Queue Length [ft/ln]	26.09	13.71	56.10	31.81	34.04	32.85
95th-Percentile Queue Length [veh/ln]	1.88	0.99	4.04	2.29	2.45	2.37
95th-Percentile Queue Length [ft/ln]	46.96	24.68	100.98	57.26	61.28	59.14

Movement, Approach, & Intersection Results

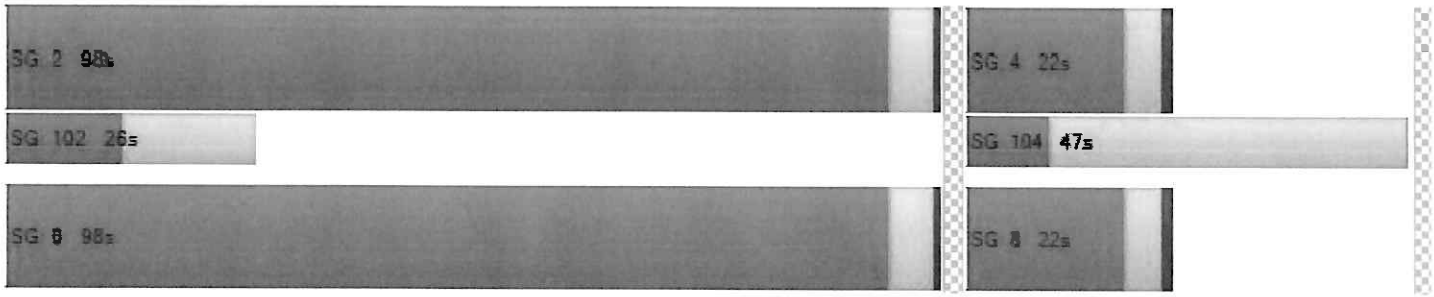
d_M, Delay for Movement [s/veh]	0.00	2.07	0.00	0.00	1.37	0.00	57.86	57.86	56.84	55.29	55.29	57.46
Movement LOS		A			A		E	E	E	E	E	E
d_A, Approach Delay [s/veh]	2.07			1.37			57.49			56.34		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	3.68											
Intersection LOS	A											
Intersection V/C	0.736											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	0.0	16.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	11886.32	0.00	13719.37	0.00
d_p, Pedestrian Delay [s]	47.70	0.00	45.07	0.00
l_p,int, Pedestrian LOS Score for Intersection	3.754	0.000	1.997	0.000
Crosswalk LOS	D	F	A	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1543	1543	283	283
d_b, Bicycle Delay [s]	3.13	3.13	44.20	44.23
l_b,int, Bicycle LOS Score for Intersection	2.327	3.386	1.746	1.703
Bicycle LOS	B	C	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: SE Main St/OR 99E

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	SE Main St		SE Main St		OR 99E	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Main St		SE Main St		OR 99E	
Base Volume Input [veh/h]	0	44	93	0	6	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	13.00	8.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	44	93	0	6	10
Peak Hour Factor	1.0000	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	14	29	0	2	3
Total Analysis Volume [veh/h]	0	54	115	0	7	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	9.40	8.87
Movement LOS		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.64	0.97
d_A, Approach Delay [s/veh]	0.00		0.00		9.06	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: SE Main St/Site Access

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.038

Intersection Setup

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			30.00			10.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

Volumes

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Base Volume Input [veh/h]	3	49	10	6	121	1	0	0	0	19	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	15.00	0.00	0.00	4.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	49	10	6	121	1	0	0	0	19	0	3
Peak Hour Factor	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	1.0000	1.0000	1.0000	0.7400	0.7400	0.7400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	17	3	2	41	0	0	0	0	6	0	1
Total Analysis Volume [veh/h]	4	66	14	8	164	1	0	0	0	26	0	4
Pedestrian Volume [ped/h]	0			0			0			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	7.39	0.00	0.00	0.00	0.00	0.00	10.52	10.92	8.89
Movement LOS	A	A	A	A	A	A				B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.21	0.21	0.21	0.40	0.40	0.40	0.00	0.00	0.00	3.31	3.31	3.31
d_A, Approach Delay [s/veh]	0.36			0.34			0.00			10.31		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	1.39											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: OR 99E (SE McLoughlin Blvd)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.965

Intersection Setup

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	370.00	100.00	100.00	375.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	272	835	169	105	1707	15	30	82	492	219	51	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	4.00	1.00	2.00	2.00	0.00	6.00	1.00	2.00	9.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	0	0	0	246	0	0	22
Total Hourly Volume [veh/h]	272	835	161	105	1707	15	30	82	246	219	51	13
Peak Hour Factor	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	211	41	27	431	4	8	21	62	55	13	3
Total Analysis Volume [veh/h]	275	843	163	106	1724	15	30	83	248	221	52	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	12			0			12			0		
v_di, Inbound Pedestrian Volume crossing major street [	12			0			12			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			13			6		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Split	Split	Overla	Split	Split	Split
Signal Group	1	6		5	2			8	1		4	
Auxiliary Signal Groups									1,8			
Lead / Lag	Lead	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	4	10		6	10			6	4		6	
Maximum Green [s]	19	66		15	62			10	19		15	
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	0.0	3.5	3.5	0.0	4.0	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.0	0.5	0.5	0.0	0.5	0.0
Split [s]	23	60		19	56			26	23		15	
Vehicle Extension [s]	2.3	6.1	0.0	2.3	6.1	0.0	0.0	2.3	2.3	0.0	2.3	0.0
Walk [s]		7			11			8			0	
Pedestrian Clearance [s]		17			18			21			0	
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.5	0.0
Minimum Recall	No	Yes		No	Yes			No	No		No	
Maximum Recall	No	No		No	No			No	No		No	
Pedestrian Recall	No	No		No	No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.50	2.50
g_i, Effective Green Time [s]	19	68	68	9	58	58	16	39	11	11
g / C, Green / Cycle	0.16	0.57	0.57	0.07	0.48	0.48	0.13	0.32	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.15	0.28	0.28	0.06	0.47	0.47	0.06	0.16	0.08	0.08
s, saturation flow rate [veh/h]	1781	1840	1724	1795	1870	1864	1786	1571	1781	1692
c, Capacity [veh/h]	282	1043	978	134	904	901	237	508	158	150
d1, Uniform Delay [s]	47.14	7.94	7.97	54.66	29.97	30.03	48.24	32.46	54.35	54.34
k, delay calibration	0.40	0.50	0.50	0.07	0.50	0.50	0.07	0.42	0.12	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	42.16	1.68	1.84	6.39	22.11	22.57	0.91	2.78	21.90	22.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.98	0.49	0.50	0.79	0.96	0.96	0.48	0.49	0.93	0.93
d, Delay for Lane Group [s/veh]	89.30	9.61	9.81	61.05	52.08	52.61	49.15	35.24	76.25	76.84
Lane Group LOS	F	A	A	E	D	D	D	D	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	11.08	4.46	4.28	3.39	28.89	29.02	3.17	6.09	5.43	5.18
50th-Percentile Queue Length [ft/ln]	276.96	111.46	107.05	84.79	722.20	725.58	79.29	152.14	135.85	129.55
95th-Percentile Queue Length [veh/ln]	16.54	7.92	7.68	6.10	37.70	37.86	5.71	10.13	9.26	8.92
95th-Percentile Queue Length [ft/ln]	413.43	198.03	191.89	152.62	942.56	946.46	142.73	253.28	231.42	222.88

Movement, Approach, & Intersection Results

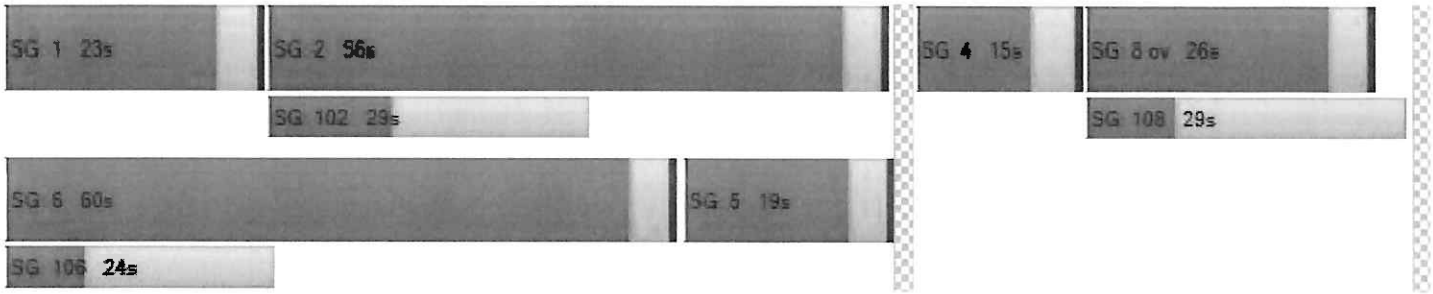
d_M, Delay for Movement [s/veh]	89.30	9.69	9.81	61.05	52.34	52.61	49.15	49.15	35.24	76.45	76.84	76.84
Movement LOS	F	A	A	E	D	D	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	26.80			52.84			39.59			76.54		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	44.53											
Intersection LOS	D											
Intersection V/C	0.965											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	0.0	15.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	300.78	0.00	0.00	6662.70
d_p, Pedestrian Delay [s]	48.60	0.00	45.94	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.051	0.000	2.661	2.130
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	867	367	175
d_b, Bicycle Delay [s]	17.08	19.27	40.28	50.11
l_b,int, Bicycle LOS Score for Intersection	2.623	3.082	2.561	2.068
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: SE Main St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.394

Intersection Setup

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	13	40	48	68	63	46	39	161	56	39	149	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	7.00	25.00	2.00	5.00	3.00	4.00	2.00	10.00	22.00	5.00	8.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	48	68	63	46	39	161	56	39	149	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	11	13	18	17	13	11	44	15	11	40	9
Total Analysis Volume [veh/h]	14	43	52	74	68	50	42	175	61	42	162	37
Pedestrian Volume [ped/h]	6			0			12			26		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	642	662	706	684
Degree of Utilization, x	0.17	0.29	0.39	0.35

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.61	1.20	1.88	1.59
95th-Percentile Queue Length [ft]	15.20	30.06	47.05	39.66
Approach Delay [s/veh]	9.75	10.65	11.37	11.10
Approach LOS	A	B	B	B
Intersection Delay [s/veh]	10.91			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 6: SE 21st St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

Intersection Setup

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	17	9	43	21	6	21	11	253	13	39	184	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	25.00	0.00	10.00	0.00	0.00	0.00	0.00	6.00	0.00	19.00	7.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	9	43	21	6	21	11	253	13	39	184	19
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	3	13	6	2	6	3	74	4	11	54	6
Total Analysis Volume [veh/h]	20	11	51	25	7	25	13	298	15	46	216	22
Pedestrian Volume [ped/h]	7			10			8			5		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	675	676	765	749
Degree of Utilization, x	0.12	0.08	0.43	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.41	0.28	2.15	1.78
95th-Percentile Queue Length [ft]	10.32	6.88	53.63	44.44
Approach Delay [s/veh]	9.07	8.81	11.16	10.71
Approach LOS	A	A	B	B
Intersection Delay [s/veh]	10.58			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 7: SE 23rd St/SE Harrison St

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		No	

Volumes

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Base Volume Input [veh/h]	10	307	6	9	232	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	14.00	6.00	0.00	17.00	8.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	307	6	9	232	9
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	87	2	3	66	3
Total Analysis Volume [veh/h]	11	349	7	10	264	10
Pedestrian Volume [ped/h]	0		3		0	

Intersection Settings

Priority Scheme	Free	Stop	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance		No	
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.02	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	7.97	0.00	13.31	11.14	0.00	0.00
Movement LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh/ln]	1.24	1.24	0.10	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	30.98	30.98	2.49	2.49	0.00	0.00
d_A, Approach Delay [s/veh]	0.24		12.04		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: OR 224 (Milwaukie Expy)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.895

Intersection Setup

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	160.00	100.00	160.00	615.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	65	1520	89	312	1815	32	5	271	58	69	194	172
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	7.00	2.00	3.00	1.00	3.00	0.00	0.00	5.00	6.00	4.00	6.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	1520	89	312	1815	32	5	271	58	69	194	172
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	392	23	80	468	8	1	70	15	18	50	44
Total Analysis Volume [veh/h]	67	1567	92	322	1871	33	5	279	60	71	200	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	10	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	4			6			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			4			6		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			1			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			2			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	72.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	1	6		5	2			8			4	
Auxiliary Signal Groups												
Lead / Lag	Lag			Lead								
Minimum Green [s]	4	10		4	10			6			6	
Maximum Green [s]	15	50		15	50			20			20	
Amber [s]	3.5	5.0		3.5	5.0			3.5			3.5	
All red [s]	0.5	2.0		0.5	2.0			1.5			1.5	
Split [s]	15	70		30	85			30			30	
Vehicle Extension [s]	2.3	3.9		2.3	3.9			2.5			2.5	
Walk [s]		7			10			9			8	
Pedestrian Clearance [s]		18			22			29			27	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0			0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0			2.0	
I2, Clearance Lost Time [s]	2.0	5.0		2.0	5.0			3.0			3.0	
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	7.00	7.00	4.00	7.00	7.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	5.00	5.00	2.00	5.00	5.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	6	59	59	25	78	78	30	30	30	30
g / C, Green / Cycle	0.05	0.46	0.46	0.19	0.60	0.60	0.23	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.44	0.06	0.18	0.53	0.02	0.12	0.12	0.22	0.19
s, saturation flow rate [veh/h]	1709	3560	1555	1795	3532	1614	1366	1496	727	1478
c, Capacity [veh/h]	84	1631	713	345	2122	970	338	339	205	335
d1, Uniform Delay [s]	60.05	24.18	14.32	51.68	22.00	10.56	42.87	44.25	53.86	48.25
k, delay calibration	0.07	0.50	0.50	0.35	0.50	0.50	0.12	0.13	0.40	0.31
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.87	14.70	0.37	27.27	5.70	0.07	1.19	1.64	20.91	16.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.96	0.13	0.93	0.88	0.03	0.48	0.54	0.78	0.86
d, Delay for Lane Group [s/veh]	69.92	38.88	14.69	78.95	27.70	10.63	44.06	45.89	74.76	64.49
Lane Group LOS	E	D	B	E	C	B	D	D	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.35	21.59	1.20	12.74	23.74	0.39	4.60	5.39	6.47	10.53
50th-Percentile Queue Length [ft/ln]	58.82	539.72	29.89	318.62	593.42	9.78	114.95	134.70	161.71	263.17
95th-Percentile Queue Length [veh/ln]	4.24	29.21	2.15	18.60	31.73	0.70	8.11	9.19	10.64	15.85
95th-Percentile Queue Length [ft/ln]	105.88	730.22	53.80	465.00	793.18	17.60	202.86	229.87	265.99	396.19

Movement, Approach, & Intersection Results

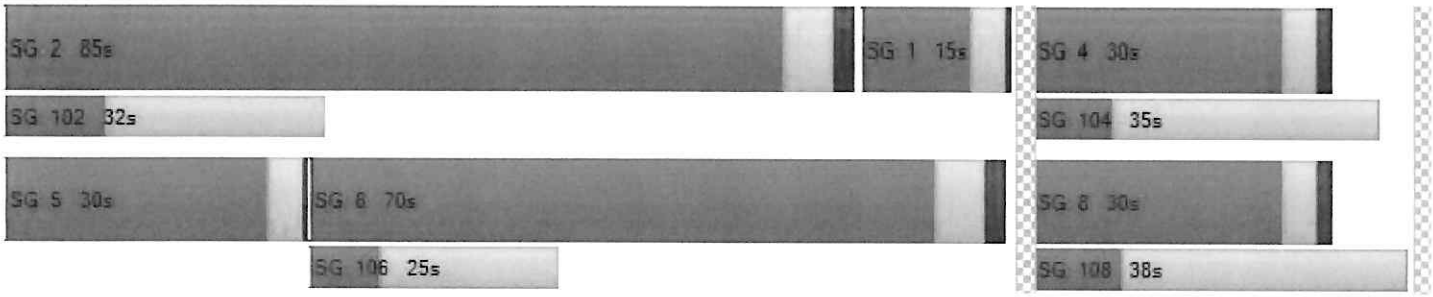
d_M, Delay for Movement [s/veh]	69.92	38.88	14.69	78.95	27.70	10.63	44.06	44.86	45.89	74.76	69.08	64.49
Movement LOS	E	D	B	E	C	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	38.79			34.86			45.03			68.16		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	40.17											
Intersection LOS	D											
Intersection V/C	0.895											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	14.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	2461.06	1379.14	11526.78	7524.62
d_p, Pedestrian Delay [s]	52.65	53.55	51.75	54.47
l_p,int, Pedestrian LOS Score for Intersection	3.378	3.338	2.277	2.380
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	969	1200	385	385
d_b, Bicycle Delay [s]	17.28	10.40	42.45	42.40
l_b,int, Bicycle LOS Score for Intersection	2.984	3.396	1.843	1.929
Bicycle LOS	C	C	A	A

Sequence

Ring 1	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix F Year 2022 Total Traffic Conditions Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: OR 99E (SE McLoughlin Blvd)/SE Milport Rd

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Base Volume Input [veh/h]	0	2362	0	0	1338	0	37	71	11	16	7	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	7.00	2.00	20.00	21.00	33.00	56.00	0.00	18.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2362	0	0	1338	0	37	71	11	16	7	52
Peak Hour Factor	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	656	0	0	372	0	10	20	3	4	2	14
Total Analysis Volume [veh/h]	0	2624	0	0	1487	0	41	79	12	18	8	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-		-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	6	0	0	6	0
Maximum Green [s]	0	40	0	0	40	0	0	25	0	0	25	0
Amber [s]	0.0	4.7	0.0	0.0	4.7	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	98	0	0	98	0	0	22	0	0	22	0
Vehicle Extension [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	0	0	0	12	0	0	9	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	14	0	0	38	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	97	97	12	12	12	12
g / C, Green / Cycle	0.81	0.81	0.10	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.39	0.30	0.08	0.01	0.02	0.04
s, saturation flow rate [veh/h]	6683	4889	1472	1190	1153	1385
c, Capacity [veh/h]	5429	3972	189	120	167	140
d1, Uniform Delay [s]	3.47	3.03	52.58	48.93	49.20	50.55
k, delay calibration	0.50	0.50	0.15	0.15	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.27	4.97	0.51	0.61	2.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.37	0.64	0.10	0.16	0.42
d, Delay for Lane Group [s/veh]	3.78	3.30	57.54	49.44	49.81	53.34
Lane Group LOS	A	A	E	D	D	D
Critical Lane Group	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.02	2.01	3.76	0.34	0.74	1.73
50th-Percentile Queue Length [ft/ln]	75.39	50.28	94.07	8.56	18.46	43.32
95th-Percentile Queue Length [veh/ln]	5.43	3.62	6.77	0.62	1.33	3.12
95th-Percentile Queue Length [ft/ln]	135.71	90.51	169.32	15.41	33.23	77.97

Movement, Approach, & Intersection Results

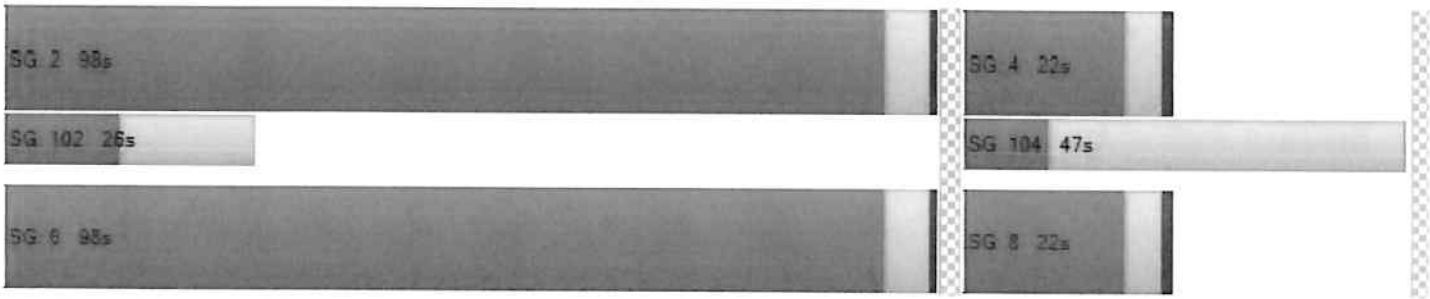
d_M, Delay for Movement [s/veh]	0.00	3.78	0.00	0.00	3.30	0.00	57.54	57.54	49.44	49.81	49.81	53.34
Movement LOS		A			A		E	E	D	D	D	D
d_A, Approach Delay [s/veh]	3.78			3.30			56.81			52.24		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	6.18											
Intersection LOS	A											
Intersection V/C	0.499											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	0.0	16.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	12323.74	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	0.00	45.07	0.00
l_p,int, Pedestrian LOS Score for Intersection	3.497	0.000	2.003	0.000
Crosswalk LOS	C	F	B	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1543	1543	283	283
d_b, Bicycle Delay [s]	3.13	3.13	44.20	44.20
l_b,int, Bicycle LOS Score for Intersection	2.642	2.377	1.777	1.698
Bicycle LOS	B	B	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: SE Main St/OR 99E

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name	SE Main St		SE Main St		OR 99E	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Main St		SE Main St		OR 99E	
Base Volume Input [veh/h]	0	106	44	0	57	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	11.00	35.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	106	44	0	57	6
Peak Hour Factor	1.0000	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	30	13	0	16	2
Total Analysis Volume [veh/h]	0	122	51	0	66	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	9.81	8.54
Movement LOS		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.26	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.59	0.52
d_A, Approach Delay [s/veh]	0.00		0.00		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.87					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: SE Main St/Site Access

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.064

Intersection Setup

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			30.00			10.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

Volumes

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Base Volume Input [veh/h]	2	53	13	6	26	0	0	0	0	28	0	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	10.00	0.00	0.00	29.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	53	13	6	26	0	0	0	0	28	0	21
Peak Hour Factor	0.5700	0.5700	0.5700	0.5700	0.5700	0.5700	1.0000	1.0000	1.0000	0.5700	0.5700	0.5700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	23	6	3	11	0	0	0	0	12	0	9
Total Analysis Volume [veh/h]	4	93	23	11	46	0	0	0	0	49	0	37
Pedestrian Volume [ped/h]	0			0			0			4		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.04
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	7.46	0.00	0.00	0.00	0.00	0.00	10.17	10.61	9.29
Movement LOS	A	A	A	A	A	A				B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.34	0.34	0.34
95th-Percentile Queue Length [ft/ln]	0.19	0.19	0.19	0.56	0.56	0.56	0.00	0.00	0.00	8.55	8.55	8.55
d_A, Approach Delay [s/veh]	0.24			1.44			0.00			9.79		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.62											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: OR 99E (SE McLoughlin Blvd)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	370.00	100.00	100.00	375.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	419	1481	97	94	602	21	21	53	177	84	56	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	5.00	11.00	7.00	2.00	6.00	10.00	4.00	7.00	11.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	89	0	0	0
Total Hourly Volume [veh/h]	419	1481	97	94	602	21	21	53	88	84	56	24
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	107	378	25	24	154	5	5	14	22	21	14	6
Total Analysis Volume [veh/h]	428	1511	99	96	614	21	21	54	90	86	57	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	15			0			15			0		
v_di, Inbound Pedestrian Volume crossing major street [	15			0			15			0		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			0			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	10			0			13			8		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	93.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Split	Split	Overla	Split	Split	Split
Signal Group	1	6		5	2			8	1		4	
Auxiliary Signal Groups									1,8			
Lead / Lag	Lag			Lead								
Minimum Green [s]	4	10		6	10			6	4		6	
Maximum Green [s]	30	63		16	49			11	30		14	
Amber [s]	3.5	3.5		3.5	3.5			3.5	3.5		4.0	
All red [s]	0.5	0.5		0.5	0.5			0.5	0.5		0.5	
Split [s]	34	56		20	42			26	34		18	
Vehicle Extension [s]	2.3	6.1		2.3	6.1			2.3	2.3		2.3	
Walk [s]		7			11			8			0	
Pedestrian Clearance [s]		17			18			21			0	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0	2.0		2.0	
I2, Clearance Lost Time [s]	2.0	2.0		2.0	2.0			2.0	2.0		2.5	
Minimum Recall	No	Yes		No	Yes			No	No		No	
Maximum Recall	No	No		No	No			No	No		No	
Pedestrian Recall	No	No		No	No			No	No		No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.50	2.50
g_i, Effective Green Time [s]	30	69	69	9	48	48	16	64	10	10
g / C, Green / Cycle	0.25	0.58	0.58	0.07	0.40	0.40	0.13	0.53	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.24	0.44	0.45	0.06	0.18	0.18	0.04	0.06	0.05	0.06
s, saturation flow rate [veh/h]	1752	1840	1794	1652	1795	1774	1726	1549	1360	1591
c, Capacity [veh/h]	438	1063	1036	118	717	708	226	828	151	166
d1, Uniform Delay [s]	39.66	9.15	9.36	54.92	26.34	26.35	47.37	13.82	54.95	53.82
k, delay calibration	0.43	0.50	0.50	0.07	0.50	0.50	0.07	0.07	0.07	0.07
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.44	5.05	5.73	7.95	2.00	2.03	0.52	0.03	1.27	2.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.98	0.76	0.78	0.81	0.45	0.45	0.33	0.11	0.45	0.60
d, Delay for Lane Group [s/veh]	74.10	14.20	15.09	62.87	28.34	28.37	47.89	13.85	56.22	55.89
Lane Group LOS	E	B	B	E	C	C	D	B	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	15.85	8.81	9.24	3.12	7.05	6.98	2.06	1.20	2.11	3.07
50th-Percentile Queue Length [ft/ln]	396.37	220.16	230.94	78.04	176.20	174.43	51.49	29.89	52.66	76.72
95th-Percentile Queue Length [veh/ln]	22.39	13.67	14.22	5.62	11.40	11.31	3.71	2.15	3.79	5.52
95th-Percentile Queue Length [ft/ln]	559.63	341.83	355.55	140.48	285.05	282.73	92.69	53.80	94.78	138.09

Movement, Approach, & Intersection Results

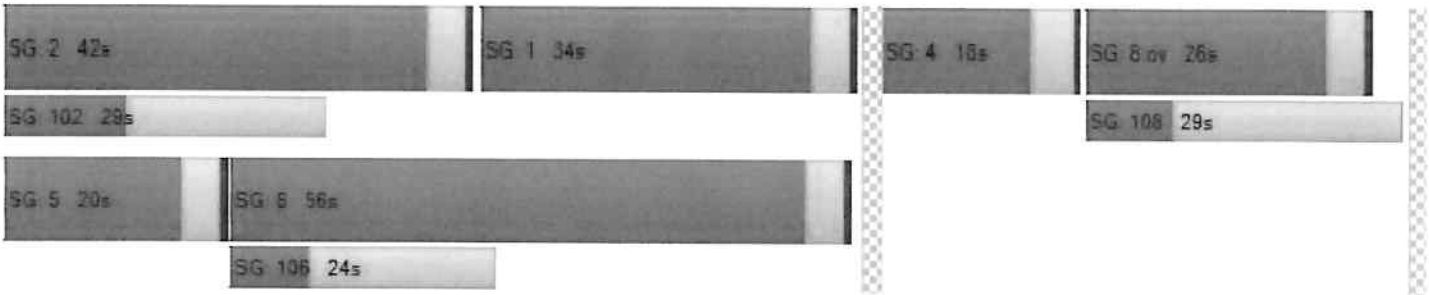
d_M, Delay for Movement [s/veh]	74.10	14.61	15.09	62.87	28.36	28.37	47.89	47.89	13.85	56.20	55.89	55.89
Movement LOS	E	B	B	E	C	C	D	D	B	E	E	E
d_A, Approach Delay [s/veh]	27.13			32.89			29.32			56.02		
Approach LOS	C			C			C			E		
d_I, Intersection Delay [s/veh]	30.16											
Intersection LOS	C											
Intersection V/C	0.707											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	0.0	15.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	269.18	0.00	0.00	3943.13
d_p, Pedestrian Delay [s]	48.60	0.00	45.94	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.026	0.000	2.366	2.044
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	867	633	367	225
d_b, Bicycle Delay [s]	19.36	28.02	40.28	47.45
l_b,int, Bicycle LOS Score for Intersection	3.241	2.163	1.979	1.835
Bicycle LOS	C	B	A	A

Sequence

Ring 1	2	1	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: SE Main St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.330

Intersection Setup

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	4	16	27	42	16	36	60	114	49	29	121	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	22.00	64.00	19.00	22.00	0.00	0.00	2.00	11.00	44.00	16.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	16	27	42	16	36	60	114	49	29	121	64
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	8	12	5	10	17	33	14	8	35	18
Total Analysis Volume [veh/h]	5	18	31	48	18	41	69	131	56	33	139	74
Pedestrian Volume [ped/h]	7			1			12			13		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	630	684	775	751
Degree of Utilization, x	0.09	0.16	0.33	0.33

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.28	0.55	1.45	1.43
95th-Percentile Queue Length [ft]	7.00	13.80	36.15	35.74
Approach Delay [s/veh]	9.24	9.24	9.91	10.11
Approach LOS	A	A	A	B
Intersection Delay [s/veh]	9.82			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 6: SE 21st St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.339

Intersection Setup

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	22	2	16	4	4	7	4	163	16	42	186	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	45.00	0.00	33.00	0.00	0.00	25.00	0.00	14.00	11.00	27.00	14.00	50.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	2	16	4	4	7	4	163	16	42	186	4
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	1	5	1	1	2	1	46	5	12	53	1
Total Analysis Volume [veh/h]	25	2	18	5	5	8	5	185	18	48	211	5
Pedestrian Volume [ped/h]	12			13			8			4		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	648	711	790	779
Degree of Utilization, x	0.07	0.03	0.26	0.34

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.22	0.08	1.06	1.50
95th-Percentile Queue Length [ft]	5.58	1.95	26.41	37.61
Approach Delay [s/veh]	8.97	8.19	9.18	9.98
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.52			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: SE 23rd St/SE Harrison St

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		No	

Volumes

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Base Volume Input [veh/h]	7	176	7	5	226	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	16.00	0.00	33.00	17.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	176	7	5	226	13
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	51	2	1	65	4
Total Analysis Volume [veh/h]	8	202	8	6	260	15
Pedestrian Volume [ped/h]	0		5		0	

Intersection Settings

Priority Scheme	Free	Stop	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance		No	
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.79	0.00	11.80	11.35	0.00	0.00
Movement LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh/ln]	0.58	0.58	0.08	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	14.44	14.44	1.92	1.92	0.00	0.00
d_A, Approach Delay [s/veh]	0.30		11.61		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: OR 224 (Milwaukie Expy)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	51.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.988

Intersection Setup

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	160.00	100.00	160.00	615.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	62	1862	65	101	917	14	19	130	51	65	192	329
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	14.00	5.00	4.00	1.00	6.00	0.00	0.00	16.00	18.00	3.00	8.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	1862	65	101	917	14	19	130	51	65	192	329
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	501	17	27	247	4	5	35	14	17	52	88
Total Analysis Volume [veh/h]	67	2002	70	109	986	15	20	140	55	70	206	354
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	10	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			2			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			2		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	52.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	1	6		5	2			8			4	
Auxiliary Signal Groups												
Lead / Lag	Lag			Lead								
Minimum Green [s]	4	10		4	10			6			6	
Maximum Green [s]	15	50		15	50			20			20	
Amber [s]	3.5	5.0		3.5	5.0			3.5			3.5	
All red [s]	0.5	2.0		0.5	2.0			1.5			1.5	
Split [s]	15	77		15	77			28			28	
Vehicle Extension [s]	2.3	3.9		2.3	3.9			2.5			2.5	
Walk [s]		7			10			9			8	
Pedestrian Clearance [s]		18			22			29			27	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0			0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0			2.0	
I2, Clearance Lost Time [s]	2.0	5.0		2.0	5.0			3.0			3.0	
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	7.00	7.00	4.00	7.00	7.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	5.00	5.00	2.00	5.00	5.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	6	67	67	9	70	70	28	28	28	28
g / C, Green / Cycle	0.05	0.56	0.56	0.07	0.58	0.58	0.23	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.58	0.04	0.06	0.29	0.01	10000.00	0.14	0.29	0.27
s, saturation flow rate [veh/h]	1609	3475	1564	1795	3446	1615	0	1381	876	1387
c, Capacity [veh/h]	83	1950	878	134	2013	943	60	319	241	320
d1, Uniform Delay [s]	55.26	15.09	6.80	54.69	14.53	10.47	59.98	41.33	50.02	46.14
k, delay calibration	0.07	0.50	0.50	0.07	0.50	0.50	0.08	0.21	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.57	27.46	0.18	7.16	0.86	0.03	2.38	3.61	68.91	110.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	1.03	0.08	0.81	0.49	0.02	0.33	0.61	1.04	1.19
d, Delay for Lane Group [s/veh]	65.83	42.55	6.98	61.85	15.38	10.50	62.37	44.94	118.93	156.89
Lane Group LOS	E	F	A	E	B	B	E	D	F	F
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.18	22.77	0.51	3.46	7.51	0.17	0.65	5.53	11.98	19.41
50th-Percentile Queue Length [ft/ln]	54.58	569.21	12.74	86.45	187.86	4.19	16.33	138.35	299.61	485.24
95th-Percentile Queue Length [veh/ln]	3.93	31.25	0.92	6.22	12.01	0.30	1.18	9.39	18.05	29.15
95th-Percentile Queue Length [ft/ln]	98.24	781.25	22.93	155.62	300.25	7.54	29.39	234.80	451.20	728.67

Movement, Approach, & Intersection Results

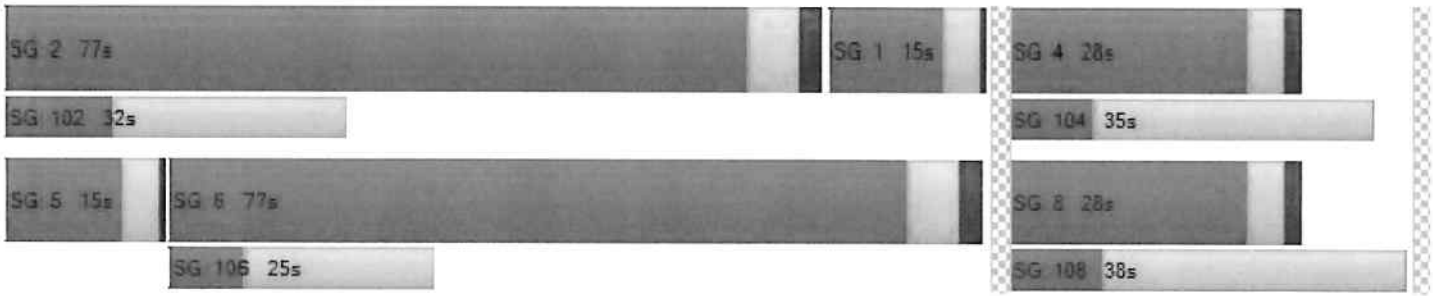
d_M, Delay for Movement [s/veh]	65.83	42.55	6.98	61.85	15.38	10.50	62.37	44.94	44.94	118.93	123.68	156.89
Movement LOS	E	F	A	E	B	B	E	D	D	F	F	F
d_A, Approach Delay [s/veh]	42.11			19.88			46.56			141.81		
Approach LOS	D			B			D			F		
d_I, Intersection Delay [s/veh]	51.66											
Intersection LOS	D											
Intersection V/C	0.988											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	14.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	3413.25	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	48.60	46.82	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.269	3.250	2.245	2.338
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	1167	383	383
d_b, Bicycle Delay [s]	10.42	10.42	39.20	39.20
l_b,int, Bicycle LOS Score for Intersection	3.324	2.475	1.737	2.079
Bicycle LOS	C	B	A	B

Sequence

Ring 1	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: OR 99E (SE McLoughlin Blvd)/SE Milport Rd

Control Type:	Signalized	Delay (sec / veh):	3.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.743

Intersection Setup

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	OR 99E			OR 99E			SE Milport Rd			SE Milport Rd		
Base Volume Input [veh/h]	0	1786	0	0	3209	0	50	19	39	34	10	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	9.00	8.00	0.00	12.00	0.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1786	0	0	3209	0	50	19	39	34	10	54
Peak Hour Factor	1.0000	0.9600	1.0000	1.0000	0.9600	1.0000	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	465	0	0	836	0	13	5	10	9	3	14
Total Analysis Volume [veh/h]	0	1860	0	0	3343	0	52	20	41	35	10	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	6	0	0	6	0
Maximum Green [s]	0	40	0	0	40	0	0	25	0	0	25	0
Amber [s]	0.0	4.7	0.0	0.0	4.7	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	98	0	0	98	0	0	22	0	0	22	0
Vehicle Extension [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	0	0	0	12	0	0	9	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	14	0	0	38	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	R	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	101	101	8	8	8	8
g / C, Green / Cycle	0.84	0.84	0.07	0.07	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.27	0.66	0.05	0.03	0.03	0.04
s, saturation flow rate [veh/h]	6792	5094	1467	1608	1400	1540
c, Capacity [veh/h]	5736	4302	152	110	150	106
d1, Uniform Delay [s]	2.00	0.00	54.63	53.37	53.61	53.95
k, delay calibration	0.50	0.50	0.15	0.15	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	1.44	3.21	2.93	1.59	5.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.33	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.78	0.47	0.37	0.30	0.53
d, Delay for Lane Group [s/veh]	2.15	1.44	57.84	56.30	55.20	59.68
Lane Group LOS	A	A	E	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.11	0.57	2.25	1.26	1.36	1.79
50th-Percentile Queue Length [ft/ln]	27.70	14.32	56.19	31.59	34.05	44.73
95th-Percentile Queue Length [veh/ln]	1.99	1.03	4.05	2.27	2.45	3.22
95th-Percentile Queue Length [ft/ln]	49.86	25.77	101.14	56.87	61.29	80.51

Movement, Approach, & Intersection Results

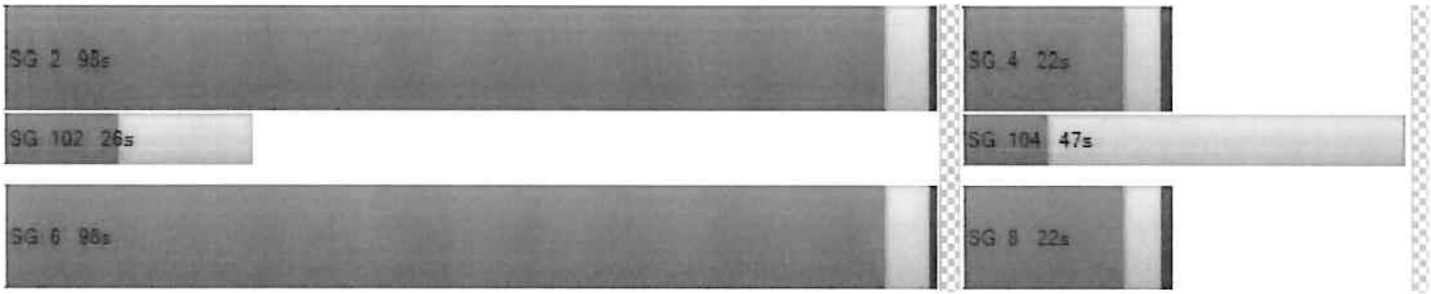
d_M, Delay for Movement [s/veh]	0.00	2.15	0.00	0.00	1.44	0.00	57.84	57.84	56.30	55.20	55.20	59.68
Movement LOS		A			A		E	E	E	E	E	E
d_A, Approach Delay [s/veh]	2.15			1.44			57.28			57.68		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	3.89											
Intersection LOS	A											
Intersection V/C	0.743											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	0.0	16.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	11886.32	0.00	13719.37	0.00
d_p, Pedestrian Delay [s]	47.70	0.00	45.07	0.00
l_p,int, Pedestrian LOS Score for Intersection	3.759	0.000	1.997	0.000
Crosswalk LOS	D	F	A	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1543	1543	283	283
d_b, Bicycle Delay [s]	3.13	3.13	44.20	44.23
l_b,int, Bicycle LOS Score for Intersection	2.327	3.398	1.746	1.726
Bicycle LOS	B	C	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: SE Main St/OR 99E

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name	SE Main St		SE Main St		OR 99E	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Main St		SE Main St		OR 99E	
Base Volume Input [veh/h]	0	58	93	0	6	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	13.00	8.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	58	93	0	6	22
Peak Hour Factor	1.0000	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	18	29	0	2	7
Total Analysis Volume [veh/h]	0	72	115	0	7	27
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	9.50	8.93
Movement LOS		A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.66	2.21
d_A, Approach Delay [s/veh]	0.00		0.00		9.05	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: SE Main St/Site Access

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.076

Intersection Setup

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			30.00			10.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

Volumes

Name	SE Main St			SE Main St			Key Bank Access			Site Access		
Base Volume Input [veh/h]	3	49	46	18	121	1	0	0	0	35	0	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	15.00	0.00	0.00	4.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	49	46	18	121	1	0	0	0	35	0	17
Peak Hour Factor	0.7400	0.7400	0.7400	0.7400	0.7400	0.7400	1.0000	1.0000	1.0000	0.7400	0.7400	0.7400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	17	16	6	41	0	0	0	0	12	0	6
Total Analysis Volume [veh/h]	4	66	62	24	164	1	0	0	0	47	0	23
Pedestrian Volume [ped/h]	0			0			0			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.02
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	7.52	0.00	0.00	0.00	0.00	0.00	11.42	11.77	9.36
Movement LOS	A	A	A	A	A	A				B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.05	0.05	0.05	0.00	0.00	0.00	0.33	0.33	0.33
95th-Percentile Queue Length [ft/ln]	0.21	0.21	0.21	1.26	1.26	1.26	0.00	0.00	0.00	8.34	8.34	8.34
d_A, Approach Delay [s/veh]	0.23			0.95			0.00			10.74		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.46											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: OR 99E (SE McLoughlin Blvd)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	45.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.968

Intersection Setup

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	370.00	100.00	100.00	375.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	OR 99E			OR 99E			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	272	847	169	127	1707	15	30	84	492	225	53	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	4.00	1.00	2.00	2.00	0.00	6.00	1.00	2.00	9.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	0	0	0	246	0	0	22
Total Hourly Volume [veh/h]	272	847	161	127	1707	15	30	84	246	225	53	13
Peak Hour Factor	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	214	41	32	431	4	8	21	62	57	13	3
Total Analysis Volume [veh/h]	275	856	163	128	1724	15	30	85	248	227	54	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	12			0			12			0		
v_di, Inbound Pedestrian Volume crossing major street [	12			0			12			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			13			6		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Split	Split	Overla	Split	Split	Split
Signal Group	1	6		5	2			8	1		4	
Auxiliary Signal Groups									1,8			
Lead / Lag	Lead			Lag								
Minimum Green [s]	4	10		6	10			6	4		6	
Maximum Green [s]	19	66		15	62			10	19		15	
Amber [s]	3.5	3.5		3.5	3.5			3.5	3.5		4.0	
All red [s]	0.5	0.5		0.5	0.5			0.5	0.5		0.5	
Split [s]	23	60		19	56			26	23		15	
Vehicle Extension [s]	2.3	6.1		2.3	6.1			2.3	2.3		2.3	
Walk [s]		7			11			8			0	
Pedestrian Clearance [s]		17			18			21			0	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0	2.0		2.0	
I2, Clearance Lost Time [s]	2.0	2.0		2.0	2.0			2.0	2.0		2.5	
Minimum Recall	No	Yes		No	Yes			No	No		No	
Maximum Recall	No	No		No	No			No	No		No	
Pedestrian Recall	No	No		No	No			No	No		No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.50	2.50
g_i, Effective Green Time [s]	19	67	67	10	58	58	16	39	11	11
g / C, Green / Cycle	0.16	0.55	0.55	0.09	0.48	0.48	0.13	0.33	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.15	0.28	0.29	0.07	0.47	0.47	0.06	0.16	0.08	0.08
s, saturation flow rate [veh/h]	1781	1840	1725	1795	1870	1864	1787	1571	1781	1693
c, Capacity [veh/h]	282	1019	955	156	902	900	238	509	158	150
d1, Uniform Delay [s]	47.14	8.89	8.93	53.88	30.05	30.12	48.22	32.39	54.48	54.48
k, delay calibration	0.40	0.50	0.50	0.07	0.50	0.50	0.07	0.42	0.14	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	42.16	1.84	2.02	6.65	22.36	22.85	0.93	2.76	27.92	28.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.98	0.51	0.52	0.82	0.96	0.97	0.48	0.49	0.96	0.95
d, Delay for Lane Group [s/veh]	89.30	10.73	10.95	60.53	52.41	52.97	49.15	35.15	82.40	83.05
Lane Group LOS	F	B	B	E	D	D	D	D	F	F
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	11.08	4.92	4.73	4.09	28.98	29.13	3.23	6.08	5.83	5.57
50th-Percentile Queue Length [ft/ln]	276.96	122.99	118.26	102.23	724.46	728.15	80.73	151.93	145.83	139.16
95th-Percentile Queue Length [veh/ln]	16.54	8.56	8.30	7.36	37.81	37.98	5.81	10.12	9.79	9.44
95th-Percentile Queue Length [ft/ln]	413.43	213.93	207.44	184.01	945.17	949.42	145.31	253.01	244.85	235.89

Movement, Approach, & Intersection Results

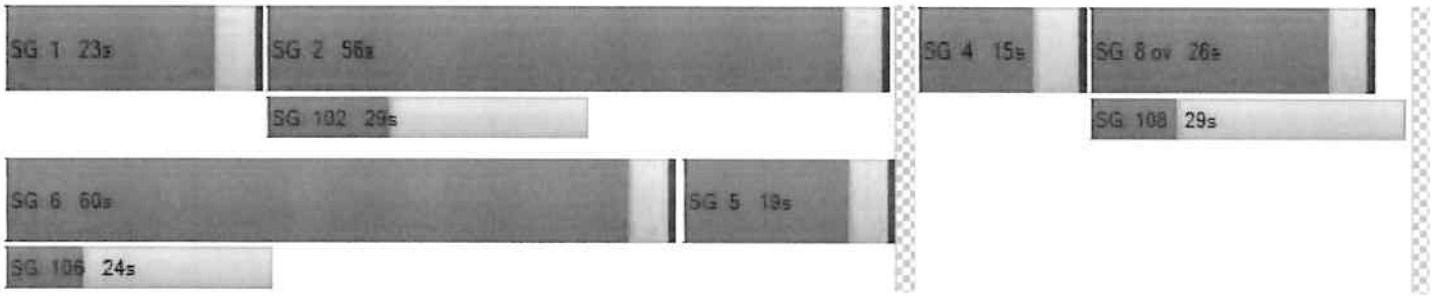
d_M, Delay for Movement [s/veh]	89.30	10.82	10.95	60.53	52.69	52.97	49.15	49.15	35.15	82.62	83.05	83.05
Movement LOS	F	B	B	E	D	D	D	D	D	F	F	F
d_A, Approach Delay [s/veh]	27.51			53.23			39.59			82.72		
Approach LOS	C			D			D			F		
d_I, Intersection Delay [s/veh]	45.49											
Intersection LOS	D											
Intersection V/C	0.968											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	0.0	15.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	300.78	0.00	0.00	6662.70
d_p, Pedestrian Delay [s]	48.60	0.00	45.94	49.50
l_p,int, Pedestrian LOS Score for Intersection	3.055	0.000	2.662	2.137
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	867	367	175
d_b, Bicycle Delay [s]	17.08	19.27	40.28	50.11
l_b,int, Bicycle LOS Score for Intersection	2.634	3.100	2.564	2.081
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: SE Main St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

Intersection Setup

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE Main St			SE Main St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	13	40	48	76	63	54	63	161	56	39	149	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	7.00	25.00	2.00	5.00	3.00	4.00	2.00	10.00	22.00	5.00	8.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	48	76	63	54	63	161	56	39	149	46
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	11	13	21	17	15	17	44	15	11	40	13
Total Analysis Volume [veh/h]	14	43	52	83	68	59	68	175	61	42	162	50
Pedestrian Volume [ped/h]	6			0			12			26		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	621	647	688	670
Degree of Utilization, x	0.18	0.32	0.44	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.63	1.41	2.27	1.77
95th-Percentile Queue Length [ft]	15.81	35.20	56.71	44.22
Approach Delay [s/veh]	10.03	11.23	12.31	11.60
Approach LOS	B	B	B	B
Intersection Delay [s/veh]	11.56			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 6: SE 21st St/SE Harrison St

Control Type:	All-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

Intersection Setup

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00			20.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SE 21st St			SE 21st St			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	17	9	43	21	6	21	11	261	13	39	196	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	25.00	0.00	10.00	0.00	0.00	0.00	0.00	6.00	0.00	19.00	7.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	9	43	21	6	21	11	261	13	39	196	19
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	3	13	6	2	6	3	77	4	11	58	6
Total Analysis Volume [veh/h]	20	11	51	25	7	25	13	307	15	46	231	22
Pedestrian Volume [ped/h]	7			10			8			5		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	667	669	760	746
Degree of Utilization, x	0.12	0.09	0.44	0.40

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.42	0.28	2.26	1.94
95th-Percentile Queue Length [ft]	10.45	6.97	56.61	48.44
Approach Delay [s/veh]	9.15	8.89	11.40	11.01
Approach LOS	A	A	B	B
Intersection Delay [s/veh]	10.83			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 7: SE 23rd St/SE Harrison St

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	20.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		No	

Volumes

Name	SE Harrison St		SE 23rd St		SE Harrison St	
Base Volume Input [veh/h]	10	315	6	9	244	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	14.00	6.00	0.00	17.00	8.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	315	6	9	244	9
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	89	2	3	69	3
Total Analysis Volume [veh/h]	11	358	7	10	277	10
Pedestrian Volume [ped/h]	0		3		0	

Intersection Settings

Priority Scheme	Free	Stop	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance		No	
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.02	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	8.01	0.00	13.57	11.26	0.00	0.00
Movement LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh/ln]	1.30	1.30	0.10	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	32.58	32.58	2.55	2.55	0.00	0.00
d_A, Approach Delay [s/veh]	0.24		12.21		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: OR 224 (Milwaukie Expy)/SE Harrison St

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.912

Intersection Setup

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	160.00	100.00	160.00	615.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	OR 224			OR 224			SE Harrison St			SE Harrison St		
Base Volume Input [veh/h]	75	1520	89	312	1815	32	5	273	64	69	196	172
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	7.00	2.00	3.00	1.00	3.00	0.00	0.00	5.00	6.00	4.00	6.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	1520	89	312	1815	32	5	273	64	69	196	172
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	392	23	80	468	8	1	70	16	18	51	44
Total Analysis Volume [veh/h]	77	1567	92	322	1871	33	5	281	66	71	202	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	10	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	4			6			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			4			6		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			1			1		
v_ci, Inbound Pedestrian Volume crossing minor street [	1			1			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			2			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	72.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	1	6		5	2			8			4	
Auxiliary Signal Groups												
Lead / Lag	Lag			Lead								
Minimum Green [s]	4	10		4	10			6			6	
Maximum Green [s]	15	50		15	50			20			20	
Amber [s]	3.5	5.0		3.5	5.0			3.5			3.5	
All red [s]	0.5	2.0		0.5	2.0			1.5			1.5	
Split [s]	15	70		30	85			30			30	
Vehicle Extension [s]	2.3	3.9		2.3	3.9			2.5			2.5	
Walk [s]		7			10			9			8	
Pedestrian Clearance [s]		18			22			29			27	
Delayed Vehicle Green [s]	0.0	0.0		0.0	0.0			0.0			0.0	
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0		2.0	2.0			2.0			2.0	
I2, Clearance Lost Time [s]	2.0	5.0		2.0	5.0			3.0			3.0	
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]												
Detector Length [ft]												
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	7.00	7.00	4.00	7.00	7.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	5.00	5.00	2.00	5.00	5.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	7	60	60	25	78	78	29	29	29	29
g / C, Green / Cycle	0.06	0.46	0.46	0.19	0.60	0.60	0.22	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.05	0.44	0.06	0.18	0.53	0.02	0.13	0.13	0.24	0.20
s, saturation flow rate [veh/h]	1709	3560	1555	1795	3532	1614	1253	1493	635	1484
c, Capacity [veh/h]	96	1657	724	344	2123	970	304	328	180	326
d1, Uniform Delay [s]	59.38	23.13	13.77	51.69	21.97	10.55	43.63	45.45	55.49	49.57
k, delay calibration	0.07	0.50	0.50	0.35	0.50	0.50	0.15	0.17	0.47	0.36
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.17	12.50	0.36	27.52	5.69	0.07	1.95	2.60	32.57	26.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.95	0.13	0.94	0.88	0.03	0.52	0.59	0.83	0.92
d, Delay for Lane Group [s/veh]	68.55	35.64	14.13	79.21	27.66	10.61	45.57	48.05	88.05	75.77
Lane Group LOS	E	D	B	E	C	B	D	D	F	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.67	20.49	1.16	12.76	23.72	0.39	4.58	5.91	6.64	11.95
50th-Percentile Queue Length [ft/ln]	66.77	512.28	29.09	319.12	593.07	9.77	114.49	147.80	166.03	298.86
95th-Percentile Queue Length [veh/ln]	4.81	27.92	2.09	18.62	31.71	0.70	8.09	9.90	10.87	17.62
95th-Percentile Queue Length [ft/ln]	120.19	697.88	52.37	465.60	792.77	17.59	202.23	247.49	271.69	440.62

Movement, Approach, & Intersection Results

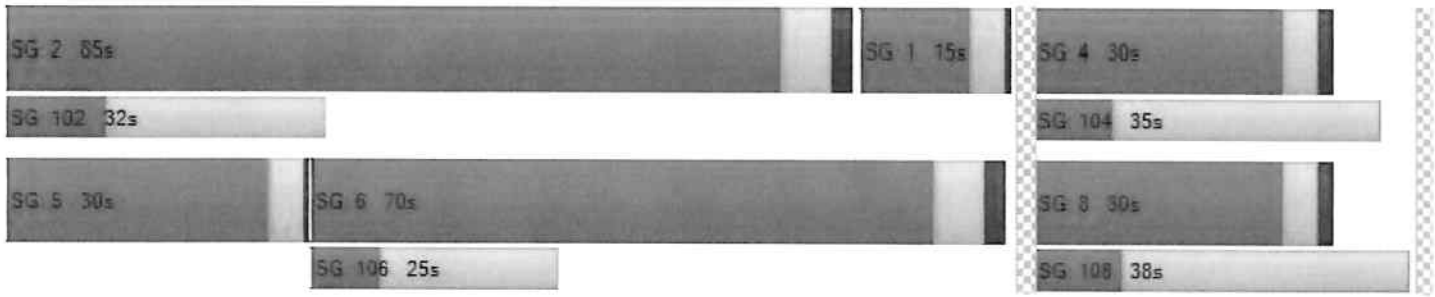
d_M, Delay for Movement [s/veh]	68.55	35.64	14.13	79.21	27.66	10.61	45.57	46.70	48.05	88.05	80.58	75.77
Movement LOS	E	D	B	E	C	B	D	D	D	F	F	E
d_A, Approach Delay [s/veh]	35.96			34.87			46.94			79.87		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	40.41											
Intersection LOS	D											
Intersection V/C	0.912											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	12.0	14.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	2443.32	1379.14	11526.78	7524.62
d_p, Pedestrian Delay [s]	52.65	53.55	51.75	54.47
l_p,int, Pedestrian LOS Score for Intersection	3.381	3.338	2.282	2.381
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	969	1200	385	385
d_b, Bicycle Delay [s]	17.28	10.40	42.45	42.40
l_b,int, Bicycle LOS Score for Intersection	2.992	3.396	1.850	1.931
Bicycle LOS	C	C	A	A

Sequence

Ring 1	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix G 95th Percentile Queuing Analysis Summary

Appendix G: 95th Percentile Queuing Analysis Summary

February 2021

Henley Place

Project #: 25641

	Intersection	Movement	Queue Storage (feet)	95th Percentile Queues						Queue Storage Adequate?	Notes
				AM Peak Hour			PM Peak Hour				
				Existing	Background	Total	Existing	Background	Total		
1	OR 99E/SE Milport Road	NB	>2,000	150	150	150	50	50	50	Yes	
		SB	2,050	100	100	100	25	25	50	Yes	
		EB LT/TH	>300	175	175	175	100	125	125	Yes	Approximately 70 feet storage available to frontage road wetst of OR 99E
		WB LT/TH	50	50	50	50	75	75	75	Yes	SE Main Street 3-way intersection has additional storage
2	SE Main Street/OR 99E	EB LT	25	25	25	25	25	25	25	Yes	
		EB RT	25	25	25	25	25	25	25	Yes	
3	SE Main Street/Site Access	WB	75	25	25	25	25	25	25	Yes	
4	OR 99E/SE Harison Street	NB LT	370	525	575	575	375	425	425	No	
		NB TH/RT	470	300	325	375	200	200	225	Yes	
		SB LT	375	150	150	150	150	175	200	Yes	
		SBT TH/RT	>2,000	275	300	300	900	950	950	Yes	
		EB LT/TH	700	100	100	100	150	150	150	Yes	
		EB RT	150	75	75	75	250	275	275	No	
		WB LT	200	100	100	100	225	250	250	No	Storage reflects distance to SE Main Street, 1 car length added with site trips
		WB LT/TH/RT	200	125	150	150	225	225	250	No	Storage reflects distance to SE Main Street
5	SE Main Street/SE Harrison Street	NB	190	25	25	25	25	25	25	Yes	
		SB	>200	25	25	25	50	50	50	Yes	
		EB	200	50	50	50	50	50	75	Yes	
		WB	200	50	50	50	50	50	50	Yes	
6	SE 21st Street/SE Harrison Street	NB	190	25	25	25	25	25	25	Yes	
		SB	100	25	25	25	25	25	25	Yes	
		EB	200	25	25	50	75	75	75	Yes	
		WB	>200	50	50	50	50	50	50	Yes	
7	SE 23rd Street/SE Harrison Street	SB	>100	25	25	25	25	25	25	Yes	
8	OR 224/SE Harrison Street	NBLT	160	100	100	100	125	125	125	Yes	
		NBTH	425	725	825	800	600	750	700	No	Storage reflects distance to SE Monroe Street, no increase with site trips
		NBRT	150	25	25	25	50	75	75	Yes	
		SB LT	615	150	175	175	450	475	475	Yes	
		SBTH	>1,500	300	325	325	750	800	800	Yes	
		SBRT	160	25	25	25	25	25	25	Yes	
		EB TH/LT	200	50	50	50	225	225	225	No	Storage reflects striped lane length to SE 29th Avenue, no change with site trips
		EB TH/RT	>300	225	225	250	225	250	250	Yes	
		WB TH/LT	225	310	450	450	250	275	275	No	Storage reflects approximate striped lane length to railroad crossing
		WB TH/RT	500	525	675	725	350	400	450	No	Storage reflects approximate distance to SE 32nd Avenue less railroad crossing area

Queues are rounded up to the nearest vehicle length (approximately 25 feet).

Shaded cells indicate 95th percentile queue exceeds available storage

Bold and red text/shaded cells indicate 95th percentile queue exceeds available storage and site development increases queue length