



**Public Safety Committee Agenda  
City Hall Council Chambers  
104 Bridge Street South**

February 1, 2024 09:00 AM

Don Tracy, Co-Chair/Councilmember  
Stanley Holland, Co-Chair/Councilmember  
Scott Larson, City Administrator  
Devon Gabreluk, Police Chief  
Kristin Wetzel, Orting Police

**Call to Order**

- Approval of January 2024 Minutes

**Agenda**

- AB24-13 - Emergency Management Role
- AB24-12 - Police Guild MOU
- Information - Orting Safety Action Plan
- Monthly Crime Statistics
- Information - 2024 Orting EOC Exercise
- Information - 2024 Regional Lahar Drill
- Information - 2024 "Arrive Alive" Event

**Additional Comments/Good of the Order**

**Action Items**

- To Study Session - AB24-003 - Police Guild MOU

**Adjournment**

**Next Meeting: *March 7, 2024 – 09:00 am***

**Orting Public Safety Committee Meeting  
City Hall Council Chambers  
January 2, 2024**

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**ATTENDANCE**     Tod Gunther, Chair/Councilmember  
Don Tracy, Chair/Councilmember  
Scott Larson, City Administrator  
Chief Devon Gabreluk, Orting Police Dept.  
Kristin Wetzel, Orting Police Dept.

**Call to Order at 8:15 AM**

**AGENDA ITEMS**

**Approval of December 2023 Minutes**

**Monthly Crime Statistics**

- All of the 2023 department crime statistics were reviewed with the committee. Chief Gabreluk provided a complete breakdown of type of crime with comparable statistics from the last several years.

**Police Surplus**

- The police department has a surplus of SWAT equipment. This equipment was assigned to an officer that is no longer on staff. Chief Gabreluk reported that Sumner Police Department would like to purchase the surplus items. This would allow the department to recover costs associated with the original purchase. The committee requested this item be moved to the next study session.

**Other Business**

- **Sergeant Promotion** - Zach Kenyon was promoted to Sergeant. He will be sworn in at the next council meeting.
- **Recreational Vehicle Parking** – The City Administrator requested the committee review the Permissible Parking of Recreational Vehicles on Private Property ordinance. The City is seeking council input on this ordinance as well as the current permit process.
- **Safety Grant** – City Project Manager, John Bielka, informed the committee that the City acquired a federal grant to conduct a comprehensive safety action plan. He requested committee input to identify areas of potential focus.

**Meeting Adjourned at 9:05 AM**



**City of Orting  
Council Agenda Summary Sheet**

	<b>Agenda Bill #</b>	<b>Recommending Committee</b>	<b>Study Session Dates</b>	<b>Regular Meeting Dates</b>
<b>Subject: Emergency Management Coordinator – Job Description &amp; Budget Amendment</b>	<b>AB24-13</b>	<b>Public Safety</b>		
		<b>2.1.24</b>		
	<b>Department:</b>	Administration		
	<b>Date Submitted:</b>	<b>January 25, 2024</b>		
<b>Cost of Item:</b>	N/A			
<b>Amount Budgeted:</b>	N/A			
<b>Unexpended Balance:</b>	N/A			
<b>Bars #:</b>	N/A			
<b>Timeline:</b>	<b>End of Month</b>			
<b>Submitted By:</b>	<b>Chief Gabreluk, Scott Larson</b>			
<b>Fiscal Note:</b> None				
<b>Attachments:</b> Budget Amendment Ordinance, Job Description				
<b>SUMMARY STATEMENT:</b>				
<p>The 2024 Budget accounted for hiring a part-time Emergency Management Coordinator, but upon developing the job description, it was discovered that both the headcount and wages for this position were not included in our approved staffing matrix. To address this, an updated staffing matrix has been prepared, proposing a wage range of \$34.66 to \$39.02 per hour. This range was determined by comparing wages paid by East Pierce Interlocal Coalition (EPIC) partners for similar roles, due to limited wage data from the Association of Washington Cities for such positions. Should we choose to pay the midpoint wage of \$36.78 per hour, the total annual cost, including benefits, would be approximately \$42,076.32. The overall budget allocated for emergency management is \$70,000. This budget includes not only the coordinator's salary but also other expenses such as our EPIC dues, which amount to around \$15,000.</p>				
<b>RECOMMENDED ACTION: Move to Study Session.</b>				
<b>FUTURE MOTION: Motion to adopt Ordinance No. 2024-1XXX, amending the City of Orting 2024 Budget, providing for appropriation and expenditure of funds received in excess of estimated revenues; adopting various transfers; and providing for severability; and establishing an effective date.</b>				

# 2024 Job Classifications and Pay Ranges

Salary (Low & High)

Position	Range	Approved		Department	Low	High	*2024 Salaries
		FTE Positions					
<b>Unrepresented Employees</b>							
City Administrator	51	1		GG	164,964.80	185,660.80	\$ 169,873.68
Finance Director	40	1		GG	119,184.00	134,139.20	\$ 122,719.92
Community Development Director/Planner	39	1		GG	115,710.40	130,228.80	
City Clerk	30	1		GG	88,670.40	99,798.40	\$ 96,334.24
Administrative Assistant	18	1		GG	62,192.00	70,012.80	\$ 65,612.26
Events & Activities Coordinator	17	0.65		GG	39,248.56	44,169.84	\$ 41,839.67
HR Clerk	23	1		GG	72,092.80	81,161.60	\$ 73,841.56
Court Administrator	30	1		Court	88,670.40	99,798.40	\$ 96,334.24
Police Chief	48	1		Police	150,966.40	169,915.20	\$ 159,247.61
Police Commander	38	1		Police	112,340.80	126,422.40	
Capital Projects Manager	40	1		PW	119,184.00	134,139.20	\$ 129,469.52
City Engineer (PE)	43	1		PW	130,228.80	146,577.60	
Public Works Director	43	1		PW	130,228.80	146,577.60	\$ 142,967.37
Deputy Public Works Director	36	1		PW	105,892.80	119,184.00	
Building Official	28	1		GG	83,595.20	94,078.40	\$ 91,309.01
Emergency Management Coordinator	23	0.5		GG	36,046.40	40,580.80	
Term Limited GIS Technician	18	1		PW	62,192.00	70,012.80	\$ 62,193.87
Term Limited Landscape Maintenance Supported Employment	1	1		PW	37,633.98	42,357.38	
	1	0.2		PW	7,526.80	8,471.48	
<b>Police Wages (Per CBA)</b>							
Officer	P24	7		Police	83,916.14	97,285.03	
Detective	P26	1		Police	91,709.28	100,212.84	
Lieutenant	P28	2		Police	111,881.02	111,881.02	
<b>Public Works and Administrative Staff (Per CBA)</b>							
Sr. Accountant	21	1		GG	67,953.60	76,502.40	
Building Inspector/Permits	20	0		GG	65,977.60	74,256.00	
Permit & PW Support	17	1		GG	60,382.40	67,953.60	
Court Clerk	16	0.5		GG	58,635.20	65,977.60	
PW Supervisor	29	1		PW	86,091.20	96,907.20	
Wastewater Plant Supervisor	35	1		PW	102,793.60	115,710.40	
Water Plant Supervisor	27	1		PW	81,161.60	91,332.80	
Maintenance Worker Lead	22	1		PW	70,012.80	78,790.40	
Wastewater OIT	15			PW	56,908.80	64,064.00	
Wastewater I	18			PW	62,192.00	70,012.80	
Wastewater II	22			PW	70,012.80	78,790.40	
Wastewater III	27			PW	81,161.60	91,332.80	
Water OIT	15			PW	56,908.80	64,064.00	
Water I	18			PW	62,192.00	70,012.80	
Water II	22			PW	70,012.80	78,790.40	Should be 21
Water III	25			PW	76,502.40	86,091.20	
Maintenance Worker I	15			PW	56,908.80	64,064.00	
Maintenance Worker II	20			PW	65,977.60	74,256.00	
Stormwater Worker I	16			PW	58,635.20	65,977.60	
Stormwater Worker II	21			PW	67,953.60	76,502.40	
Code Enforcement	24	1		GG	74,256.00	83,595.20	
Police Records Clerk I	15	1		GG	56,908.80	64,064.00	

~Positions with a box around their "FTE" represent a series of positions that can be hired, with the maximum number of employees employed for that series limited to the FTE approved in the budget.

\*Current non-represented staff will be paid no more than shown.

CITY OF ORTING - 2024 WAGE MATRIX

Unrepresented Wage Matrix Values

COLA: 0.00% Per COLA: 0.00%

Step	A	B	C	D	E
<b>PW &amp; Administrative Staff</b>					
1	\$18.09	\$18.64	\$19.20	\$19.77	\$20.36
2	\$18.64	\$19.20	\$19.77	\$20.36	\$20.98
3	\$19.20	\$19.77	\$20.36	\$20.98	\$21.60
4	\$19.77	\$20.36	\$20.98	\$21.60	\$22.25
5	\$20.36	\$20.98	\$21.60	\$22.25	\$22.92
6	\$20.98	\$21.60	\$22.25	\$22.92	\$23.61
7	\$21.60	\$22.25	\$22.92	\$23.61	\$24.32
8	\$22.25	\$22.92	\$23.61	\$24.32	\$25.05
9	\$22.92	\$23.61	\$24.31	\$25.04	\$25.79
10	\$23.61	\$24.31	\$25.04	\$25.79	\$26.57
11	\$24.31	\$25.04	\$25.79	\$26.57	\$27.36
12	\$25.04	\$25.79	\$26.57	\$27.36	\$28.19
13	\$25.79	\$26.57	\$27.36	\$28.19	\$29.03
14	\$26.57	\$27.36	\$28.19	\$29.03	\$29.90
15	\$27.36	\$28.19	\$29.03	\$29.90	\$30.80
16	\$28.19	\$29.03	\$29.90	\$30.80	\$31.72
17	\$29.03	\$29.90	\$30.80	\$31.72	\$32.67
18	\$29.90	\$30.80	\$31.72	\$32.67	\$33.66
19	\$30.80	\$31.72	\$32.67	\$33.66	\$34.66
20	\$31.72	\$32.67	\$33.66	\$34.66	\$35.70
21	\$32.67	\$33.66	\$34.66	\$35.70	\$36.78
22	\$33.66	\$34.66	\$35.70	\$36.78	\$37.88
23	\$34.66	\$35.70	\$36.78	\$37.88	\$39.02
24	\$35.70	\$36.78	\$37.88	\$39.02	\$40.19
25	\$36.78	\$37.88	\$39.02	\$40.19	\$41.39
26	\$37.88	\$39.02	\$40.19	\$41.39	\$42.63
27	\$39.02	\$40.19	\$41.39	\$42.63	\$43.91
28	\$40.19	\$41.39	\$42.63	\$43.91	\$45.23
29	\$41.39	\$42.63	\$43.91	\$45.23	\$46.59
30	\$42.63	\$43.91	\$45.23	\$46.59	\$47.98
31	\$43.91	\$45.23	\$46.59	\$47.98	\$49.42
32	\$45.23	\$46.59	\$47.98	\$49.42	\$50.91
33	\$46.59	\$47.98	\$49.42	\$50.91	\$52.43
34	\$47.98	\$49.42	\$50.91	\$52.43	\$54.01
35	\$49.42	\$50.91	\$52.43	\$54.01	\$55.63
36	\$50.91	\$52.43	\$54.01	\$55.63	\$57.30
37	\$52.43	\$54.01	\$55.63	\$57.30	\$59.01
38	\$54.01	\$55.63	\$57.30	\$59.01	\$60.78
39	\$55.63	\$57.30	\$59.01	\$60.78	\$62.61
40	\$57.30	\$59.01	\$60.78	\$62.61	\$64.49
41	\$59.01	\$60.78	\$62.61	\$64.49	\$66.42
42	\$60.78	\$62.61	\$64.49	\$66.42	\$68.41
43	\$62.61	\$64.49	\$66.42	\$68.41	\$70.47
44	\$64.49	\$66.42	\$68.41	\$70.47	\$72.58
45	\$66.42	\$68.41	\$70.47	\$72.58	\$74.76
46	\$68.41	\$70.47	\$72.58	\$74.76	\$77.00
47	\$70.47	\$72.58	\$74.76	\$77.00	\$79.31
48	\$72.58	\$74.76	\$77.00	\$79.31	\$81.69
49	\$74.76	\$77.00	\$79.31	\$81.69	\$84.14
50	\$77.00	\$79.31	\$81.69	\$84.14	\$86.66
51	\$79.31	\$81.69	\$84.14	\$86.66	\$89.26

matches contract 3% increase

2023 Totals

Unrepresented Employees					
City Administrator	51	1	GG	\$ 160,163.33	\$ 180,275.25
Finance Director	40	1	GG	\$ 115,699.50	\$ 130,220.80
City Planner	37	1	GG	\$ 105,881.43	\$ 119,170.48
City Clerk	30	1	GG	\$ 86,091.29	\$ 96,896.51
Building Official	27	1	GG	\$ 78,785.73	\$ 88,674.03
Administrative Assistant	17	1	GG	\$ 60,382.70	\$ 67,961.26
Events & Activities Coordinat	18	1	GG	\$ 58,623.98	\$ 65,981.81
Term Limited Records Organi	8	0	GG	\$ -	\$ -
HR Clerk	21	1	GG	\$ 63,433.81	\$ 71,395.32
Court Administrator	29	1	Court	\$ 83,583.78	\$ 94,074.28
Police Chief	48	1	Police	\$ 146,564.66	\$ 164,959.82
Police Commander	38	1	Police	\$ 109,057.87	\$ 122,745.60
Capital Projects Manager	40	1	PW	\$ 115,699.50	\$ 130,220.80
City Engineer	45	1	PW	\$ 134,127.43	\$ 150,961.00
Public Works Director	42	1	PW	\$ 122,745.60	\$ 138,151.25
Term Limited Landscape Mai	1	1	PW	\$ 36,532.53	\$ 41,117.68
Supported Employment	1	0.2	PW	\$ 6,240.00	\$ 6,240.00
Supported Employment	1	0.2	PW	\$ 7,526.80	\$ 8,471.48

2023 Totals with 3% totals

Unrepresented Employees					
City Administrator	51	1	GG	\$ 164,968.23	\$ 185,683.50
Finance Director	40	1	GG	\$ 119,170.48	\$ 134,127.43
City Planner	37	1	GG	\$ 109,057.87	\$ 122,745.60
City Clerk	30	1	GG	\$ 86,074.03	\$ 99,803.40
Building Official	27	1	GG	\$ 81,149.30	\$ 91,234.25
Administrative Assistant	18	1	GG	\$ 62,194.18	\$ 70,000.10
Events & Activities Coordinat	17	1	GG	\$ 60,382.70	\$ 67,961.26
Term Limited Records Organi	8	0	GG	\$ -	\$ -
HR Clerk	21	1	GG	\$ 65,336.83	\$ 73,537.17
Court Administrator	29	1	Court	\$ 86,091.29	\$ 96,896.51
Police Chief	48	1	Police	\$ 150,961.60	\$ 169,908.61
Police Commander	38	1	Police	\$ 112,329.61	\$ 126,427.96
Capital Projects Manager	40	1	PW	\$ 119,170.48	\$ 134,127.43
City Engineer	45	1	PW	\$ 138,151.25	\$ 155,490.45
Public Works Director	42	1	PW	\$ 126,427.96	\$ 142,295.79
Term Limited Landscape Mai	1	1	PW	\$ 37,638.50	\$ 42,351.21
Supported Employment	1	0.2	PW	\$ 6,427.20	\$ 6,427.20
Supported Employment	1	0.2	PW	\$ 7,752.60	\$ 8,725.62

# CITY OF ORTING- 2020 WAGE MATRIX

COLA:  

Pol MKT Increase: 0.0%

Sgt. MKT Increase: 0.0%

Step	C	D	E	F	G	H	
Range	Police						
P24	\$40.34	\$41.56	\$42.81	\$44.09	\$45.42	\$46.77	<b>Off Det Lt</b>
P26			\$44.09	\$45.42	\$46.78	\$48.18	
P28						\$53.79	

# CITY OF ORTING- 2024 WAGE MATRIX

COLA:      

Step	A	B	C	D	E
Range					
1	\$18.09	\$18.64	\$19.20	\$19.77	\$20.36
2	\$18.64	\$19.20	\$19.77	\$20.36	\$20.98
3	\$19.20	\$19.77	\$20.36	\$20.98	\$21.60
4	\$19.77	\$20.36	\$20.98	\$21.60	\$22.25
5	\$20.36	\$20.98	\$21.60	\$22.25	\$22.92
6	\$20.98	\$21.60	\$22.25	\$22.92	\$23.61
7	\$21.60	\$22.25	\$22.92	\$23.61	\$24.32
8	\$22.25	\$22.92	\$23.61	\$24.32	\$25.05
9	\$22.92	\$23.61	\$24.31	\$25.04	\$25.79
10	\$23.61	\$24.31	\$25.04	\$25.79	\$26.57
11	\$24.31	\$25.04	\$25.79	\$26.57	\$27.36
12	\$25.04	\$25.79	\$26.57	\$27.36	\$28.19
13	\$25.79	\$26.57	\$27.36	\$28.19	\$29.03
14	\$26.57	\$27.36	\$28.19	\$29.03	\$29.90
15	\$27.36	\$28.19	\$29.03	\$29.90	\$30.80
16	\$28.19	\$29.03	\$29.90	\$30.80	\$31.72
17	\$29.03	\$29.90	\$30.80	\$31.72	\$32.67
18	\$29.90	\$30.80	\$31.72	\$32.67	\$33.66
19	\$30.80	\$31.72	\$32.67	\$33.66	\$34.66
20	\$31.72	\$32.67	\$33.66	\$34.66	\$35.70
21	\$32.67	\$33.66	\$34.66	\$35.70	\$36.78
22	\$33.66	\$34.66	\$35.70	\$36.78	\$37.88
23	\$34.66	\$35.70	\$36.78	\$37.88	\$39.02
24	\$35.70	\$36.78	\$37.88	\$39.02	\$40.19
25	\$36.78	\$37.88	\$39.02	\$40.19	\$41.39
26	\$37.88	\$39.02	\$40.19	\$41.39	\$42.63
27	\$39.02	\$40.19	\$41.39	\$42.63	\$43.91
28	\$40.19	\$41.39	\$42.63	\$43.91	\$45.23
29	\$41.39	\$42.63	\$43.91	\$45.23	\$46.59
30	\$42.63	\$43.91	\$45.23	\$46.59	\$47.98
31	\$43.91	\$45.23	\$46.59	\$47.98	\$49.42
32	\$45.23	\$46.59	\$47.98	\$49.42	\$50.91
33	\$46.59	\$47.98	\$49.42	\$50.91	\$52.43
34	\$47.98	\$49.42	\$50.91	\$52.43	\$54.01
35	\$49.42	\$50.91	\$52.43	\$54.01	\$55.63
36	\$50.91	\$52.43	\$54.01	\$55.63	\$57.30
37	\$52.43	\$54.01	\$55.63	\$57.30	\$59.01
38	\$54.01	\$55.63	\$57.30	\$59.01	\$60.78
39	\$55.63	\$57.30	\$59.01	\$60.78	\$62.61

40	\$57.30	\$59.01	\$60.78	\$62.61	<b>\$64.49</b>
41	\$59.01	\$60.78	\$62.61	\$64.49	<b>\$66.42</b>
42	\$60.78	\$62.61	\$64.49	\$66.42	<b>\$68.41</b>
43	\$62.61	\$64.49	\$66.42	\$68.41	<b>\$70.47</b>
44	\$64.49	\$66.42	\$68.41	\$70.47	<b>\$72.58</b>
45	\$66.42	\$68.41	\$70.47	\$72.58	<b>\$74.76</b>
46	68.41	70.47	72.58	74.76	77
47	70.47	72.58	74.76	77	79.31
48	72.58	74.76	77	79.31	81.69
49	74.76	77	79.31	81.69	84.14
50	77	79.31	81.69	84.14	86.66
51	79.31	81.69	84.14	86.66	89.26
52	81.69	84.14	86.66	89.26	91.94
53	84.14	86.66	89.26	91.94	94.7
54	86.66	89.26	91.94	94.7	97.54
55	89.26	91.94	94.7	97.54	100.47
56	91.94	94.7	97.54	100.47	103.48
57	94.7	97.54	100.47	103.48	106.59
58	97.54	100.47	103.48	106.59	109.78
59	100.47	103.48	106.59	109.78	113.08
60	103.48	106.59	109.78	113.08	116.47



CITY OF ORTING  
WASHINGTON  
**ORDINANCE NO. 2024-1XXX**

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**AN ORDINANCE OF THE CITY OF ORTING, WASHINGTON, AMENDING ORDINANCE NO. 2023-1119, AMENDING THE CITY OF ORTING 2024 BUDGET, PROVIDING FOR APPROPRIATION AND EXPENDITURE OF FUNDS RECEIVED IN EXCESS OF ESTIMATED REVENUES; ADOPTING VARIOUS TRANSFERS; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE**

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**WHEREAS**, Washington State law, Chapter 35A.33 RCW provides for the annual adoption of the City’s budget and provides procedures for filing of the proposed budget, deliberations, public hearings, final fixing, and any subsequent adjustments to the budget; and

**WHEREAS**, the City Council adopted the 2024 budget pursuant to Ordinance No. 2023-1119; and

**WHEREAS**, the expenditures as classified and itemized in the adopted budget as amended constitute the City's appropriations for the ensuing fiscal year provided that the budget Ordinance may be amended by ordinance to provide for appropriation and expenditure of funds received in excess of the estimated revenues during the calendar year; and

**WHEREAS**, the City has received funds that are in excess of the estimated revenues for the 2024 budget year and desires to amend the 2024 budget to provide for the appropriation and expenditure of said funds; and

**WHEREAS**, this amendment to the 2023 budget could not have been reasonably foreseen during budget development; and

**WHEREAS**, the Council finds that the amendments authorized by this Ordinance are consistent with applicable laws and financial policies, and further the public’s health, safety and welfare;

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ORTING, WASHINGTON, DO ORDAIN AS FOLLOWS:**

**Section 1. Amending Section 4.** The job classifications and pay ranges for employees of the City of Orting is hereby amended as shown in Exhibit A.

**Section 2. Corrections.** The City Clerk is authorized to make necessary corrections to this Ordinance including, but not limited to, the correction of scrivener’s/clerical errors, references, Ordinance numbering, section/subsection numbers and any references thereto.

**Section 3. Severability.** Should any section, paragraph, sentence, clause or phrase of this Ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this Ordinance be pre-empted by state or federal law or regulation, such decision or pre-emption shall not affect the validity of the remaining portions of this Ordinance or its application to other persons or circumstances.

**Section 4. Effective Date.** This Ordinance shall be published in the official newspaper of the City, and shall take effect and be in full force five (5) days after the date of publication.

**ADOPTED BY THE CITY COUNCIL AT A REGULAR MEETING THEREOF  
ON THE XXth DAY OF FEBRUARY, 2024.**

CITY OF ORTING

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Joshua Penner, Mayor

ATTEST/AUTHENTICATED:

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Kimberly Agfalvi, CMC, City Clerk

Approved as to form:

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Charlotte Archer  
Inslee, Best, Doezie & Ryder, P.S.  
City Attorney

Filed with the City Clerk:  
Passed by the City Council:  
Ordinance No.:  
Date of Publication:  
Effective Date:

# CITY OF ORTING

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## JOB DESCRIPTION

Job Title: Emergency Management  
Coordinator/Specialist  
Reports to: Police Chief

Department: Administration

Revision Date:

Hourly Wage 2024: \$34.66 - \$39.02

Closing Date:

### SUMMARY DESCRIPTION

Under the supervision of the Police Chief, the Emergency Management Coordinator performs program support for the City of Orting and East Pierce Interlocal Coalition for Emergency Management (EPIC). This is a part-time non-represented, non-Civil Service position. A typical work week is 20 hours with a flexible schedule to accommodate evening and weekend meetings, and events as required.

### ESSENTIAL DUTIES:

**Duties may include, but are not limited to the following:**

1. Set up meetings, trainings, and presentations, and coordinate public education materials, related to the Emergency Management Plan and other disaster related response, mitigation and recovery plans in support of the City of Orting and neighboring jurisdictions.
2. Collaborate effectively with all city departments and representatives of neighboring jurisdictions in the development and publishing of various emergency plans.
3. Attend local, county, state and federal emergency management meetings and represent the city's interest at those meetings.
4. Research and collect data and information in support of developing the emergency plans.
5. Provide program support such as meeting minutes, records maintenance, and other administrative support functions.
6. Assist manager with planning of phases of projects and assignments.
7. Work safely in the Emergency Operations Center, Emergency Management Office and other locations as required.
8. Safely drive city vehicles to work sites and off-site meetings.
9. Establish and maintain cooperative and effective working relationships with those contacted in the performance of work.
10. Maintain regular, reliable and punctual attendance.
11. Attend evening and weekend meetings and activities in fulfillment of job duties.
12. Perform other duties as assigned.

### QUALIFICATIONS:

#### **Knowledge of:**

- Functions, activities, and responsibilities of the City Clerk's office.
- Knowledge of Records Management process and procedures.
- Knowledge of the different branches of municipal government
- Roberts Rules of Order and parliamentary procedures.

- State and local laws and regulations regarding public records, public meetings, and legal notices.
- Organizing recreation activities including rostering.
- Managing volunteers.
- Advertising and community engagement.

**Ability to:**

- Work on multiple projects simultaneously in a fast-paced and challenging Environment
- Understand trends in municipal communication practices, and implement new communication mediums.
- Work independently and cooperatively with others.
- Maintain confidentiality of sensitive materials and information.
- Communicate in person, in writing or over the phone with the public and other staff courteously and professionally.
- To research and communicate findings to other executive staff.
- Interact with the public in an effective, customer friendly manner.
- Ability to follow projects to completion and meet deadlines.
- Maintain effecting working relationship with City staff and other cities. [SL1]

**Education and Experience Guidelines**

Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying.

**Education/Training:**

- High school diploma or GED is required.
- Two years of office experience preferably in the government sector.
- Completion of ICS ???

**Licenses and Certification:**

- Valid Washington State driver’s license

**PHYSICAL DEMANDS AND WORKING ENVIRONMENT**

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

**Environment:** Work is primarily performed in an indoor office setting with extended periods at a computer, sitting or standing.

**Physical:** Physical effort is needed to move, lift and carry office equipment, supplies, and materials. Basic communication skills such as talking, seeing, hearing is needed for frequent person-to-person contacts, and telephone usage. The nature of the work has frequent interruptions and contact with staff, and requires strong communication skills, and the ability to work independently on a consistent basis.[SL2]

**Vision:** See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents and to operate equipment.

**Hearing:** Hear in the normal audio range with or without correction.

**REASONABLE ACCOMMODATIONS**

Reasonable accommodations may be made in accordance with the Americans with Disabilities Act and the Fair Employment and Housing Act.

*This job description does not constitute an employment agreement between the Employer and Employee and is subject to change as the needs of the Employer and requirements of the job change. This job description is not designed to cover or contain a comprehensive listing of all activities, duties, or responsibilities that are required of the employee.*

*The City of Orting provides equal employment opportunities to all employees and applicants for employment without regard to race, color, creed, religion, sex, sexual orientation, marital status, national origin, age, gender, disability, genetics, or status as a protected veteran.*

\_\_\_\_\_  
City Clerk Signature

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date



**City of Orting  
Council Agenda Summary Sheet**

	<b>Agenda Bill #</b>	<b>Recommending Committee</b>	<b>Study Session Dates</b>	<b>Regular Meeting Dates</b>								
<b>Subject:</b>  Police Guild Staffing MOU	<b>AB24-12</b>	<b>Public Safety</b>										
	<b>Department:</b>	Public Safety										
	<b>Date Submitted:</b>	2.1.24										
<b>Cost of Item:</b>	<u>N/A</u>											
<b>Amount Budgeted:</b>	<u>N/A</u>											
<b>Unexpended Balance:</b>	<u>N/A</u>											
<b>Bars #:</b>	N/A											
<b>Timeline:</b>	None											
<b>Submitted By:</b>	CA Larson											
<b>Fiscal Note:</b> None												
<b>Attachments:</b> "Orting Staffing MOU 01-04-24.docx"												
<p><b>SUMMARY STATEMENT:</b> The Orting Police Guild has requested to enter into an MOU with the City for an additional stipend due to the added workload and additional mandated overtime hours Officers are required to work as a result of low staffing levels. In addition, the stipend is designed to encourage retention of current Officers and to prevent further attrition. The Guild is requesting five percent be added to the base pay of each commissioned Officer who is subject to mandatory overtime requirements. The MOU is proposed to survive only so long as the Police Department has fewer than 9 sworn Officers assigned to the department who are subject to mandatory overtime, or until December 31, 2024; whichever comes first. The Police Department currently employs 8 of its authorized 12 commissioned FTE, 5 are subject to mandatory overtime requirements.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;">Pros</th> <th style="width: 50%;">Cons</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>					Pros	Cons						
Pros	Cons											
<b>RECOMMENDED ACTION:</b> <u>Action:</u>												
<b>FUTURE MOTION:</b> TBD												

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
THE CITY OF ORTING  
AND  
ORTING POLICE OFFICERS GUILD**

It is understood and agreed that the City of Orting (City) and Orting Police Officers Guild (Guild) enter into the following Memorandum of Understanding (MOU) to address staffing and attrition.

WHEREAS, Article 1 of the collective bargaining agreement (CBA or contract) recognizes the Guild as the designated representative of City of Orting Police Officer employees; and

WHEREAS, the City and the Guild have a mutual interest to maintain an adequately staffed and experienced police staff; and

WHEREAS, due to attrition and injuries amongst police staff the City and Guild have had to adjust hours of work and schedules to minimize gaps in coverage; and

WHEREAS, due to the Guild and City trying to accommodate each other's needs during this time of low staffing and to encourage staff to stay with the City, it is agreed that a temporary stipend is needed while staffing remains low;

**NOW, THEREFORE, on the condition that both sides agree that this MOU does not constitute a precedent and/or practice and neither side will cite it as such in any future grievance, other administrative process, or any other matter under the Collective Bargaining Act or under RCW Chapters 41.56 and 41.58, the City and the Union agree as follows:**

1. The terms and conditions of said contract, except as hereafter set forth, shall remain "as is."
2. While total sworn officers assigned to the Police Department remains below nine, the City shall pay an additional 5% on top of the Base Rate of Pay as defined in the CBA **for Officers that are mandatory overtime eligible**. If at least nine sworn officers are employed by the Police Department, this MOU shall automatically expire. This MOU shall expire regardless of staffing level on December 31, 2024.

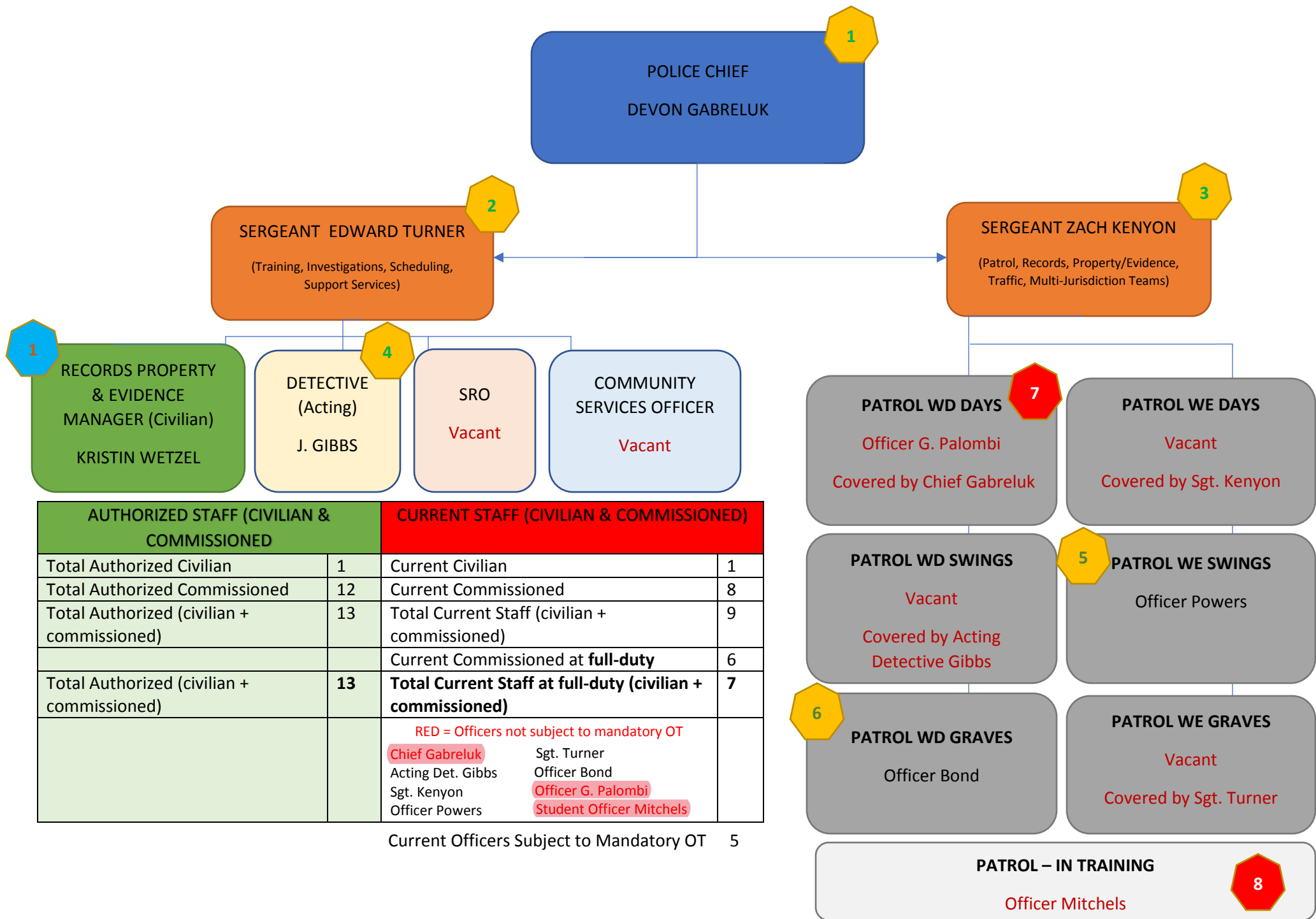
This Memorandum of Understanding is entered into on this the \_\_\_\_ day of \_\_\_\_\_ 2024.

CITY OF ORTING

POLICE GUILDS PRESIDENT

By: \_\_\_\_\_

By: \_\_\_\_\_



AUTHORIZED STAFF (CIVILIAN & COMMISSIONED)		CURRENT STAFF (CIVILIAN & COMMISSIONED)	
Total Authorized Civilian	1	Current Civilian	1
Total Authorized Commissioned	12	Current Commissioned	8
Total Authorized (civilian + commissioned)	13	Total Current Staff (civilian + commissioned)	9
		Current Commissioned at <b>full-duty</b>	6
Total Authorized (civilian + commissioned)	<b>13</b>	<b>Total Current Staff at full-duty (civilian + commissioned)</b>	<b>7</b>
		RED = Officers not subject to mandatory OT	
		Chief Gabreluk	Sgt. Turner
		Acting Det. Gibbs	Officer Bond
		Sgt. Kenyon	Officer G. Palombi
		Officer Powers	Student Officer Mitchels

Current Officers Subject to Mandatory OT 5



IncidentNo	CallDate	CallTime	Type_Text
2400100043	1/1/2024	0:14:14	FIRE (CALL TRANSFERRED TO FIRE PSAP)
2400100147	1/1/2024	0:55:55	TRAFFIC STOP
2400100216	1/1/2024	1:28:28	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400100314	1/1/2024	2:44:44	DV - PHYSICAL
2400100686	1/1/2024	8:18:18	TRAFFIC STOP
2400100709	1/1/2024	8:40:40	TRAFFIC STOP
2400100717	1/1/2024	8:49:49	TRAFFIC STOP
2400101017	1/1/2024	12:07:07	TRAFFIC STOP
2400101026	1/1/2024	12:17:17	WELFARE CHECK
2400101034	1/1/2024	12:20:20	MVC - INJURY OR UNK INJURY
2400101465	1/1/2024	16:32:32	WELFARE CHECK
2400101563	1/1/2024	17:22:22	SECURITY CHECK
2400102016	1/1/2024	21:59:59	FIREWORKS
2400200373	1/2/2024	6:18:18	TRAFFIC STOP
2400200875	1/2/2024	10:50:50	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400201052	1/2/2024	12:12:12	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400201163	1/2/2024	12:52:52	911 HANG-UP/OPEN LINE
2400201278	1/2/2024	13:50:50	SUSPICIOUS - VEHICLE
2400201923	1/2/2024	18:30:30	CIVIL CHILD CUSTODY
2400202089	1/2/2024	19:38:38	CIVIL CHILD CUSTODY
2400202125	1/2/2024	19:57:57	CIVIL ISSUE
2400202243	1/2/2024	20:52:52	TRAFFIC STOP
2400202252	1/2/2024	20:58:58	UNWANTED LOITERER
2400202491	1/2/2024	23:32:32	MVC - NON INJURY
2400300368	1/3/2024	6:19:19	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400300757	1/3/2024	9:42:42	FOLLOW UP
2400301323	1/3/2024	13:42:42	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400301518	1/3/2024	15:08:08	ABUSE - CHILD OR ADULT
2400301608	1/3/2024	15:47:47	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400301754	1/3/2024	16:53:53	CITIZEN ASSIST
2400302258	1/3/2024	21:15:15	WELFARE CHECK
2400302423	1/3/2024	22:54:54	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400302436	1/3/2024	23:07:07	DISORDERLY - VERBAL ALTERCATION
2400302489	1/3/2024	23:45:45	WARRANT SERVICE/SUBJ WITH WARRANT
2400400200	1/4/2024	3:04:04	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400400664	1/4/2024	9:13:13	VANDALISM
2400400746	1/4/2024	9:57:57	ABANDONED VEHICLE
2400400865	1/4/2024	10:40:40	THREATS
2400400878	1/4/2024	10:46:46	FOLLOW UP
2400400985	1/4/2024	11:36:36	FOLLOW UP
2400401420	1/4/2024	14:29:29	CITIZEN ASSIST
2400401499	1/4/2024	14:59:59	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400401587	1/4/2024	15:37:37	UNWANTED PERSON
2400401695	1/4/2024	16:25:25	SUSPICIOUS - PERSON ~ NOT IN PROGRESS
2400402026	1/4/2024	18:41:41	SHOPLIFT ~ JUST OCCURRED
2400402188	1/4/2024	20:16:16	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400500632	1/5/2024	8:59:59	FOLLOW UP
2400500723	1/5/2024	9:49:49	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400500999	1/5/2024	11:50:50	FOLLOW UP
2400501002	1/5/2024	11:53:53	HOLDUP ALARM - COMMERCIAL
2400501085	1/5/2024	12:36:36	FOLLOW UP
2400501482	1/5/2024	15:46:46	MISSING PERSON
2400501758	1/5/2024	17:38:38	WELFARE CHECK
2400501902	1/5/2024	18:53:53	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400501953	1/5/2024	19:21:21	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400502266	1/5/2024	22:00:00	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400502272	1/5/2024	22:03:03	TRAFFIC STOP
2400502426	1/5/2024	23:33:33	UNKNOWN TROUBLE

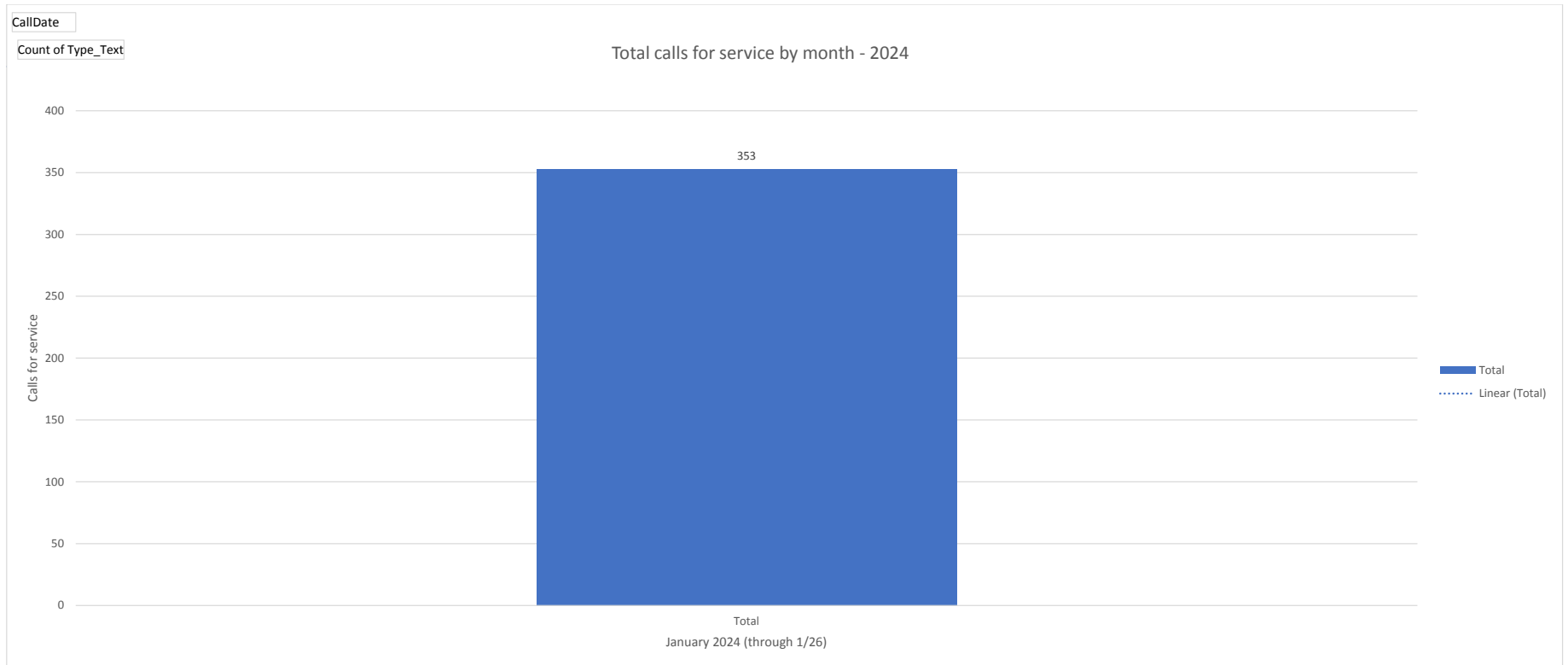
2400600384	1/6/2024	5:50:50	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400600631	1/6/2024	9:29:29	SUICIDE THREAT
2400600698	1/6/2024	10:05:05	WELFARE CHECK
2400600821	1/6/2024	11:08:08	SHOPLIFT ~ JUST OCCURRED
2400601025	1/6/2024	13:04:04	FOLLOW UP
2400601110	1/6/2024	13:42:42	SUICIDE THREAT
2400601284	1/6/2024	15:21:21	BURGLARY ALARM - COMMERCIAL
2400601495	1/6/2024	17:02:02	BURGLARY ALARM - RESIDENTIAL
2400601794	1/6/2024	19:30:30	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400601896	1/6/2024	20:19:19	DVV - VERBAL DOMESTIC
2400602011	1/6/2024	21:36:36	TRAFFIC STOP
2400602046	1/6/2024	21:54:54	FOUND PROPERTY
2400602126	1/6/2024	22:34:34	TRAFFIC STOP
2400602178	1/6/2024	22:58:58	TRAFFIC STOP
2400602212	1/6/2024	23:07:07	TRAFFIC STOP
2400602250	1/6/2024	23:22:22	TRAFFIC STOP
2400602285	1/6/2024	23:41:41	TRAFFIC STOP
2400602305	1/6/2024	23:53:53	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400700045	1/7/2024	0:31:31	FOLLOW UP
2400700448	1/7/2024	7:16:16	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400700481	1/7/2024	7:48:48	TRAFFIC STOP
2400700827	1/7/2024	11:29:29	CITIZEN ASSIST
2400701140	1/7/2024	14:25:25	ANIMAL COMPLAINT (GENERAL)
2400701413	1/7/2024	16:48:48	FOLLOW UP
2400701437	1/7/2024	17:02:02	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400701749	1/7/2024	20:02:02	TRAFFIC STOP
2400701774	1/7/2024	20:18:18	TRAFFIC STOP
2400701805	1/7/2024	20:33:33	TRAFFIC STOP
2400701862	1/7/2024	21:04:04	TRAFFIC STOP
2400701914	1/7/2024	21:38:38	TRAFFIC STOP
2400701933	1/7/2024	21:47:47	TRAFFIC STOP
2400701969	1/7/2024	22:08:08	SUSPICIOUS - VEHICLE
2400701970	1/7/2024	22:09:09	TRAFFIC STOP
2400702022	1/7/2024	22:37:37	TRAFFIC STOP
2400800153	1/8/2024	2:04:04	SUBJECT STOP - SUBJECT IN VEHICLE
2400800179	1/8/2024	2:29:29	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400800287	1/8/2024	4:24:24	SUSPICIOUS - VEHICLE
2400800508	1/8/2024	8:11:11	FOLLOW UP
2400801154	1/8/2024	13:07:07	TRAFFIC STOP
2400801379	1/8/2024	14:57:57	CITIZEN FLAG DOWN
2400801408	1/8/2024	15:09:09	MVC - HIT & RUN
2400801820	1/8/2024	18:08:08	TRAFFIC STOP
2400801882	1/8/2024	18:38:38	TRAFFIC STOP
2400801905	1/8/2024	18:52:52	TRAFFIC STOP
2400802149	1/8/2024	21:06:06	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400802232	1/8/2024	21:56:56	TRAFFIC STOP
2400802261	1/8/2024	22:09:09	TRAFFIC STOP
2400900650	1/9/2024	6:26:26	TRAFFIC STOP
2400900666	1/9/2024	6:36:36	TRAFFIC STOP
2400900676	1/9/2024	6:41:41	TRAFFIC STOP
2400900802	1/9/2024	7:47:47	911 HANG-UP/OPEN LINE
2400900992	1/9/2024	9:04:04	CITIZEN ASSIST
2400901224	1/9/2024	10:30:30	FOLLOW UP
2400901360	1/9/2024	11:32:32	SECURITY CHECK
2400901562	1/9/2024	13:05:05	FOLLOW UP
2400901650	1/9/2024	13:36:36	ANIMAL INJURED/DOA
2400901772	1/9/2024	14:26:26	TRESPASS
2400901798	1/9/2024	14:36:36	FOLLOW UP
2400901806	1/9/2024	14:41:41	FOLLOW UP

2400901835	1/9/2024	14:52:52	CITIZEN FLAG DOWN
2400901994	1/9/2024	15:54:54	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400902229	1/9/2024	17:33:33	SUSPICIOUS - VEHICLE
2400902287	1/9/2024	17:58:58	911 HANG-UP/OPEN LINE
2400902291	1/9/2024	18:00:00	ANIMAL INJURED/DOA
2400902295	1/9/2024	18:01:01	PORNOGRAPHY
2400902296	1/9/2024	18:01:01	THEFT
2400902315	1/9/2024	18:08:08	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400902359	1/9/2024	18:30:30	DUI
2400902393	1/9/2024	18:48:48	CITIZEN ASSIST
2400902480	1/9/2024	19:27:27	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2400902492	1/9/2024	19:31:31	TRAFFIC STOP
2400902882	1/9/2024	23:24:24	TRAFFIC STOP
2401000388	1/10/2024	7:10:10	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401000651	1/10/2024	9:34:34	FOLLOW UP
2401000680	1/10/2024	9:46:46	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401000803	1/10/2024	10:37:37	FOLLOW UP
2401000841	1/10/2024	10:53:53	WELFARE CHECK
2401001288	1/10/2024	14:17:17	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401001478	1/10/2024	15:28:28	FOLLOW UP
2401001533	1/10/2024	15:43:43	CITIZEN ASSIST
2401001611	1/10/2024	16:18:18	MVC - NON INJURY
2401002017	1/10/2024	19:24:24	SUSPICIOUS - VEHICLE
2401002428	1/10/2024	23:14:14	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401100212	1/11/2024	3:22:22	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401100720	1/11/2024	9:26:26	FOLLOW UP
2401100737	1/11/2024	9:35:35	THREATS
2401100832	1/11/2024	10:16:16	THREATS
2401101025	1/11/2024	11:30:30	DV - PHYSICAL ~ NOT IN PROGRESS
2401101279	1/11/2024	13:17:17	INFORMATION FOR POLICE
2401101769	1/11/2024	16:27:27	MISSING PERSON
2401102005	1/11/2024	18:06:06	CITIZEN ASSIST
2401102229	1/11/2024	19:49:49	FOLLOW UP
2401200061	1/12/2024	0:42:42	TRAFFIC STOP
2401200082	1/12/2024	0:53:53	SUBJECT STOP - SUBJECT IN VEHICLE
2401200141	1/12/2024	1:39:39	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401200248	1/12/2024	3:35:35	PANIC ALARM - RESIDENTIAL
2401200255	1/12/2024	3:45:45	TRAFFIC STOP
2401200408	1/12/2024	6:55:55	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401200553	1/12/2024	8:31:31	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401200673	1/12/2024	9:40:40	FOLLOW UP
2401200692	1/12/2024	9:49:49	ALARM OTHER
2401200740	1/12/2024	10:12:12	RUNAWAY
2401200857	1/12/2024	11:14:14	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401200877	1/12/2024	11:25:25	PARKING PROBLEM
2401201082	1/12/2024	13:06:06	CIVIL ISSUE
2401201157	1/12/2024	13:39:39	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401201171	1/12/2024	13:48:48	THREATS
2401201240	1/12/2024	14:19:19	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401201398	1/12/2024	15:26:26	SUSPICIOUS - PERSON
2401201588	1/12/2024	16:52:52	VEHICLE RECOVERY
2401201674	1/12/2024	17:28:28	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401201713	1/12/2024	17:41:41	TRAFFIC COMPLAINT (RECKLESS VEHICLE)
2401201961	1/12/2024	19:42:42	DVV - VERBAL DOMESTIC
2401300696	1/13/2024	9:04:04	WELFARE CHECK
2401300820	1/13/2024	10:19:19	CITIZEN ASSIST
2401300947	1/13/2024	11:31:31	FOLLOW UP
2401301083	1/13/2024	12:41:41	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401301501	1/13/2024	16:19:19	TRAFFIC STOP

2401301587	1/13/2024	16:59:59	TRAFFIC STOP
2401301636	1/13/2024	17:23:23	TRAFFIC STOP
2401301752	1/13/2024	18:31:31	TRAFFIC STOP
2401301918	1/13/2024	20:04:04	TRAFFIC STOP
2401301949	1/13/2024	20:20:20	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401301960	1/13/2024	20:25:25	TRAFFIC STOP
2401301965	1/13/2024	20:29:29	BURGLARY ALARM - COMMERCIAL
2401302014	1/13/2024	20:57:57	TRAFFIC STOP
2401302313	1/13/2024	23:25:25	TRAFFIC STOP
2401302330	1/13/2024	23:34:34	TRAFFIC STOP
2401400002	1/14/2024	0:00:00	DISABLED VEHICLE IN ROADWAY
2401400149	1/14/2024	1:25:25	SUBJECT STOP - SUBJECT IN VEHICLE
2401400469	1/14/2024	7:30:30	ANIMAL COMPLAINT (GENERAL)
2401400654	1/14/2024	9:33:33	TRAFFIC STOP
2401401042	1/14/2024	12:45:45	ABANDONED VEHICLE
2401401050	1/14/2024	12:49:49	911 HANG-UP/OPEN LINE
2401401101	1/14/2024	13:05:05	SUSPICIOUS - PERSON ~ NOT IN PROGRESS
2401401199	1/14/2024	13:32:32	FIRE (CALL TRANSFERRED TO FIRE PSAP)
2401401212	1/14/2024	13:36:36	WELFARE CHECK
2401401626	1/14/2024	15:58:58	FIRE (CALL TRANSFERRED TO FIRE PSAP)
2401401972	1/14/2024	17:57:57	CIVIL ISSUE
2401402005	1/14/2024	18:06:06	FIRE (CALL TRANSFERRED TO FIRE PSAP)
2401402146	1/14/2024	18:57:57	HAZARD - MISCELLANEOUS
2401402257	1/14/2024	19:44:44	HAZARD - MISCELLANEOUS
2401402536	1/14/2024	22:13:13	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401402600	1/14/2024	22:42:42	SUSPICIOUS - VEHICLE
2401402608	1/14/2024	22:46:46	TRAFFIC STOP
2401402687	1/14/2024	23:38:38	DUI
2401500145	1/15/2024	1:40:40	SUBJECT STOP - SUBJECT IN VEHICLE
2401500353	1/15/2024	5:40:40	TRAFFIC STOP
2401500624	1/15/2024	9:07:07	TRAFFIC STOP
2401500658	1/15/2024	9:24:24	TRAFFIC STOP
2401501340	1/15/2024	14:30:30	CITIZEN ASSIST
2401501716	1/15/2024	16:45:45	VANDALISM
2401501804	1/15/2024	17:26:26	MISSING PERSON
2401501908	1/15/2024	18:14:14	STRONG ARM ROBBERY
2401501904	1/15/2024	18:14:14	UNKNOWN TROUBLE
2401600230	1/16/2024	3:26:26	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401600254	1/16/2024	3:54:54	TRAFFIC STOP
2401600539	1/16/2024	8:01:01	TRAFFIC STOP
2401600642	1/16/2024	8:48:48	CIVIL ISSUE
2401601201	1/16/2024	12:50:50	SUSPICIOUS - PERSON
2401601322	1/16/2024	13:33:33	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401601544	1/16/2024	14:56:56	RUNAWAY
2401601642	1/16/2024	15:31:31	INFORMATION FOR POLICE
2401601749	1/16/2024	16:10:10	FOLLOW UP
2401602085	1/16/2024	18:20:20	FOLLOW UP
2401602209	1/16/2024	19:22:22	FOLLOW UP
2401602700	1/16/2024	23:06:06	SUBJECT STOP - SUBJECT IN VEHICLE
2401602748	1/16/2024	23:27:27	TRAFFIC STOP
2401602771	1/16/2024	23:40:40	TRAFFIC STOP
2401700359	1/17/2024	6:13:13	ATTEMPT MOTOR VEHICLE THEFT
2401700363	1/17/2024	6:17:17	THEFT - FROM VEHICLE
2401700562	1/17/2024	8:19:19	FOLLOW UP
2401700598	1/17/2024	8:38:38	911 HANG-UP/OPEN LINE
2401700700	1/17/2024	9:16:16	ATTEMPT MOTOR VEHICLE THEFT
2401700914	1/17/2024	10:39:39	THREATS
2401701359	1/17/2024	13:29:29	PARKING PROBLEM
2401701404	1/17/2024	13:50:50	ATTEMPT MOTOR VEHICLE THEFT

2401701414	1/17/2024	13:54:54	SHOPLIFT
2401701551	1/17/2024	14:48:48	HAZARD - MISCELLANEOUS
2401701938	1/17/2024	17:30:30	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401701990	1/17/2024	17:48:48	PHONE MESSAGE FOR OFFICER
2401702358	1/17/2024	20:16:16	TRAFFIC STOP
2401702385	1/17/2024	20:27:27	TRAFFIC STOP
2401702481	1/17/2024	21:23:23	TRAFFIC STOP
2401702542	1/17/2024	22:00:00	TRAFFIC STOP
2401702560	1/17/2024	22:12:12	SUBJECT STOP - SUBJECT IN VEHICLE
2401800087	1/18/2024	1:14:14	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401800458	1/18/2024	7:43:43	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401800479	1/18/2024	7:57:57	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401800695	1/18/2024	9:39:39	ATTEMPT MOTOR VEHICLE THEFT
2401800826	1/18/2024	10:43:43	THEFT - FROM VEHICLE
2401800948	1/18/2024	11:28:28	THREATS
2401800981	1/18/2024	11:41:41	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401801430	1/18/2024	14:50:50	CITIZEN ASSIST
2401801587	1/18/2024	15:48:48	CITIZEN ASSIST
2401801871	1/18/2024	18:07:07	DV - PHYSICAL
2401802179	1/18/2024	20:31:31	THEFT
2401802398	1/18/2024	22:22:22	CITIZEN ASSIST
2401900043	1/19/2024	0:29:29	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401900073	1/19/2024	1:03:03	OVERDOSE
2401900128	1/19/2024	1:52:52	TRAFFIC STOP
2401900511	1/19/2024	7:45:45	WELFARE CHECK
2401900942	1/19/2024	11:02:02	CITIZEN ASSIST
2401900989	1/19/2024	11:17:17	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401901279	1/19/2024	13:40:40	RUNAWAY
2401901359	1/19/2024	14:07:07	VIOLATION OF COURT ORDER ~ JUST OCCURRED
2401901444	1/19/2024	14:39:39	DVV - VERBAL DOMESTIC
2401901624	1/19/2024	15:59:59	CITIZEN ASSIST
2401901759	1/19/2024	16:56:56	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2401902530	1/19/2024	23:14:14	SUSPICIOUS - VEHICLE
2401902602	1/19/2024	23:55:55	AGENCY ASSIST
2402000427	1/20/2024	7:31:31	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402000428	1/20/2024	7:32:32	ANIMAL COMPLAINT (GENERAL)
2402000833	1/20/2024	11:34:34	DEATH INVESTIGATION
2402000840	1/20/2024	11:41:41	FOLLOW UP
2402001272	1/20/2024	15:06:06	WELFARE CHECK
2402001297	1/20/2024	15:17:17	ALARM OTHER
2402001506	1/20/2024	16:51:51	SUSPICIOUS - VEHICLE
2402001578	1/20/2024	17:20:20	DVV - VERBAL DOMESTIC
2402001577	1/20/2024	17:20:20	TRAFFIC STOP
2402001647	1/20/2024	17:52:52	TRAFFIC STOP
2402001670	1/20/2024	18:05:05	TRAFFIC STOP
2402001751	1/20/2024	18:46:46	FOLLOW UP
2402001899	1/20/2024	20:00:00	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402001965	1/20/2024	20:36:36	TRAFFIC STOP
2402002060	1/20/2024	21:28:28	TRAFFIC STOP
2402002095	1/20/2024	21:48:48	TRAFFIC STOP
2402002145	1/20/2024	22:20:20	MVC - HIT & RUN
2402100059	1/21/2024	0:41:41	HAZARD - TRAFFIC
2402100241	1/21/2024	2:59:59	TEST
2402100450	1/21/2024	6:40:40	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402100504	1/21/2024	7:43:43	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402100580	1/21/2024	8:40:40	TRAFFIC STOP
2402100581	1/21/2024	8:41:41	SECURITY CHECK
2402100859	1/21/2024	11:16:16	TRAFFIC STOP
2402100887	1/21/2024	11:28:28	TRAFFIC STOP

2402100956	1/21/2024	12:10:10	INFORMATION FOR POLICE
2402101098	1/21/2024	13:31:31	ALARM OTHER
2402101306	1/21/2024	15:22:22	SUSPICIOUS - PERSON
2402101455	1/21/2024	16:40:40	ANIMAL BITE
2402101481	1/21/2024	16:55:55	SECURITY CHECK
2402101545	1/21/2024	17:28:28	FOLLOW UP
2402101596	1/21/2024	17:45:45	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402101685	1/21/2024	18:30:30	FOLLOW UP
2402101926	1/21/2024	20:26:26	TRAFFIC STOP
2402102204	1/21/2024	22:50:50	MOTOR VEHICLE THEFT
2402200485	1/22/2024	7:45:45	TRAFFIC STOP
2402200509	1/22/2024	7:54:54	TRAFFIC STOP
2402200546	1/22/2024	8:15:15	SECURITY CHECK
2402200770	1/22/2024	9:46:46	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402200904	1/22/2024	10:41:41	WELFARE CHECK
2402201704	1/22/2024	16:36:36	FOLLOW UP
2402201825	1/22/2024	17:40:40	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402201904	1/22/2024	18:18:18	TRAFFIC STOP
2402201935	1/22/2024	18:31:31	FIRE (CALL TRANSFERRED TO FIRE PSAP)
2402201975	1/22/2024	18:52:52	TRAFFIC STOP
2402202050	1/22/2024	19:33:33	SUICIDE THREAT
2402300118	1/23/2024	1:23:23	SECURITY CHECK
2402300170	1/23/2024	2:03:03	BURGLARY ALARM - RESIDENTIAL
2402300198	1/23/2024	2:25:25	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402300209	1/23/2024	2:29:29	DISORDERLY - VERBAL ALTERCATION
2402300707	1/23/2024	9:19:19	ANIMAL COMPLAINT (GENERAL)
2402300991	1/23/2024	11:17:17	RUNAWAY
2402301121	1/23/2024	12:07:07	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402301459	1/23/2024	14:23:23	MVC - NON INJURY
2402301783	1/23/2024	16:30:30	FOUND NARCOTICS
2402301984	1/23/2024	18:05:05	ANIMAL COMPLAINT (GENERAL)
2402302031	1/23/2024	18:26:26	FOUND PROPERTY
2402302100	1/23/2024	18:59:59	VIOLATION OF COURT ORDER
2402302330	1/23/2024	20:48:48	FOLLOW UP
2402400699	1/24/2024	9:26:26	PARKING PROBLEM
2402401086	1/24/2024	12:09:09	FOLLOW UP
2402401322	1/24/2024	13:40:40	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402401838	1/24/2024	17:03:03	FOLLOW UP
2402402002	1/24/2024	18:21:21	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402402131	1/24/2024	19:15:15	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402500007	1/25/2024	0:02:02	RESIDENTIAL BURGLARY ~ IN PROGRESS
2402500393	1/25/2024	6:41:41	CITIZEN ASSIST
2402500580	1/25/2024	8:22:22	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402500686	1/25/2024	9:04:04	SUSPICIOUS - PERSON
2402500767	1/25/2024	9:35:35	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402500799	1/25/2024	9:48:48	911 HANG-UP/OPEN LINE
2402500992	1/25/2024	11:01:01	MEDICAL AID - CPR IN PROGRESS
2402501065	1/25/2024	11:36:36	MVC - NON INJURY
2402501176	1/25/2024	12:18:18	SUSPICIOUS - VEHICLE
2402501637	1/25/2024	15:28:28	911 HANG-UP/OPEN LINE
2402502079	1/25/2024	18:48:48	MVC - NON INJURY
2402502456	1/25/2024	22:03:03	TRAFFIC STOP
2402502625	1/25/2024	23:52:52	SUSPICIOUS - PERSON
2402600033	1/26/2024	0:28:28	TRAFFIC STOP
2402600045	1/26/2024	0:42:42	SECURITY CHECK
2402600278	1/26/2024	4:08:08	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)
2402600679	1/26/2024	8:59:59	FOLLOW UP
2402600727	1/26/2024	9:23:23	FOLLOW UP
2402600822	1/26/2024	10:07:07	MEDICAL AID (CALL TRANSFERRED TO FIRE PSAP)



Case Number	Subject	Occurred On	Person #	M	H	S
<a href="#">2400902296</a>	Theft   Arrest	01/09/24	1	X		F
<a href="#">2401101769</a>	Missing Person	01/11/24	2	X		F
<a href="#">2401201961</a>	Simple Assault   Harassment   DV   Misd	01/12/24	3	X		M
<a href="#">2402200904</a>	Mental Health   Damage to Property   Arrest	01/22/24	4	X	X	M
<b>Total</b>			<b>4</b>			

Case Number	Subject	Occurred On	Person #	M	H	S
<a href="#">2400601896</a>	FIR   DV	01/06/24	5		X	F
<a href="#">2402200904</a>	Mental Health   Damage to Property   Arrest	01/22/24	4	X	X	M
<b>Total</b>			<b>2</b>			



Officer	Total Training Hours Required		Percent of Required
BOND	0.00	24.00	0%
KENYON	0.00	24.00	0%
GABRELUK	0.00	24.00	0%
TURNER	0.00	24.00	0%
G. PALOMBI	0.00	24.00	0%
J. GIBBS	0.00	24.00	0%
POWERS	0.00	24.00	0%
MITCHELS	0.00	24.00	0%
<b>Total</b>	<b>0.00</b>	<b>216.00</b>	<b>0%</b>

# Local Road Safety Plan

City of Shelton  
Shelton, WA

**Prepared For:**

City of Shelton

**Prepared By:**

SCJ Alliance

8730 Tallon Lane NE, Suite 200

Lacey, WA 98516

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January 2022



**SCJ ALLIANCE**  
CONSULTING SERVICES

# Local Road Safety Plan

## Project Information

Project: Local Road Safety Plan  
Prepared for: City of Shelton  
525 W. Cota Street  
Shelton, WA 98584

## Reviewing Agency

Jurisdiction: City of Shelton

## Project Representative

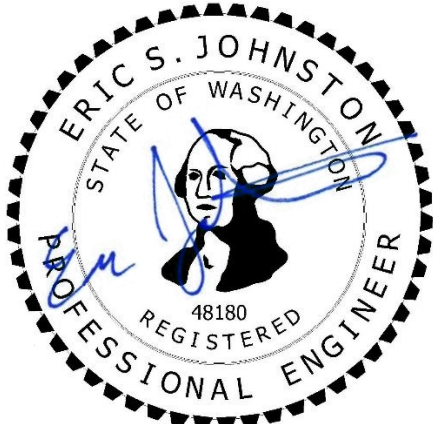
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Project Reference: SCJ #615.OCA  
Path: N:\Projects\0615 City of Shelton\0615.OCA  
Local Road Safety Plan\04-Dels\2022-0228 Local  
Road Safety Plan.docx

## Signature

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.



2/28/2022

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Prepared by Ryan Shea, PTP and Anne Sylvester, PTE



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Approved by Eric Johnston, PE

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# 1 INTRODUCTION

The City of Shelton is actively pursuing improvements to reduce crashes and enhance safety for its multimodal transportation system. As part of that effort, the city has prepared this *Local Road Safety Plan* (LRSP) following the risk-based, data-driven analytical procedures outlined in guidance provided by the Washington State Department of Transportation (WSDOT) Local Programs Division. This guidance is designed to support WSDOT's efforts to implement the *Target Zero – Washington State Strategic Highway Safety Plan* which relies on a data-based approach that analyzes crash trends and contributing factors in the development of successful crash reduction strategies.

## 1.1 Purpose of the Study

The purpose of this plan is to improve safety for different modes of transportation along city streets through the analysis of crash data, identifying and prioritizing risk factors that impact safety and establishing and prioritizing engineering countermeasures and strategies that reduce the number and severity of crashes in the city.

## 1.2 Analysis Methodology

The Local Road Safety Plan follows the WSDOT's recommended approach for developing a prioritized list of engineering countermeasures. Analysis was conducted following a multi-step process that relied on five years of crash data (2016 through 2020). The multi-step process includes:

1. Evaluate crash data to identify crashes with a fatality and/or a serious injury and characterize crash types and locations that have an average of one crash or more per year.
2. Based on this data, identify key risk factors which contribute to the crashes identified in the city of Shelton and compared to an average of risk factors for Western Washington in the aggregate. Risk factors were categorized into three priority levels based on significance in relation to the reported severe crashes.
3. Select the most common risk factors and group these by priority level based on their significance in relation to the reported severe crashes.
4. Identify and score high priority crash locations.
5. Identify countermeasures to address the types of crashes in the high priority locations.
6. Develop a prioritized list of projects including both systemic and spot improvements and cost estimates.

## 1.3 Study Area

The study area for the Shelton Local Road Safety Plan includes the entire city of Shelton. The population of Shelton was 9,834 in 2010, growing to an estimated 10,390 by 2020<sup>1</sup>. This data indicates that the population in Shelton grew by over 5.6 percent during the ten years between 2010 and 2020. The population of Mason County in 2010 was 60,699 of which Shelton represented 15.5 percent. By 2020,

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<sup>1</sup> [https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm\\_april1\\_poptrends.pdf](https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_poptrends.pdf)



Mason County's population was estimated to increase to 65,650<sup>2</sup> of which Shelton was 15.8 percent indicating that Shelton is growing more rapidly than Mason County. Based on projections from the Washington Office of Financial Management, Shelton's population is expected to grow to approximately 85,000 by 2040, an increase of 29.5 percent<sup>3</sup>.

As the Mason County seat, Shelton is a governmental employment, health care and educational center for the county. Government is the largest employer in the county, followed by the service industry and retail industry. Shelton is also a bedroom community for persons employed in Bremerton, including the Kitsap Naval Base.

**Figure 1** illustrates the boundaries of the City of Shelton and its general location in Western Washington. The figure also identifies key roadway corridors which include US 101, Wallace Kneeland Boulevard, Olympic Highway North, Alder Street, First Street, Railroad Avenue, SR 3 (which includes portions of Pine Street, Front Street, Railroad Avenue, First Street and Olympic Highway South). US 101 serves as the major roadway connection between Shelton and the region, linking to the Aberdeen/Hoquiam area to the southwest and Olympia to the southeast. As a grade-separated state highway facility with limited access, crash data from US 101 has not been included in the analysis presented in this report. Both US 101 and SR 3 are freight and commuter routes.

## 1.4 Report Content and Organization

This report is organized into six chapters, the first of which is this Introduction. **Chapter 2** identifies and discusses historic crash data in the City of Shelton (2016 through 2020) with an emphasis on what are characterized as "severe" crashes. These include crashes that result in fatalities and/or serious injury. Chapter 2 also presents historic data for bicycle and pedestrian crashes in the city. Crash data is stratified by both corridors and intersections focusing on the top twenty corridors and intersections that averaged at least one crash per year. Chapter 2 also includes a summary of risk factors by number and percent for severe crashes in Shelton in comparison with Western Washington.

**Chapter 3** documents the most common risk factors as identified through analysis of the crash data presented in Chapter 2. Risk factors were categorized into two priority levels based on significance in relation to the reported severe crashes.

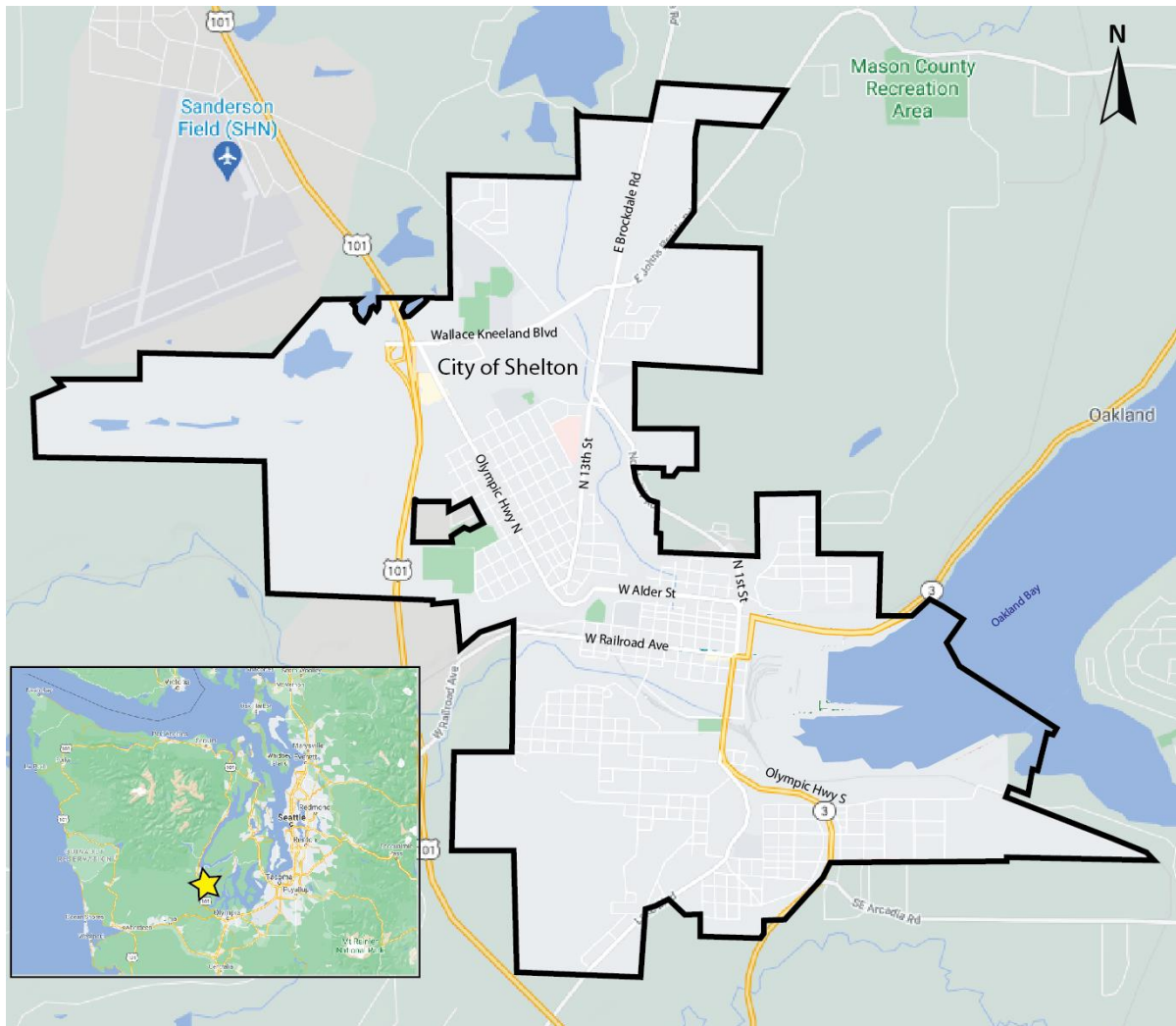
**Chapter 4** identifies high priority crash locations using the Level 1 risk factors identified in Chapter 3. Each risk factor is scored on a relative scale in terms of the number of crashes that are affected by these factors. Scoring criteria include Low number of crashes associated with a specific risk factor, medium number of crashes and High number of crashes. The low, medium, and high levels are given points which are assigned to each corridor and risk factor. Total points for each corridor are summed and corridors ranked based on this total.

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<sup>2</sup> [https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm\\_april1\\_poptrends.pdf](https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_poptrends.pdf)

<sup>3</sup> [https://ofm.wa.gov/sites/default/files/public/dataresearch/pop/GMA/projections17/GMA\\_2017\\_county\\_pop\\_projections.pdf](https://ofm.wa.gov/sites/default/files/public/dataresearch/pop/GMA/projections17/GMA_2017_county_pop_projections.pdf)

Figure 1. Study Area and Vicinity



**Chapter 5** discusses the identification of countermeasures for each of the high priority corridors and local concern areas based on the likely effectiveness of the countermeasure in addressing the relevant types of crashes and risk factors at each location.

**Chapter 6** presents a further refinement of the identification of countermeasures in the high priority corridors focusing on both systemic measures that can be implemented throughout the city and spot locations where specific countermeasures can be applied. For systemic improvements, applicable locations were identified, and planning level cost estimates were prepared. For spot improvements, the discussion focuses on specific activities that can be implemented at these priority locations along with planning level cost estimates.

## 2 ANALYSIS OF HISTORIC CRASH DATA

Historical crash data was obtained for the City of Shelton for the five-year time period from January 1, 2016 through December 31, 2020. Crash data is collected by WSDOT from all crash reports completed by responding law enforcement officials. Crash data includes information related to crash circumstances, locations, driver behaviors, contributing factors, and severity including degree of injury. This data can be used to identify the factors that most clearly indicate the reasons why a crash occurred and provide the basis for developing engineering, education, or enforcement countermeasures.

WSDOT crash data included all streets within the city limits of Shelton plus portions of SR 3 along Pine Street, Front Street, Railroad Avenue, First Street and Olympic Highway South. As noted in the Introduction, US 101 through the city is not included in the database or the analysis conducted for this report as it is a limited access, grade-separated facility through the city.

During the five-year analysis period, there were a total of 832 crashes with 632 crashes occurring on City-operated streets and 200 crashes occurring on SR 3 which is operated by WSDOT. **Figure 2** presents a graphic image of these crashes by location. The more intense the colors in the figure, the greater the number of crashes that occurred during the five-year period. Of particular significance for the analysis presented in this report are severe crashes and those involving bicyclists and/or pedestrians. These crashes are discussed in the following sections and illustrated in Figures 3 and 4.

### 2.1 Severe Crashes

Of the 832 total crashes on Shelton streets, two crashes resulted in a fatality and 14 resulted in a serious injury. Fatalities represent a total of 0.02 percent of all crashes in the city, while serious injuries represent a total of 1.7 percent of citywide crashes. Fatal and serious injury crashes, referred to in this report as severe crashes, are the focus of the Local Road Safety Plan. Of the 16 severe crashes, four occurred on SR 3 within the city limits, three occurred on Olympic Highway North, and the remaining nine occurred on other streets. **Figure 3** shows the location of the 16 severe collisions during the five-year study period.

Seven severe crashes occurred at intersections, and four of those crashes occurred at intersections that do not have traffic signals. None of the seven intersections experienced more than one severe crash during the 2016-2020 study period. Figure 3 does not show crashes that occurred on US 101 as this is a limited access facility under the jurisdiction of WSDOT.

### 2.2 Pedestrian and Bicycle Crashes

There were 38 total crashes in Shelton during the study period which involved a pedestrian or bicyclist. Ten, or 26 percent, of these crashes resulted in a serious injury or a fatality, eight for pedestrians and two for bicyclists. This high percentage out of all bicycle and pedestrian crashes compares to the low percentage that severe crashes represent out of total citywide crashes - less than 2 percent. This high bicycle and pedestrian percentage is indicative of the much higher level of risk assumed by vulnerable bicyclists and pedestrians as they use the multimodal transportation system.

Figure 2. 2016-2020 Crashes in Shelton

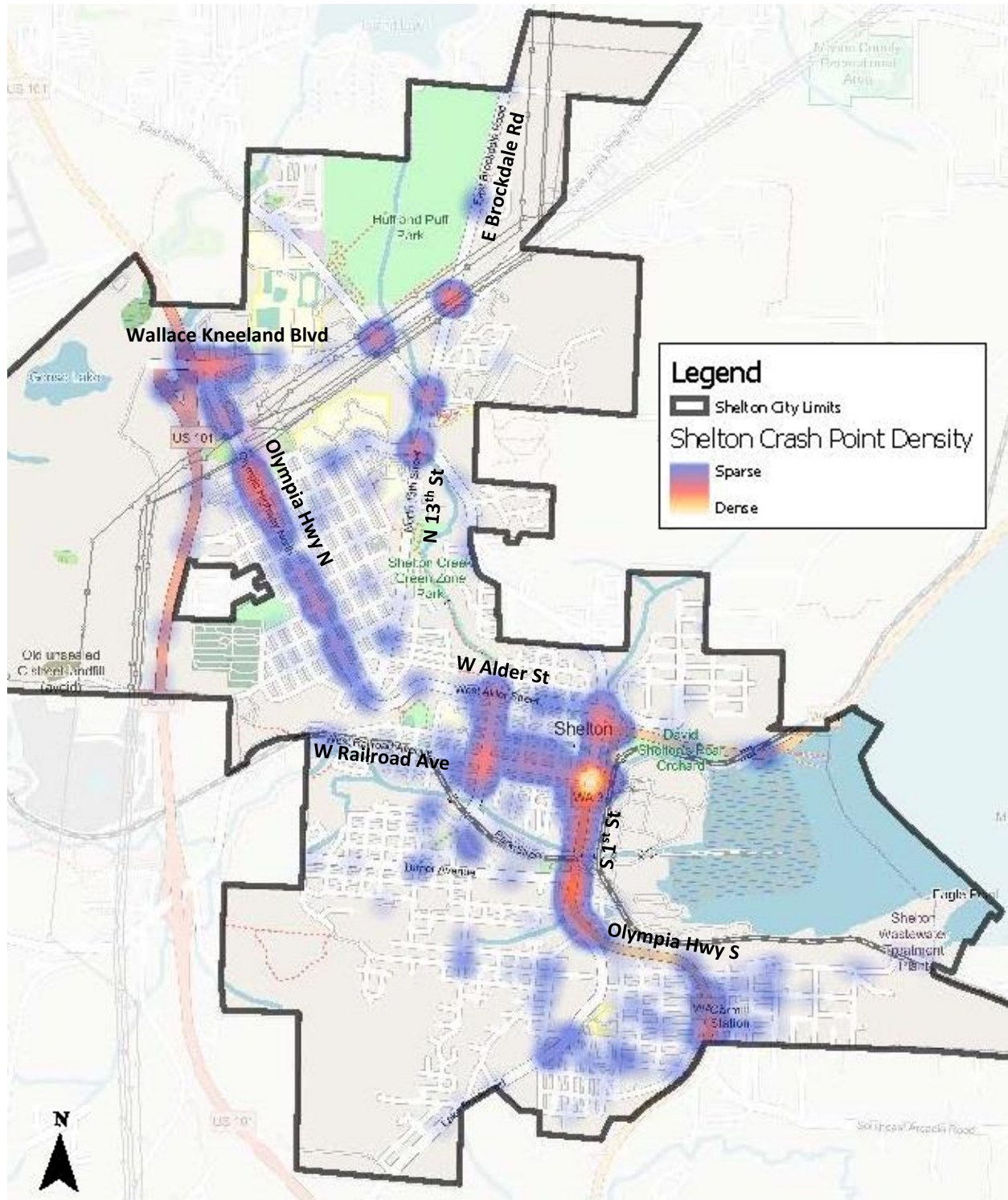
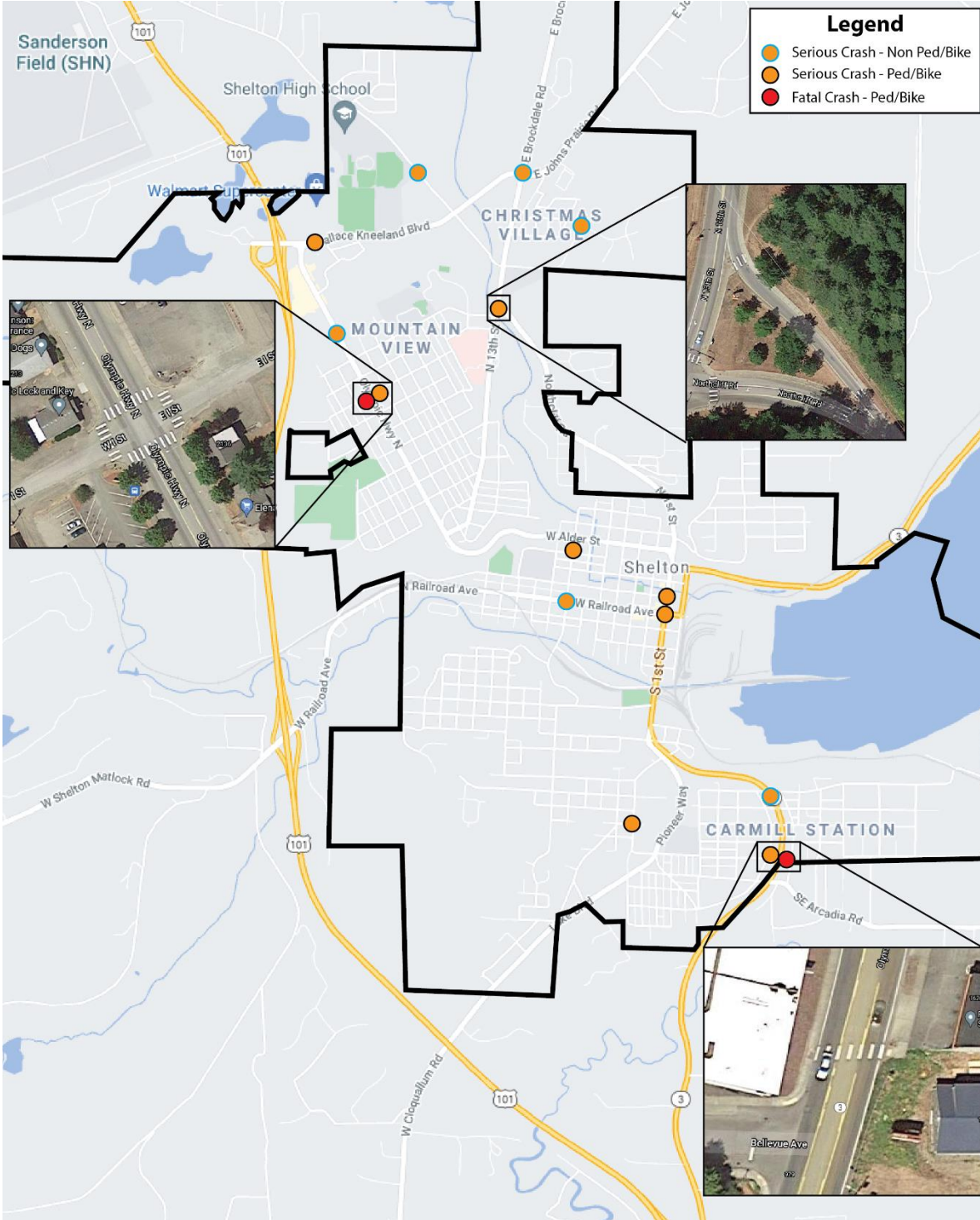


Figure 3. 2016-2020 Severe Crashes in Shelton



**Figure 4** shows the location of the pedestrian and bicycle crashes. The locations where the most severe pedestrian and bicycle crashes occurred are:

- Olympic Highway North in the vicinity of I Street (one fatal crash and one serious injury crash both of which involved pedestrians)
- SR 3 in the vicinity of Bellevue Avenue (also one fatal crash and one serious injury crash both of which involved pedestrians)
- Serious injury pedestrian crashes also occurred on:
  - Wallace Kneeland Boulevard in the vicinity of Olympic Highway North
  - 13<sup>th</sup> Street at Northcliff Road
  - SR 3 at Railroad Avenue
  - Seattle Avenue west of 2<sup>nd</sup> Street
- Serious injury bicyclist crashes also occurred on:
  - 1<sup>st</sup> Street at Franklin Street
  - 7<sup>th</sup> Street west of Pine Street

## 2.3 Corridor Crashes

The analysis of crash data included identification of the 20 street corridors within the city where the most crashes occurred. **Table 1** summarizes this data including both crashes by type and a description of key corridor characteristics such as segment length, functional classification, number of travel lanes and posted speed limit. As shown in the table, common crash types in the 20 highest corridors include rear end, sideswipe, right turns, head-on, hitting a parked vehicle, left turns, angles, hitting fixed objects, pedestrians, bicyclists (pedal cyclists) and “other”.

**South 1<sup>st</sup> Street** led the list of corridors with the highest number of crashes – 116 in five years or an average of 23 per year over its 0.40-mile length between Mill Street and Railroad Avenue. This street is a portion of SR 3 through the heart of the city and designated as a Principal Arterial.

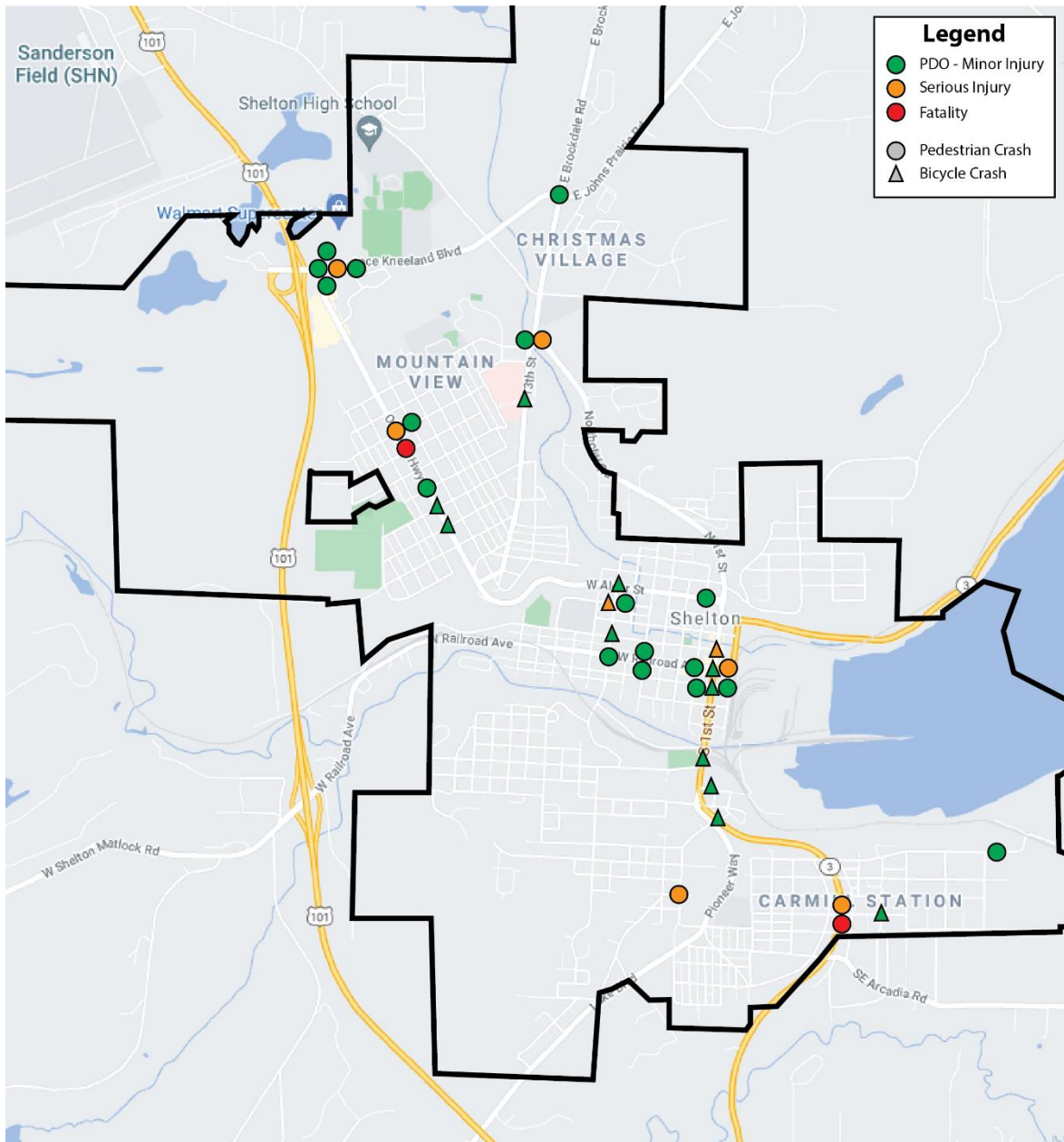
**Olympic Highway North** between Alder Street and Wallace Kneeland Boulevard experienced 115 crashes over five years with essentially the same annual average of 23 crashes per year. This corridor is a designated Principal Arterial and a total of 1.05 miles in length.

The corridor with the third highest number of crashes over the five-year period is **Olympic Highway South**, another portion of SR 3 through the city. This highway segment is 1.25 miles long between the south city limits and Mill Street and experienced 51 crashes over five years or about ten crashes per year.

## 2.4 Intersection Crashes

This section presents a discussion of severe crashes at intersections in the City of Shelton that occurred during the five-year analysis period. **Table 2** includes data for signalized intersections, while **Table 3** shows data for unsignalized intersections.

Figure 4. 2016-2020 Bicycle and Pedestrian Crashes in Shelton



**Table 1. Summary of Crash Data for 20 Highest Corridors**

Corridor	Segment	Segment Length (Miles)	Functional Classification	Number of Travel Lanes	Speed Limit	Existing Crashes by Type											
						Rear-end	Sideswipe	Right Turn	Head On	Parked Vehicle	Left Turn	Angle	Fixed Object	Pedestrian	Pedal cyclist	Other	Total (Severe)
S 1 <sup>st</sup> Street (SR 3)	Mill Street to Railroad Avenue	0.40	Principal Arterial	2 Thru & TWLTL	25	66	2	2	1	1	8	20	9	3 (1)	3	1	116 (1)
Olympic Highway N	W Alder Street to E Wallace Kneeland Boulevard	1.05	Principal Arterial	2 thru & TWLTL	30	26	7	5	2	6	3	49 (1)	8	4 (2)	2	3	115 (3)
Olympic Highway S (SR 3)	City limits to Mill Street	1.25	Principal Arterial	2 Thru & TWLTL	30	16	6	1 (1)	1	1	2	12	7	2 (2)	1	2	51 (3)
Wallace Kneeland Boulevard	Olympic Highway N to Shelton Springs Road	0.55	Principal Arterial	4 thru & TWLTL	30	10	5	1	0	0	6	11	3	4 (1)	0	1	41 (1)
W Railroad Avenue	N 1 <sup>st</sup> Street/S First Street/E Railroad Avenue to Pacific Ct (City limits)	0.90	Principal Arterial	2 thru	25	11	2	0	0	6	5	7	3	3	0	4	41 (0)
N 1 <sup>st</sup> Street	Railroad Avenue to Moore Avenue	0.55	Principal Arterial	2 thru	25	6	1	1	1	1	6	14	2	0	1 (1)	3	36 (1)
N 7 <sup>th</sup> Street	W Railroad Avenue to W Alder Street	0.25	Major Collector	2 thru	25	2	1	1	0	3	4	14	0	2	2 (1)	0	29 (1)
E Brockdale Road	Wallace Kneeland Blvd/E Johns Prairie Rd/N 13th St to City limits	0.85	Minor Arterial	2 thru	30	7	1	0	0	0	0	11 (1)	3	0	0	0	22 (1)
E Pine Street (SR 3)	Front St to city limits	0.61	Principal Arterial	2 thru	35	4	4	0	1	0	1	0	1	0	0	2	15 (0)
W Cota Street	S 12 <sup>th</sup> Street to S 1 <sup>st</sup> Street	0.60	--	2 thru	25	1	1	0	0	5	2	7	1	0	0	1	18 (0)
W Alder Street	N 1 <sup>st</sup> Street to Olympic Highway N	0.70	Principal Arterial	3 thru	30	3	1	0	0	2	2	3	4	1	1	1	18 (0)



Corridor	Segment	Segment Length (Miles)	Functional Classification	Number of Travel Lanes	Speed Limit	Existing Crashes by Type											
						Rear-end	Sideswipe	Right Turn	Head On	Parked Vehicle	Left Turn	Angle	Fixed Object	Pedestrian	Pedal cyclist	Other	Total (Severe)
N 13 <sup>th</sup> Street	N 12th Street to Wallace Kneeland Boulevard/E Johns Prairie Road	1.25	Minor Arterial	2 thru & TWLTL	30	2	1	0	0	0	2	6	3	1	1	2	18 (0)
S 7 <sup>th</sup> Street	W Railroad Avenue to Highland Drive	0.25	Major Collector	2 thru	25	0	0		0	2	3 (1)	6	4	0	0	0	15 (1)
Northcliff Road	Moore Avenue/N 1st Street to N 13th Street	0.80	Major Collector	2 thru	30	4	1	1	0	0	0	0	5	2 (1)	0	2	15 (1)
E K Street	Olympic Highway North - N 13th Street	0.55	Major Collector	2 thru	25	3	0	1	0	1	3	1	3	0	0	0	12 (0)
N Front Street (SR 3)	E Railroad Avenue to E Pine Street	0.15	Principal Arterial	2 thru	25	1	0	0	0	0	5	5	0	0	0	0	11 (0)
W Franklin Street	N 1 <sup>st</sup> Street to city limits	0.90	--	2 thru	25	1	0	0	0	2	2	4	1	0	0	1	11 (0)
E Railroad Avenue (SR 3)	N 1 <sup>st</sup> Street/S 1 <sup>st</sup> Street to N Front Street/S Front Street	0.05	Principal Arterial	4 thru	25	0	1	0	0	0	0	7	1	0	0	1	10 (0)
N Shelton Springs Road	N 13 <sup>th</sup> Street/Alpine Way to Tarragon Avenue (city limits)	0.85	Major Collector	2 Thru & TWLTL	30	2	0	0	0	0	1	4	3 (1)	0	0	0	10 (1)
E Arcadia Avenue	Pioneer Way to Olympic Highway S	0.35	Minor Arterial	2 thru	25	0	0	0	1	1	0	4	4	0	0	0	10 (0)
<b>Total Crashes</b>	-	-	-	-	-	<b>165</b>	<b>34</b>	<b>12</b>	<b>7</b>	<b>31</b>	<b>55 (1)</b>	<b>186 (3)</b>	<b>65 (1)</b>	<b>22 (7)</b>	<b>11 (2)</b>	<b>16</b>	<b>612 (14)</b>

Note: Numbers in brackets are severe crashes

**Table 2. Data Summary for Signalized Intersections with More than Five Crashes**

<b>Signalized Intersections</b>	<b>Rear-end</b>	<b>Sideswipe</b>	<b>Right Turn</b>	<b>Head On</b>	<b>Parked Vehicle</b>	<b>Left Turn</b>	<b>Angle</b>	<b>Fixed Object</b>	<b>Pedestrian</b>	<b>Pedal cyclist</b>	<b>Other</b>	<b>Total (Severe)</b>
1 <sup>st</sup> Street at Railroad Avenue	10	0	0	0	0	4	8	2	1 (1)	1	2	28 (1)
1 <sup>st</sup> Street at Cota Street	14	0	0	1	0	0	3	1	0	1	0	20 (0)
Wallace Kneeland Boulevard at Olympic Highway North	5	2	1	0	0	2	5	1	2	0	0	18 (0)
K Street at 13 <sup>th</sup> Street	4	0	0	0	0	4	3	1	2 (1)	0	2	16 (1)
Railroad Avenue at 7 <sup>th</sup> Street	1	2	0	0	1	5 (1)	6	0	1	0	0	16 (1)
1 <sup>st</sup> Street at Mill Street	11	1	0	0	0	0	2	0	0	1	0	15 (0)
Wallace Kneeland Boulevard at Shelton Springs Road	3	0	0	0	0	3	6	0	0	0	1	13 (0)
Olympic Highway North at K Street	4	1	1	0	0	1	4	1	0	0	0	12 (0)
Wallace Kneeland Boulevard at Kneeland Plaza Access	3	0	1	0	0	2	5	0	0	0	0	11 (0)
Olympic Highway South at Cascade Avenue	3	0	0	0	0	2	3	1	0	0	0	9 (0)
<b>Total</b>	<b>58</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>23 (1)</b>	<b>45</b>	<b>7</b>	<b>6 (2)</b>	<b>3</b>	<b>5</b>	<b>158 (3)</b>

Note 1: Intersections in this table had at least an average of one crash per year in period 2016-2020.

Note 2: Numbers in brackets are severe crashes.

**Table 3. Data Summary for Unsignalized Intersections with More than Five Crashes**

<b>Unsignalized Intersections</b>	<b>Rear-end</b>	<b>Sideswipe</b>	<b>Right Turn</b>	<b>Parked Vehicle</b>	<b>Left Turn</b>	<b>Angle</b>	<b>Fixed Object</b>	<b>Pedestrian</b>	<b>Pedal cyclist</b>	<b>Other</b>	<b>Total (Severe)</b>
Wallace Kneeland/Johns Prairie Road at Brockdale Road/13th Street	8	0	0	0	2	10 (1)	0	1	0	0	21 (1)
1 <sup>st</sup> Street at Pine Street	1	0	0	0	0	12	0	0	0	0	13 (0)
1 <sup>st</sup> Street at Turner Avenue	11	0	0	0	0	1	0	0	0	0	12 (0)
Front Street at Pine Street	1	0	0	0	5	5	0	0	0	0	11 (0)
1 <sup>st</sup> Street at Alder Street	0	0	0	0	4	3	3	0	0	0	10 (0)
7 <sup>th</sup> Street at Franklin Street	1	1	1	0	1	5	0	0	1	0	10 (0)
Cota Street at 7 <sup>th</sup> Street	0	0	0	1	2	7	0	0	0	0	10 (0)
Railroad Avenue at Front Street	1	1	0	0	0	7	0	0	0	0	9 (0)
Brockdale Road at N 13th Street/Alpine Way	0	0	0	0	0	9	0	0	0	0	9 (0)
7 <sup>th</sup> Street at Alder Street	1	0	0	0	5	1	0	0	1	0	8 (0)
1 <sup>st</sup> Street at Grove Street	2	0	1	0	2	1	1	1	0	0	8 (0)
1 <sup>st</sup> Street at Kneeland Street	3	0	0	0	0	4	0	0	0	0	7 (0)
Olympic Highway North at J Street	5	0	0	0	0	2	0	0	0	0	7 (0)
Wallace Kneeland Boulevard at SR 101 Northbound Ramps	5	0	1	0	0	1	0	0	0	0	7 (0)
Olympic Highway North at E Street	1	0	0	0	0	4	0	0	1	0	6 (0)

	Rear-end	Sideswipe	Right Turn	Parked Vehicle	Left Turn	Angle	Fixed Object	Pedestrian	Pedal cyclist	Other	Total (Severe)
<b>Unsignalized Intersections</b>											
Railroad Avenue at 4 <sup>th</sup> Street	2	0	0	0	1	3	0	0	0	0	6 (0)
Railroad Avenue at 2 <sup>nd</sup> Street	1	0	0	1	0	3	0	1	0	0	6 (0)
Railroad Avenue at 5 <sup>th</sup> Street	1	0	1	0	1	1	0	2	0	0	6 (0)
1 <sup>st</sup> Street at Cedar Street	1	0	0	0	2	2	0	0	0	0	5 (0)
1 <sup>st</sup> Street at Franklin Street	1	1	1	0	0	1	0	0	1 (1)	0	5 (1)
7 <sup>th</sup> Street at Cedar Street	1	0	0	1	0	3	0	0	0	0	5 (0)
1 <sup>st</sup> Street at Park Street	1	0	0	0	2	1	0	0	1	0	5 (0)
Cota Street at 2 <sup>nd</sup> Street	0	0	0	0	2	1	1	0	0	1	5 (0)
<b>Total</b>	<b>48</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>29</b>	<b>87 (1)</b>	<b>5</b>	<b>5</b>	<b>5 (1)</b>	<b>1</b>	<b>191 (2)</b>

Note 1: Intersections in this table had at least an average of one crash per year in period 2016-2020.

Note 2: Numbers in brackets are severe crashes.

Results of the analysis found that three signalized intersections along 1<sup>st</sup> Street experienced more than five total crashes with 28 at Railroad Avenue, 20 at Cota Street, and 15 at Mill Street. An additional three signalized intersections along Wallace Kneeland Boulevard experienced more than five crashes including 18 at Olympic Highway North, 13 at Shelton Springs Road, and 11 at Kneeland Plaza Access.

A significant share of the total crashes occurring at the signalized intersections included in Table 2 involved rear end collisions (37 percent). This was followed by angle crashes at 28 percent, and left turns at 15 percent.

The results of analysis at unsignalized intersections found that seven locations experienced ten or more crashes during the five-year period. The intersection of Wallace Kneeland Boulevard/Johns Prairie Road with Brockdale Road/13<sup>th</sup> Street experienced 21 total crashes for an average of over four per year. Eight unsignalized intersections along 1<sup>st</sup> Street experienced more than a total of five crashes.

It should be noted that crashes that occurred at intersections are included in the corridor data presented in section 2.3 for both the north/south corridors and the east/west corridors. This results in some double counting between corridors.

## 2.5 Comparison with Western Washington

The severe crashes in Shelton were reviewed to identify and characterize the risk factors associated with them. Based on available data from the records of the 16 severe crashes reported in Shelton, key crash factors were identified. In developing the list of crash factors that were most significant for Shelton city streets, consideration was given to both contributing causes and other features included in the crash record and on characteristics of the crash location. These risk factors are included in **Table 4** along with comparable information on the presence of these same risk factors averaged for the locations of severe crashes in Western Washington.

**Table 4. Comparison of Crash Factors Present on City Streets in Severe Crashes**

<b>Crash Risk Factors</b>	<b>City of Shelton</b>	<b>Western Washington Cities</b>
<i>By Crash Type</i>		
Hit Pedestrian	<b>8 (50%)</b>	26%
Entering at Angle	<b>2 (13%)</b>	12%
Hit Cyclist	<b>2 (13%)</b>	8%
Hit Fixed Object	2 (13%)	20%
<i>By Light Condition</i>		
Dark - Street Lights On	<b>8 (50%)</b>	36%
<i>By Junction Relationship</i>		
Not at Intersection & Not Related	<b>8 (50%)</b>	45%
At Intersection & Related	<b>7 (44%)</b>	39%
<i>By Roadway Curvature</i>		
Straight & Level	8 (50%)	58%
<i>By Traffic Control</i>		
No Traffic Control	<b>11 (69%)</b>	62%
Signal	4 (25%)	26%
<i>By Posted Speed</i>		
25 mph	<b>6 (37%)</b>	29%
30 mph	<b>10 (63%)</b>	22%
<i>By Pedestrian Contributing Circumstances</i>		
Inattentive Pedestrian (including likely)	<b>6 (75%)</b>	12%
Did not Grant ROW to Vehicle	<b>1 (13%)</b>	4%
<i>By Facility Use (Pedestrian)</i>		
Roadway	<b>4 (50%)</b>	10%
Marked Crosswalk	<b>4 (50%)</b>	8%

**Bold** = Higher than the rest of Western Washington

**Table 4** summarizes the crash factors present in severe crashes that were higher in the city of Shelton compared to other cities in Western Washington. As indicated in bold, many of the key crash factors in Shelton are occurring at higher levels than other Western Washington cities, especially those related to pedestrians.

### 3 SELECTION OF MOST COMMON RISK FACTORS

Based on the review severe crash data presented in Chapter 2, an analysis was conducted to identify the most common risk factors. Risk factors included crash type, contributing factors, roadway and intersection characteristics and driver/pedestrian behavior.

Based on guidance found in WSDOT's Target Zero – Washington Strategic Highway Safety Plan, the primary risk factors found in severe crashes were grouped into priority levels one and two. The levels are based on the percentage of traffic fatalities and serious injuries associated with each factor.

- **Priority Level 1:** Contributing risk factors that are involved in 25 percent or more of fatal or serious injury crashes
- **Priority Level 2:** Risk factors that are involved in less than 25 percent of fatal or serious injury crashes

From the data analysis, patterns arose showing several factors that were present in the fatal and serious injury collisions. The risk factors for Priority Levels 1 and 2 are listed below.

**Priority Level 1:** As indicated from the data in Table 4, risk factors that represent 25 percent or more of the severe crashes within the city include:

- Hitting pedestrians
- After dark but with illumination
- At or between intersections
- Along straight and level roadways with no traffic control
- In areas with both 25 and 30 mph speeds (the predominate speed limits within the city)
- Inattentive pedestrians (or pedestrians for which no contributing cause was identified in the crash report but for which inattention is a likely cause)
- Pedestrian crashes located along roadways and within crosswalks.

**Priority Level 2:** All other crash types and potential risk factors identified in Table 4 including:

- Angle crashes
- Turning crashes
- Hitting fixed objects
- Signalized intersections
- Failing to grant right of way.

## 4 IDENTIFICATION OF HIGH PRIORITY LOCATIONS

Severe crashes on streets in the city of Shelton are dominated by pedestrian crashes. Both fatal collisions during the five-year study period involved pedestrians including one on SR 3 and one on a city street. Out of all the risk factors identified under priority level 1, four specifically speak to pedestrians (crash type, inattentive pedestrian, failure to grant right of way, and pedestrian crashes along roadways or in marked crosswalks).

Additionally, several of the crashes that occurred under dark but illuminated conditions involved pedestrians, occurred in areas that were straight and level with no traffic control (i.e., located away from intersections) and largely in areas with 30 mph speeds. None of the crashes were reported to be related to speeding vehicles and speed measurements taken during this study at select locations indicated that speeds were only slightly higher than posted.

### 4.1 Selection of High Priority Locations based on Technical Analysis

Because risk factors associated with pedestrian and bicycle crashes are the highest Severe crash type in Shelton, this has been selected to determine to assess the roadway corridors. The locations of all bicycle and pedestrian crashes were used for determining priority roadway corridors. This information, shown in Figure 4, indicates the following roadway corridors should be high priority locations:

- Olympic Highway N
- W Railroad Avenue
- N 7<sup>th</sup> Street
- Wallace Kneeland Boulevard
- S 1<sup>st</sup> Street
- Olympic Highway S

### 4.2 Local Input

Concerns that have been raised by residents have also been taken into consideration. Eight concerns shared are described below:

- E Arcadia Avenue – Vehicle speeding between Lake Boulevard and Olympic Highway S
- E K Street – Mountain View Elementary School afternoon parent pick-up
- Wallace Kneeland Boulevard – Oakland Bay Junior High School mid-block pedestrian crossing
- W Railroad Avenue – Pedestrian crossing between 4<sup>th</sup> Street and 2<sup>nd</sup> Street
- Pine Street/N 1<sup>st</sup> Street – Westbound Pine Street intersection sight distance
- E Fir Street – Steep grade and gravel material between Otter Street and Magnolia Street
- N 13<sup>th</sup> Street/Shelton Springs Road – South leg pedestrian crossing
- Northcliff Road/Terrace Boulevard – North and south leg pedestrian crossings

Six of these concerns relate to pedestrian safety on roadways. Two of these roadways, W Railroad Avenue and Wallace Kneeland Boulevard, are registered as high priority locations while the other four roadways, E Arcadia Avenue, N 13<sup>th</sup> Street, E K Street, and Northcliff Road are included in the top 20 crash corridors described in Table 1 earlier in this report. However, based on technical review of all



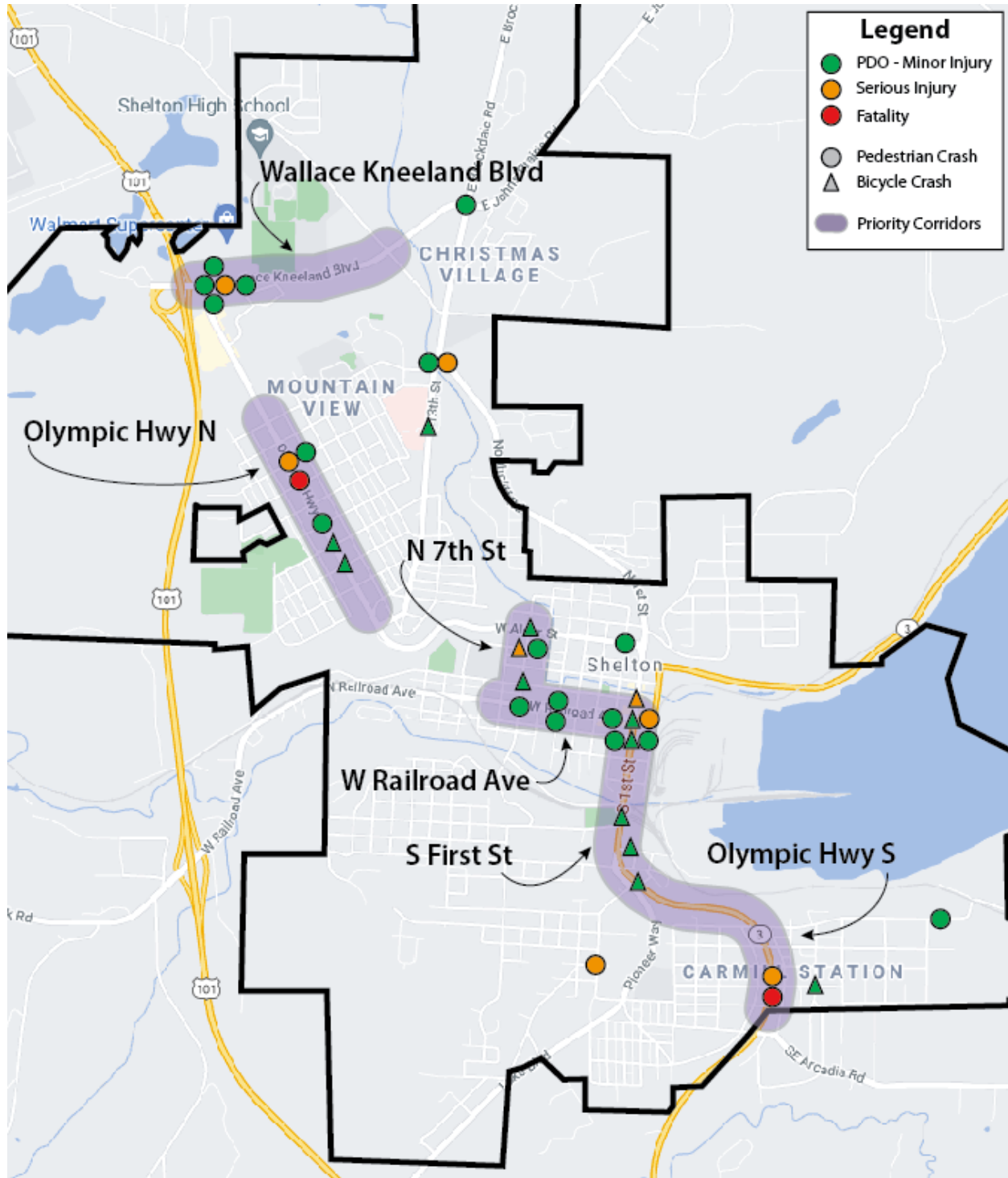
existing bicycle and pedestrian crashes, these four locations did not register as high priority locations. The remaining two concerns raised both have to do with vehicle sight distance.

Additional review of pedestrian-related crashes indicated that many occurred in areas with sidewalks, crosswalks, and bus stops and largely occurred adjacent to commercial development. None of these features would appear to contribute to incidence of pedestrian crashes but may be indicative of areas where a higher level of pedestrian activity is experienced resulting in a greater degree of exposure than other parts of the city.

Both E Arcadia Avenue and E K Street are located adjacent to or in close proximity to elementary schools, which generate higher levels of pedestrian activity at the beginning and end of each school day. While there were no recorded pedestrian or bicycle crashes within the last five years on either roadway, the proximity to higher levels of pedestrian activity and local concern for pedestrian safety indicate these roadways should be included as secondary priority locations.

The priority corridors are shown in **Figure 5**.

Figure 5. Priority Corridors and Local Safety Concern Locations



## 5 IDENTIFICATION OF COUNTERMEASURES FOR HIGH PRIORITY CORRIDORS

A review of each high priority crash corridor and additional spot locations raised by local residents was performed to identify potential safety countermeasures. These countermeasures were selected based on a review of the specific crash data and existing roadway conditions, consultation with City staff, and a review of safety countermeasure resources from WSDOT and FHWA. Below is a description of each identified priority location, the issues specific to that location, and the selected countermeasures.

### 5.1 Olympic Highway N

Olympic Highway N between K Street and B Street has three vehicle travel lanes ( two through and a center left) and on-street parking and sidewalks along both sides of the street. There are marked pedestrian crossings at the intersections of the roadway with K Street, J Street, I Street, G Street, E Street and C Street. With the exception of K Street, these crossing are located at unsignalized locations, which are highlighted in **Figure 6**.

Figure 6. Olympic Highway N Unsignalized Pedestrian Crossing Locations



The last five years of reported crash data included two bicycle crashes and four pedestrian crashes in this corridor, including one serious injury and one fatal crash, both involving pedestrians. The contributing cause for the pedestrian fatality was inattention on the part of the person walking. While not specifically listed, the serious injury pedestrian crash may have also been the result of walker inattention. Three of the six pedestrian crashes occurring in the corridor, including both severe crashes, happened at the I Street intersection. As noted above, this location is one of several uncontrolled intersections in the corridor with fully striped pedestrian crossings on each approach and adjacent commercial or pedestrian-generating land uses including hospital access, transit stops and other uses. While the specific land uses at this intersection may have contributed to the higher number of reported pedestrian crashes, it is assumed that the physical characteristics of this intersection are a factor. With several other intersections within the corridor sharing the same physical characteristics, multiple systemic improvements have been identified for this corridor.

Recommended Countermeasures:

1. Curb extensions on Olympic Highway N for all intersecting streets and enhanced illumination.
2. Development of ADA-compliant curb cuts with tactile warning strips.
3. High visibility pedestrian treatments such as Rectangular Rapid Flashing Beacons (RRFBs) or other advanced pedestrian warning signs.

These countermeasures are recommended at the I Street intersection specifically but are all also considered systemic improvements for the entire corridor.

## 5.2 Wallace Kneeland Boulevard

Wallace Kneeland Boulevard Between the US 101 interchange and Shelton Springs Road has primarily two travel lanes in each direction and a two-way left turn lane on the western portion of the road adjacent to existing commercial development. There were five reported pedestrian crashes in the last five years, with one serious injury crash, but no bicycle crashes. All five of the recorded pedestrian crashes on this corridor occurred in the western portion, largely at or near the two signalized intersections of Olympic Highway N and Bell Lane. A detailed review of each of these crashes indicate that no specific deficiency is apparent. Each crash has an independent cause and the causes for multiple crashes were attributed to the pedestrian.

This roadway corridor also includes one of the locally raised concerns, the mid-block pedestrian crossing serving the Oakland Bay Junior High School. This crossing provides a connection between the middle school and high school to the north and Mountain View Elementary School and residential properties to the south. There are crosswalks at the intersection on the school access road and on Wallace Kneeland Road. There are existing active pedestrian crossing signs (Rectangular Rapid Flashing Beacons or RRFBs) and an overhead pedestrian crossing sign with flashing yellow lights. Over the last five years there have been no reported pedestrian or bicycle crashes at this crossing. This existing crossing is shown in **Figure 7**.

**Figure 7. Wallace Kneeland Boulevard Mid-Block Pedestrian Crossing**



Recommended Countermeasures:

1. Monitor pedestrian and bicycle safety at the Wallace Kneeland Boulevard/Olympic Highway N intersection.
2. Perform an improvement alternatives study for Wallace Kneeland Boulevard at the Oakland Bay Junior High School mid-block crossing, including a public outreach component.
3. Consider a midblock refuge island
4. Consider enhanced pedestrian signal treatment that would stop vehicular traffic.

### 5.3 N 7<sup>th</sup> Street

N 7<sup>th</sup> Street between W Alder Street and W Railroad Avenue has a single travel lane in each direction and on-street parking on both sides of the street. This corridor experienced three reported bicycle crashes, including one severe crash, and two reported pedestrian crashes in the last five years. A detailed review of each pedestrian and bicycle crash did not indicate any specific deficiencies on the corridor, however the presence of three bicycle crashes suggests that this may be a good candidate for enhanced bicycle treatments. The planned conversion of the former Simpson Logging Railroad that runs parallel to Park Street to a bicycle path and trail will provide a safe route between S 7<sup>th</sup> Street and Kneeland Park, which may only increase the bicycle volumes on N 7<sup>th</sup> Street.

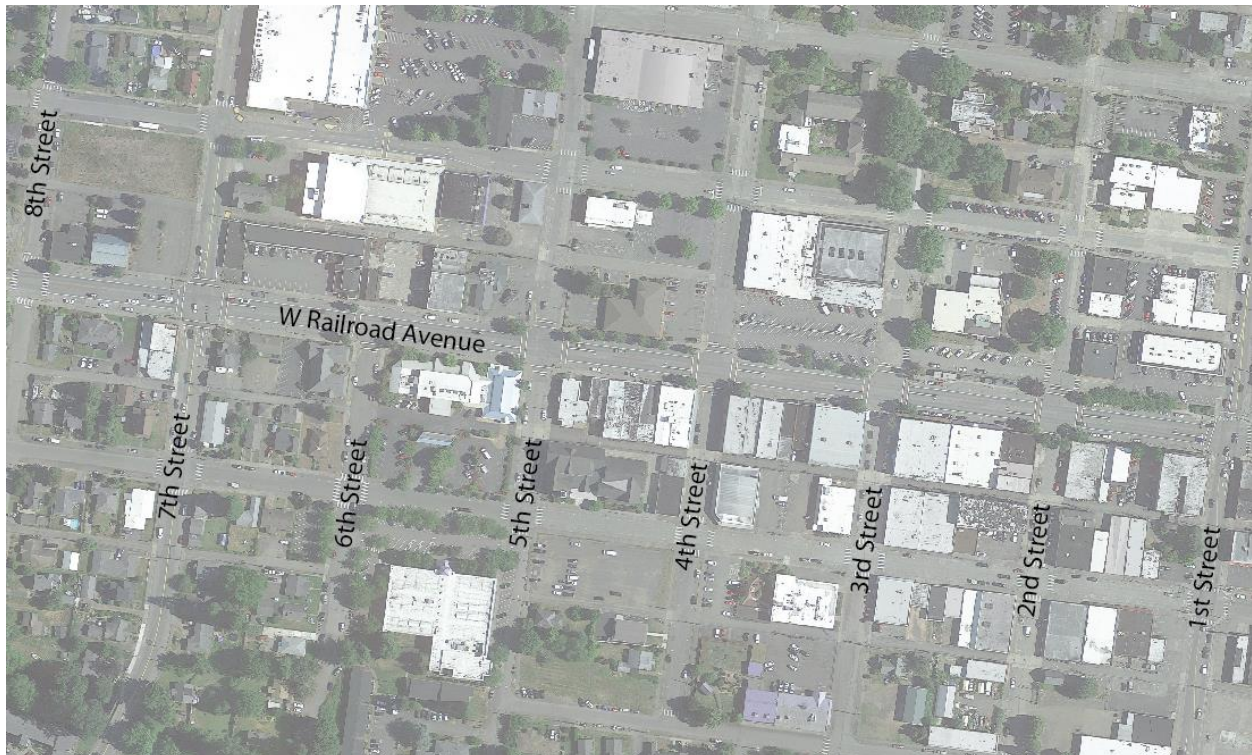
Recommended Countermeasures:

1. Develop city-wide bicycle route plan, to include identification of specific bicycle corridors which could include 7<sup>th</sup> Street.
2. Consider enhanced bicycle treatments on 7<sup>th</sup> Street which may include designated bicycle lanes to enhance access to the future trail.

## 5.4 W Railroad Avenue

W Railroad Avenue between 8<sup>th</sup> Street and 1<sup>st</sup> Street has one travel lane in each direction, a two-way center left-turn lane, and on-street parking on both sides of the street. Curb extensions with ADA crossing warning strips have been provided along Railroad Avenue for many years along with street trees. In 2015, this corridor was improved by the city to provide high visibility, enhanced pedestrian amenities such as crosswalks with colored pavement, two-way left turn refuge areas, and attractive illumination. The corridor is shown in **Figure 8**.

**Figure 8. W Railroad Avenue Between 8<sup>th</sup> Street and 1<sup>st</sup> Street**



Between 2016 and 2020, this corridor experienced three pedestrian crashes between 7<sup>th</sup> Street and 2<sup>nd</sup> Street, while the intersection of Railroad Avenue and 1<sup>st</sup> Street had four pedestrian crashes, including one serious injury crash, and two bicycle crashes. Additionally, a vehicular serious injury crashes occurred at the intersection of Railroad Avenue with 7<sup>th</sup> Street.

The intersection of Railroad Avenue with 7<sup>th</sup> Street currently is controlled by a traffic signal and there are marked crosswalks on all four legs. As noted, there was one serious injury vehicular crash at this location and one of the non-severe pedestrian crashes also occurred here. Both the serious injury

vehicle crash and the pedestrian crash involved a vehicle making a left turn from 7<sup>th</sup> Street (one turning northbound and the other turning southbound). All four approaches currently operate with permissive left-turns, meaning all left-turning vehicles must yield to the opposing through traffic.

Pedestrian crashes also occurred at the intersection with 2<sup>nd</sup> Street (one involving a left turning vehicle), and 5<sup>th</sup> Street (two with one that involved a drunk driver). None of these crashes suggest a specific deficiency on the corridor.

This corridor does include one of the locally raised safety concerns. Previously the intersection of W Railroad Avenue and 4<sup>th</sup> Street operated under traffic signal control and provided a controlled pedestrian crossing to access the Post Office and other destinations in the core commercial area. The city removed this control a few years ago and while the vehicle operations at the intersection appear to be acceptable, there is concern about the loss of the protected pedestrian crossings that were a part of the traffic signal operation. Specific concern regarding pedestrians crossing W Railroad Avenue to reach the post office, located between N 2<sup>nd</sup> Avenue and N 3<sup>rd</sup> Avenue, was raised.

Recommended Countermeasures:

1. Evaluate existing traffic signal and intersection operations at W Railroad Avenue/7<sup>th</sup> Street to determine if protected left-turn phasing could be implemented without a significant impact to the vehicle operations.
2. Consider adding yield to pedestrian crossing signage on the traffic signal mast arms.
3. As Railroad Avenue already has a good pedestrian environment with the curb extensions, ADA ramps and other pedestrian-supportive features, as well as signalization at the intersections with 1<sup>st</sup> and 5<sup>th</sup> Streets, consider installing an active pedestrian crossing signal at the intersection of W Railroad Avenue and 3<sup>rd</sup> Street which lies roughly midway between the two existing signalized crossings.

## 5.5 S 1<sup>st</sup> Street (SR 3)

S 1<sup>st</sup> Street between Railroad Avenue and Harvard Avenue has a single travel lane in each direction and a two-way left-turn lane. Near the center of this roadway corridor is the concrete trestle bridge crossing Goldsborough Creek, which narrows the street to two lanes and provides narrow, separated sidewalks on each side.

There were four reported pedestrian crashes in this corridor, including one serious injury crash, which all occurred at the Railroad Avenue intersection. There were also five reported bicycle crashes, two of which occurred at the Railroad Avenue intersection. Each of the six total crashes at Railroad Avenue were evaluated and were predominately found to be attributed to either a failure on the part of the bicycle or pedestrian to yield, a failure to use the striped crosswalks, or involving the influence of drugs/alcohol. There does not appear to be a specific pattern to the crashes and no obvious countermeasures. Given the high traffic volume at this intersection, it may be a candidate for roundabout control, which is considered a safer intersection treatment for bicycles and pedestrians due to reduced travel speeds, however, the right of way impacts of a roundabout may preclude its implementation.

The remaining three bicycle crashes occurred on S 1<sup>st</sup> Street between Park Street and Harvard Avenue, all south of the Goldsborough Creek bridge. Sufficient physical space to accommodate bicyclists on 1<sup>st</sup> Street in this area is an issue, particularly with the relatively high volume of truck traffic that uses this facility (1<sup>st</sup> Street in this area functions as SR 3). These crashes suggest the need for enhanced bicycle treatments perhaps off the 1<sup>st</sup> Street corridor. This would be particularly important to access the planned rails to trails conversion of the railroad line parallel to Park Street.

Recommended Countermeasures:

1. Evaluate the potential for roundabout control at Railroad Avenue/1<sup>st</sup> Street.
2. Develop city-wide bicycle route plan, to include identification of specific bicycle corridors to address travel needs into and out of the downtown area and to access the proposed rails to trails conversion.

## 5.6 Olympic Highway S (SR 3)

Olympic Highway S between Harvard Avenue and Bellevue Avenue, which is at the city boundary of SR 3, provides one travel lane in each direction and primarily also provides a two-way left-turn lane. Between Harvard Street and Fairmount Avenue, which is a steep downhill drop from south to north, the two-way left-turn lane converts to a 2<sup>nd</sup> southbound travel lane. There were no bicycle crashes reported in this corridor but there were two reported pedestrian crashes, one a serious injury crash and the other a fatal crash, which were both located in the immediate vicinity of the mid-block pedestrian crossing between Cascade Avenue and Bellevue Avenue. Additionally, one of the six serious injury vehicle crashes occurred in this corridor, at the intersection of Olympic Highway S and Fairmount Avenue.

With both severe pedestrian crashes occurring in the immediate vicinity of the midblock crossing between Cascade Avenue and Bellevue Avenue, this crossing was evaluated. Olympic Highway S in the vicinity of the mid-block crossing is shown below in **Figure 9**.



Figure 9. Olympic Highway S Mid-Block Pedestrian Crossing



As shown on Figure 6, there are currently protected pedestrian crossings of Olympic Highway S at both Cascade Avenue and Arcadia Avenue, which both operate under traffic signal control. These crossings are located approximately 700 feet apart, with the existing mid-block crossing located approximately 225 feet south of Cascade Avenue, just north of Bellevue Avenue. The Bordeaux Elementary School is

located on Bellevue Avenue west of Olympic Highway S and draws from households east of Olympic Highway S.

The crossing is currently located on a portion of Olympic Highway S with a vertical curve. The vertical curve crests near the Cascade Avenue intersection, which limits the available sight distance for vehicles travelling southbound on Olympic Highway S. The existing crossing does not provide direct overhead lighting and only provides an advance sign in the northbound direction. The existing sidewalk on the east side of Olympic Highway S extends south from Cascade Avenue and ends at the mid-block crossing.

As this is the only mid-block crossing within the corridor and is the only location with reported bicycle or pedestrian crashes, the recommended countermeasures are limited to this location.

Recommended Countermeasures:

1. Evaluate the viability of the mid-block crossing and if maintained:
  - Extend east sidewalk south to connect to Arcadia Avenue
  - Relocate mid-block crossing to the south side of Bellevue Avenue

## 5.7 Additional Local Concern Locations

Of the seven locally raised safety concerns, two of them have been covered in the priority corridor descriptions above. The remaining five concerns are evaluated below:

### 5.7.1 Arcadia Avenue – Vehicle speeding between Lake Boulevard and Olympic Highway S

Arcadia Avenue is an east/west minor arterial that runs from Lake Boulevard on the west end to the Puget Sound on the east end, well outside of the Shelton city limits. The identified area of concern is very near the western end of the roadway and is one block south of the Bordeaux Elementary School. In this area, the surrounding land uses are primarily residential, and there are multiple striped pedestrian crossings of Arcadia Avenue connecting the residential properties to the elementary school. There are currently no sidewalks provided on this portion of Arcadia Avenue and intermittent street lighting.

Recommended Countermeasures:

1. Collect vehicle speed data on Arcadia Avenue
2. Identify speed reduction strategies and coordinate with the local residents. These could include:
  - Mini roundabout(s)
  - Speed bumps/speed tables
  - Raised pedestrian crossings
3. Curb, gutter and sidewalk installation
4. Enhanced street lighting

### 5.7.2 E K Street – Mountain View Elementary School afternoon parent activity

The Mountain View Elementary School has recently completed a new school building, adjacent to the previous building. This new school was designed to provide more on-site vehicle storage for parent pick-up, but currently there is still a substantial vehicle queue on K Street during the afternoons. This queue

results in congestion for vehicles trying to travel on K Street and is creating an unsafe environment for children trying to cross K Street. The school and adjacent street network are shown on **Figure 10**.

**Figure 10. Mountain View Elementary School**



As shown on Figure 10, there are currently two pedestrian crosswalks on K Street, both based on the location and orientation the previous school building. The new school's primary path does not align with either crosswalk, which is across from King Street. Students have been observed crossing at King Street, even without a striped crosswalk. The previous main school entrance, across from N Callanan Street, provides a curb extension and a diagonal crossing to directly connect the school entrance path to the southwest corner of the E K Street/N Callanan Street intersection. With the new school location this curb extension prohibits the parent vehicle queue from advancing along the edge of the street, forcing vehicles to stay complete in the single westbound travel lane.

Recommended Countermeasures:

1. In cooperation with the school and school district, conduct an evaluation of access and on-site circulation and identify improvements that will accommodate the parent vehicle activity while reducing existing on-street conflicts and delays.

2. Consider installation of a pedestrian crossing at King Street.
3. Consider In-Street Pedestrian Crossing signs.
4. If supported by the evaluation of on-site access and circulation, consider removal of the curb extension at N Callanan Street and realign the existing crosswalk to be perpendicular to E K Street.

### 5.7.3 Pine Street/N 1st Street – Westbound Pine Street intersection sight distance

This is an existing four-way intersection that operates under two-way stop control for the Pine Street approaches. There is an existing building on the south side of Pine Street that extends the entire block between N 1<sup>st</sup> Street and N Front Street. This building, as shown in **Figure 11**, is very tight to the southeast corner of the intersection and limits the ability of stopped vehicles on Pine Street from seeing oncoming vehicles from northbound N 1<sup>st</sup> Street.

**Figure 11. Westbound Pine Street approaching N 1<sup>st</sup> Street**



Recommended Countermeasures:

1. Conduct a study of the intersection to determine if a different control type could operate acceptably and reduce the sight distance need.

### 5.7.4 E Fir Street – Steep grade and gravel material between Otter Street and Magnolia Avenue

E Fir Street is an existing city roadway that is part of the roadway grid network serving the Capitol Hill area of northeast Shelton. Between Otter Street and Magnolia Avenue this road is currently gravel and very steep, especially as it approaches Magnolia Avenue. This leads to access issues for City maintenance vehicles and concerns regarding sight distance due to frequent dust and from the gravel roadway surface. This approach is shown on **Figure 12**. There are several residential driveways accessing this portion of E Fir Street, but much of the adjacent property on the south side is undeveloped

**Figure 12. E Fir Street approaching Magnolia Avenue**



**Recommended Countermeasures:**

1. Upgrade the roadway surface chip seal or pavement. This could be developer driven if/when the adjacent property is developed.

**5.7.5 N 13th Street/Shelton Springs Road – South leg pedestrian crossing**

The N 13<sup>th</sup> Street at Shelton Springs Road/Alpine Way intersection is located in north Shelton, just south of Wallace Kneeland Boulevard and is close proximity to Olympia, Middle School, Mountain View Elementary School, and the Olympic College Shelton Campus. N 13<sup>th</sup> Street travels north/south and provides access to the neighborhoods along Olympic Highway N and, via Northcliff Road, access to downtown Shelton. This intersection currently operates under two-way stop control for the Shelton Springs Road and Alpine Way, with striped crosswalks on all four approaches. The intersection is shown in Figure 13.

Figure 13. N 13<sup>th</sup> Street/Shelton Springs Road Intersection



Concerns have been expressed for the south leg pedestrian crossing. This crossing is across the free-flowing N 13<sup>th</sup> Street roadway, and there are currently four travel lanes to cross. Additionally, it has been noted that vehicles waiting to make a left turn from northbound N 13<sup>th</sup> Street onto westbound Shelton Springs Road obstruct the visibility of the pedestrians for the two northbound through lanes, which has potentially contributed to some near miss crashes. Given the adjacent schools, this is a common crossing for kids to make during school hours.

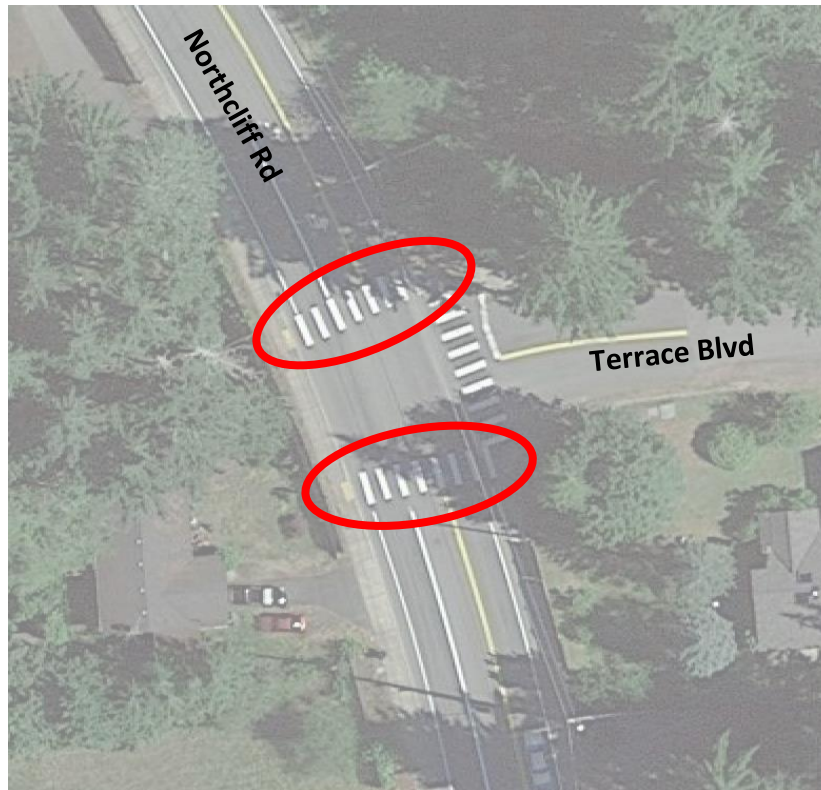
Recommended Countermeasures:

1. Evaluate existing intersection operations to assess alternative control options, including all-way stop control, traffic signal control, and roundabout control.
2. Consider installation of high visibility pedestrian treatments such as Rectangular Rapid Flashing Beacons (RRFBs) or other advanced pedestrian warning signs.

### 5.7.6 Northcliff Road/Terrace Boulevard – North and south leg pedestrian crossings

The Northcliff Road at Terrace Boulevard intersection is located in north Shelton, just south of Wallace Kneeland Boulevard and is close proximity to Olympic Middle School, Mountain View Elementary School, and the Olympic College Shelton Campus. N 13<sup>th</sup> Street travels north/south and provides access to the neighborhoods along Olympic Highway N and, via Northcliff Road, access to downtown Shelton. The intersection, and pedestrian crossings, are shown on **Figure 14**.

**Figure 14. Northcliff Road/Terrace Boulevard Intersection**



Concerns have been expressed regarding the safety of both Northcliff Road pedestrian crossings at this location. There are currently advance pedestrian signs north and south of the intersection as well as pedestrian crossing signs at each crosswalk. Northcliff Road is travelling uphill from south to north at this location, and the road has a horizontal curve immediately north of the intersection.

Recommended Countermeasures:

1. Monitor pedestrian and bicycle safety at the Northcliff Road/Terrace Boulevard intersection.
2. Perform a speed study for Northcliff Road at the Terrace Boulevard intersection.
3. Consider installation of high visibility pedestrian treatments such as Rectangular Rapid Flashing Beacons (RRFBs) or other advanced pedestrian warning signs.
4. Consider installation median refuge for the south crosswalk.

## 6 PRIORITIZED LIST OF COUNTERMEASURES

Based on the detailed evaluation of each priority corridor and local concern area the recommended systemic and spot countermeasures were assessed, and a prioritization was established. All of the recommended countermeasures we divided into three tiers:

1. Top Priorities
2. Additional Needs
3. Studies and Further Evaluation

This prioritization was based on the severity of the existing safety issue, the nature of the proposed countermeasure, and the cost of the proposed countermeasure. Planning level cost estimates have been prepared for each potential countermeasure. The estimates provided represent the cost of independent implementation. However, should multiple countermeasures be implemented at the same time, the collective cost would likely be lower. This grouping of improvements would apply to city-wide implementation of a single countermeasure, like advanced pedestrian signage across town, or if multiple different countermeasures were implemented at the same time in a single location. Many of the identified countermeasures would group together naturally, for example:

- High visibility pedestrian treatments, advance stop/yield lines, and advanced pedestrian signage could all group together or with any other pedestrian improvement
- New ADA Ramp and midblock pedestrian refuge or curb extension with possible RRFB installation.

The summary of proposed countermeasures, including the prioritization and estimated cost, are provided in **Table 5**.

**Table 5. Countermeasure Prioritization and Cost Estimates**

#	Location	Improvement	Total Cost
<b>Tier 1 – Priority Improvements</b>			
1-A	Olympic Highway N at I Street	<ul style="list-style-type: none"> <li>• Install curb extensions</li> <li>• Enhance illumination</li> <li>• Develop ADA-compliant curb cuts and tactile warning strips</li> <li>• Install advanced pedestrian crossing warning signs</li> <li>• Install high visibility pedestrian treatments</li> </ul>	\$350,000
1-B	Olympic Highway S (SR 3) Mid-Block Pedestrian Crossing	<ul style="list-style-type: none"> <li>• Extend east sidewalk south to connect to Arcadia Avenue</li> <li>• Relocate mid-block crossing to the south side of Bellevue Avenue</li> </ul>	\$610,000
<b>Tier 2 – Additional Improvements</b>			
2-A	Olympic Highway N Between K Street and B Street	<ul style="list-style-type: none"> <li>• Install curb extensions</li> <li>• Enhance illumination</li> <li>• Develop ADA-compliant curb cuts and tactile warning strips</li> <li>• Install advanced pedestrian crossing warning signs</li> <li>• Install high visibility pedestrian treatments</li> </ul>	\$1,210,000
2-B	W Railroad Avenue Between 8 <sup>th</sup> Street and 1 <sup>st</sup> Street	<ul style="list-style-type: none"> <li>• Evaluate existing traffic signal and intersection operations at W Railroad Avenue/7<sup>th</sup> Street to assess potential protected left-turn phasing</li> <li>• Consider adding yield to pedestrian crossing signage on traffic signal mast arms at W Railroad Avenue/7<sup>th</sup> Street</li> <li>• Install active pedestrian crossing signal at the intersection of W Railroad Avenue and 3<sup>rd</sup> Street</li> </ul>	\$100,000
2-C	E K Street at Mountain View Elementary School	<ul style="list-style-type: none"> <li>• Evaluate on-site circulation improvements to accommodate</li> </ul>	\$180,000



		<p>afternoon parent pick-up</p> <ul style="list-style-type: none"> <li>• Consider installation a pedestrian crossing at King Street</li> <li>• If supported by on-site access/circulation analysis, consider removing existing curb extensions at N Callanan Street and realign existing crosswalk</li> <li>• Consider in-street pedestrian crossing signs</li> </ul>	
2-D	<b>E Fir Street Between Otter Street and Magnolia Avenue</b>	<ul style="list-style-type: none"> <li>• Upgrade roadway surface to chip seal or pavement</li> </ul>	\$175,000
<b>Tier 3 – Studies and Further Evaluation</b>			
3-A	<b>Wallace Kneeland Boulevard at Mid-Block Pedestrian Crossing</b>	<ul style="list-style-type: none"> <li>• Monitor pedestrian and bicycle safety</li> <li>• Perform an improvement alternatives study</li> </ul>	\$50,000
3-B	<b>S 1<sup>st</sup> Street (SR 3) Between Railroad Avenue and Harvard Avenue</b>	<ul style="list-style-type: none"> <li>• Evaluate potential for roundabout control at Railroad Avenue and 1<sup>st</sup> Street</li> <li>• Develop citywide bicycle route plan to connect with downtown and rails to trails project south of downtown</li> </ul>	\$4,100,000
3-C	<b>Arcadia Avenue Between Lake Boulevard and Olympia Highway S</b>	<ul style="list-style-type: none"> <li>• Perform a speed study</li> <li>• Consider installation of a mini roundabout</li> <li>• Consider installation of speed bumps/speed tables/raised pedestrian crossings</li> <li>• Consider installation of curb, gutter, and sidewalk</li> <li>• Consider installation of enhanced illumination</li> </ul>	\$1,800,000
3-D	<b>N 7<sup>th</sup> Street Between W Alder Street and W Railroad Avenue</b>	<ul style="list-style-type: none"> <li>• Develop city-wide bicycle route plan, to include identification of specific bicycle corridors</li> <li>• Consider enhanced bicycle treatments on 7<sup>th</sup> Street</li> </ul>	\$50,000
3-E	<b>Pine Street at 1st Street Intersection Sight Distance</b>	<ul style="list-style-type: none"> <li>• Conduct an evaluation of the intersection to determine if a different control type could operate acceptably and reduce the sight distance needs</li> </ul>	\$2,000
3-F	<b>N 13<sup>th</sup> Street at Shelton Springs Road</b>	<ul style="list-style-type: none"> <li>• Evaluate existing intersection operations and assess alternative control options</li> <li>• Consider installation of high visibility pedestrian treatments such as Rectangular Rapid Flashing Beacons (RRFBs) or other advanced pedestrian warning signs</li> </ul>	\$60,000
3-G	<b>Northcliff Road/Terrace Avenue Pedestrian Crossing</b>	<ul style="list-style-type: none"> <li>• Monitor pedestrian and bicycle safety</li> <li>• Perform a speed study</li> <li>• Consider installation of refuge island</li> <li>• Consider installation of enhanced pedestrian signal treatment</li> </ul>	\$140,000

# Local Road Safety Plan

**Prepared For:**

City of Yelm

**Prepared By:**

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August 2023



**City of Yelm**  
WASHINGTON EST. 1924



# Local Road Safety Plan

## Project Information

Project: Local Road Safety Plan

Prepared for: City of Yelm  
106 2<sup>nd</sup> Street SE  
Yelm, WA 98597

## Reviewing Agency

Jurisdiction: City of Yelm  
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Safety Plan.docx

## Signature

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

 *Anne Sylvester*

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Prepared by Ryan Shea, PTP and Anne Sylvester, PTE

*Eric Johnston*

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Approved by Eric Johnston, PE



08/22/2023

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# 1 INTRODUCTION

The City of Yelm is actively pursuing improvements to reduce crashes and enhance safety for its multimodal transportation system. As part of that effort, the city has prepared this *Local Road Safety Plan* (LRSP) following the risk-based, data-driven analytical procedures outlined in guidance provided by the Washington State Department of Transportation (WSDOT) Local Programs Division. This guidance is designed to support WSDOT’s efforts to implement the *Target Zero – Washington State Strategic Highway Safety Plan* which relies on a data-based approach that analyzes crash trends and contributing factors in the development of successful crash reduction strategies.

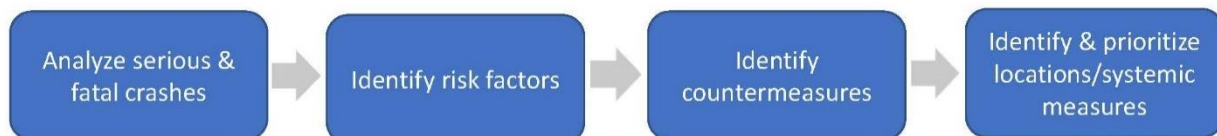
## 1.1 Purpose of the Study

The purpose of this plan is to improve safety for different modes of transportation along city streets through the analysis of crash data, identifying and prioritizing risk factors that impact safety, and establishing and prioritizing engineering countermeasures and strategies that reduce the number and severity of crashes in the city.

## 1.2 Analysis Methodology

The *Local Road Safety Plan* follows the WSDOT’s recommended approach for developing a prioritized list of engineering countermeasures. Analysis was conducted following a multi-step process that relied on five years of crash data (2017 through 2021). The multi-step process includes:

1. Evaluate crash data to identify crashes with a fatality and/or a serious injury. Identify contributing circumstances and characterize crash types and locations.
2. Based on this data, identify key risk factors which contribute to the crashes identified in the city of Yelm and compared to an average of risk factors for Western Washington in the aggregate. Risk factors were categorized into three priority levels based on significance in relation to the reported severe crashes.
3. Select the most common risk factors and group these by priority level based on their significance in relation to the reported severe crashes.
4. Identify and score high priority crash locations.
5. Identify countermeasures to address the types of crashes in the high priority locations.
6. Develop a prioritized list of projects including both systemic and spot improvements and cost estimates.





### 1.3 Study Area

Yelm is located off the I-5 corridor between the Olympia/Lacey area in Thurston County and Joint Base Lewis-McChord (JBLM) in Pierce County. The study area for the Yelm *Local Road Safety Plan* includes the entire area within the city's corporate limits. The population of Yelm was 6,848 in 2010, growing to 10,617 by 2020<sup>1</sup>. This data indicates that the population in Yelm grew by over 55 percent during the ten years between 2010 and 2020. The population of Thurston County in 2010 was 252,264 of which Yelm represented 2.7 percent. By 2020, Thurston County's population was estimated to increase to 294,793<sup>2</sup> of which Yelm was 3.6 percent indicating that Yelm is growing more rapidly than Thurston County as a whole. In fact, Yelm has been the most rapidly growing community in Thurston County.

Population growth, in part, has been due to increases in the number of persons per household, likely due to an influx of young military families associated with JBLM. Overall Yelm's population has the youngest median age of all of the cities and towns in Thurston County at 29 years old (Census 2010). Almost five percent of off-base Joint Base Lewis-McChord households live in Yelm. Based on projections from the Thurston Regional Planning Council, Yelm's population is expected to grow to approximately 23,900 by 2040, an increase of 125 percent<sup>3</sup>.

**Figure 1** illustrates the boundaries of the City of Yelm, its Urban Growth Area, and its general location in Western Washington. The figure also identifies key roadway corridors which include state highway facilities, some with limited access, including SR 507, SR 510, and SR 510 Alt (Yelm Bypass).

### 1.4 City Plans and Policies Related to Transportation Safety

The existing Yelm Comprehensive Plan, Transportation System Plan and Downtown Strategy Plan have several goals and numerous policy statements that speak to providing for the safe and cost-effective movement of goods, services, and people. Some of these policy statements are broad and generalized but others address more specific problems that are important to the city, and/or reflect the dominant crash types or systemic risk factors found within the community. Some of these include guidance on sidewalk replacement, safer pedestrian crossings, intersection control improvements and integration of trails all of which have a strong correlation to the spot and systemic problems identified in the Safety Plan.

The Safety Plan was developed with full consideration of existing goal and policy statements moving from the more generalized to the more specific as data was collected and analyzed, and recommended improvements were developed and prioritized. As shown in the data, key problem locations included intersections with angle crashes and/or lack of illumination, as well as several locations where the lack of multimodal facilities contributed to either actual crashes or were considered a systemic problem.

The Safety Plan relies on the goal and policy statements provided by the existing Comprehensive Plan and Transportation System Plan for guidance in the development and implementation of improvements. Additionally, the Transportation System Plan provides strategies for reducing traffic flow through the community via the new Yelm Bypass, and the implementation of improvements through the use of development mitigation and the 6-Year Transportation Improvement Program.

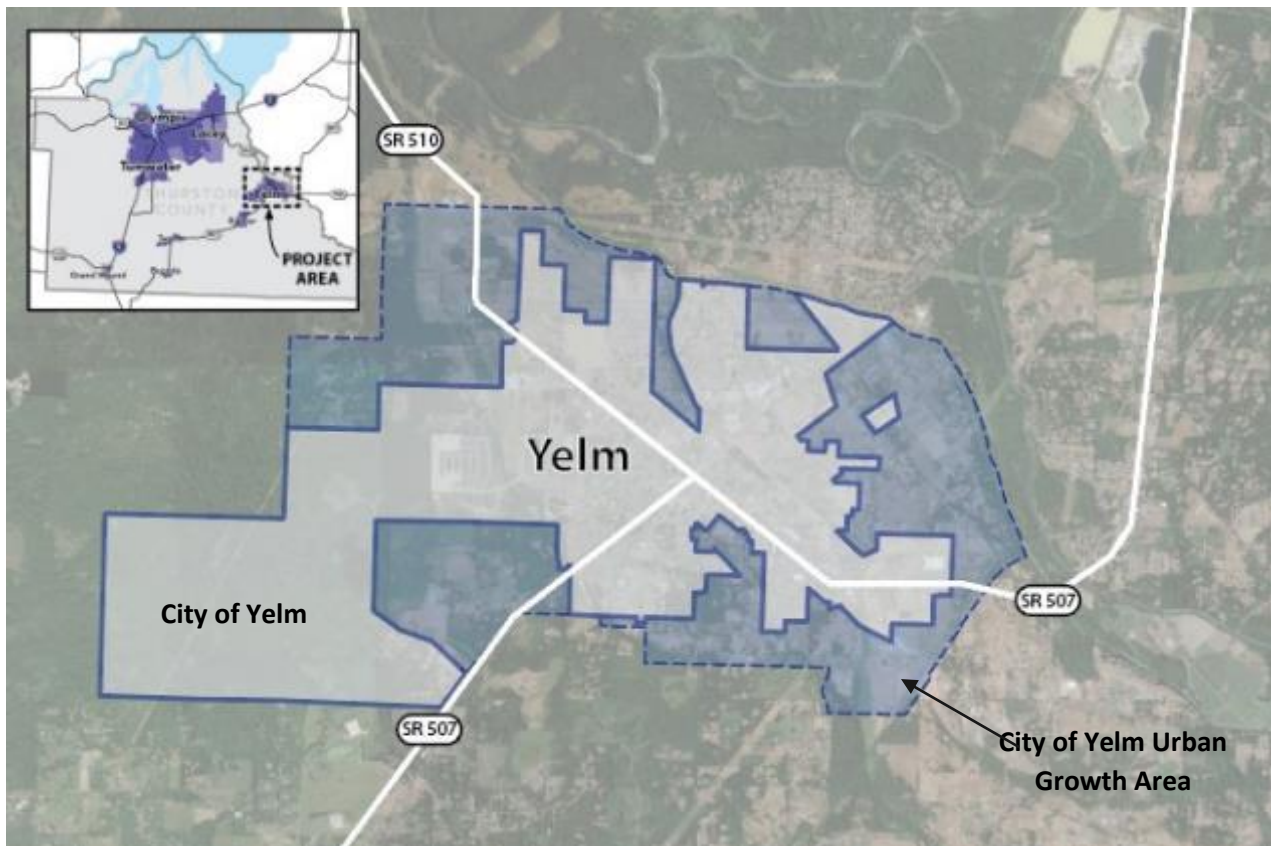
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<sup>1</sup> [https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm\\_april1\\_poptrends.pdf](https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_poptrends.pdf)

<sup>2</sup> Ibid.

<sup>3</sup> Thurston Regional Planning Council, *Population Forecast Allocations for Thurston County*, June 2019.

Figure 1. Study Area and Vicinity



## 1.5 Report Content and Organization

This report is organized into seven chapters, the first of which is this Introduction. **Chapter 2** identifies and discusses historic crash data in the City of Yelm (2017 through 2021) with an emphasis on what are characterized as “severe” crashes. These include crashes that result in fatalities and/or serious injury. Chapter 2 also presents historic data for bicycle and pedestrian crashes in the city. Crash data is stratified by both corridors and intersections. Chapter 2 also includes a summary of risk factors by number and percent for severe crashes in Yelm in comparison with Western Washington.

**Chapter 3** documents the contributing circumstances behind the crashes experienced in Yelm and identifies the most common risk factors through analysis of the crash data presented in Chapter 2. Risk factors were categorized into two priority levels based on significance in relation to the reported severe crashes along with bicycle and pedestrian crashes.

**Chapter 4** identifies high priority crash locations using the Level 1 and Level 2 risk factors identified in Chapter 3.

**Chapter 5** discusses the identification of countermeasures for each of the high priority corridors and local concern areas based on the likely effectiveness of the countermeasure in addressing the relevant types of crashes and risk factors at each location.

**Chapter 6** presents a further refinement of the identification of countermeasures in the high priority corridors focusing on both systemic measures that can be implemented throughout the city and spot locations where specific countermeasures can be applied. For systemic improvements, applicable locations were identified, and planning level cost estimates were prepared. For spot improvements, the discussion focuses on specific activities that can be implemented at these priority locations along with planning level cost estimates.

**Chapter 7** presents a summary of key findings, conclusions, and recommendations for the Yelm *Local Road Safety Plan*.

## 2 ANALYSIS OF HISTORIC CRASH DATA

Historical crash data was obtained for the City of Yelm for the five-year time period from January 1, 2017 through December 31, 2021. Crash data is collected by WSDOT from all crash reports completed by responding law enforcement officials. Crash data includes information related to crash circumstances, locations, driver behaviors, contributing factors, and severity including degree of injury. This data can be used to identify the factors that most clearly indicate the reasons why a crash occurred and provide the basis for developing engineering, education, or enforcement countermeasures.

WSDOT crash data included all streets within the city limits of Yelm plus portions of SR 507 along E Yelm Avenue, SR 510 including W Yelm Avenue and 1<sup>st</sup> Street S, and SR 510 Alt for which Phase 1 west of Cullens Road SE has been constructed.

During the five-year analysis period, there were a total of 714 crashes with 265 crashes occurring on City-operated streets and 449 crashes occurring on SR 507 or SR 510 which are operated by WSDOT. **Figure 2** presents a graphic image of these crashes by location. The more intense the colors in the figure, the greater the number of crashes that occurred during the five-year period. Of particular significance for the analysis presented in this report are severe crashes and those involving bicyclists and/or pedestrians. These crashes are discussed in the following sections and illustrated in Figures 3 and 4.

### 2.1 Severe Crashes

Of the 714 total crashes on Yelm streets in the five-year analysis period, there were no fatalities and 17 resulted in a serious injury. Serious injuries represented a total of 2.4 percent of all crashes in the city. Fatal and serious injury crashes, referred to in this report as severe crashes, are the focus of the *Local Road Safety Plan*. Of the 17 severe crashes, eight occurred on SR 507, and three occurred on SR 510 within the city limits. The remaining six crashes occurred on various city streets including two on Tahoma Boulevard SE. **Figure 3** shows the location of the 17 severe collisions during the five-year study period. The information in this figure is presented in more detail in **Table 1**.

Nine severe crashes occurred at intersections, and five of those crashes occurred at intersections that do not have traffic signals. One of the nine intersections (SR 507 at Grove Road) experienced three severe crashes during the 2017-2021 study period, while the others experienced one crash each.

### 2.2 Pedestrian and Bicycle Crashes

There were 13 total crashes in Yelm during the study period which involved a pedestrian or bicyclist. Only one of these crashes, or approximately eight percent, resulted in a serious injury. This crash involved a vehicle hitting a pedestrian on E. Yelm Avenue between 103<sup>rd</sup> Avenue and Creek Street (milepost 28.98).

**Figure 4** shows the location of pedestrian and bicycle crashes. More detailed information about these crashes is provided in **Table 2**. The locations where pedestrian and bicycle crashes occurred includes:

- E. Yelm Avenue (SR 507) between 103<sup>rd</sup> and Creek Street (one serious injury crash involving a pedestrian who did not yield right of way)

Figure 2. 2017-2021 Crashes in Yelm

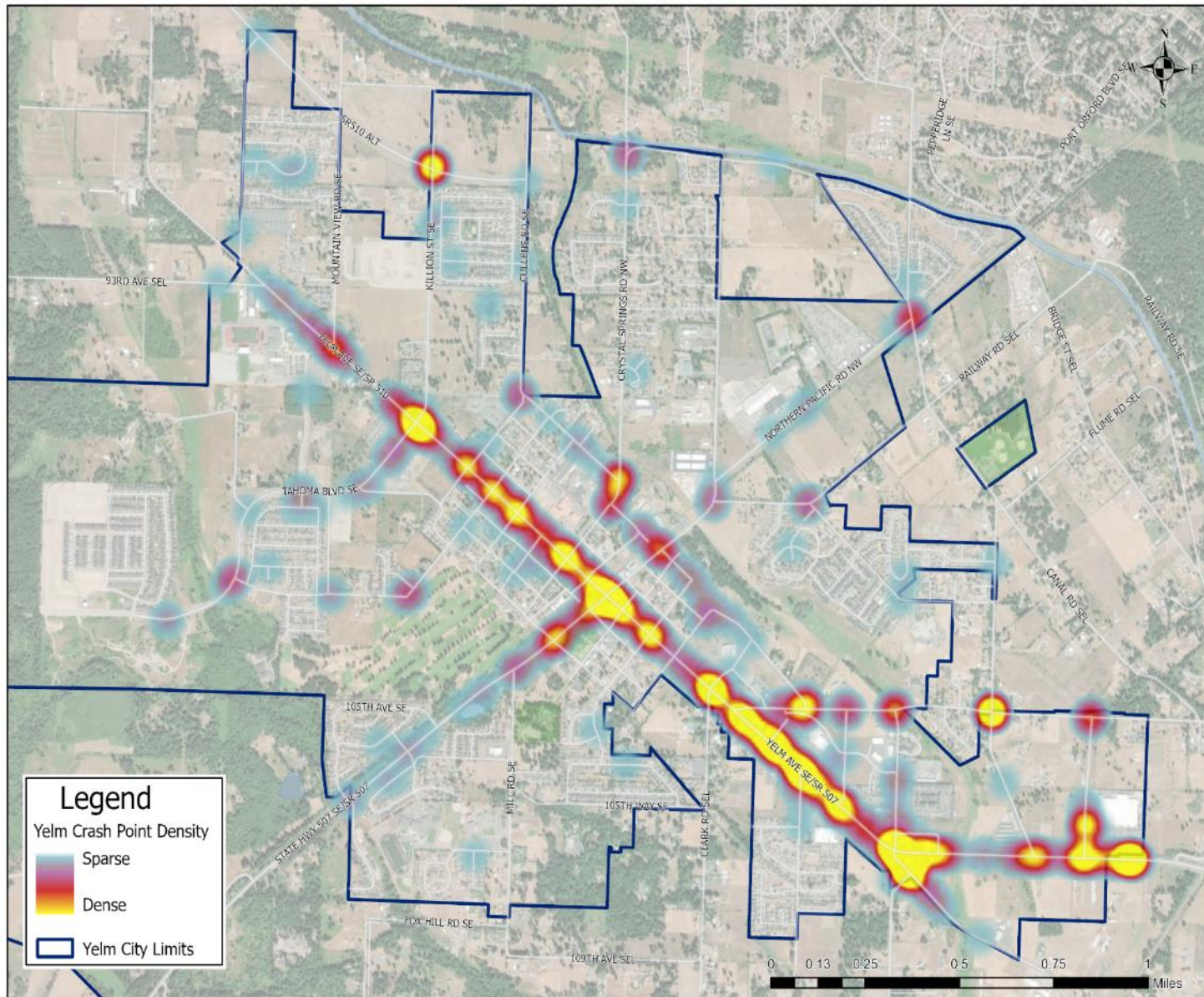


Figure 3. 2017-2021 Severe Crashes in Yelm

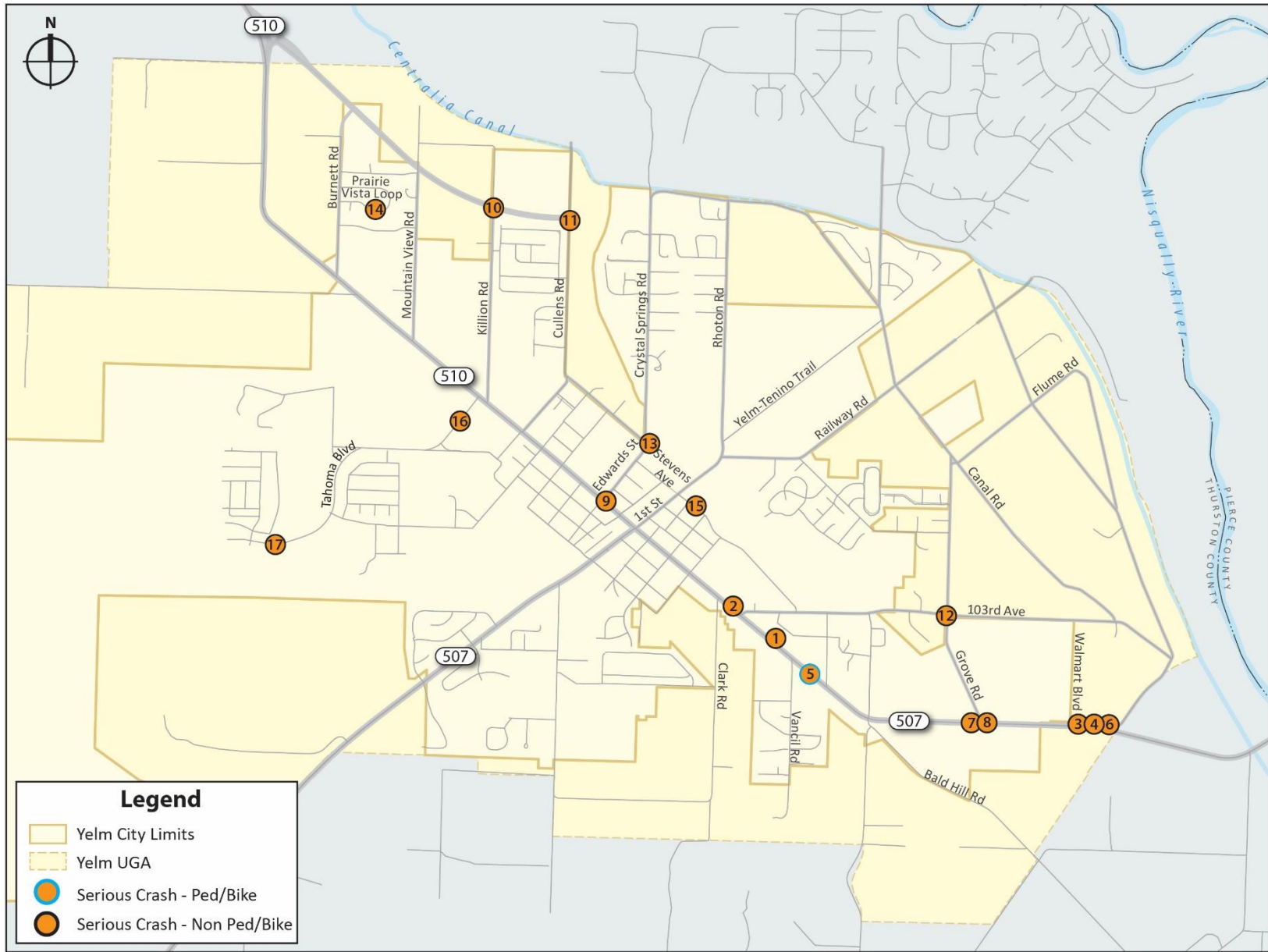
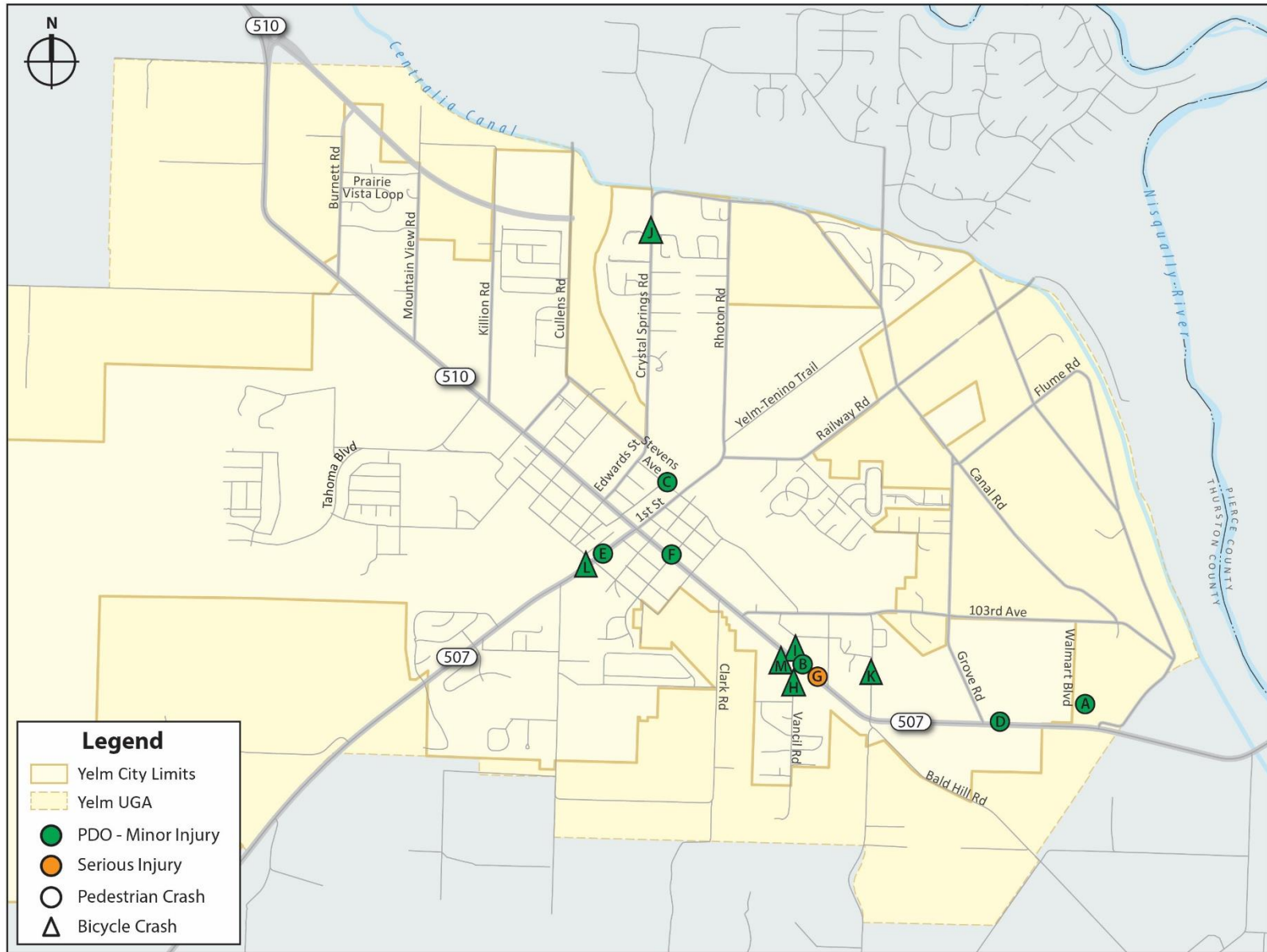


Figure 4. Location of Pedestrian and Bicycle Crashes



**Table 1. Summary of Severe Crashes (Serious Injuries), 2017 to 2021**

No.	Corridor	Milepost	Intersection/Segment	Segment Length (Miles)	Functional Classification	Number of Travel Lanes	Speed Limit	Contributing Cause	Crash Type
1	E. Yelm Avenue (SR 507)	28.72	103 <sup>rd</sup> Avenue to Plaza Drive	0.56	Principal Arterial	2 thru & TWLTL	35	Operating defective equipment	Head-On
2	E. Yelm Avenue (SR 507)	28.60	SR 507 at Clark Road	--	Principal Arterial	2 thru & TWLTL	35	Apparently asleep or fatigued	Rear End
3	E. Yelm Avenue (SR 507)	29.78	170 <sup>th</sup> Street to Centralia Canal	0.32	Principal Arterial	2 thru & turns	35	Apparently ill	Rear End
4	E. Yelm Avenue (SR 507)	29.82	170 <sup>th</sup> Street to Centralia Canal	0.32	Principal Arterial	2 thru & turns	35	Inattention	Sideswipe
5	E. Yelm Avenue (SR 507)	28.98	Vancil Road to Plaza Drive	0.56	Principal Arterial	2 thru & TWLTL	35	Pedestrian did not grant right of way	Pedestrian
6	E. Yelm Avenue (SR 507)	29.84	SR 507 at Walmart Driveway	--	Principal Arterial	2 thru & turns	35	Did not grant right of way	Turn
7	E. Yelm Avenue (SR 507)	29.59	SR 507 at Grove Road	--	Principal Arterial	2 thru & turns	35	Did not grant right of way	Angle
8	E. Yelm Avenue (SR 507)	29.59	SR 507 at Grove Road	--	Principal Arterial	2 thru & turns	35	Did not grant right of way	Angle
9	W Yelm Avenue (SR 510)	15.47	Cullens Street to 1 <sup>st</sup> Street	0.48	Principal Arterial	2 thru & TWLTL	35	Apparently asleep or fatigued	Fixed Object
10	W Yelm Avenue (SR 510 Yelm Loop)	14.44	SR 510 at Killion Road	--	Principal Arterial	2 thru & turns	35	Disregarded traffic signal	Angle
11	W Yelm Avenue (SR 510 Yelm Loop)	14.70	SR 510 at Cullens Road	--	Principal Arterial	2 thru & turns	35	Under influence of alcohol	Fixed Object
12	103 <sup>rd</sup> Avenue	--	103 <sup>rd</sup> Avenue at Grove Road	--	Major Collector	2 thru	25	Apparently ill	Angle
13	Crystal Springs Road	--	Crystal Springs Road at Coates Avenue	--	Local	2 thru	25	Inattention	Vehicle overturned
14	Prairie Vista Loop	--	Burnett Road to Andes Court	0.04	Local	2 thru	25	Person fell from vehicle while backing	Other



**Table 1 Continued. Summary of Severe Crashes (Serious Injuries), 2017 to 2021**

No.	Corridor	Milepost	Intersection/Segment	Segment Length (Miles)	Functional Classification	Number of Travel Lanes	Speed Limit	Contributing Cause	Crash Type
15	Stevens Avenue	--	1 <sup>st</sup> Street to 4 <sup>th</sup> Street	0.20	Major Collector	2 thru	25	Excessive speed while negotiating a curve	Fixed object
16	Tahoma Boulevard	--	Tahoma Boulevard at Driveway south of SR 510	--	Local	4 thru & TWLTL	35	Inattention	Angle
17	Tahoma Boulevard	--	Longmire Street to Dotson Street	0.31	Local	4 thru & turns	35	Exceeding safe speed limit	Fixed object

**Table 2. Summary of Severe and Other Crashes Involving Bicycles or Pedestrians, 2017 to 2021**

No.	Corridor	Milepost	Intersection/Segment	Segment Length (Miles)	Functional Classification	Number of Travel Lanes	Speed Limit	Severity	Contributing Cause	Crash Type
A	Walmart Throughway	--	Walmart Throughway east of Walmart Boulevard	--	Local	2 thru	NA	Possible injury	Inattention	Vehicle hit pedestrian
B	E. Yelm Avenue (SR 507)	28.91	SR 507 at Plaza Drive	--	Principal Arterial	2 thru & TWLTL	35	Possible injury	Inattention, disregarded traffic signal (no signal at this location)	Vehicle hit pedestrian
C	Stevens Avenue	--	Stevens Avenue at Railroad Avenue	--	Major Collector	2 thru	25	Possible injury	Inattention	Vehicle hit pedestrian
D	E. Yelm Avenue (SR 507)	29.62	Grove Road to 170th Street	0.13	Principal Arterial	2 thru & turns	35	Possible injury	None identified	Vehicle hit pedestrian
E	1st Street (SR 507)	28.09	Mosman Avenue to E. Yelm Avenue	0.18	Principal Arterial	2 thru & TWLTL	25	Suspected minor injury	Under the influence of alcohol, did not grant right of way	Vehicle hit pedestrian
F	E. Yelm Avenue (SR 507)	28.39	SR 507 at 3rd Street	--	Principal Arterial	2 thru & turns	35	Suspected minor injury	Motorist did not grant right of way	Vehicle hit pedestrian
G	E. Yelm Avenue (SR 507)	28.98	Vancil Road to Plaza Drive	0.56	Principal Arterial	2 thru & TWLTL	35	Suspected serious injury	Pedestrian did not grant right of way	Vehicle hit pedestrian
H	Vancil Road	--	Vancil Road at Driveway south of E. Yelm Avenue	--	Local	2 thru	25	Possible injury	Bicyclist did not grant right of way	Vehicle hit bicyclist
I	E Yelm Avenue (SR 507)	28.91	SR 507 at Plaza Drive	--	Principal Arterial	2 thru & TWLTL	35	Possible injury	Bicyclist did not grant right of way	Vehicle hit bicyclist
J	View Drive Court	--	View Drive Court at Crystal Springs Street	--	Local	2 thru	25	Suspected minor injury	Bicyclist inattention	Vehicle hit bicyclist
K	Creek Street	14.70	Creek Street at Driveway north of 106th Avenue	--	Local	2 thru & turns	25	Possible injury	Bicyclist inattention	Vehicle hit bicyclist
L	1st Street (SR 507)	28.07	1st Street at Mosman Avenue	--	Principal Arterial	2 thru & TWLTL	25	Suspected minor injury	Bicyclist did not grant right of way	Bicyclist hits vehicle
M	E Yelm Avenue (SR 507)	28.91	SR 507 at Plaza Drive	--	Principal Arterial	2 thru & TWLTL	35	Suspected minor injury	Bicyclist did not grant right of way	Vehicle hit bicyclist

Note: Location G is the same as location #5 in Table 1.

- E. Yelm Avenue (SR 507) at Plaza Drive (one suspected minor injury and two possible injury crashes)
- Other suspected minor injury crashes involving pedestrians or bicyclists occurred at:
  - 1<sup>st</sup> Street (SR 507) between Mosman Avenue and E. Yelm Avenue
  - E. Yelm Avenue (SR 57) at 3<sup>rd</sup> Street
  - View Court Drive at Crystal Springs Street
  - 1<sup>st</sup> Street (SR 507) at Mosman Avenue
- Other possible injury crashes involving pedestrians or bicyclists occurred at:
  - Walmart Throughway east of Walmart Boulevard
  - Stevens Avenue at Railroad Avenue
  - E. Yelm Avenue (SR 507) between Grove Road and Walmart Boulevard SE
  - Vancil Road at driveway south of E. Yelm Avenue
  - Creek Street at driveway north of 106<sup>th</sup> Avenue

## 2.3 Intersection Crashes

The crash data presented in Tables 1 and 2 is stratified by intersection in **Table 3**, including both signalized and unsignalized locations. Two of the three crashes at signalized intersections involved serious injuries – both of which occurred along either SR 507 or SR 510. The other one occurred on a city street, involved a bicyclist, and resulted in a suspected minor injury. It occurred at an intersection where there were bicycle facilities on most legs but not on the affected approach leg (eastbound) where there was a conflict with a right turn lane.

Fifteen crashes occurred at unsignalized intersections. Seven of these crashes involved serious injuries, four of which occurred on either SR 507 or SR 510, and the other three on city streets. The pedestrian crashes occurred at locations where there were sidewalks or crosswalks. With two exceptions, the bicycle crashes largely occurred where bicycle lanes or wide shoulders were present.

The most common contributing causes to intersection severe and bicycle/pedestrian crashes include failure to grant right of way (eight), and inattention (six).

## 2.4 Corridor (Roadway Segment) Crashes

**Table 4** summarizes the crash data presented in Tables 1 and 2 for roadway segments. A total of 11 locations have been identified including those involving severe crashes, as well as bicycle and pedestrian-related crashes. Eight of the 11 locations included in this table involve severe crashes, while the remainder involved pedestrians (one location is duplicated as it involves a pedestrian-related severe crash). Information presented in Table 4 includes crash type and contributing causes, speeds, specific movement involved in the crash, lighting and roadway conditions, the absence of illumination and the presence or absence of dedicated pedestrian or bicycle facilities.

As noted in the table, the most common type of severe crash occurring on roadway segments in Yelm involved hitting fixed objects (three out of eight). The most common contributing causes to severe crashes and bicycle/pedestrian crashes involved failure to grant right of way (three), inattention (two), illness or fatigue (two), and speeding (two).

**Table 3. Data Summary for Intersections and Conditions**

No.	Intersections	Crash Type	Contributing Cause	Speed	Movement	Lighting Condition	Illumination	Road Surface	Notes
<b>Signalized Intersections</b>									
2	E. Yelm Avenue (SR 507) at Clark Road	Rear End	Apparently asleep or fatigued	35	Both going straight	Daylight	NA	Wet	
10	W Yelm Avenue (SR 510 Yelm Loop) at Killion Road	Angle	Disregarded traffic signal	35	Making left turn	Daylight	NA	Dry	
L	1st Street at Mosman Avenue	Bicyclist hits vehicle	Bicyclist did not grant right of way	25	Vehicle making right turn	Daylight	NA	Dry	Bicycle lanes on 3 legs, no separation from vehicle right turn lane
<b>Unsignalized Intersections</b>									
6	E. Yelm Avenue (SR 507) at Walmart Driveway	Turn	Did not grant right of way	35	Making left turn	Dark	Lights on	Wet	
7	E. Yelm Avenue (SR 507) at Grove Road	Angle	Did not grant right of way	35	Making right turn	Daylight	NA	Dry	
8	E. Yelm Avenue (SR 507) at Grove Road	Angle	Did not grant right of way	35	Making left turn	Daylight	NA	Dry	
11	W Yelm Avenue (SR 510 Yelm Loop) at Cullens Road	Fixed object	Under influence of alcohol	35	Going straight	Daylight	NA	Dry	
12	103 <sup>rd</sup> Avenue at Grove Road	Angle	Apparently ill	25	Entering at angle	Dark	Lights on	Wet	Raining
13	Crystal Springs Road at Coates Avenue	Vehicle overturned	Inattention	25	Going straight	Daylight	NA	Dry	
16	Tahoma Boulevard at Driveway south of SR 510	Angle	Inattention	35	Making left turn	Daylight	NA	Wet	Raining
B	E. Yelm Avenue (SR 507) at Plaza Drive	Vehicle hit pedestrian	Inattention, disregarded traffic signal (no signal at this location)	35	Vehicle going straight hits pedestrian	Daylight	NA	Dry	Crosswalk on Plaza Drive (side street)
C	Stevens Avenue at Railroad Avenue	Vehicle hit pedestrian	Inattention	25	Vehicle going straight hits pedestrian	Daylight	NA	Dry	Crosswalk on Railroad Avenue (side street)

**Table 3 Continued. Data Summary for Intersections and Conditions**

No.	Intersections	Crash Type	Contributing Cause	Speed	Movement	Lighting Condition	Illumination	Road Surface	Notes
<b>Unsignalized Intersections</b>									
F	E. Yelm Avenue (SR 507) at 3 <sup>rd</sup> Street	Vehicle hit pedestrian	Motorist did not grant right of way	35	Making right turn	Daylight	NA	Dry	Crosswalks on SR 507
H	Vancil Road at driveway south of E. Yelm Avenue (SR 507)	Vehicle hit bicyclist	Bicyclist did not grant right of way	25	Going straight	Daylight	NA	Dry	No bicycle facilities
I	E. Yelm Avenue (SR 507) at Plaza Drive	Vehicle hit bicyclist	Bicyclist did not grant right of way	35	Making left turn	Daylight	NA	Dry	Bicycle lanes on SR 507
J	View Drive Count at Crystal Springs Street	Vehicle hit bicyclist	Bicyclist inattention	25	Going straight	Daylight	NA	Dry	Wide shoulders on Crystal Springs
K	Creek Street at driveway north of 106th Avenue	Vehicle hit bicyclist	Bicyclist inattention	25	Going straight	Daylight	NA	Dry	No bicycle facilities
M	E. Yelm Avenue (SR 507) at Plaza Drive	Vehicle hit bicyclist	Bicyclist did not grant right of way	35	Going straight	Daylight	NA	Dry	Bicycle lanes on SR 507

**Table 4. Data Summary for Roadway Segments and Conditions**

No.	Roadway Segment	Crash Type	Contributing Cause	Speed	Movement	Lighting Condition	Illumination	Road Surface	Notes
1	E. Yelm Avenue (SR 507), 103 <sup>rd</sup> Avenue to Creek Street	Head on	Operating defective equipment	35	Both going straight, opposite direction	Dark	Lights on	Dry	
3	E. Yelm Avenue (SR 507), 170 <sup>th</sup> Street to Centralia Canal	Rear end	Apparently ill	35	Going straight, one stopped	Daylight	NA	Dry	
4	E. Yelm Avenue (SR 507), 170 <sup>th</sup> Street to Centralia Canal	Sideswipe	Inattention	35	Going straight, one stopped.	Daylight	NA	Dry	
5	E. Yelm Avenue (SR 507), Vancil Road to Plaza Drive	Pedestrian	Pedestrian did not give right of way	35	Going straight	Daylight	NA	Dry	
9	W. Yelm Avenue (SR 510), Cullens Street to 1 <sup>st</sup> Street	Fixed object	Apparently asleep or fatigued	35	Going straight	Dark	Lights on	Dry	
14	Prairie Vista Loop, Burnett Road to Andes Curt	Other	Person fell from moving vehicle	25	Vehicle backing	Dark	Lights on	Wet	
15	Stevens Avenue, 1st Street to 4th Street	Fixed object	Excessive speed	25	Negotiating curve	Daylight	NA	Dry	
17	Tahoma Boulevard	Fixed object	Exceeding safe speed limit	35	Going straight	Daylight	NA	Dry	
A	Walmart Throughway east of Walmart Boulevard	Vehicle hit pedestrian	Inattention	NA	Going straight	Dark	Lights on	Wet	Raining, no pedestrian facilities
D	E. Yelm Avenue (SR 507), Grove Road to 170 <sup>th</sup> Street	Vehicle hit pedestrian	None identified	35	Going straight	Dark	No lights	Wet	Raining, shoulders but no sidewalks
E	1st Street (SR 507), Mosman Avenue to E. Yelm Avenue	Vehicle hit pedestrian	Under the influence of alcohol, did not grant right of way	25	Going straight	Dark	Lights on	Wet	Sidewalk on west side, narrow shoulder on east side
G	E. Yelm Avenue (SR 507), 103 <sup>rd</sup> Avenue to Creek Street	Vehicle hit pedestrian	Pedestrian did not grant right of way	35	Going straight	Daylight	NA	Dry	Sidewalks or pathways available

Note: Location G is the same as location #5.

## 2.5 Comparison with Western Washington

The severe crashes in Yelm were reviewed to identify and characterize the risk factors associated with them. Based on available data from the records of the 17 severe crashes reported in Yelm, key crash factors were identified. In developing the list of crash factors that were most significant for Yelm city streets, consideration was given to both contributing causes and other features included in the crash record and on characteristics of the crash location. These risk factors are included in **Table 5** along with comparable information on the presence of these same risk factors averaged for the locations of severe crashes in Western Washington.

**Table 5. Comparison of Crash Factors Present on City Streets in Severe Crashes**

<b>Crash Risk Factors</b>	<b>City of Yelm</b>	<b>Western Washington Cities</b>
<i>By Crash Type</i>		
Entering at Angle	<b>5 (29.4%)</b>	14.1%
Hit Fixed Object	<b>4 (23.5%)</b>	18.2%
Rear End	<b>2 (11.8%)</b>	4.1%
Hit Pedestrian	1 (5.9%)	28.4%
<i>By Contributing Cause</i>		
Failure to Grant Right of Way	<b>4 (23.5%)</b>	6.2%
Asleep/Fatigued/Ill	<b>4 (23.5%)</b>	0.6%
Inattention	<b>3 (17.6%)</b>	4.7%
Excessive Speed	<b>2 (11.8%)</b>	6.1%
<i>By Light Condition</i>		
Dark - Street Lights On	4 (23.5%)	34.7%
Dark – Street Lights Off	0 (0.0%)	4.9%

**Bold** = Higher than the rest of Western Washington

**Table 5** summarizes the crash factors present in multiple severe crashes in the city of Yelm and the corresponding percentage of those crash factors experienced by other cities in Western Washington. As indicated in bold, many of the key crash factors in Yelm are occurring at higher levels than other Western Washington cities. This is likely due to the presence of SR 507/SR510, which is a high-volume corridor through Yelm that not all cities must contend with, resulting in Yelm experiencing higher amounts of angle and rear end severe crashes. The key contributing causes are all higher as well, however this is likely the result of many statewide crashes being assigned no contributing cause, thus diluting the percentages for crashes with causes provided.

## 2.6 Comparison with Community Demographics

Federal regulations and guidance address the fair treatment of disadvantaged populations in the implementation of transportation improvements. New projects must ensure potential project impacts are not disproportionately burdensome to these populations. An analysis of environmental justice (EJ) populations within the City of Yelm was performed to ensure the effects of crash risk factors do not disproportionately affect disadvantaged populations and that proposed transportation projects are equitably allocated.

Demographic statistics on race and poverty status, as well as overall study area characteristics, are used to evaluate EJ effects. EJ populations include people of color and low-income populations, defined as follows:

- ◆ **People of color:** The percent of individuals in a block group<sup>4</sup> who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. That is, all people other than non-Hispanic white-alone individuals. The word “alone” in this case indicates that the person is of a single race, not multiracial.
- ◆ **Low-income:** The percent of a block group’s population in households where the household income is less than or equal to twice the federal “poverty level.”<sup>5</sup>

Census data was gathered using EPA’s Environmental Justice Screening and Mapping Tool (EJScreen)<sup>6</sup>, which uses official U.S. Census Bureau 2017-2021 American Community Survey (ACS) 5-Year Estimates provided at the block group level. Six census block groups lie either fully or partially within the city limits, as shown in **Figure 5**.

To determine whether disparate impacts exist among EJ populations, ACS population data was gathered for each block group as well as for the City of Yelm as a whole. Based on WSDOT guidance<sup>7</sup>, the EJ populations within the city overall were used as a comparison group. The comparison group percentage was divided by the percentage of EJ population in each block group to determine disparate impact; a resulting ratio of less than 0.80 indicates a disparate impact on that population.

The results of the disparate impact analysis were then compared with the severe crash locations in the City of Yelm to ensure there is no disproportionately high and adverse effect on any EJ population. The analysis is summarized below.

### 2.6.1 People of Color

Within the City of Yelm as a whole, people of color make up 24 percent of the population. Among the city’s six block groups, people of color comprise between 18.7 and 29.4 percent of the population. Using the methodology described above, this analysis found no disparate impact among people of color within the City of Yelm (see **Table 6**).

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<sup>4</sup> Block groups are geographic units used for data collection by the U.S. Census Bureau. A block group generally has a population of 600 to 3,000 and is the smallest geographic unit for which the Census Bureau publishes sample data.

<sup>5</sup> “Overview of Socioeconomic Indicators in EJScreen,” <https://www.epa.gov/ejscreen/overview-socioeconomic-indicators-ejscreen>

<sup>6</sup> EPA EJScreen Mapping Tool, <https://ejscreen.epa.gov/mapper/>

<sup>7</sup> “Determining EJ Effects on Project Populations,” WSDOT, April 2020, <https://wsdot.wa.gov/sites/default/files/2021-10/Env-EJ-Tsk458dDetProjEffect.pdf>



Figure 5. Block Groups in the City of Yelm

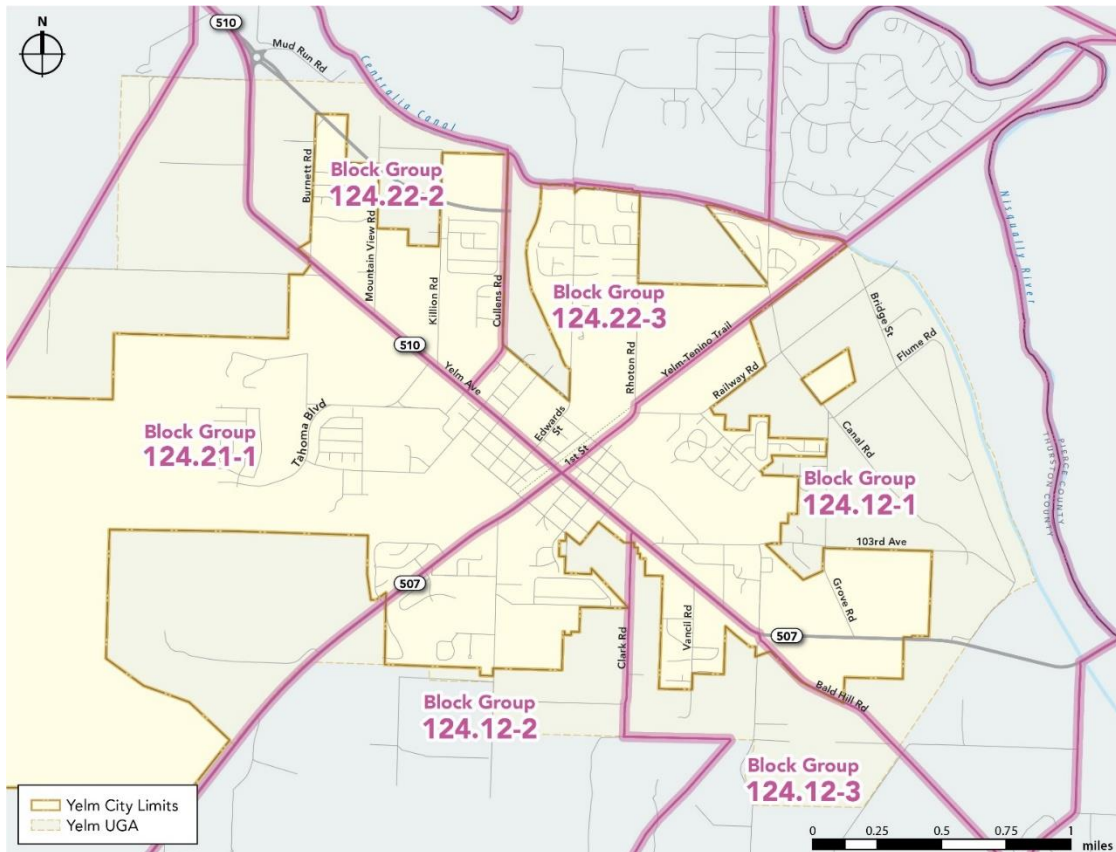


Table 6. People of Color, City of Yelm

Geography	People of Color as % of Total Population	Disparate Impact Ratio*	Disparate Impact?
<b>City of Yelm (Comparison Group)</b>	<b>24.0%</b>	-	
Block Group 124.12-1	29.4%	0.82	No
Block Group 124.12-2	23.6%	1.02	No
Block Group 124.12-3	23.5%	1.02	No
Block Group 124.21-1	28.5%	0.84	No
Block Group 124.22-2	18.7%	1.29	No
Block Group 124.22-3	19.3%	1.25	No

\*To determine disparate impact: divide **comparison group** percentage by **block group** percentage; if result is less than 0.80, there is disparate impact.

### 2.6.2 Low-Income Populations

Within the City of Yelm as a whole, low-income persons make up 23.8 percent of the population. Among the city’s six block groups, the low-income population ranges from 6.5 to 34.4 percent. The analysis found no disparate impact among low-income populations in the City of Yelm except for one block group, 124.12-1 in the northeast corner of the city (see **Table 7**).

Table 7. Low-Income Population, City of Yelm

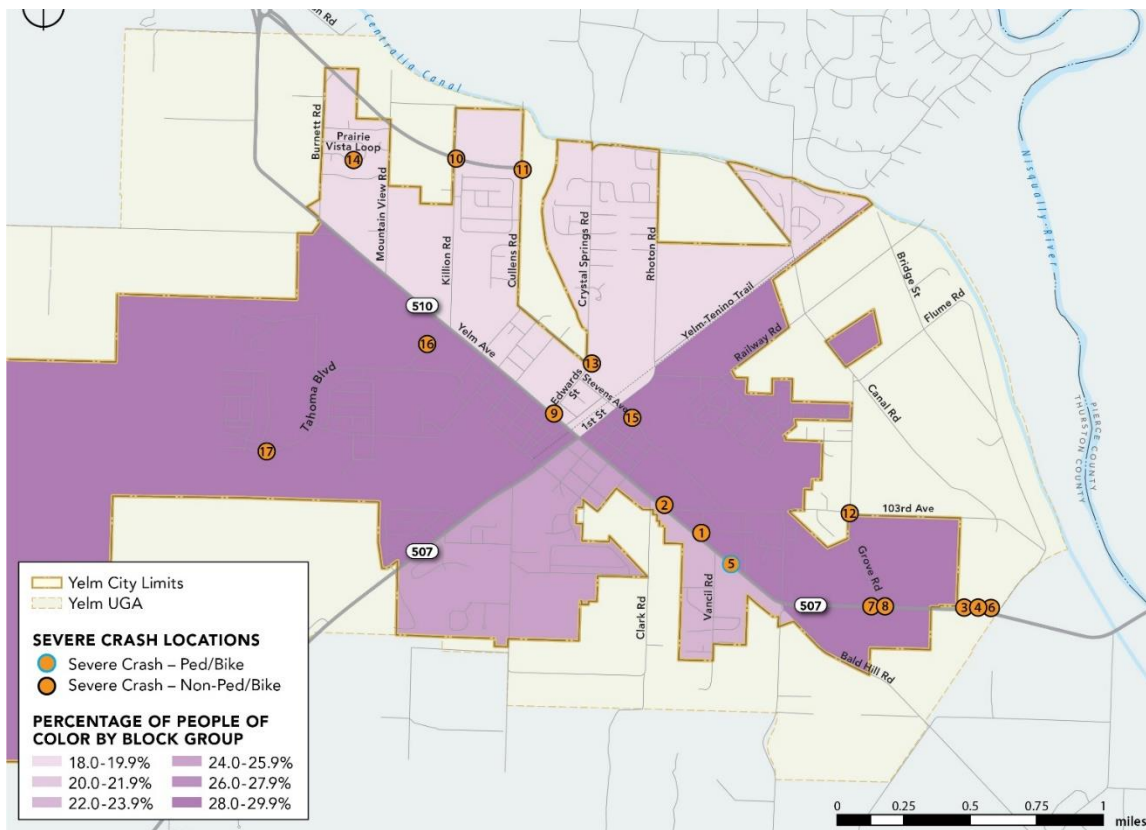
Geography	Low-Income Pop. as % of Total Population	Disparate Impact Ratio*	Disparate Impact?
<b>City of Yelm (Comparison Group)</b>	<b>23.8%</b>	-	
Block Group 124.12-1	34.4%	0.69	<b>Yes</b>
Block Group 124.12-2	24.5%	0.97	No
Block Group 124.12-3	6.5%	3.68	No
Block Group 124.21-1	16.7%	1.43	No
Block Group 124.22-2	29.5%	0.81	No
Block Group 124.22-3	19.6%	1.21	No

\*To determine disparate impact: divide **comparison group** percentage by **block group** percentage; if result is **less than 0.80**, there is disparate impact.

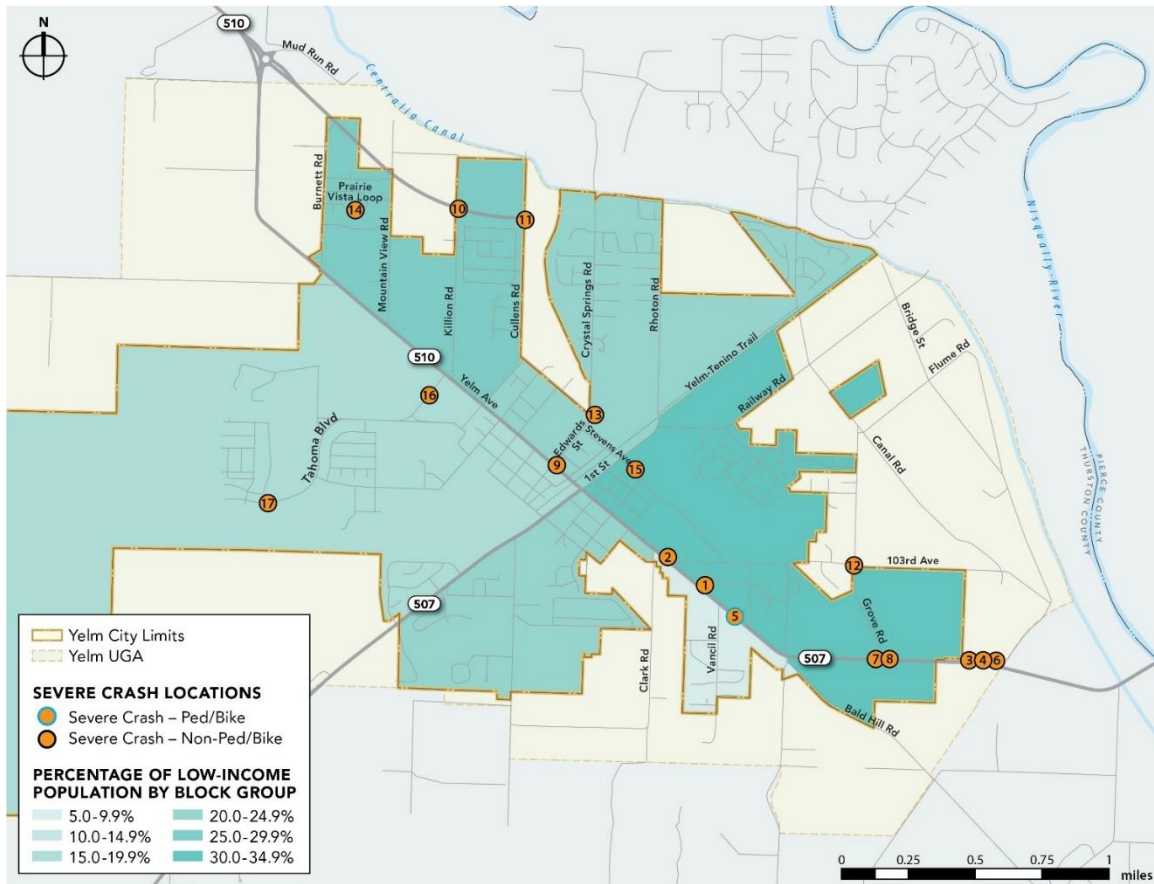
### 2.6.3 Effects on EJ Populations

EJ population concentrations were compared with crash locations to determine whether existing crash risk factors have a disproportionately high and adverse effect on any EJ population in the City of Yelm. The percentage of EJ populations within each block group is represented graphically in **Figure 6** and **Figure 7**, with severe crash locations overlaid on the census data.

Figure 6. Percentage People of Color by Block Group as Compared to Severe Crash Locations



**Figure 7. Percentage Low-Income Population by Block Group as Compared to Severe Crash Locations**



The severe crash locations are reasonably evenly dispersed throughout the city, with a slightly higher concentration along SR 507 at the eastern end of town (adjacent to block group 124.12-1, the area of Yelm with the highest low-income population and for which the analysis indicated a slight disparate impact). The same is true when looking at all crashes or at pedestrian and bicycle crashes only (see Figures 2 and 4).

As noted above, the analysis indicated a slight disparate impact for low-income populations in block group 124.12-1. While this impact is very minor, lower-income populations generally have less vehicle access and are therefore more likely than other populations to rely on non-motorized transportation or public transit. Because there is also a slightly higher concentration of crashes in this vicinity, this low-income population should be taken into account to some extent during project allocation. However, the overall crash distribution indicates that there is no disproportionately high and adverse effect for any EJ population within the City of Yelm.

### 3 CONTRIBUTING CIRCUMSTANCES/SELECTION OF MOST COMMON RISK FACTORS

Based on the review of severe crash data presented in Chapter 2, an analysis was conducted to determine the circumstances that contributed to a crash and to identify the most common risk factors. Risk factors included crash type, contributing factors, roadway and intersection characteristics and driver/pedestrian behavior.

#### 3.1 Contributing Circumstances

Based on the crash data from 2017 through 2021 presented in Table 1, the top contributing circumstances observed in severe crashes in Yelm included:

- Failure to grant right of way (four or 23.5% of all severe crashes)
- Asleep/fatigued/ill (four or 23.5% of all severe crashes)
- Inattention (three or 17.6% of all severe crashes)
- Excessive speed (two or 11.8% of all severe crashes)

None of these contributing causes represented more than 25 percent of all severe crashes.

#### 3.2 Crash Types

Based on data in Table 1, the top crash types at the locations with severe crashes included:

- Angle (five or 29.4% of all severe crashes)
- Hitting fixed objects (four or 23.5% of all severe crashes)
- Rear end (two or 11.8% of all severe crashes)
- Pedestrian (one or 5.9% of all severe crashes)

Based on guidance found in WSDOT's *Target Zero – Washington Strategic Highway Safety Plan*, the primary risk factors found in severe crashes were grouped into priority levels 1, 2, and 3. The levels are based either on the percentage of traffic fatalities and serious injuries associated with each factor or the presence of a bicyclists or pedestrian (a very vulnerable roadway user) in the crash.

- **Priority Level 1:** Contributing risk factors that are involved in 25 percent or more of fatal or serious injury crashes. According to WSDOT's *Target Zero Plan*, these are the risk factors typically associated with the greatest number of fatal and serious injury crashes.
- **Priority Level 2:** Crashes involving vulnerable roadway users including bicyclists and pedestrians
- **Priority Level 3:** Risk factors that are involved in less than 25 percent of fatal or serious injury crashes

From the data analysis, patterns arose showing several factors that were present in the serious injury collisions. The risk factors for Priority Levels 1,2, and 3 are listed below.

**Priority Level 1:** As indicated from the data in Table 1, angle crashes represented 29.4 percent of all severe crashes including three at the intersection of E. Yelm Avenue (SR 507) and Grove Road. No other contributing circumstances or crash types represented more than 25 percent of severe crashes but several were close at 23.5 percent including failure to grant right of way, being asleep/fatigued/ill, or

hitting fixed objects. For purposes of this report, these risk factors were not considered as Priority Level 1 issues but may be considered in identifying priority locations for improvements.

**Priority Level 2:** While most pedestrian and bicycle-related crashes in Yelm during the study period did not result in a fatality or serious injury, the group of travelers is among the most vulnerable on the road and should be considered as a priority. For purposes of this report, all bicycle and pedestrian crashes are considered as Priority Level 2.

**Priority Level 3:** All other crash types and potential risk factors identified in Table 1 including:

Contributing Causes

- Failure to yield
- Hitting fixed objects
- Being asleep/fatigued/ill
- Defective equipment
- Inattention
- Disregarding traffic signal
- Under the influence of alcohol
- Falling from vehicle
- Speeding
- Rear end

Crash Types

- Head on
- Rear ends
- Sideswipe
- Turn
- Vehicle overturned
- Other

## 4 IDENTIFICATION OF HIGH PRIORITY LOCATIONS

Severe crashes on streets in the city of Yelm are dominated by a mix of risk factors including both crash types and contributing causes. Priority Level 1 includes the highest priority locations which can be considered for location-specific or systemic improvements. Priority Level 2 includes bicycle and pedestrian-related crashes, only one of which involved a serious injury, and are also considered high priority locations for the identification of improvements.

### 4.1 Priority Level 1

As noted in Chapter 3, angle crashes represented 29.4 percent of all severe crashes including three at the intersection of E. Yelm Avenue (SR 507) and Grove Road. No other contributing circumstances or crash types represented more than 25 percent of severe crashes but several other locations were identified as having a significant level of angle crashes leading to non-severe injuries. All of these locations are considered for Priority Level 1 improvement recommendations.

#### 4.1.1 Specific Locations for Improvement

- **SR 507 (E. Yelm Avenue) at Grove Road** – three severe crashes occurred at this location over the five-year planning period.
  - **#7: Right Turn Angle Crash** - An angle crash occurred on 5/16/2021 during daylight hours when the pavement was dry and the weather clear. The vehicle identified at fault was making a right turn from the north to the west and failed to give right of way to a vehicle coming from the east and moving straight to the west. The intersection is stop-controlled on the side street movement where the right turn was made.
  - **#8: Left Turn Angle Crash** – An angle crash occurred on 9/28/2021 during daylight hours when the pavement was dry and the weather clear. The vehicle identified at fault was making a left turn from the north to the east and failed to give right of way to a vehicle coming from the east and heading straight to the west. The left turn movement was stop-controlled.
  - **#12: Right Angle Crash** - An angle crash occurred on 2/21/2021 during nighttime hours when it was raining and the pavement was wet. A single luminaire over the intersection was in operation. The vehicle identified at fault was moving straight from the west to the east and hit a vehicle stopped at the side street stop sign. The listed contributing cause was apparent illness.
- **SR 507 (E. Yelm Avenue) between Grove Road and Walmart Boulevard SE (#D)** - one non-severe pedestrian crash occurred approximately 0.03 miles east of the intersection with Grove Road during the five-year study period. As this crash occurred so close to those identified above at the intersection of Grove Road with E. Yelm Avenue it has been included as a Priority Level 1 location for purposes of this Safety Plan. This crash occurred on 12/4/2021 during hours of darkness and rain when the pavement was wet. There was no illumination at this location. The vehicle was going straight on SR 507 and no contributing causes were identified. It should be noted that this location will be reconstructed as part of the SR 510 Yelm Loop phase 2 project, tentatively scheduled for 2024 construction.

- **SR 510 Spur (W. Yelm Avenue) at Killion Road (#10)** – one severe crash occurred at this location that involved an angle collision. A total of 13 crashes occurred at this intersection over the five-year planning period, of which 12 involved angle crashes and one involved hitting a fixed object.
- **507 (E. Yelm Avenue) at Walmart Driveway (#6)** – One severe crash occurred at this location which involved a turning collision. A total of 13 angle crashes occurred at this driveway out of a total of 17 crashes over the five-year study period. It should be noted that this location will be reconstructed as part of the SR 510 Yelm Loop phase 2 project, tentatively scheduled for 2024 construction.
- **507 (E. Yelm Avenue) Near Walmart Driveway (#3 and 4)** – These crashes occurred within 0.06 of a mile from the Walmart driveway intersection and could be considered related to the presence of that intersection and Walmart related traffic. Two severe crashes occurred, one of which involved a rear end collision and the other a sideswipe. A total of nine crashes occurred in this area over the five-year study period none of which involved angle crashes. It should be noted that this location will be reconstructed as part of the SR 510 Yelm Loop phase 2 project, tentatively scheduled for 2024 construction.
- **Grove Road at 103<sup>rd</sup> Avenue (#12)** – One severe crash occurred at this location which involved an angle collision. This crash occurred on 2/21/2021 at 6:30 pm. It was raining and dark with streetlights on. Pavement was wet. The intersection was controlled by a four-way stop and caused by a motorist making a right turn from southbound to westbound. The contributing causes was cited as illness. Nineteen total crashes occurred at this intersection during the five-year study period of which 13 involved entering at an angle.
- **Bald Hill Road at Morris Road** – No severe crashes occurred at this location but there were a total of 32 crashes of which 13 involved angle collisions.
- **103<sup>rd</sup> Avenue at West Road** – No severe crashes occurred at this location but there were a total of 12 crashes of which five involved angle crashes.

#### 4.1.2 Systemic Improvements

High priority systemic improvements were identified in response to the highest risk factors identified in the Yelm study area. These were associated with angle crashes and included identification of locations where:

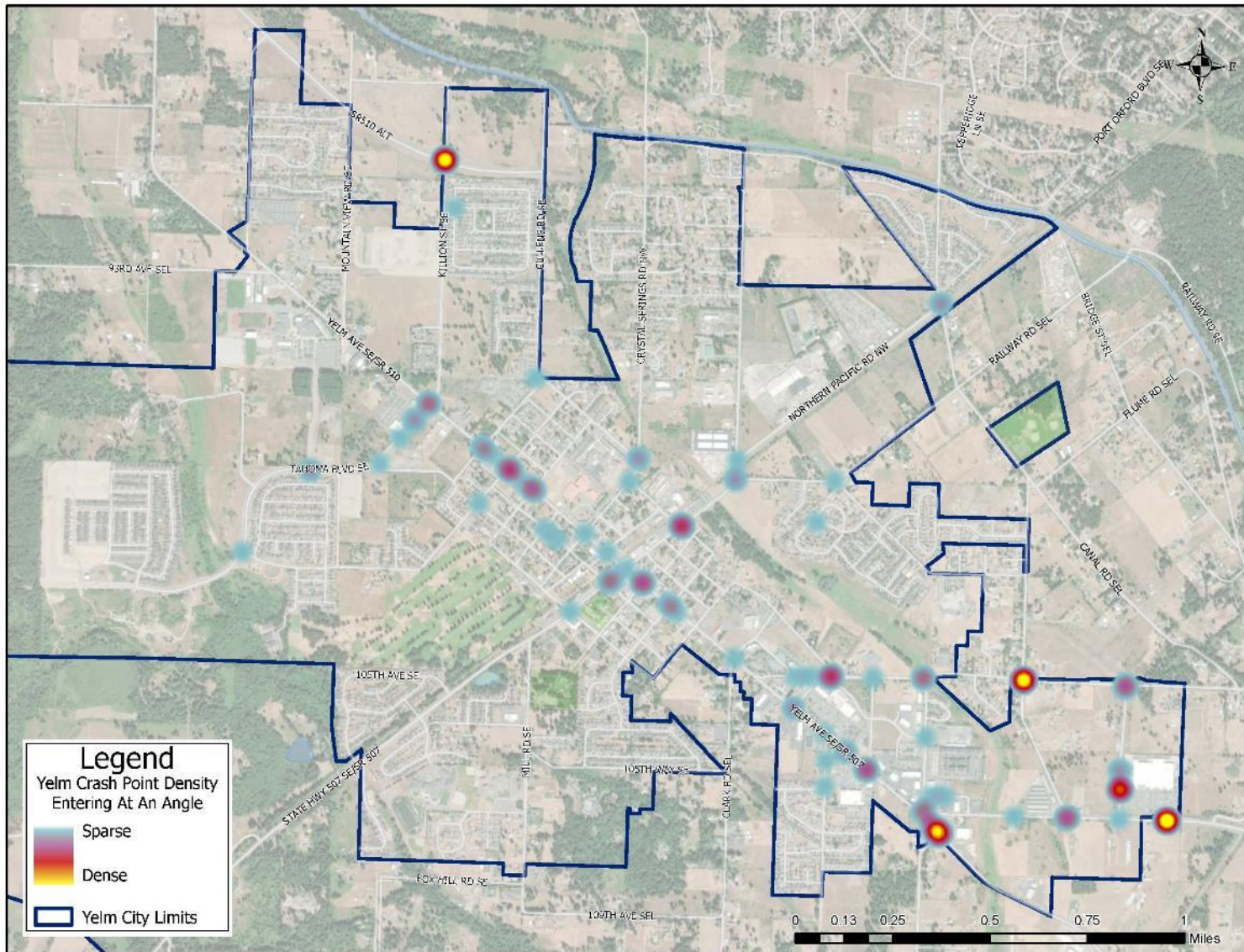
- Arterial corridors that completely lacked street lighting
- Stop controlled intersections with a history of angle crashes at all levels of severity (i.e., at least one crash per year)

**Figure 8** shows the location of angle crashes at non-signalized intersections.

### 4.2 Priority Level 2

Because risk factors associated with pedestrian and bicycle crashes include a severe injury as well as several other injuries, and pose a significant risk to active transportation users, these types of crashes were also identified as Priority Level 2 locations. These locations include the following.

Figure 8. Angle Crash Locations





## 4.2.1 Pedestrian and Bicycle Crashes

As summarized in Table 2, there were seven pedestrian-related crashes in Yelm during the study period and six non-severe bicycle-related crashes. With one exception pedestrian-related crashes largely involved non-severe injuries. There were no severe bicycle-related crashes. Pedestrian and bicycle crashes that occurred during the study period included the following

- **SR 507 (E. Yelm Avenue) at Plaza Drive (#B, I and M)** – three non-severe crashes occurred at this location over the five-year study period, one of which involved a pedestrian, and two which involved bicyclists. These crashes included:
  - **#B: Pedestrian Crash** - The pedestrian crash occurred on 2/24/2017 during daylight hours when the weather was overcast and the pavement was dry. The vehicle was going straight on SR 507 and apparently failed to notice the presence of the pedestrian due to inattention. No contributing causes were assigned to the pedestrian.
  - **#I: Bicycle Crash** - A non-severe crash between a motor vehicle and a bicyclist occurred on 8/23/2018 during daylight hours when the weather was clear/partly cloudy and the pavement was dry. The vehicle was making an eastbound left turn from E. Yelm Avenue to Plaza Drive. The pedestrian was noted as failing to yield right of way to the vehicle. The intersection is stop sign-controlled on Plaza Drive.
  - **#M: Bicycle Crash** - A non-severe crash between a motor vehicle and a bicyclist occurred on 7/19/2019 during daylight hours when the weather was clear/partly cloudy and the pavement was dry. The vehicle was traveling straight from the south to the north and the bicyclist as noted as being inattentive.
- **SR 507 (E. Yelm Avenue) between Vancil Road and Plaza Drive (#5/G)** – one severe crash occurred in this highway segment over the five-year study period that involved a pedestrian. The crash occurred at milepost 28.98 at a driveway for a commercial business. This is 0.05 miles from the intersection with Vancil Road and 0.06 miles from the intersection with Plaza Drive. The crash occurred on 7/29/2018 during daylight hours when the weather was partly cloudy and the pavement was dry. The vehicle was going straight, and the pedestrian was cited as failing to yield to the motor vehicle.
- **Walmart Boulevard (170<sup>th</sup> Avenue) at Walmart Throughway (#A)** – one non-severe crash occurred in this roadway segment at the entrance to Walmart over the five-year study period that involved a pedestrian. The crash occurred on 11/12/2017 during hours of darkness and rain when the pavement was wet. The intersection was illuminated. The vehicle was going straight on SR 507 and apparently failed to notice the presence of the pedestrian due to inattention. No contributing causes were assigned to the pedestrian. It should be noted that this location will be reconstructed with a median curb as part of the SR 510 Yelm Loop phase 2 project, tentatively scheduled for 2024 construction.
- **Stevens Street at Railroad Avenue** – one non-severe pedestrian crash occurred at this intersection during the five-year study period. This crash occurred on 5/31/2019 during daylight hours when the weather was clear/partly cloudy and the pavement was dry. The vehicle was going straight on Stevens Avenue and was inattentive to the presence of a pedestrian. The

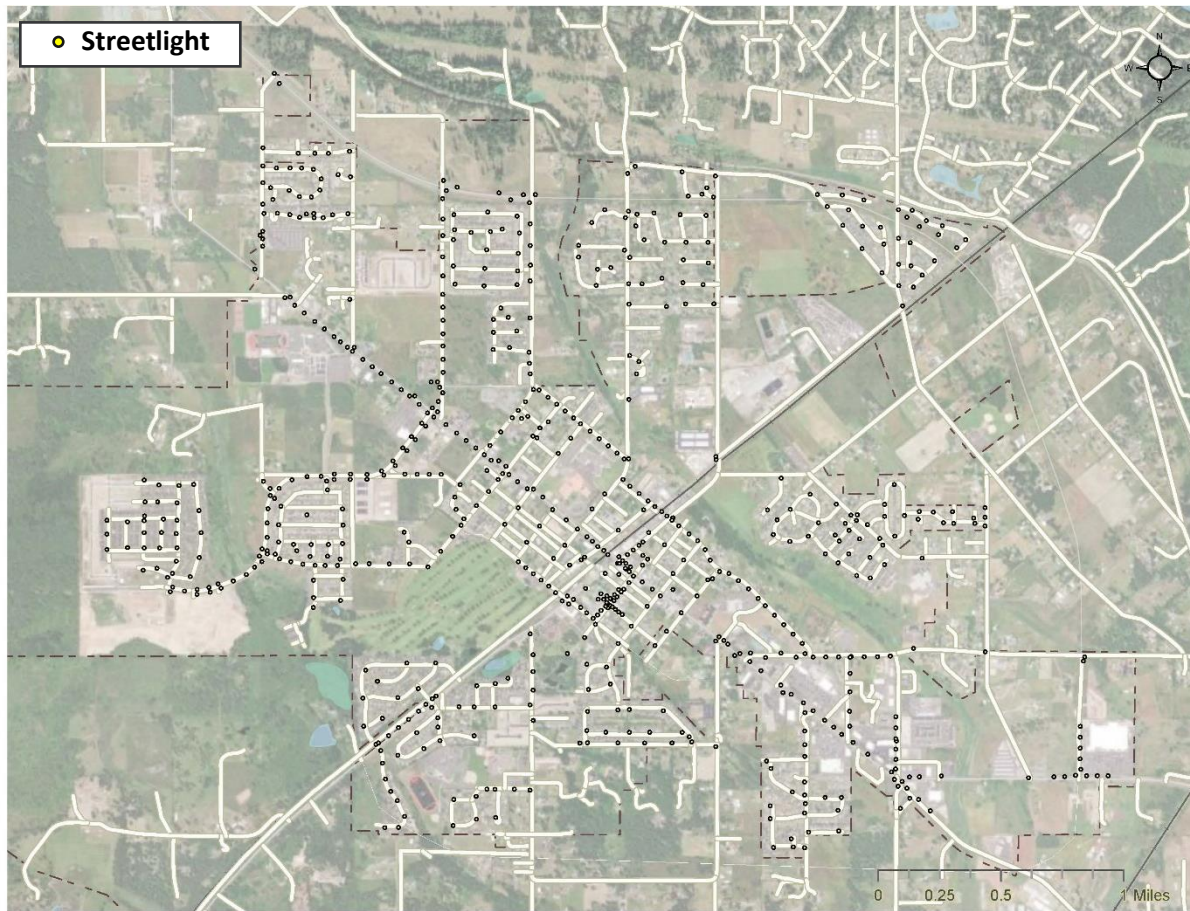
pedestrian was also noted as being inattentive. The intersection was stop-controlled on Railroad Avenue with no stops required on Stevens Avenue.

- **SR 507 (1<sup>st</sup> Street) between Mosman Avenue and E. Yelm Avenue** - one non-severe pedestrian crash occurred at this intersection during the five-year study period. This crash occurred on 10/12/2019 during hours of darkness when the weather was clear/partly cloudy and the pavement was wet. The vehicle was going straight on 1<sup>st</sup> Street, while the pedestrian was crossing while under the influence of alcohol and was inattentive to the presence of the vehicle.
- **SR 507 (E. Yelm Avenue) at 3<sup>rd</sup> Street** - one non-severe pedestrian crash occurred at this intersection during the five-year study period. This crash occurred on 5/28/2019 during daylight hours when the weather was clear/partly cloudy and the pavement was dry. The vehicle was making a right turn from 3<sup>rd</sup> Street to eastbound SR 507. The pedestrian was noted as being inattentive to the presence of the vehicle. The pedestrian was also noted as being inattentive. The intersection was stop-controlled on 3<sup>rd</sup> Street.
- **Vancil Road at Driveway south of E. Yelm Avenue** – one non-severe pedestrian crash occurred at this intersection during the five-year study period. This crash occurred on 10/27/2020 during daylight hours when the weather was clear and the pavement was dry. The vehicle traveling straight through the intersection on Vancil Road. The pedestrian was noted as failing to yield right of way to the vehicle. The intersection is traffic signal controlled.
- **View Drive Court at Crystal Springs Street** - one non-severe bicycle crash occurred at this intersection during the five-year study period. This crash occurred on 7/19/2019 during daylight hours when the weather was clear/partly cloudy and the pavement was dry. The vehicle traveling straight through the intersection on Crystal Springs Street. The bicyclist was noted as being inattentive. The intersection is stop sign-controlled on Crystal Springs Street.
- **Creek Street at Driveway north of 106<sup>th</sup> Avenue** - one non-severe bicycle crash occurred at this intersection during the five-year study period. This crash occurred on 4/1/2019 during daylight hours when the weather was clear/partly cloudy and the pavement was dry. The vehicle traveling straight east/west at the driveway. The pedestrian was noted as inattentive.
- **1<sup>st</sup> Street S at Mosman Avenue** - one non-severe bicycle crash occurred at this intersection during the five-year study period. This crash occurred on 5/7/2021 during daylight hours when the weather was clear and the pavement was dry. The vehicle was making an eastbound to southbound right turn and was hit by the bicyclist. The cyclist was noted as failing to yield right of way to the vehicle. The intersection is traffic signal controlled.

#### 4.2.2 Roadway Streetlight Evaluation

Given the influence that sufficient lighting can have on safety for all roadway users, an assessment of the existing streetlights was performed. The city tracks its streetlight inventory in GIS and using that data **Figure 9** was prepared to depict all streetlight locations.

Figure 9. City-wide Streetlight Locations



Based on a review of the existing streetlight locations on the primary City routes, which typically provide street lighting approximately every 200 feet, several roadway segments with substandard streetlighting were identified. These are:

- SR 510 (W Yelm Avenue) from SR 510 Spur to 93<sup>rd</sup> Avenue SE
- SR 507 (S 1<sup>st</sup> Street) from Brighton Road SE to Mosman Avenue
- SR 507 (E Yelm Avenue) from 3<sup>rd</sup> Street to Clark Road SE
- SR 507 (E Yelm Avenue) from 106<sup>th</sup> Avenue SE to Walmart Boulevard SE
- 103<sup>rd</sup> Avenue SE from Creek Street SE to Walmart Boulevard SE

Some of these segments contain intermittent streetlights but do not provide the same consistent close spacing as most of the city.

### 4.3 Summary of Conclusions on High Priority Locations

In summary, all of the Priority Level 1 spot locations are recommended to be carried forward for further evaluation to identify appropriate solutions. In addition, review of the Priority Level 2 identifies two locations that should be carried further. Priority locations to be further studied include:

- SR 507 (E. Yelm Avenue) at or near Grove Road

- SR 510 Spur at Killion
- SR 507 (E. Yelm Avenue) at or near Walmart Entrance
- Grove Road at 103<sup>rd</sup> Avenue
- Bald Hill Road at Morris Road
- 103<sup>rd</sup> Avenue at West Road
- SR 507 (E. Yelm Avenue) at or near Plaza Drive
- Roadway segments with substandard street lighting

Other locations are not recommended as high priorities to be carried into the evaluation or countermeasures and the development of improvement recommendations. **Figure 10** illustrates the highest Priority Level 1 and Level 2 locations including both spot and potential systemic improvements, those roadway segments with substandard street lighting.

When the project locations identified in Figure 10 are compared with the demographic data presented in Chapter 2, it is clear that there is a distribution of projects throughout much of the city. In particular, there is a concentration of improvements recommended for the southeast portion of the city which includes a higher than average percentage of person of color and low income population.

Figure 10. Priority Level 1 and 2 Locations for Improvement



## 5 IDENTIFICATION OF COUNTERMEASURES FOR HIGH PRIORITY CORRIDORS

Chapter 5 includes a discussion and evaluation of potential countermeasures for severe crashes or bicycle/pedestrian crash risk factors where appropriate. As an introduction to this discussion it is important to note that a significant change to the transportation system in the City of Yelm is pending and may substantively alter the magnitude of crash experience as identified in this study. Phase 1 of the Yelm Loop (Bypass) has been constructed and is under operation. This bypass currently runs from Yelm Highway to Cullens Road. East of Cullens Road, many motorists are currently using a route comprised of several local streets to bypass the city center and reach destinations to the east of Yelm while waiting for the Bypass to be completed. These local streets include Cullens Road, Coates Avenue, Edwards Street, Stevens Street, 103<sup>rd</sup> Avenue and Walmart Boulevard. Several of these streets experienced either bicycle/pedestrian crashes or a significant number of angle crashes during the study period.

Analysis conducted for the Yelm Bypass project indicates that traffic volumes, particularly on these local streets, could see a potentially significant reduction when the bypass is completed. With this reduction in volumes, it is also anticipated that crash levels would decline. Earlier analysis also shows a reduction in expected traffic volumes along SR 510 (W. Yelm Avenue) and SR 507 (E. Yelm Avenue), although to a much lesser degree than on the local streets and may result in a reduction in crash experience.

Completion of the Yelm Loop bypass is not expected to affect recommendations in this report related to Yelm Avenue (including both SR 510 and SR 507) but may affect the need for improvements at several of the local street intersections. This is further discussed in the sub-sections below. Local street intersections currently experiencing high angle, bicycle or pedestrian crashes should be monitored to determine if crash potential actually reduces.

### 5.1 Spot Improvements

A review of each high priority crash location was performed to identify potential safety countermeasures. These countermeasures were selected based on a review of the specific crash data and existing roadway conditions, consultation with City staff, and a review of safety countermeasure resources from WSDOT and FHWA. Below is a description of each identified priority location, the issues specific to that location, and the selected countermeasures.

#### 5.1.1 SR 507 (E. Yelm Avenue) at and near Grove Road

**Figure 11** illustrates the existing layout of this intersection. Three severe crashes occurred at this location over the five-year planning period including two right turn angle crashes and one left turn angle crash. Two of the crashes involved turns from the stop-controlled side street (Grove Road) resulting from a failure to yield on the

**Figure 11. SR 507 at Grove Road**



part of the entering motorist. The third crash involved apparent illness. An additional non-severe injury crash involving a pedestrian occurred approximately 160 feet to the east of the intersection with Grove Road. Two of the crashes occurred during hours of darkness when it was raining and the pavement was wet. There is currently no illumination at this intersection.

#### 5.1.1.1 Recommended Countermeasures

The following countermeasures were identified for consideration to improve safety at this intersection.

- *Install Roundabout* - The EIS prepared the properties between Grove Road and Walmart Boulevard and on both sides of Yelm Avenue identified installation of a roundabout at the intersection with Grove Road. Based on information provided by the FHWA Crash Modification Factor Clearinghouse<sup>8</sup>, a 42 to 51 percent reduction in existing crashes could be expected with the roundabout in comparison to the existing stop-controlled intersection. This reduction would apply to all crashes and not just to angle crashes as the data is not specific enough to make that distinction.
- *Reconfigure Intersection to Eliminate Skew* – The closest CMF to such an improvement would be related to enhancing the sight distance triangle, making it easier for a driver to see on-coming vehicles. One relevant factor was identified that applied to injury crashes. This would see a reduction of 47 percent of existing relevant crashes. If installation of the proposed roundabout proceeds to implementation, this roadway skew should be addressed and included in any approved design concept.
- *Add Illumination* – The existing intersection is not lighted and two of the severe crashes occurred during hours of darkness. Based on a review of data from the CMF Clearinghouse, the addition of illumination to a road could result in a 50 reduction in all types of crashes.
- Install pedestrian crossing protection which could include such features as ADA compliant curb cuts and tactile warning strips and high visibility pedestrian warning treatments such as the following:
  - *Active warning beacons* - no CMF has been identified for this measure. Existing studies indicate motorist yielding varies from 25 to 76 percent, with an unclear relationship to roadway characteristics. Actuated beacons are typically more effective than continuous flashing beacons.

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<sup>8</sup> Crash countermeasures are actions taken to reduce the danger or threat of a particular type of crash. The effectiveness of various countermeasures are identified through various Crash Modification Factors (CMFs) that indicate the proportion of crashes that would be expected to change after implementation of a countermeasure. FHWA provides an extensive database of CMFs in its online Crash Modification Factors Clearinghouse.

CMFs are expressed as a factor which is multiplied by the number of crashes of a relevant and specific type that are currently being experienced. The result would determine the magnitude of changes in the number of that type of crash that would be expected. For example, if a stop-controlled intersection experienced 5.2 crashes per year over the analysis period and traffic signal installation was considered. The CMF for installing a traffic signal was .56 for all crashes, the expected total crashes after signal installation would be  $5.2 \times 0.56 = 2.9$  total crashes per year or a reduction of 44 percent.

- Crossing island/refuge - roadway treatments that provide refuge for pedestrians and bicyclists between motor vehicle travel lanes at intersections and midblock locations. CMFs for pedestrian/bicycle refuges suggest a 46 percent reduction could be experienced for all crashes and a 31 percent reduction for vehicle/pedestrian crashes where raised medians are also included.
- Rectangular rapid flashing beacons (RRFBs) – these differ from standard flashing beacons by using a rapid flash frequency (approximately 190 times per minute), brighter light intensity, and ability to aim the LED lighting. RRFBs can be passive or pedestrian actuated, and feature an irregular, eye-catching flash pattern to call attention to the presence of pedestrians. CMFs indicate a potential reduction of vehicle/pedestrian crashes of 47 percent with typically a much higher motorist yield rate than uncontrolled crossings.
- Curb extensions - Curb extensions (also known as “bulb-outs,” or “neck downs”) may enhance pedestrian safety in several ways, such as by making pedestrians, bicyclists, and motorists more visible to each other; by keeping motor vehicles from parking too close to crossings and blocking sight lines; by reducing crossing distance; and by narrowing radii at intersections, which may slow-turning traffic. A CMF has not yet been determined; initial research indicates this treatment may be effective at increasing driver yielding and improving pedestrian safety

**Conclusions** – Given the recommended improvement to the intersection by installation of a roundabout, it is recommended that this improvement be prioritized and that it include adequate and appropriate illumination. In addition, consideration should be given to installation of appropriate pedestrian crossing protection such as ADA compliant curb cuts and tactile warning strips, and high visibility pedestrian treatments including warning signage and/or curb extensions to narrow the street crossing distance for walkers.

### 5.1.2 SR 510 Spur at Killion Road

**Figure 12** shows the layout of this existing intersection. One severe crash occurred at this location over the past five years which involved an angle collision. 12 other angle crashes occurred here which represented 92 percent of all crashes at the intersection.

#### 5.1.2.1 Potential Countermeasures

The following countermeasures were identified for consideration to improve safety at this intersection

- Install roundabout – Based on information provided by the FHWA Crash Modification Factor Clearinghouse, a 42 to 51 percent reduction in existing crashes could be expected with the roundabout in comparison to the existing stop-controlled intersection. This reduction would apply to all crashes and not just to angle crashes as the data is not specific enough to make that distinction.

**Figure 12. SR 510 Spur at Killion Road**





- **Install signalization** – Based on CMF research for a four-legged urban intersection, a 67 percent reduction is anticipated in injury crashes resulting from angle collisions. A 54 percent reduction is anticipated in angle crashes of all severities. An increase is anticipated in rear end crashes with this CMF.

### 5.1.3 SR 507 (E. Yelm Avenue) at and Near Walmart Entrance

One severe crash occurred at the entrance to Walmart which involved a turning collision. A total of 13 angle crashes occurred at this driveway out of a total of 17 crashes over the five-year period.

Additionally, two severe crashes occurred within 0.06 miles (about 300 feet) to the west of this intersection.

One involved a rear end collision and the other a sideswipe. A total of nine crashes occurred in this area over the five-year study period none of which involved angle crashes.

**Figure 13** shows the location of the Walmart entrance driveway and the area within which the two other severe crashes occurred. It should be noted that this location will be reconstructed with a median curb as part of the SR 510 Yelm Loop phase 2 project, tentatively scheduled for 2024 construction.

**Figure 13. SR 507 at and Near Walmart Entrance**



#### 5.1.3.1 Recommended Countermeasures

The current design effort for the completion of the Yelm Loop bypass includes a roundabout at the intersection with the Walmart driveway along with access management for the entire Walmart Frontage. Additionally, the frontage along Walmart Boulevard SE between SR 507 and 103<sup>rd</sup> Avenue would also see installation of an access management strategy. Along both SR 507 and Walmart Boulevard SE, property access would be restricted to right-in/right-out traffic with a median barrier. U-turns can be made at the roundabouts that will be constructed at both the Walmart driveway and the 103<sup>rd</sup> Avenue intersections. These restrictions are expected to substantively reduce angle crashes along SR 507 in this area, as well as along Walmart Boulevard SE. This would affect both the subject intersection as well as the intersection of Walmart Boulevard SE with the Walmart driveway which was identified earlier in this report as having a non-severe pedestrian crash.

**Figure 14. Grove Road at 103rd Avenue**



### 5.1.4 Grove Road at 103<sup>rd</sup> Avenue

**Figure 14** illustrates the intersection of Grove Road with 103<sup>rd</sup> Avenue. One severe crash occurred at this location which involved an angle collision. This crash occurred on 2/21/2021 at 6:30 pm. It was raining and dark with streetlights on. Pavement was wet. The intersection was controlled by a four-way stop and caused by a motorist making a right turn from

southbound to westbound. The contributing causes was cited as illness. Nineteen total crashes occurred at this intersection during the five-year study period of which 13 involved entering at an angle.

#### 5.1.4.1 Potential Countermeasures

Potential countermeasures that could be considered at this location would involve improvement to the assignment of traffic control at the intersection. Three alternatives were identified for consideration:

- Remove stop control from 103<sup>rd</sup> Avenue – It is understood that this intersection currently experienced higher traffic levels on 103<sup>rd</sup> Avenue as a result of the Yelm Loop bypass being only partially complete. Given that this is the only location on 103<sup>rd</sup> Avenue where vehicles are required to stop, removal of the existing stop signs on the 103<sup>rd</sup> Avenue approaches could better accommodate current volumes and be a more consistent treatment for the facility. If/when the Yelm Loop bypass is completed the existing all-way stop-control may be reimplemented.
- Install roundabout – Based on information provided by the FHWA Crash Modification Factor Clearinghouse, a 42 to 51 percent reduction in existing crashes could be expected with the roundabout in comparison to the existing stop-controlled intersection. This reduction would apply to all crashes and not just to angle crashes as the data is not specific enough to make that distinction.
- Install signalization – Based on CMF research for a four-legged urban intersection, a 67 percent reduction is anticipated in injury crashes resulting from angle collisions. A 54 percent reduction is anticipated in angle crashes of all severities. An increase is expected in rear end crashes with.

#### 5.1.5 SR 507 (E. Yelm Avenue) at and near Plaza Drive

Three non-severe crashes involving bicyclists or pedestrians occurred at the intersection of E. Yelm Avenue and Plaza Drive and one severe crash occurred in the vicinity. The severe crash occurred at milepost 28.98 at a driveway for a commercial business. This is 0.05 miles from the intersection with Vancil Road and 0.06 miles from the intersection with Plaza Drive and involved a pedestrian who was cited for failing to yield to the motor vehicle. The three crashes at Plaza Drive all occurred during daylight hours under good weather conditions. In some instances blame was attributed to the motorist and in others to the non-motorist. It should be noted that this intersection is not illuminated which could create an added safety hazard for pedestrians and bicyclists in the area. **Figure 15** shows the intersection of SR 507 with Plaza Drive and the vicinity where identified crashes occurred.

Figure 15. SR 507 at and Near Plaza Drive



### 5.1.5.1 Potential Countermeasures

Potential countermeasures that could be considered at this location would involve improvement to the assignment of traffic control at the intersection. Two alternatives were identified for consideration:

- Install roundabout – Based on information provided by the FHWA Crash Modification Factor Clearinghouse, a 42 to 51 percent reduction in existing crashes could be expected with the roundabout in comparison to the existing stop-controlled intersection. This reduction would apply to all crashes and not just to angle crashes as the data is not specific enough to make that distinction.
- Install signalization – Based on CMF research for a four-legged urban intersection, a 67 percent reduction is anticipated in injury crashes resulting from angle collisions. A 54 percent reduction is anticipated in angle crashes of all severities. An increase is anticipated in rear end crashes with this CMF.

Additional countermeasures for consideration could be implemented with either signalization or a roundabout and include:

- Add Illumination – The existing intersection is not lighted and two of the severe crashes occurred during hours of darkness. Based on a review of data from the CMF Clearinghouse, the addition of illumination to a road could result in a 50 reduction in all types of crashes.
- Pedestrian crossing protection – these measures could include ADA compliant curb cuts with tactile warning strips, curb extensions, active warning beacons, crossing islands or refuges, rectangular rapid flashing beacons (RRFBs) or other similar strategies many of which are described earlier in this section.

## 5.2 Systemic Improvements

As noted in Chapter 4, high priority systemic improvement needs were identified in response to the highest risk factors in the Yelm study area. These risk factors were associated with angle crashes, and to a lesser degree locations that lacked illumination. The latter affected a number of locations where bicycle and pedestrian crashes occurred.

Many of the spot locations discussed in Section 5.1 experienced a high number of angle crashes, and many were particularly associated with severe injuries. This section is intended to build on the foregoing discussion of angle crashes by adding locations where there has been a significant number of these crashes. Data in Figure 8 (see Chapter 4) was used to guide that review. Two locations emerged from the analysis:

- Bald Hills Road at Morris Road
- 103rd Avenue at West Road

In addition to the systemic angle crash locations, five roadway segments with substandard streetlighting were identified.

## 5.2.1 Bald Hills Road at Morris Road

**Figure 16** presents the intersection of Bald Hills Road at Morris Road which lies just to the southeast of the intersection of SR 507 with Bald Hills Road, which is currently under design for installation of a multi-lane roundabout to address existing congestion and safety concerns.

No severe crashes occurred at the subject intersection but there were a total of 32 crashes over the five-year study period, 13 of which (or 41 percent) involved angle collisions.

### 5.2.1.1 Potential Countermeasures

Potential countermeasures that could be considered at this location would involve improvement to the assignment of traffic control at the intersection. Any improvement at this intersection should be coordinated with the improvement constructed at the adjacent intersection of SR 507/Bald Hills Road. Three alternatives were identified for consideration:

- Closure or Relocation of southwest bound driveway – the presence of a commercial driveway as a fourth leg to this intersection increases the complexity and number of conflict points at the intersection. Given the high-volume interaction between Morris Road SE and the west leg of Bald Hill Road SE, relocating the driveway east would simplify the intersection and create a lower volume access for the commercial development.
- Install roundabout – Installation of a roundabout at this location would continue with the same form of traffic control as is currently being designed for the nearby intersection of Bald Hills Road with SR 507. Based on information provided by the FHWA Crash Modification Factor Clearinghouse, a 42 to 51 percent reduction in existing crashes could be expected with the roundabout in comparison to the existing stop-controlled intersection. This reduction would apply to all crashes and not just to angle crashes as the data is not specific enough to make that distinction.
- Install Signalization – Based on CMF research for a four-legged urban intersection, a 67 percent reduction is anticipated in injury crashes resulting from angle collisions. A 54 percent reduction is anticipated in angle crashes of all severities. An increase is anticipated in rear end crashes with this CMF. It is unlikely that this intersection currently meets traffic signal warrants, but this should be monitored over time if signalization is the preferred countermeasure to address angle crashes.

## 5.2.2 103<sup>rd</sup> Avenue at West Road

**Figure 17** shows the intersection of 103<sup>rd</sup> Avenue with West Road. No severe crashes occurred at this location but there were a total of 12 crashes of which five involved angle crashes.

**Figure 16. Bald Hills Road at Morris Road**



Figure 17. 103rd Avenue at West Road



#### 5.2.2.1 Potential Countermeasures

Potential countermeasures that could be considered at this location would involve improvement to the assignment of traffic control at the intersection. Three alternatives were identified for consideration:

- Install all-way stop control– Currently the east and west approaches of 103<sup>rd</sup> Avenue SE operate as free approaches. However, the current traffic volume patterns indicate that most of the traffic is travelling to/from West Road and the east leg of 103<sup>rd</sup> Avenue SE. While the current traffic volume patterns persist, installation of all-way stop control would improve the operation of the high-volume southbound left turn movement.
- Install roundabout – Installation of a roundabout at this location would continue with the same form of traffic control as is currently being designed for the nearby intersection of Bald Hills Road with SR 507. Based on information provided by the FHWA Crash Modification Factor Clearinghouse, a 42 to 51 percent reduction in existing crashes could be expected with the roundabout in comparison to the existing stop-controlled intersection. This reduction would apply to all crashes and not just to angle crashes as the data is not specific enough to make that distinction.
- Install signalization – Based on CMF research for a four-legged urban intersection, a 67 percent reduction is anticipated in injury crashes resulting from angle collisions. A 54 percent reduction is anticipated in angle crashes of all severities. An increase is anticipated in rear end crashes with this CMF. It is unlikely that this intersection currently meets traffic signal warrants but this should be monitored over time if signalization is the preferred countermeasure to address angle crashes.

### 5.2.3 Locations with Substandard Illumination

A review of the city-wide streetlight locations was conducted to identify any roadway segments with substandard lighting. Most of the city provided street lighting at approximately 200-foot intervals and this was used to identify substandard roadway segments. The assessment was focused on high-volume roads and five roadway segments were identified:

- SR 510 (W Yelm Avenue) from SR 510 Spur to 93<sup>rd</sup> Avenue SE
- SR 507 (S 1<sup>st</sup> Street) from Brighton Road SE to Mosman Avenue
- SR 507 (E Yelm Avenue) from 3<sup>rd</sup> Street to Clark Road SE
- SR 507 (E Yelm Avenue) from 106<sup>th</sup> Avenue SE to Walmart Boulevard SE
- 103<sup>rd</sup> Avenue SE from Creek Street SE to Walmart Boulevard SE

For each of these locations additional streetlights should be designed and installed to provide 200-foot spacing.

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## 6 PRIORITIZED LIST OF COUNTERMEASURES

Based on the detailed evaluation of each priority corridor and local concern area the recommended systemic and spot countermeasures were assessed, and a prioritization was established. The development and prioritization of recommendations included review of city policy on transportation safety, public discussion on potential improvements, and a technical evaluation of the relative significance of each improvement in meeting the safety objectives of the community.

### 6.1 Public Engagement in Developing Safety Solutions

As noted in the evaluation of crash data, the dominant pattern of crashes in Yelm is related to the two existing state highways - SR 507 and SR 510. Since the early 1990's planning and design for a bypass of the community has been underway with construction of Phase 1 of this improvement completed between Yelm Highway to the west of the city and Cullens Road. As noted earlier in this report, a significant share of existing crashes over the five year study period addressed in this Safety Plan occurred along the portion of SR 510 and SR 507 that is not currently served by Phase 1 of the Yelm Loop project. Additionally, a number of crashes occurred on local streets that are currently serving to connect Phase 1 of the Yelm Loop to the existing highway alignment. With completion of Phase 2, it is expected that traffic patterns in Yelm will change as regional traffic is diverted from the existing highway and local streets onto the new Loop. This will have an effect on improving transportation safety within the community. Many of the projects identified for implementation in this Safety Plan reflect this expected traffic pattern change.

The planning and design process for the SR 510 Yelm Loop (and many of the safety improvements recommended in this plan) has included extensive public engagement which is well documented in the project's *New Alignment Phase 2, Supplemental Environmental Assessment* dated May 2021. Public engagement included a Stakeholder Advisory Group (SAG) to ensure relevant agencies<sup>9</sup> stay engaged and informed. Additionally, since the Yelm Loop corridor is located in the traditional territory of the Nisqually Tribe and near the Nisqually reservation, the Tribe has been included in all project meeting invitations and documentation distribution.

Engagement of the general public for Phase 2 of the Yelm Loop project included two open houses (one in person and one online), a project website and media communications. The primary issues of concern expressed by extensive public comment included transportation service and the environment. Transportation concerns included changes in travel patterns and safety, as well as access to pedestrian and bicycle facilities in the corridor. Based on comments received intersection improvements were confirmed and additional active transportation facilities were incorporated into the project.

Specific engagement activities that were included in development of the Safety Plan included: presentation to City Council, coordination with WSDOT on improvement recommendations, and ongoing dialogue with emergency responders, particularly police. Additional outreach to the general public related to transportation safety is anticipated as part of the pending update to the City's Comprehensive Plan and Transportation System Plan.

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<sup>9</sup> The SAC included representation from various departments within the City of Yelm, the Thurston Regional Planning Council (TRPC), Thurston County, WSDOT and Intercity Transit.



## 6.2 Relationship to City Policy on Transportation Safety

As noted earlier in this report, the Safety Plan relies on the goal and policy statements provided by the existing Comprehensive Plan and Transportation System Plan for guidance in the development and implementation of improvements. Additionally, the Transportation System Plan provides strategies for reducing traffic flow through the community via the new Yelm Bypass, and the implementation of improvements through the use of development mitigation and the Six-Year Transportation Improvement Program. The recommendations of this Safety Plan will be incorporated into those documents, as appropriate, to ensure implementation in a timely manner.

## 6.3 Summary of Recommendations

Based on the detailed evaluation of each priority corridor and local concern area the recommended systemic and spot countermeasures were assessed, and a prioritization was established. All of the recommended countermeasures were divided into three tiers:

- Tier 1: Top Priorities (including top ranked Priority Level 1 and Level 2 needs)
- Tier 2: Additional Needs (including high ranked Priority Level 1 and Level 2 needs)
- Tier 3: Studies and Further Evaluation

This prioritization was based on the severity of the existing safety issue, the nature of the proposed countermeasure, and the cost of the proposed countermeasure. Planning level cost estimates have been prepared for each potential countermeasure. The estimates provided represent the cost of independent implementation. However, should multiple countermeasures be implemented at the same time, the collective cost would likely be lower. This grouping of improvements would apply to city-wide implementation of a single countermeasure, like advanced pedestrian signage across town, or if multiple different countermeasures were implemented at the same time in a single location. Many of the identified countermeasures would group together naturally, for example:

- High visibility pedestrian treatments, advance stop/yield lines, and advanced pedestrian signage could all group together or with any other pedestrian improvement

The summary of proposed countermeasures, including the prioritization and estimated cost, are provided in **Table 8**.

**Table 8. Countermeasure Prioritization and Cost Estimates**

#	Location	Improvement	Total Cost
<b>Tier 1 – Priority Improvements</b>			
1-A	SR 507 (E Yelm Avenue) at Grove Road	<ul style="list-style-type: none"> <li>• Install roundabout and correct for roadway skew</li> <li>• Install illumination</li> <li>• Develop ADA-compliant curb cuts and tactile warning strips</li> <li>• Install high visibility pedestrian treatments</li> </ul>	\$3,000,000
1-B	SR 507 (E Yelm Avenue) at Plaza Drive	<ul style="list-style-type: none"> <li>• Install roundabout</li> <li>• Develop ADA-compliant curb cuts and tactile warning strips</li> </ul>	\$2,900,000

		<ul style="list-style-type: none"> <li>• Install high visibility pedestrian treatments</li> </ul>	
1-C	City-wide Streetlight installation	<ul style="list-style-type: none"> <li>• Install additional streetlighting along main City streets where gaps in streetlights exist.</li> </ul>	\$900,000
<b>Tier 2 – Additional Improvements</b>			
2-A	SR 510 Spur at Killion Road	<ul style="list-style-type: none"> <li>• Install roundabout</li> <li>• Develop ADA-compliant curb cuts and tactile warning strips</li> <li>• Install high visibility pedestrian treatments</li> </ul>	\$3,500,000
2-B	Bald Hill Road SE at Morris Road SE	<ul style="list-style-type: none"> <li>• Install roundabout</li> <li>• Develop ADA-compliant curb cuts and tactile warning strips</li> <li>• Install high visibility pedestrian treatments</li> </ul>	\$2,900,000
2-C	Grove Road SE at 103 <sup>rd</sup> Avenue SE	<ul style="list-style-type: none"> <li>• Convert All-Way Stop Control to Two-Way Stop Control</li> </ul>	\$45,000
2-D	103 <sup>rd</sup> Avenue SE at West Road	<ul style="list-style-type: none"> <li>• Assess intersection control alternatives and monitor traffic volume patterns.</li> </ul>	\$35,000
<b>Tier 3 – Studies and Further Evaluation</b>			
3-A	SR 507 (E Yelm Avenue) Between Vancil Road SE and Bald Hill Road SE	<ul style="list-style-type: none"> <li>• Assess corridor for access control alternatives and pedestrian crossings</li> </ul>	\$50,000
3-B	SR 507 (E Yelm Avenue) at and near Walmart Entrance	<ul style="list-style-type: none"> <li>• Installation of access control on SR 507 to limit the Walmart driveways to right-in right-out. This improvement is planned as part of Phase 2 of the Yelm Loop (Bypass). The city should monitor the status of that project and, should it not get constructed, should study implementation of access control independent of the Yelm Loop (Bypass) project.</li> </ul>	\$35,000

## 6.4 Commitment to Implementation

Through its Comprehensive Plan and Transportation System Plan, the City of Yelm has adopted plans and policies that identify a commitment to transportation safety and implementation of safety improvements. Through the adoption of this Safety Plan, the city makes a further commitment to the goal of zero roadway fatalities and serious injuries (Target Zero) and significant progress towards that goal by 2030. This commitment will be further addressed in the pending update of the City’s Comprehensive Plan and Transportation System Plan through:

- The addition of specific policies that address Target Zero
- The incorporation of safety improvements identified in this plan, as well as projects identified through subsequent monitoring and analysis into the Transportation System Plan and Six Year Transportation Improvement Program for implementation.

## 6.5 On-Going Monitoring of Crashes

The City will continue monitoring crash data on a regular basis, with a focus on locations identified in the Plan. Monitoring will occur through the collection of crash data at three to five year intervals to update

the identification and assessment of severe crashes. As needed, further evaluation of improvements to problem locations will be determined. On-going monitoring will be the responsibility of the city's engineering staff with assistance from the Chief of Police or designee.

Also, the City will add the safety projects in this Plan to other City documents to help accelerate their funding and construction. The Safety Pan will be posted on the city's website.

## 7 CONCLUSIONS AND SUMMARY

The City of Yelm is actively pursuing improvements to reduce crashes and enhance safety for its multimodal transportation system. As part of that effort, the city has prepared this *Local Road Safety Plan* (LRSP) following the risk-based, data-driven analytical procedures outlined in guidance provided by the Washington State Department of Transportation (WSDOT) Local Programs Division. This guidance is designed to support WSDOT's efforts to implement the *Target Zero – Washington State Strategic Highway Safety Plan* which relies on a data-based approach that analyzes crash trends and contributing factors in the development of successful crash reduction strategies.

The purpose of this plan is to improve safety for different modes of transportation along city streets through the analysis of crash data, identifying and prioritizing risk factors that impact safety, and establishing and prioritizing engineering countermeasures and strategies that reduce the number and severity of crashes in the city.

### 7.1 Existing Crash History

Of the 714 total crashes on Yelm streets in the five-year analysis period, there were no fatalities and 17 resulted in a serious injury. Serious injuries represented a total of 2.4 percent of all crashes in the city. Fatal and serious injury crashes, referred to in this report as severe crashes, are the focus of *the Local Road Safety Plan*.

An assessment of these 17 severe crashes was performed to determine what, if any, trends were present. It was determined that the most common element of these 17 severe crashes was instances of vehicles entering at an angle from a side street. This was identified as a systemic issue and other locations in the City experiencing occurrences of entering at angle crashes were identified.

Overall, the following elements were used to identify priority locations in the city:

- Location of severe crashes
- Location of bicyclist and pedestrian crashes
- Location of clustered entering at angle crashes

### 7.2 Priority Locations

Based on the results of the existing crash data assessment, the following locations were identified as priority locations:

- SR 507 (E. Yelm Avenue) at or near Grove Road
- SR 510 Spur at Killion
- SR 507 (E. Yelm Avenue) at or near Walmart Entrance
- Grove Road at 103<sup>rd</sup> Avenue
- Bald Hill Road at Morris Road
- 103<sup>rd</sup> Avenue at West Road
- SR 507 (E. Yelm Avenue) at or near Plaza Drive
- Roadway segments with substandard street lighting

For each priority location improvements were identified and are described in Section 5. The preferred improvement option for each priority location is identified in Section 6, which includes a prioritization of the projects and their estimated costs.

### 7.3 Commitment to Safety

Through its Comprehensive Plan and Transportation System Plan, the City of Yelm has adopted plans and policies that identify a commitment to transportation safety and implementation of safety improvements. Through the adoption of this Safety Plan, the city makes a further commitment to the goal of zero roadway fatalities and serious injuries (Target Zero) and significant progress towards that goal by 2030. This commitment will be further addressed in the pending update of the City's Comprehensive Plan and Transportation System Plan through:

- The addition of specific policies that address Target Zero
- The incorporation of safety improvements identified in this plan, as well as projects identified through subsequent monitoring and analysis into the Transportation System Plan and Six Year Transportation Improvement Program for implementation.

The City's will continue monitoring crash data on a regular basis, with a focus on locations identified in the Plan. Monitoring will occur through the collection of crash data at three to five year intervals to update the identification and assessment of severe crashes. As needed, further evaluation of improvements to problem locations will be determined. On-going monitoring will be the responsibility of the city's engineering staff with assistance from the Chief of Police or designee.

Consultant Fee Determination Summary - Exhibit D-1



SCJ Alliance

Client: City of Orting  
 Project: Safety Action Plan  
 Job #: 24-000006  
 File Name: 2024-0119 Orting Safety Action Plan Fee Estimate.xlsm

Template Version: 8/17/2023  
 Contract Type: LAG Contract

Consultant Fee Determination

**DIRECT SALARY COST**

Classification	Hours	Direct Hourly Rate	Amount
Senior Planner	156.0	\$71.00	\$11,076.00
Senior Project Manager	71.0	\$92.11	\$6,539.81
P4 Planner	123.0	\$52.17	\$6,416.91
PM1 Project Manager	48.0	\$52.00	\$2,496.00
T2 Technician	16.0	\$36.00	\$576.00
Principal	7.0	\$132.15	\$925.05
P2 Planner	33.0	\$39.48	\$1,302.84
E4 Engineer	63.0	\$60.00	\$3,780.00

**Total Direct Salary Cost \$33,112.61**

**OVERHEAD**

Overhead Rate: 166.19%      Direct Salary Cost: #####      **Overhead Cost \$55,029.85**

**FIXED FEE**

Fixed Fee Rate: 31.00%      Direct Salary Cost: #####      **Fixed Fee Cost \$10,264.91**

**TOTAL SALARY COST**

**Total Salary Cost \$98,407.37**

**SUBCONSULTANTS**

**Subconsultant Fee Subtotal: \$0 \$0.00**  
**Subconsultant Markup: 0% \$0.00**

**REIMBURSABLE EXPENSES**

Copies, Printing, etc.      0.3% of the Direct Salary Costs      \$295.22  
 Mileage      540 miles at \$0.655 per mile      \$353.70  
**Expenses Subtotal: \$648.92**  
**Expenses Markup: 0% \$0.00**

**SUBTOTAL (SALARY, SUBCONSULTANTS AND EXPENSES)**

Subtotal (Salary, Subconsultants and Expenses)      **\$99,056.29**

**MANAGEMENT RESERVE FUND (MRF)**

Management Reserve: \$50,000      **\$50,000.00**

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**Total Estimated Budget: \$149,056.29**

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## Exhibit A Scope of Work Safety Action Plan Orting, WA

**Prepared For:** John Bielka, Capital Projects Manager

**Prepared By:** Ryan Shea, PTP

**Date Prepared:** January 24, 2024

## Overview

This scope of work outlines the tasks and subtasks to complete a Safety Action Plan for the City of Orting, which has received Safe Streets and Roads for All (SS4A) grant funding. The proposed scope of work has been divided into six primary tasks as described below:

- Task 1: Project Management/Team Coordination Meetings
- Task 2: Public Engagement Plan
- Task 3: Existing Data Review
- Task 4: Public Engagement
- Task 5: Identification and Evaluation of Improvement Locations
- Task 6: Finalize Countermeasures and Perform Prioritization
- Task 7: Prepare Safety Action Plan

Task 1 covers the project management tasks for the entire project. Tasks 2-7 includes the technical elements and preparation of the Safety Action Plan Report.

## Understanding

The process of preparing a Safety Action Plan includes a thorough review of existing crash data and soliciting feedback from the public about safety concerns. These two efforts help define the specific safety issues for the community and inform the content of the plan. During initial conversations with City staff about the safety action plan effort a few local concerns have already been expressed:

- Improving Lahar signage for all travel modes.
- The SR 162 and Calistoga Street corridors.
- Existing pedestrian crosswalks on high-traffic corridors (specifically those listed above) and the adequacy of lighting for pedestrian crossings overall.

These concerns provide a great starting point for the Safety Action Plan analysis and will be included in all of the evaluation steps described below.

## Task 1 Project Management/Team Coordination Meetings

SCJ (herein after referred to as The CONSULTANT) will coordinate with the city and its internal stakeholders on a regular basis throughout the project. The coordination will address on-going monitoring of project scope and status, technical and policy direction, schedule, and upcoming team meetings. Coordination will be via email, telephone calls or virtual meetings as appropriate.

- **Project management** including setup, billings, and progress reports on a monthly basis.
- **Project kick-off meeting** to discuss project goals/objectives, methods, data needs, roles and responsibilities and schedule/key milestones.
- **Monthly project manager check-ins.** It is assumed that the project will be completed over an eight-month period so eight project manager check-ins are assumed. Check-ins will be held with the City's project manager and meetings will be held over the phone or virtually.
- **Project team meetings.** It is assumed that up to six team meetings will be held with City staff. Additional meetings with City Council or the public are not included in this task.

### *Deliverables:*

- Monthly invoice and progress report.
- Attendance at meetings including up to eight project check-in meetings and project team meetings.

## Task 2 Public Engagement Plan

- 1) Identify public engagement strategy, including how to provide equitable access to the public and how often information is presented to the public.
- 2) Work with City staff to identify Action Plan Committee
- 3) Schedule initial public meetings

## Task 3 Collect and Review Existing Data

- 1) Collect current and available crash data from WSDOT for the prior five-year period
- 2) Coordinate with Police staff to ensure all known crash history is included.
- 3) Review crash data and identify serious injury, fatal, pedestrian, and bicycle crashes. Identify trends between these different crash types
- 4) Collect and review roadway data, including roadway speeds, number of travel lanes, street lighting, intersection control, pedestrian crossings, presence of bicycle lanes and sidewalks, and roadway grade. Some of this data is identified for collection is Task 5.
- 5) Discuss equity analysis categories with City staff. It is expected that this analysis will include income level and race, but additional categories may also be included. Collect demographic information for equity analysis



- 6) Overlay demographic information and crash data to identify potential equity issues
- 7) Prepare existing crash data graphics and tables

## Task 4 Public Engagement

- 1) Prepare materials for public and Action Plan Committee meetings
- 2) Work with City staff to advertise for public meetings
- 3) Initial Public meeting. This meetings will present initial existing crash data trends in the City and provide opportunities for the public to voice safety concerns or priorities. The CONSULTANT will document meeting results. The exact format and venue for the public meetings will be determined in task 2.
- 4) Develop online outreach tool to provide additional public engagement opportunity. This tool will allow the public to identify specific locations of concern and share any safety concerns or priorities they have.
- 5) Attend Action Plan Committee meetings. These meetings will occur throughout the safety action plan process and will allow the committee to share thoughts on safety concerns, countermeasures, and priorities and provide feedback on any public comments received. Three meetings are assumed, and The CONSULTANT will document meeting results.
- 6) Second Public meeting. This meeting will present a summary of the crash review and the public comments and the identified improvement locations. The meeting will also highlight the potential countermeasures and seek input on countermeasure preferences and prioritization of locations and/or countermeasures. The CONSULTANT will document meeting results. The exact format and venue for the public meetings will be determined in task 2.

## Task 5 Identify and Evaluate Improvement Locations

- 1) Review public comments and compare against crash data to identify potential additional study locations
- 2) Identify study locations where severe crashes (fatal and serious injuries) or bicycle/pedestrian crashes occurred during the five-year data analysis period. In addition to spot locations, crash risk factors will be evaluated for the city as a whole to identify potential systemic deficiencies.
- 3) Research different roadway and intersection treatments that might address the underlying circumstances of crashes at the study locations . This will include the following resources:
  - Highway Safety Manual
  - WSDOT strategic Highway Safety Plan
  - Crash Modification Factor (CMF) Clearinghouse
- 4) Identify potential countermeasure options for each identified location
- 5) Evaluate the potential effectiveness of countermeasures for each study location . This is expected to involve interaction with the Complete Street and/or ADA Transition Plan work
- 6) Overlay demographic information and improvement locations to perform equity analysis of potential projects. This helps ensure that the safety improvements are allocated equitably across the community

- 7) Present and discuss results with City staff

## Task 6 Finalize Countermeasure Selection and Perform Improvement Prioritization

- 1) Based on feedback from the Action Plan Committee and public meeting, finalize countermeasure selections for each location
- 2) Develop prioritization of safety improvements. Criteria for this effort may include:
  - Locations of risks on a citywide basis
  - Risk types
  - Availability of low-cost countermeasures that are likely to be effective in addressing underlying risk factors
  - Relative project cost and implementation feasibility
  - Stakeholder feedback
  - Potential for coordination with other planned or potential projects
  - Other factors as identified
- 3) Create draft project prioritization list and discuss with City staff
- 4) Finalize project prioritization
- 5) Prepare planning level cost estimates for each identified countermeasure. It is assumed that up to twelve (12) cost estimates will be prepared

## Task 7 Prepare Draft and Final Safety Action Plan

- 1) Prepare outline of the Safety Action Plan
- 2) Create figures and tables for inclusion in the Safety Action Plan
- 3) Prepare draft report that meets the qualifications of a Local Road Safety Plan and submit to City and WSDOT for review
- 4) Prepare draft of full Safety Action Plan report, including identification of how the plan qualifies as a Local Road Safety Plan under state requirements, and provide to City and WSDOT for review
- 5) Incorporate comments and prepare final Safety Action Plan

### *Deliverables:*

- Public Meeting Materials
- Public and Action Plan Committee Meeting Summaries
- Draft Safety Action Plan
- Final Safety Action Plan

## Proposed Fee

The estimated fee for each phase of work is summarized in the table below:

<b>Budget Summary</b>	<b>Task Budget</b>
Phase 1: Project Management	\$13,223
Phase 2: Public Engagement Plan	\$1,730
Phase 3: Collect and Review Existing Data	\$15,881
Phase 4: Public Engagement	\$13,207
Phase 5: Identify and Evaluate Improvement Locations	\$18,429
Phase 6: Countermeasure and Prioritization Evaluation	\$16,622
Phase 7 – Draft and Final Safety Action Plan Report	\$19,316
Phase 99: Expenses	\$649
Management Reserve Fund	50,000
<b>Total Fee</b>	<b>\$149,056</b>

END OF PROPOSAL