

**Committee Members**

Councilmember Chris Moore  
Councilmember John Williams  
City Administrator Scott Larson  
City Clerk Kim Agfalvi  
Executive Asst. Danielle Charchenko  
Public Works Director Marshall Maurer  
PW Admin Asst. Laura Hinds  
Finance Director Gretchen Russo  
Capital Projects Manager John Bielka  
Building Official Tim Lincoln  
Records Organizer Alison Williams  
Engineer JC Hungerford

City of Orting Public Works Committee  
**AGENDA**



Wednesday, September 6, 2023 – 2:30 p.m.  
Public Works Operations Facility, Conference Rm, 900 Rocky Rd NE

- Call Meeting to Order, Roll Call
- Approval of Minutes
- Public Comment & Presentations

**DEPARTMENT REPORTS**

**Est. Time      Action**

<p><b>1. ENGINEERING Updates– JC Hungerford</b>  <b>1.1</b> Kansas Street Reconstruction – Status report  <b>1.2</b> Whitehawk Blvd bypass – Status report  <b>1.3</b> WSDOT Fish Passage – Utility Crossing  <b>1.4</b> AC Watermain Design – Status report  <b>1.5</b> Village Green Outfall – Status report  <b>1.6</b> Kansas St Outfall – Status report  <b>1.7</b> CIPP Project – Status report</p>	Min 15	
<p><b>2. PROJECT MANAGEMENT – John Bielka</b>  <b>2.1</b> Well Updates  <b>2.2</b> Grant Updates  <b>2.3</b> Kansas St Stormwater Outfall status</p> <p><b>NEW BUSINESS</b>  <b>2.4 SCADA Upgrade Proposals</b>            2.4.1 AB-XX SCADA &amp; PLC Upgrade by TSI            2.4.2 Due Diligence and Assessment Report TSI  <b>2.5</b> WRRF RFQ Proposal  <b>2.6</b> I&amp;I Sewer Relining Update  <b>2.7</b> Site Security @ Sources Update  <b>2.8</b> Draft Items for Budget CIP  <b>2.9</b> Water System Plan  <b>2.10 Complete Street Policy</b>            2.11.1 AB-XX Complete Street Policy &amp; Ordinance</p>	Min 20	

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<b>3. ADMINISTRATION – Scott Larson</b> <b>3.1 Pavement Management Funding</b> 3.1.1 Pavement Maintenance Plan <b>3.2 ADA Transportation Plan Funding</b> 3.2.1 AB-XX TBD & ADA Funding 3.2.2 TBD & ADA Transition Funding Memo 3.2.3 ADA Program Access Plan Draft 2023-0719 <b>3.3 Legislative Priorities</b> <b>3.4 SEPA Amendment</b> 3.4.1 AB-XX SEPA Exemption 3.4.2 Staff Memo – SEPA Update	Min 15	
<b>4. PUBLIC WORKS – Daskam</b> <b>4.1</b> 2023 Sidewalk Project Bid Results <b>4.2</b> Majestic View Estates Sewer <b>4.3</b> Lead pipe survey status	Min 10	
<b>5. FINANCE – Gretchen Russo</b> <b>5.1 2023 Budget Amendment</b> 5.1.1 AB-XX Budget Amendment 5.1.2 Wage Plan 5.1.3 Budget Amendment Ordinance <b>5.2 2024 Budget Update</b>	Min 10	
<b>6. COUNCIL – CM Williams &amp; CM Moore</b>	Min	

REQUEST FOR NEW BUSINESS

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ROUND TABLE

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MEETING SUMMARY

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**City of Orting  
Council Agenda Summary Sheet**

<b>Subject: Resolution No. XXXX-XX, SCADA Upgrade by TSI</b>		<b>Committee</b>	<b>Study Session</b>	<b>Council</b>							
	<b>Agenda Item #:</b> Axx-xx										
	<b>For Agenda of:</b>	xx.xx.2023	xx.xx.2023	xx.xx.2023							
	<b>Department:</b>	Public Works									
<b>Date Submitted:</b>	xx.xx.2023										
<b>Cost of Item:</b>	<u>\$49,200</u>										
<b>Amount Budgeted + design contingency:</b>											
<b>Unexpended Balance:</b>	N/A										
<b>Bars #:</b>	N/A										
<b>Timeline:</b>	N/A										
<b>Submitted By:</b>	John Bielka										
<b>Fiscal Note:</b>											
<b>Attachments:</b> TSI Due Diligence and Assessment Report											
<b>SUMMARY STATEMENT:</b>											
<p>The objective of this Agenda Bill is to focus on updating and enhancing the SCADA system responsible for managing the water and wastewater facilities. The upgrade involves migrating from the current Wonderware InTouch Version to the latest Aveva InTouch iteration to ensure optimized performance, enhanced security, and future scalability.</p>											
<table> <tr> <td>SCADA System Upgrade:</td> <td align="right">\$24,400.00</td> </tr> <tr> <td>SCADA training (40 hours onsite)</td> <td align="right">\$9,800.00</td> </tr> <tr> <td>T&amp;M Budget for system cleanup and requested changes:</td> <td align="right"><u>\$15,000.00</u></td> </tr> <tr> <td><b>Total Budgetary Price:</b></td> <td align="right"><b>\$49,200.00</b></td> </tr> </table>				SCADA System Upgrade:	\$24,400.00	SCADA training (40 hours onsite)	\$9,800.00	T&M Budget for system cleanup and requested changes:	<u>\$15,000.00</u>	<b>Total Budgetary Price:</b>	<b>\$49,200.00</b>
SCADA System Upgrade:	\$24,400.00										
SCADA training (40 hours onsite)	\$9,800.00										
T&M Budget for system cleanup and requested changes:	<u>\$15,000.00</u>										
<b>Total Budgetary Price:</b>	<b>\$49,200.00</b>										
<b>RECOMMENDED MOTION: <u>Motion:</u></b>											
<p>To approve Resolution No. XXXX-XX, of the City of Orting, Washington, relating to the upgrade of SCADA system</p>											

# City of Orting

## PLC and SCADA System

### Due Diligence and Assessment Report



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## Summary

The purpose of this document is to have a complete list of the PLC and SCADA system for the City of Orting. Below will be a list of all the sites and recommendations.

All budgetary pricing is based on TSIs understanding of the current system.

## Areas of concern

### Automation Hardware

The City's existing automation hardware is a mix of modern products and a majority of discontinued equipment. Several locations are utilizing Allen Bradley MicroLogix 1000, MicroLogix 1100, MicroLogix 1500 and SLC PLCs. These PLC products are discontinued and are no longer supported. Replacement components are available only through surplus suppliers as used inventory.

### SCADA Software and Hardware

The current SCADA system is installed on Windows 7 computers which is no longer supported by Microsoft. This leaves your system open to cybersecurity threats and viruses.

### Radio Communication

The existing telemetry system utilizes 450 MHz licensed, 900 MHz spread spectrum and leased line communication. This is all serial-based communication and the radio paths or phone lines travel between multiple sites before reaching the SCADA system. This introduces numerous single points of failure throughout the system. If one site goes down due to hardware issues, you lose access to multiple other sites until it is repaired.

## Proposed Standard PLC Components

To standardize the PLC components being used throughout the system, TSI recommends that the city uses the Allen Bradley CompactLogix 5069 series PLC. This is the most up to date PLC for the size of the city facilities and will be supported by Allen Bradley for many years to come.

- CompactLogix 5380 Controller sized based on the site.
- 5069-Serial for any legacy serial communication.
- 5069-IA16 for 120 VAC Digital Inputs.
- 5069-IB16 for 24 VDC Digital Inputs.
- 5069-OW16 for all Digital Outputs.
- 5069-IF8 for Analog Inputs.
- 5069-OF8 for Analog Outputs.

In the pricing below, TSI includes 2 options for each site. The first will be to go with a MicroLogix 1400 replacement and the second will be to convert over to the newer version. The MicroLogix 1400 is currently Active Mature which means it will be supported in the immediate future but will eventually be discontinued.

## Site by site upgrade recommendations

The following recommendations are provided for each site based on the previously discussed upgrade objectives:

- Improve reliability.
- Replace obsolete hardware.
- Standardize equipment.

Part of the recommendation is what the current lifecycle status of each PLC is. Below is a list of what these are called and their meaning.

- Active: Most current offering within a product category.
- Active Mature: Product is fully supported, but a newer product or family exists. Gain value by migrating.
- End of Life: Discontinued date announced - actively execute migrations and last time buys. Products are generally orderable until the discontinued date.
- Discontinued: New product no longer manufactured or procured. Repair/exchange services may be available.

## SCADA

### Aveva (Wonderware)

The current system being used is Aveva System Platform 2014 R2SP1. The City of Orting is currently in support with Aveva so the software updates are free. TSI recommends that the version gets updated when doing the SCADA system update. Below is a list of the issues TSI found during the review.

### Licensing

- The licensing currently running on all four SCADA Computers is a Demo/Consignment license assigned to Parametrix. If nothing is changed, the system will stop working when this temporary development license expires on 12/6/23. During the SCADA upgrade, each computer will need to have the correct license installed on it to eliminate the expiration date.
- The licenses currently owned by the city don't quite line up with what software installed. Specifically, the InTouch 60k with IO license may need to be migrated to a Supervisory Client / InTouch for System Platform license and a separate OI server license. TSI will work with the AVEVA vendor to get the correct licenses in place.

### Minor issues

- Some of the buttons and buttons seem to have been abandoned in place. TSI recommends that these get cleaned up and deleted during the upgrade process.
- Some of the functionality only works on 1 workstation due to files being saved locally instead of the server. TSI recommends these files get stored on the server and shared to all workstations.
- The objects in the database use very old base templates (pre 2014 R2) that use field attributes and have excessive scripting in place instead of using the built in features available for IO device mapping. TSI recommends these be migrated or replaced to clean up the database, improve performance and simplify the system.
- During the TSI review, it was mentioned that the operators do not have the ability to shelve alarms. TSI recommends this ability be added to the system. This will allow operators to shelve alarms for up to 24 hours to allow for replacement time and mitigate overnight calls.



### Alarm and Event History

- The alarm and event history were frozen during our review. The reason is that the installed version of SQL (SQL Server Express) has a size limit for files. The alarm and even database exceeded that limit, mostly because there is 6+ events being logged every second that have to do with system time at one of the sites. TSI recommends these to be deleted and to set the size limit on the file size.

### Alarm Notification (WIN-911)

The current alarm notification software is WIN-911 v7.

- WIN-911 is currently using an old TAPI modem that is not compatible with modern operating systems. This will need to be replaced during the upgrade process.
- WIN-911 v7 is no longer patched or updated. TSI recommends it be migrated to the latest version. The current license is in support so will be upgraded at no software cost.

### SCADA Room Network

The current setup in the SCADA room consists of 3 managed network switches, 1 firewall and 1 router. TSI recommends that at least 1 network switch be removed and the remaining equipment be installed in a wall mount network rack.

### SCADA recommendations and budgetary cost

TSI recommends that the SCADA system be updated per the previously sent quote. This quote was under the assumption that the system would be converted directly over with no changes. After reviewing the system, TSI recommends adding a T&M budget to address any issues that are outside of scope or operator requests during the conversion process.

- SCADA System Upgrade
  - \$24,400.00
- Adder for SCADA training (40 hours onsite)
  - \$9,800.00
- T&M Budget for system cleanup and requested changes.
  - \$15,000.00
- **Total Budgetary Price: \$49,200.00**

### WWTP PLC System

#### Lab RTU Control Panel

#### Current PLC Type:

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: 1763-L16BWA
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued
- OIT: N/A

#### Status and recommendation

- The Lab RTU PLC is the current hub for numerous communication paths to the SCADA system. The control panel also has numerous cables not secured within the cabinet. TSI recommends that the control panel be cleaned up to mitigate issues with wires potentially falling out.

## Due Diligence and Assessment Report

- The Lab RTU PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement. TSI recommends that this PLC be replaced.

MicroLogix 1400 Budgetary Price: \$10,000.00

CompactLogix Budgetary Price: \$21,000.00

### Equalization Basin Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley SLC 5/05
- PLC Part Number: 1747-L553
- IP Address: [REDACTED]
- Product Lifecycle Status: End of life March 31, 2024
- OIT: EXOR EL-25T-0045 – Not functioning.

#### Status and Recommendations:

- The EB PLC has the controls for the Equalization Basin as well as the remainder of the Telemetry site data. The current PLC type has reached the end of life and will be discontinued in March of 2024. While still available for purchase from Allen Bradley, the cost is 3 times the equivalent PLC part.
- An OIT is currently installed but not functioning. TSI recommends that this OIT is abandoned and covered if the operators do not use it.
- This PLC is currently at its maximum memory capacity and will need to be replaced. TSI recommends this PLC be replaced with a new style of PLC.

CompactLogix Budgetary Price: \$55,000.00

### SBR Control Panel

#### Current PLC Type

- PLC Processor Family: Automation Direct D4
- PLC Part Number: D4-450 CPU
- IP Address: N/A
- Product Lifecycle Status: Discontinued
- OIT: EXOR CP04F-04-0045

#### Status and Recommendations:

- The Automation Direct PLC is out of date and no longer supported. Utilizing an Automation Direct PLC while the remainder of the system is Allen Bradley creates an extra amount of complexity in the system.
- The OIT is currently functional but TSI was informed it was not being used. Switching to a new PLC will require this screen to be reprogrammed or replaced if the city would like it usable.
- TSI recommends this PLC be replaced with a new style of PLC.

CompactLogix Budgetary Price: \$100,000.00

## Radio System

The existing telemetry system utilizes 450 MHz licensed, 900 MHz spread spectrum and leased line communication. TSI recommends that the radio system is upgraded to a more up to date version to help with communication issues. There are two options available to the city.

### Option 1 – Convert to Ethernet Radios

This option will require replacing all the PLCs that are not Ethernet capable with a newer PLC and replacing all the existing radios and leased line modems. The communication paths will remain the same but the system will communicate via Ethernet instead of Serial.

#### *Pros*

- The system will utilize all the existing communication paths.
- There are no additional monthly costs.

#### *Cons*

- The radio system will continue to have multiple single points of failure.
- Physical obstacles will continue to be an issue such as trees or new buildings.
- Ethernet radios are more expensive than cellular radios.

Option 1 Budgetary Price: \$71,000.00

### Option 2 – Convert to Cellular Radios

This option will require replacing all the PLCs that are not Ethernet capable with a newer PLC and replacing all the existing radios and leased line modems. The system will then utilize a wireless carrier for all communications.

#### *Pros*

- The system will no longer be reliant on the existing communications path. Every PLC will communicate directly with the SCADA server to eliminate complexity of the system.
- If any issues arise, a programmer can reach any site remotely without driving to the site, reducing service call costs.
- System operation delays are significantly decreased.

#### *Cons*

- A monthly cost will be incurred by the city. The average for this has been roughly \$25 per site.

Option 2 Budgetary Price: \$58,000.00

## Telemetry Site PLC System

### Carbon River Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1500
- PLC Part Number: 1764-28BXB
- IP Address: N/A
- Product Lifecycle Status: Discontinued
- OIT: N/A

#### Status and Recommendations:

- The Carbon River PLC utilizes a MicroLogix 1500 PLC. These are no longer available and do not support ethernet communication.
- TSI recommends this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$11,000.00

CompactLogix Budgetary Price: \$21,000.00

#### Harmon Reservoir – CL2 Building Control Panel

##### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: 1763-L16BWA
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued
- OIT: N/A

##### Status and Recommendations:

- The Harmon Reservoir CL2 PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement.
- TSI recommends that this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$10,000.00

CompactLogix Budgetary Price: \$21,000.00

#### Harmon Reservoir – Well Pump Control Panel

##### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: 1763-L16BWA
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued
- OIT: N/A

##### Status and Recommendations:

- The Harmon Reservoir Pump PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement.
- TSI recommends that this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$10,000.00

CompactLogix Budgetary Price: \$21,000.00

#### Puyallup River Lift Station Control Panel

##### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1400
- PLC Part Number: 1763-L32BXB
- IP Address: [REDACTED]
- Product Lifecycle Status: Active Mature
- OIT: N/A

##### Status and Recommendations:

## Due Diligence and Assessment Report

- The current PLC at Puyallup River Lift Station is a MicroLogix 1400 which is set at Active Mature according to Allen Bradley. This indicates that this PLC will remain available as a replacement in the immediate future.
- TSI recommends that this PLC is not required to be replaced. Below is a price to bring the PLC up to the newest version.

CompactLogix Budgetary Price: \$27,000.00

### Rainier Meadows Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1400
- PLC Part Number: 1766-L32BXB
- IP Address: [REDACTED]
- Product Lifecycle Status: Active Mature
- OIT: N/A

#### Status and Recommendations:

- The current PLC at Rainier Meadows is a MicroLogix 1400 which is set at Active Mature according to Allen Bradley. This indicates that this PLC will remain available as a replacement in the immediate future.
- TSI recommends that this PLC is not required to be replaced. Below is a price to bring the PLC up to the newest version.

CompactLogix Budgetary Price: \$26,000.00

### Soldiers Home Control Panel

#### Current PLC Type

- PLC Processor Family: N/A
- PLC Part Number: N/A
- IP Address: N/A
- Product Lifecycle Status: N/A
- OIT: N/A

#### Recommendations:

- Soldiers Home is a remote IO system communicating with Well 1. There are no recommended changes currently.

### Village Green Lift Station Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: 1763-L16BWA
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued
- OIT: N/A

#### Status and Recommendations:

- The Village Green Lift Station PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement.

## Due Diligence and Assessment Report

- TSI recommends that this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$10,000.00

CompactLogix Budgetary Price: \$21,000.00

### Village Green Storm Pump Station Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: 1763-L16BWA
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued
- OIT: N/A

#### Status and Recommendations:

- The Village Green Storm Pump Station PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement.
- TSI recommends that this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$10,000.00

CompactLogix Budgetary Price: \$21,000.00

### Well 1 Filter Building Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley SLC 5/03
- PLC Part Number: 1747-L533
- IP Address: N/A
- Product Lifecycle Status: End of life March 21, 2024
- OIT: Allen Bradley Panelview Plus 10"

#### Status and Recommendations:

- The Well 1 Filter Building PLC has reached the end of life and will be discontinued in March of 2024. While still available for purchase from Allen Bradley, the cost is 3 times the equivalent PLC part.
- The OIT is using a legacy communication style that is no longer available to use. TSI recommends replacing it with a newer version and convert the application.
- This PLC has more IO than a MicroLogix System can operate. TSI recommends this PLC be replaced with a new style of PLC.

CompactLogix Budgetary Price: \$35,000.00

### Well 1 Fire Flow Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1000
- PLC Part Number: Bul 1761 MicroLogix 1000 DH-485
- IP Address: N/A
- Product Lifecycle Status: Discontinued
- OIT: Allen Bradley DTAM

Status and Recommendations:

- The Well 1 Fire Flow PLC uses a MicroLogix 1000 which has been discontinued for 10+ years.
- The OIT is a DTAM series which has been discontinued for 10+ years.
- TSI recommends that the PLC and OIT be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$14,000.00

CompactLogix Budgetary Price: \$27,000.00

Well 1 Pump Control Panel

Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1400
- PLC Part Number: 1766-L32AWAA
- IP Address: N/A
- Product Lifecycle Status: Active Mature
- OIT: N/A

Status and Recommendations:

- The current PLC in the Well 1 Pump Panel is a MicroLogix 1400 which is set at Active Mature according to Allen Bradley. This indicates that this PLC will remain available as a replacement in the immediate future.
- TSI recommends that this PLC is not required to be replaced. Below is a price to bring the PLC up to the newest version.

CompactLogix Budgetary Price: \$25,000.00

Well 1 Telemetry Control Panel

Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: Bul 1763 MicroLogix 1100
- IP Address: N/A
- Product Lifecycle Status: Discontinued
- OIT: N/A

Status and Recommendations:

- The Well 1 Telemetry PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement.
- TSI recommends that this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$11,000.00

CompactLogix Budgetary Price: \$21,000.00

Well 3 Control Panel

Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1500
- PLC Part Number: 1764-24AWA
- IP Address: N/A
- Product Lifecycle Status: Discontinued

## Due Diligence and Assessment Report

- OIT: Panelview Plus 700 (No configuration present)

### Status and Recommendations:

- The Well 3 PLC utilizes a MicroLogix 1500 PLC. These are no longer available and do not support ethernet communication. This system includes a Devicenet link over to a Remote IO Panel in the Filter room.
- The OIT has no configuration preset within it. TSI recommends if this is not required to abandon the OIT and cover it if the operators do not use it.
- TSI recommends this PLC be replaced with a new style of PLC and the Remote IO be converted over to an ethernet system.

MicroLogix 1400 Budgetary Price: \$27,000.00

CompactLogix Budgetary Price: \$36,000.00

### Well 4 Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley CompactLogix L3
- PLC Part Number: 1769-L35E
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued

### Status and Recommendations:

- The CompactLogix PLC at Well 4 is currently utilizing Ethernet but is a discontinued model. The 1769-L35E has been replaced with the 1769-L36ERM. This utilizes the same IO cards as the previous model.
- TSI recommends that the Processor is replaced with a newer model. The basic price below is for changing the processor only. The CompactLogix price is for converting over to the newer version which will require replacing all the IO cards.

Basic CompactLogix Budgetary Price: \$16,000.00

CompactLogix Budgetary Price: \$45,000.00

### Wingate – CL2 Control Panel

#### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: 1763-L16BWA
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued
- OIT: N/A

### Status and Recommendations:

- The Wingate CL2 PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement.
- TSI recommends that this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$10,000.00

CompactLogix Budgetary Price: \$21,000.00



## Wingate – Pump Control Panel

### Current PLC Type

- PLC Processor Family: Allen Bradley MicroLogix 1100
- PLC Part Number: 1763-L16BWA
- IP Address: [REDACTED]
- Product Lifecycle Status: Discontinued
- OIT: N/A

### Status and Recommendations:

- The Wingate Pump PLC has ethernet capabilities but is no longer available from Allen Bradley. This PLC will work in the interim but if it fails, the city will need to go to a used parts warehouse for replacement.
- TSI recommends that this PLC be replaced with a new style of PLC.

MicroLogix 1400 Budgetary Price: \$10,000.00

CompactLogix Budgetary Price: \$22,000.00

## Overall Budgetary Prices

### Year 1 – SCADA System Upgrade

- SCADA System Upgrade
  - \$24,400.00
- Adder for SCADA training (40 hours onsite)
  - \$9,800.00
- T&M Budget for system cleanup and operator requested changes.
  - \$15,000.00

### Year 2 – Telemetry Upgrade

- Radio System Upgrade Option 1 – Ethernet Radios
  - \$71,000.00
- Radio System Upgrade Option 2 – Cell Radios
  - \$62,000.00
- MicroLogix Based PLC Upgrade Option 1
  - \$139,000.00
- CompactLogix Based PLC Upgrade Option 2
  - \$390,000.00

### Year 3 – WWTP Upgrade

- CompactLogix Based PLC Upgrade
  - \$172,000.00



**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: Complete Streets Ordinance</b>	<b>AB23-XX</b>	<b>PW</b>		
		<b>9.6.23</b>		
	<b>Department:</b>	Public Works		
	<b>Date Submitted:</b>	August 24, 2023		
<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>	None			
<b>Submitted By:</b>	John Bielka			
<b>Fiscal Note:</b> None				
<b>Attachments:</b> Ordinance No. 2023-XX				
<b>SUMMARY STATEMENT:</b>				
<p>The state legislature passed the Complete Streets Act in 2011 (codified in RCW 47.04.320-.340), encouraging local governments to adopt their own complete streets ordinances that would provide safe access to all “including bicyclists, pedestrians, motorists, and public transportation users.”</p> <p>Over the past couple of years we have found granting agencies, especially the Transportation Improvement Board regularly ask about our cities “Complete Streets” policy, and encourage agencies to adopt a policy as they receive credit on funding applications for having the same.</p> <p>Staff have drafted a Complete Streets Ordinance modeled on other cities in the state, to be codified in our Public Ways and Property title. Most of the elements of the Ordinance are already incorporated into street design activities that the city conducts, and this ordinance codifies our current practice.</p>				
<b>RECOMMENDED ACTION:</b> Move to Study Session on September 20, 2023.				
<b>FUTURE MOTION:</b> Motion to adopt Ordinance No. 2023-XXXX, an Ordinance of the City of Orting, Washington, adding 8-10, complete streets program, to the City of Orting municipal code Title 8, Public Ways and Property, thereby encouraging walking, biking, and transit use along with the safe operation of cars and trucks; providing for severability; and establishing an effective date.				

**CITY OF ORTING  
WASHINGTON  
ORDINANCE NO. 2023-XXXX**

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**AN ORDINANCE OF THE CITY OF ORTING,  
WASHINGTON, ADOPTING NEW CHAPTER 8-10 OF THE  
ORTING MUNICIPAL CODE, COMPLETE STREETS  
PROGRAM, TO THE CITY OF ORTING MUNICIPAL  
CODE TITLE 8, PUBLIC WAYS AND PROPERTY,  
THEREBY ENCOURAGING WALKING, BIKING, AND  
TRANSIT USE ALONG WITH THE SAFE OPERATION OF  
CARS AND TRUCKS; PROVIDING FOR SEVERABILITY;  
AND ESTABLISHING AN EFFECTIVE DATE**

---

**WHEREAS**, the term "Complete Streets" describes a comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel for all users, including pedestrians, bicyclists, motor vehicle drivers, transit users, emergency service providers and freight, and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities; and

**WHEREAS**, more than 110,000 pedestrians and bicyclists are injured each year on roads in the United States with children and older adults at greatest risk and disproportionately affected; and

**WHEREAS**, the occurrence and severity of pedestrian and bicyclists injuries could readily be decreased by implementing Complete Streets practices; and

**WHEREAS**, the one-third of Americans that do not drive, disproportionately presented by older adults, low-income people, people with disabilities, and children would greatly benefit from the equitable distribution of safe, alternative means of travel that will result from Complete Streets practices; and

**WHEREAS**, the City of Orting wants to create convenient, enjoyable, and safe streets to improve walking and bicycling while connecting the neighborhoods and key destinations; and

**WHEREAS**, the Orting City Council intends to improve the safety of city streets, enhance the quality of life of residents, encourage active living, and reduce traffic congestion and fossil fuel use by providing safe, convenient, and comfortable routes for walking, bicycling, and public transportation.

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

**Section 1. OMC Chapter 8-10, Added.** A new chapter entitled “8-10 Complete Streets Program” is hereby added to the Orting Municipal Code to read as follows:

## **Chapter 8-10**

### **COMPLETE STREETS PROGRAM**

#### **8-10-1 Purpose and Vision**

#### **8-10-2 Definitions**

#### **8-10-3 Exceptions**

#### **8-10-4 Complete Streets Infrastructure**

#### **8-10-5 Goals to Foster Partnerships**

#### **8-10-6 Best Practices Criteria**

8-10-1 Purpose and Vision.

The City of Orting shall, to the extent practical, scope, plan, design, construct, operate and maintain appropriate facilities for the safe accommodation of pedestrians, bicyclists, transit users, motorists, emergency responders, freight and users of all ages and abilities in all new construction, retrofit or reconstruction projects. Through ongoing operations and maintenance, the City of Orting shall identify cost effective opportunities to include Complete Streets practices.

8-10-2 Definitions.

"Complete Street" means a road that is designed to be safe for drivers, bicyclists, transit vehicles and riders, and pedestrians of all ages and abilities.

"Street Project" means the construction, reconstruction, retrofit, maintenance, alteration, or repair of any street, and includes the planning, design, approval, and implementation processes.

"Users" means individuals or vehicles that use streets, including pedestrians, bicyclists, freight, automobiles, public transportation vehicles and riders, and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

"Complete Streets Infrastructure" means design features that contribute to a safe, convenient, or comfortable travel experience for users, including but not limited to features such as: sidewalks; shared use paths; bicycle lanes; automobile lanes; paved shoulders; street trees and landscaping; planting strips; curbs; accessible curb ramps; bulb outs; crosswalks; refuge islands; pedestrian and traffic signals, including countdown and accessible signals; signage; street furniture; bicycle parking facilities; public transportation stops and facilities; traffic

calming devices such as rotary circles, traffic humps, and surface treatments such as paving blocks, textured asphalt, and concrete, narrow vehicle lanes; and raised medians.

#### 8-10-3 Exceptions.

Facilities for pedestrians, bicyclists, transit users and/ or people of all abilities are not required to be provided under the following circumstances:

- A. When elements of this policy would require the accommodation of street uses prohibited by law;
- B. For routine maintenance activities such as mowing, snowplowing, sweeping, spot repair, joint or crack sealing, or pothole filing;
- C. Paving projects which involve widening pavement may exclude elements of this policy when the accommodation of a specific use is expected to require more space than is physically available, located where both current and future demand is proven absent or drastically increase project costs and equivalent alternatives exists within close proximity;
- D. Adverse impacts on environmental resources such as streams, wetlands, floodplains, or on historic structures or sites above and beyond the impacts of currently existing infrastructure;
- E. Cost would be disproportionate to the current need or probable future use;
- F. Development of sidewalks in areas falling outside those identified as appropriate for sidewalks on the basis of an adopted sidewalk policy;
- G. In instances where a documented exception is granted by the City Engineer.

#### 8-10-4 Complete Streets Infrastructure.

As feasible, Orting shall incorporate "Complete Streets Infrastructure" into existing public streets to create a comprehensive, integrated, connected transportation network for Orting that balances access, mobility, health and safety needs of pedestrians (American with Disabilities Act and Title VI compliance), bicyclists, transit users, motorists, emergency responders, freight and users of all ages and abilities, ensuring a fully connected, integrated network that provides transportation options.

#### 8-10-5 Goals to Foster Partnerships.

It is a goal of the City of Orting to foster partnerships with all Washington State transportation funding agencies including the Washington State Department of Transportation (WSDOT), the Transportation Improvement Board (TIB), the Federal Highway Administration, Pierce County, Orting School District, citizens, businesses, interested groups, neighborhoods, and any funding agency assisting in the City's implementation of the Complete Streets ordinance.

#### 8-10-6 Best Practice Criteria.

The City Council or designee shall modify, develop and adopt policies, design criteria, standards and guidelines based upon recognized best practices in street design, construction,

and operations including but not limited to the latest relevant editions of the America Association of State Highway Transportation Officials (AASHTO) and the Institute of Transportation Engineers (ITE) manuals while reflecting the context and character of the surrounding built and natural environments and enhance the appearance of such.

**Section 2. Severability.** If any section, sentence, clause or phrase of this Ordinance shall be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase.

**Section 3. Corrections.** The City Clerk and the codifiers of this Ordinance are authorized to make necessary clerical corrections to this resolution including, but not limited to, the correction of scrivener's errors, references, numbering, section/subsection numbers and any references thereto.

**Section 4. Codification.** The City Council authorizes the City Clerk to correct any non-substantive errors herein, codify the above, and publish the amended code.

**Section 5. 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 \_\_\_\_\_ DAY OF \_\_\_\_\_, 2023.**

CITY OF ORTING

\_\_\_\_\_  
Joshua Penner, Mayor

ATTEST/AUTHENTICATED:

\_\_\_\_\_  
Kim Agfalvi, City Clerk, CMC

Approved as to form:

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

Filed with the City Clerk:  
Passed by the City Council:  
Date of Publication:  
Effective Date:

# 2023 Pavement Management System (PMS)



**ORTIG**  
*Washington*

June 2023



**SCJ ALLIANCE**  
CONSULTING SERVICES

# 2023 Pavement Management System

## Project Information

Project: 2023 Pavement Management System (PMS)

Prepared for: City of Orting  
P.O. Box 489  
Orting, WA 98360  
Contact Name: John Bielka  
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**Project Reference:** SCJ #21-000838, Phase 05, Task 01

Path: <N:\Projects\4270 City of Orting\21-000838 Orting 2021-24 On-Call PE Services\Phase 05 - Pavement Management\05.01 2022 Street Condition Assessment\Reports>



## PROJECT ENGINEER'S CERTIFICATION

I hereby certify that this Pavement Management System for the City of Orting has been prepared by me or under my supervision and meets the minimum standards of the City of Orting and normal standards of engineering practice.



06-08-2023

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Lisa M. Reid, PE, PMP  
[Lisa.Reid@scialliance.com](mailto:Lisa.Reid@scialliance.com)  
206.739.5454



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- Appendix A. 2022 Pavement Condition Assessment Report
- Appendix B. References
- Appendix C. Preservation Treatment Unit Costs
- Appendix D. Program Costs



# 1. EXECUTIVE SUMMARY

The City of Orting believes in the importance of well-maintained public infrastructure and wants to ensure that the public traveling throughout the City continue to have safe and well-maintained roads to navigate. This pavement maintenance program will be developed and adopted to maximize the efficiency and value of maintaining the city’s largest and most valuable form of infrastructure, its roadways.

# 2. INTRODUCTION

## 2.1 ORTING’S PAVEMENT INFRASTRUCTURE

The City of Orting is in Pierce County, Washington and encompasses an area of approximately 1,730 acres. The City of Orting is responsible for maintaining approximately 62 lane-miles of roadways consisting of asphalt concrete pavement (ACP), Portland cement concrete (PCC) and gravel roadways. This infrastructure was assessed and rated in conjunction with this program in 2022, and is shown in Appendix A.

## 2.2 INTRODUCTION TO PAVEMENT MANAGEMENT SYSTEM

This report summarizes the City of Orting’s Pavement Management System (PMS) and identifies a 6-year program of preservation and maintenance activities that will provide cost-effective approaches to maintain pavements in serviceable conditions. The purpose of the PMS is to maintain City, resident, and business operations without impacts resulting from degrading roadways. Early investment in a well-planned PMS has proven to be the most cost-effective solution for management of a system of roadways, especially as opposed to a program that simply waits for failures then repairs or reconstructs pavements to correct issues.

Actions that help to slow the rate of deterioration and delay major rehabilitation activities are considered preservation. Preservation impacts performance life, durability, lifecycle costs, construction, and materials use. Identifying and addressing specific deficiencies that contribute to overall deterioration can prolong or extend the life

Applying a pavement preservation treatment at the right time (when), on the right project (where), with quality materials and construction (how) is a critical investment strategy for optimizing infrastructure performance. The “when and where” component supports preservation by managing pavements proactively. Whole-life planning defines expectations for the long term and provides more stability to the cost of operation and maintenance. Identifying preservation strategies at the network level reduces the need for frequent or unplanned reconstruction. The “how” component promotes quality construction and materials practices, including treatment options that apply to flexible and rigid pavements. These practices contribute to improved pavement performance, providing smoother, safer roads and delaying the need for rehabilitation.

FHWA, Everyday Counts, EDC-4



of pavements or structures. It is important to apply the right treatment to the right pavement or structure at the right time.<sup>1</sup>

Pavement networks require significant, recurring investments to maintain, which only increases as pavement ages. Spending money earlier in a pavement's life cycle allows for a significant extension in the pavement's life at a much cheaper cost than if this maintenance work is delayed (see Figure 1 and Figure 2). This shows the importance of timely maintenance, rather than just waiting until roads reach a poor quality. This program's goal is to maintain and preserve the overall condition of their street network in a state of good repair rather than just reacting in a worst first manner. This will allow the roadway network to stay sustainable while using funds in the most effective manner possible.

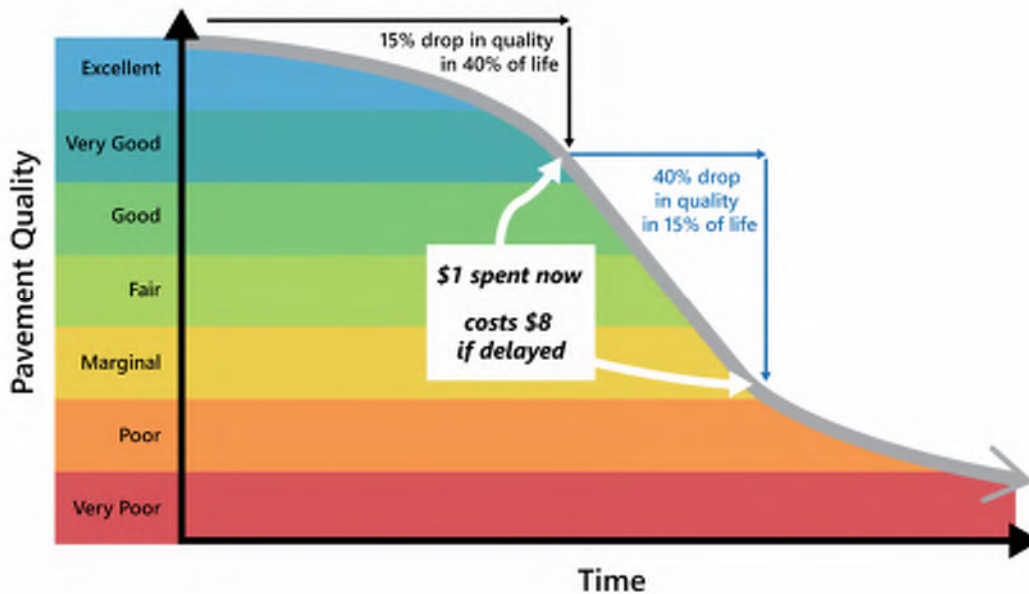


Figure 1. Pavement Degradation Curve (IMS, 2020)

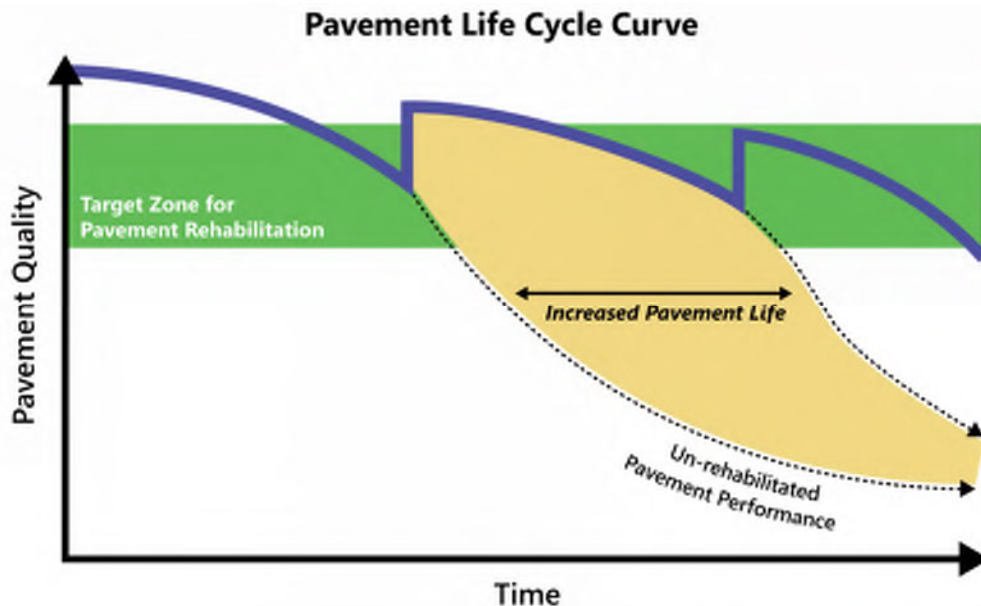


Figure 2. Pavement Rehabilitation Target Zone (IMS, 2020)



## 2.3 PRINCIPLES OF A PMS

The main priority of this PMS is to maximize the effectiveness of maintenance funds to preserve and maintain the City's pavement infrastructure. Often this will prioritize maintaining higher quality streets rather than reconstructing lower quality streets due to the difference in costs associated with different repair options. Arterials and collectors will generally have a higher importance than local access roads due to the repairs benefiting more people.

This program should coordinate with other street projects when possible. Other street projects provide an ideal time to address necessary maintenance due to the decreased mobilization costs as well as the decreased negative effects on residents (less road closures, less waste, fewer damage claims, etc.).

It is important to prioritize communication to the public with this program. Residents may see a good road being maintained and a poor road being seemingly ignored and feel the city is playing favorites. Communicating that the poor road is waiting on grants or other forms of outside funding, and that it is much cheaper to ensure good roads stay good than to make poor roads good again, may be necessary to ensure the program is not viewed negatively.

## 2.4 PAVEMENT PRESERVATION

Pavement preservation is defined as "a program employing a network level, long-term strategy that enhances pavement performance by using an integrated, cost-effective set of practices that extend pavement life, improve safety and meet motorist expectations". This PMS accomplishes these goals by assessing the quality of roads and then using the ratings to determine appropriate and timely treatments.

Pavement preservation programs commonly include multiple treatment activities and focus on the preventive maintenance level. Preventive maintenance is defined as "a planned strategy of cost-effective treatments to an existing roadway system and its appurtenances eliminate age-related, top-down surface cracking that develops in flexible pavements due to environmental exposure or to restore functionality of concrete pavements." This is generally the most effective use of funds, although some roads necessitate reconstruction or overlay as well (Geiger, 2005).

### 2.4.1 Distress Types

The following pavement distresses were used in the 2022 evaluation of pavement conditions throughout the City (see Appendix A). The bullets below describe what causes the distresses as well as typical preservation treatments that can address each distress condition.

- **Rutting** and wear is caused by repeated traffic loads along the same path and are characterized by surface depressions in the wheel path. Ruts due to only wear just need to be paved in. Ruts due to subgrade movement require rehabilitation that will improve the base materials such as in-place recycling or full depth reconstruction.
- **Alligator cracking** is caused by a loss of support from beneath the pavement. The methods to fix it rely on fixing the support beneath the pavement through an in-place recycle or full depth reconstruction.



- **Longitudinal, transverse, and block cracking** all have several causes but are present similarly on the surface. All can be crack sealed to prevent moisture from infiltrating the pavement. One method to fix the cracks is to mill and fill, although some may need full depth reconstruction.
- **Raveling and aging** occur when the aggregate or binder, respectively, wear away from the pavement. This can be fixed by microsurfacing, crack sealing, chip sealing, or milling and filling.
- **Flushing and bleeding** occur when excessive binder shows on the pavement surface. This can be fixed by applying sand to absorb the excess binder or a mill and fill.
- **Patching**, when in need of fixing, generally requires localized full depth reconstruction to ensure the same distresses do not reoccur.
- **Sags and humps** can occur due to settlement or frost heave, and it is important to determine which before repairing it. They can be repaired by mill and fill or in-place recycling, depending on the root cause of the issue.
- **Edge raveling** happens often near gravel driveways, and it can temporarily be fixed by surface edge patching. Edge potholes and lanes less than 10 feet can be fixed by full depth edge patches.

## 2.4.2 Pavement Treatment Types

There are many pavement treatments that can be used in a PMS. Common preservation and maintenance treatments are included below (all costs are in 2023 dollars):

Preservation treatments are used to maintain existing pavement assets and extend usable life. These treatments are typically low cost to implement, with \$12 per LF of 11' wide lane being repaired serving as a rough assumption of construction cost in general and \$2 per LF of 11' wide lane for crack sealing.

- Crack Seal
- Micro-surfacing
- Chip Seal
- Sand Application

Methods used in large scale maintenance activities or involved where pavement assets require preservation or rehabilitation. These treatments can trigger adjacent ADA improvement requirements depending on the scope of the treatment. Neglecting these potential ADA improvements, treatments in this category can be assumed to cost roughly \$45 per LF of 11' wide lane being replaced.

- Surface Patching
- Full-depth Patching
- Mill and Fill
- Overlay without Grinding/Fill

In some cases, the pavement asset is beyond maintenance and will require full depth replacement or repair. Note that full depth reconstruction could be the pavement or the pavement and subgrade. Reconstruction treatments can trigger adjacent ADA improvement requirements as well, and these costs need to be considered when implementing these treatment types. Ignoring ADA improvements, reconstruction may cost \$142 per LF of 11' wide lane being replaced.

- In-Place Recycling
- Full-Depth Reconstruction – Pavement Only
- Full-Depth Reconstruction – Pavement and Subgrade





## 3. PAVEMENT MANAGEMENT SYSTEM

### 3.1 INTRODUCTION

This Pavement Management System (PMS) includes all activities involved in maintaining the City's roadway including data, procedures, analysis, and a 6-Year Workplan. This Workplan is shown in Chapter 4 of this Program and shows a 6-year list of projects and includes both construction, and non-construction, activities. Updates to the Workplan are necessary bi-annually.

### 3.2 ELEMENTS OF A PMS

- 6-Year PMS Workplan Development (2024 to 2029)
  - Baseline Pavement Condition Assessment (2022)
  - Construction Activity Planning & Prioritization
    - Pavement Condition Overall Ratings
    - Prioritization of segments
    - Determining Preservation and Maintenance Treatments Needed
    - Costs to Repair
    - Annual Budget
    - Analysis of the System
    - 6-year Workplan
  - Non-Construction Activities
    - Inspection
    - Overall Rating by Section
    - Prioritization
    - Updating Treatments if Necessary
    - Updating Program Costs
    - Revising TIP as Needed
- Annual Workplan Implementation
  - Construction
    - Plan Sets and Engineering
    - Bidding
    - Coordination with Other Agencies
    - Construction Management
  - Non-Construction
    - Pavement Condition Assessment Updates
    - TIP Updates
    - PMS Updates
    - Administrative Updates
      - Funding Activities
      - GIS Updates



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## 4. 6-YEAR PMS WORKPLAN

### 4.1 BASELINE PAVEMENT CONDITION ASSESSMENT (2022)

The pavement condition assessment SCJ Alliance performed in 2022 rated roads based on visual inspection. This inspection led to overall ratings for each roadway, which were then used to develop this 6-year Workplan. Bi-annual updates to this system will be performed and reviewed to make sure there are no substantial condition changes that require reprioritization of which roadways to treat.

### 4.2 CONSTRUCTION ACTIVITY PLANNING & PRIORITIZATION

Prioritization strategies used in the report develop a targeted list of segments with current distresses and provides a snapshot status of the pavement network. From this, project planning is done to maximize the value of pavement maintenance operations given the condition of the City's infrastructure and to coordinate with nearby or currently planned improvement projects.

#### 4.2.1 Pavement Condition Overall Ratings

Pavement condition ratings were calculated using a formula that weighed distresses by their extent, severity, and level of impact to the condition of the roadway. The full assessment is included in Appendix A and the final roadway section ratings are shown in Figure 3 on the next page.

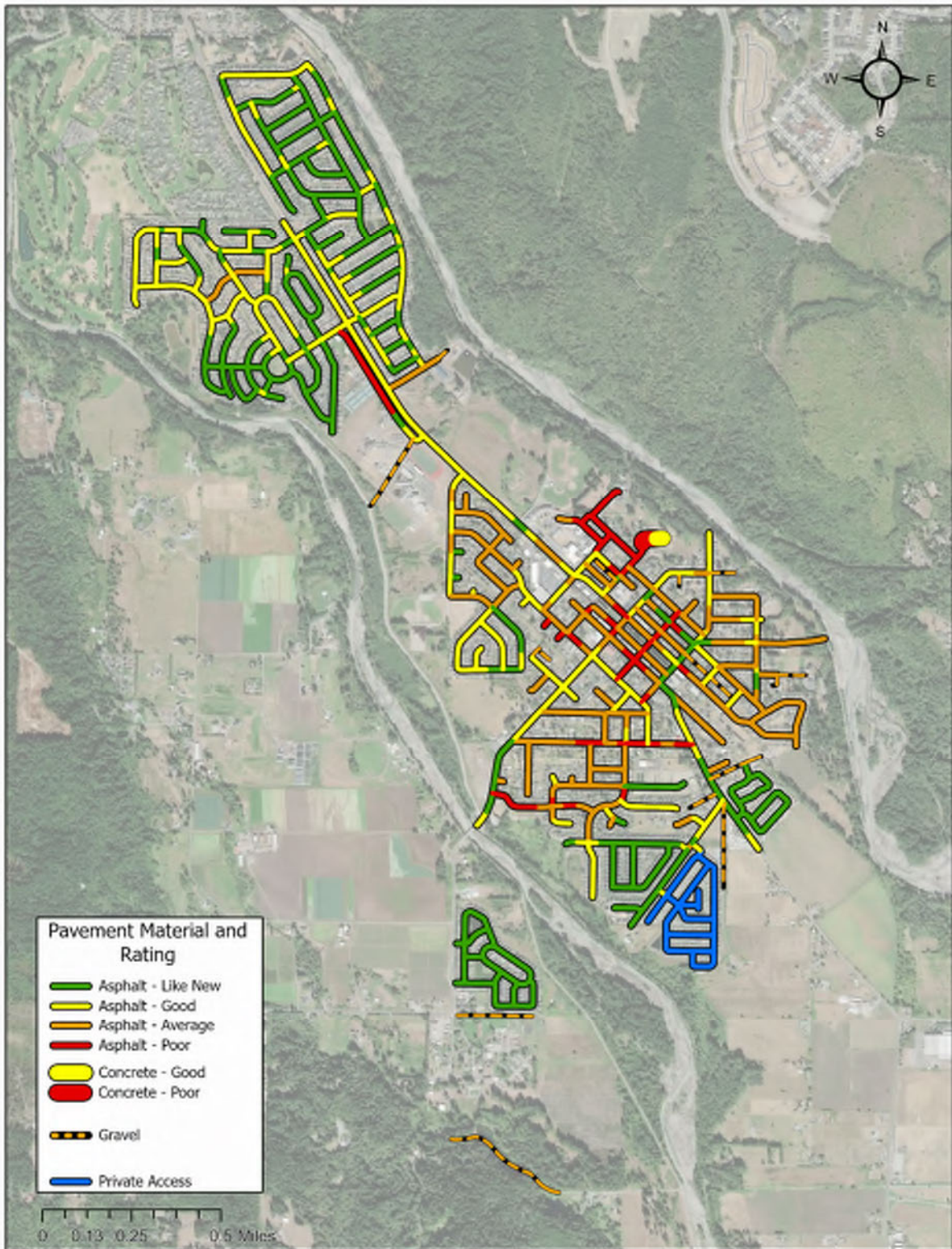


Figure 3. 2022 Pavement Condition Overall Ratings



## 4.2.2 Prioritization of Segments

Projects were prioritized by treatments needed (based on segment conditions), timing of other projects, and with the goal of minimizing the overall cost of the program. Preventative work is prioritized over maintenance in order to maximize the efficiency of dollars spent. Reconstruction projects are balanced with Kansas and Whitehawk with the goal of having one major project each year. This also allows the costs to be evenly balanced over the years and to be more manageable by the City. Overlays and reconstructions are predated by preventative treatments to allow the pavement to stay functional until the maintenance work can take place. Finally, projects with the same treatment are grouped when possible, to allow for the lowest prices based on the economy of scale.

## 4.2.3 Determining Preservation and Maintenance Treatments Needed

Different distresses are better addressed with different maintenance treatments. While this program uses crack sealing, chip sealing, mill and fill, and full-depth reconstruction as the 4 fundamental reconstruction methods for cost estimating purposes, the repair methods shown in Table 1 are still included so they can be examined once a project has been selected and is in more in-depth planning.

**Table 1. Distresses and Associated Preservation/Repair Methods**

Distress	Crack Seal	Microsurfacing	Chip Seal	Sand Application	Surface Patching	Full-Depth Patching**	Mill and Fill**	In-Place Recycle**	Full-Depth Reconstruction**
Rutting and Wear					●	●		●	●
Alligator Cracking	●	●	●			●		●	●
Cracking	●	●	●				●		●
Raveling and Aging	●	●	●				●		
Flushing and Bleeding				●			●		
Patching						●			
Sags and Humps							●	●	
Edge Raveling					●	●			
Edge Potholes					●	●			

\*\* May trigger adjacent ADA improvements based on the scope and location of work.

Several of the preservation and repair methods listed in **Table 1** may trigger a requirement to make adjacent ADA improvements. It is important to understand which will trigger this requirement, as this could alter the cost estimate and perhaps require rescheduling repairs. These repairs include full-depth reconstruction, in-place recycling, milling, and filling, and, sometimes, full-depth patching.



## 4.2.4 Preservation Costs

One of the goals of this maintenance program is to schedule roadway repairs on a frequent, recurring basis. Scheduling annually will allow yearly funds to be used efficiently and will ensure roads do not slip between the cracks and worsen before treated. Scheduling rehabilitation methods annually ensures there is budget to address the minor issues before they become more significant.

Costs of different treatment options can vary significantly. The following total costs of treatment were used in this analysis. These costs are shown per lane-foot (per linear-foot in length of 11-foot-wide lane). Appendix C includes the calculations for each treatment:

- Crack Sealing – \$2/LF of 11' lane
- Chip Seal Coat – \$12/LF of 11' lane
- Mill and Pavement Overlay – \$45/LF of 11' lane
- Reconstruction – \$142/LF of 11' lane

In addition to the basic construction costs, the total costs include all contingency, engineering, administration, and inflation costs. The following percentages were used to calculate total costs for each treatment.

**Table 2. Total Cost Elements**

Cost Element	% Construction	Description
Design Contingency	10% of itemized construction costs	Estimates the construction costs of minor design elements that have not yet been identified (e.g., pavement markings, minor ADA improvements)
Inflation/Year	3% of itemized construction costs	Escalates the construction costs from 2023 to the year of construction.
Permitting	3% of total construction cost	Estimates permit costs for the City. Does not include environmental documentation.
Design	12% of total construction cost	Estimates costs to prepare PS&E and environmental documentation.
City PM/Administration	3% of total construction cost	Estimates City costs for administration and oversight of the project.
Construction Management	15% of total construction cost	Estimates construction inspection and management for the project.
Management Reserve	10% of total construction cost	Overall contingency for the project – reduces as the project definition progresses.

## 4.2.5 Analysis of the System

Poor roads were analyzed first using their functional class and likely cost. Kansas Street Reconstruction, a project included in the city's 2022-2027 TIP and currently in design, will repair the road most in need of reconstruction. Another strong candidate for reconstruction is Old Pioneer Way. Old Pioneer Way, and other future candidates for reconstruction projects, are shown in



Table 3. Note that it is proposed to maintain an annual budget of \$150k for selected spot pavement replacements – to fix recurring potholes or minor instances of failed pavement.

**Table 3. Reconstruction Projects**

Project	Construction Cost (in 2022 dollars)	Linear Feet of Lanes	Year Scheduled
Train Street Reconstruction (Eldredge Avenue to Ammons Lane)**	\$415,000	2,917	2026
Skinner Way Reconstruction (Calistoga Street to Belfair Avenue)**	\$273,000	1,915	2027
Bowlin Avenue Reconstruction (Parker Lane to Leber Street)**	\$260,000	1,828	2028
Old Pioneer Way Reconstruction (North of Chief Emmons Lane)**	\$404,000	2,842	2029
TBD – Annual Reconstruction (includes spot replacements)	\$150,000 per year	NA	2024-2029

*\*\* Each of these streets is also included in the crack sealing program in 2024 to maintain their current condition prior to reconstruction.*

Although it is good to keep in mind the poor roads that will need to be reconstructed, due to their high funding needs, it is more efficient to spend money on roads that have not yet reached this level of disrepair. Due to this, the average roads were analyzed next to determine ideal cases for an overlay project. Corrin Avenue, from Whitesell Street to Bridge Street, is a strong candidate for a mill and overlay project due to its cracking and aging as well as its status as a minor arterial. Eldredge Avenue, from Whitesell Street to Calistoga Street is another strong candidate for a mill and overlay due to its aging and patches. These, and other, candidates for a mill and overlay project are shown in Table 4. Note again that an annual overlay budget of \$80k is proposed after 2026 to address specific overlays that will be needed.

**Table 4. Overlay Projects**

Project	Construction Cost (in 2022 dollars)	Linear Feet of Lanes	Year Scheduled
Corrin Avenue Overlay (Whitesell Street to Bridge Street)	\$179,000	3,986	2024
Eldredge Avenue Overlay (Whitesell Street to Calistoga Street)	\$90,000	1,990	2024



Project	Construction Cost (in 2022 dollars)	Linear Feet of Lanes	Year Scheduled
Anderson Street Overlay (Williams Street to Boatman Avenue)	\$99,000	2,203	2024
Orting Avenue (Callendar Street to Whitehawk Boulevard)	\$61,000	1,358	2028
Deeded Lane (Calistoga Street to Eldredge Avenue)	\$145,000	3,216	2024
Ammons Lane (Leber Street to River Avenue)	\$135,000	2,994	2028
Corrin Avenue Overlay (South of Harman Way)**	\$93,000	2,060	2028
Brown Street and Brown Way**	\$134,000	2,983	2028
Washington Avenue (South of Bridge Street)**	\$150,000	3,330	2028
TBD – Annual Overlay after 2026	\$80,000 per year		2027-2029

\*\* Each of these streets is also included in the crack sealing program in 2024 to maintain their current condition prior to overlay.

Finally, the most efficient use of funding is to keep good roads good. Chip and crack sealing are both cheap and effective maintenance methods. Chip sealing is generally better if the road is aging and/or has several cracks, while a road without aging and with only a few cracks will likely be better served with crack sealing. Crack sealing is also appropriate when old crack seals are beginning to crack again.

Crack sealing would be appropriate on Calistoga Street between Ammons Lane and River Avenue as well as Callendar Street between Thompson Avenue and Groff Avenue. Chip sealing would be appropriate along Whitehawk Boulevard, between Washington Avenue and Orting Avenue, and Calistoga Street, from Kansas Street to Corrin Avenue. Crack sealing projects are shown in Table 5, while chip sealing projects are shown in

Table 6. Both tables include annual programs of \$25k and \$30k per year respectively to begin after this set of projects is completed.

**Table 5. Crack Seal Projects**

Project	Construction Cost (in 2022 dollars)	Linear Feet of Lanes	Year Scheduled
Boatman Avenue/Cloud Street/Nunnally Avenue Crack Seal (Lane Boulevard to Colorossi Circle)	\$9,000	3,871	2024
Icey Street Crack Seal (East of Grinnell Avenue)	\$4,000	1,729	2024



Project	Construction Cost (in 2022 dollars)	Linear Feet of Lanes	Year Scheduled
Grinnell Avenue Crack Seal (South of Balmer Street)	\$4,000	1,642	2024
Williams Boulevard/Avenue/Court Crack Seal (West of Headley Avenue)	\$8,000	3,356	2024
Williams Street Crack Seal (Ozzie Street to Williams Avenue)	\$7,000	2,845	2024
Mellinger Avenue Crack Seal (Williams Street to Williams Boulevard)	\$4,000	1,685	2024
Nunally Avenue Crack Seal (Cloud Street to Williams Boulevard)	\$5,000	1,960	2024
Lane Boulevard Crack Seal (Nunally Avenue to Washington Avenue)	\$5,000	2,086	2024
Thompson Avenue Crack Seal (Callendar Street to Groff Avenue)	\$4,000	1,688	2024
Calistoga Street Crack Seal (Ammons Lane to River Avenue)	\$5,000	1,831	2024
Callendar Street Crack Seal (Thompson Avenue to Groff Avenue)	\$4,000	1,676	2024
Train Street Reconstruction (Eldredge Avenue to Ammons Lane)**	\$7,000	2,917	2024
Skinner Way Reconstruction (Calistoga Street to Belfair Avenue)**	\$5,000	1,915	2024
Bowlin Avenue Reconstruction (Parker Lane to Leber Street)**	\$5,000	1,828	2024
Old Pioneer Way Reconstruction (North of Chief Emmons Lane)**	\$7,000	2,842	2024
Corrin Avenue Overlay (South of Harman Way)**	\$5,000	2,060	2024
Brown Street and Brown Way Overlay**	\$7,000	2,983	2024
Washington Avenue Overlay (South of Bridge Street)**	\$8,000	3,330	2024





Project	Construction Cost (in 2022 dollars)	Linear Feet of Lanes	Year Scheduled
TBD – Annual Crack Seal After 2024	\$25,000 per year		2025-2029

\*\* Each of these streets is included for crack sealing prior to a subsequent overlay or reconstruction.

**Table 6. Chip Seal Projects**

Project	Construction Cost (in 2022 dollars)	Linear Feet of Lanes	Year Scheduled
Olive Street Chip Seal	\$10,000	749	2025
Whitehawk Boulevard Chip Seal (Washington Avenue to Orting Avenue)	\$74,000	5,617	2025
Calistoga Street Chip Seal (Kansas Street to Corrin Avenue)	\$55,000	4,222	2025
Tacoma Avenue Chip Seal	\$24,000	1,770	2025
Stone Street Chip Seal (Headley Avenue to Mellinger Avenue)	\$13,000	982	2025
Eldredge Avenue Chip Seal (Calistoga Street to Kansas Street)	\$44,000	3,313	2025
TBD – Annual Chip Seal After 2025	\$30,000 per year		2026-2029

#### 4.2.6 Annual Budget

The annual budget varies depending on several assumptions, including the overall extent of preservation treatments needed (defined by total construction costs), the aggressiveness of making preservation treatments (generally controlled by total years of preservation program/cycle), and availability of funding. The total construction costs are constant for a given year. The total years of the preservation cycle is based on the TIB cycle as balancing the number of roads in need of maintenance with a reasonable annual budget (targeted at \$1M to 1.3M annually in 2024 based on similar local agencies). The availability of funding changes based on government programs and the City’s budget.

The annual budget, shown in Table 7, was estimated at \$1.15M for the first 2 years, \$1.25 million for years 3 and 4 and \$1.35 million for years 5 and 6.

**Table 7. Annual Budget**



Year #	Year	Cost
1	2024	\$1,150,000
2	2025	\$1,150,000
3	2026	\$1,250,000
4	2027	\$1,250,000
5	2028	\$1,350,000
6	2029	\$1,350,000

#### 4.2.7 6-Year Workplan

This workplan needs to account for the roadway projects currently planned. These are the Kansas Street Reconstruction and the Whitehawk Boulevard Road Extension. The Kansas Street Reconstruction is a major reconstruction project that is currently in design while the Whitehawk Boulevard Road Extension is currently in the planning stages. For the purposes of this program, it will be assumed that these two projects will reconstruct all of Kansas Street and remedy any pavement needs in Whitehawk Boulevard and they were not factored into the pavement preservation budget. See Table 8 for a list of all of the projects covered in the 6-year Workplan. Note that the Annual Budgets will be used to address projects TBD throughout that year (as the PS&E is being prepared) and will include monies for ongoing pavement preservation and maintenance activities.

**Table 8. 6-Year Workplan**

Location and Treatment	Year of Construction
<b>2024</b>	
Corrin Avenue Overlay (Whitesell Street to Bridge Street)	2024
Eldredge Avenue Overlay (Whitesell Street to Calistoga Street)	2024
Anderson Street Overlay (Williams Street to Boatman Avenue)	2024
Orting Avenue Overlay (Callendar Street to Whitehawk Boulevard)	2024
Boatman Avenue/Cloud Street/Nunnally Avenue Crack Seal (Lane Boulevard to Colorossi Circle)	2024
Icey Street Crack Seal (East of Grinnell Avenue)	2024
Grinnell Avenue Crack Seal (South of Balmer Street)	2024
Williams Boulevard/Avenue/Court Crack Seal (West of Headley Avenue)	2024
Williams Street Crack Seal (Ozzie Street to Williams Avenue)	2024
Mellinger Avenue Crack Seal (Williams Street to Williams Boulevard)	2024
Nunally Avenue Crack Seal (Cloud Street to Williams Boulevard)	2024
Lane Boulevard Crack Seal (Nunnally Avenue to Washington Avenue)	2024
Thompson Avenue Crack Seal (Callendar Street to Groff Avenue)	2024
Calistoga Street Crack Seal (Ammons Lane to River Avenue)	2024
Callendar Street Crack Seal (Thompson Avenue to Groff Avenue)	2024
Train Street Reconstruction (Eldredge Avenue to Ammons Lane)*	2024
Skinner Way Reconstruction (Calistoga Street to Belfair Avenue)*	2024
Bowlin Avenue Reconstruction (Parker Lane to Leber Street)*	2024
Old Pioneer Way Reconstruction (North of Chief Emmons Lane)*	2024



Location and Treatment	Year of Construction
Corrin Avenue Overlay (South of Harman Way)**	2024
Brown Street and Brown Way Overlay**	2024
Washington Avenue Overlay (South of Bridge Street)**	2024
Annual Pavement Reconstruction Budget \$150K	2024
<b>2025</b>	
Deeded Lane Overlay (Calistoga Street to Eldredge Avenue)	2025
Ammons Lane Overlay (Leber Street to River Avenue)	2025
Olive Street Chip Seal	2025
Whitehawk Boulevard Chip Seal (Washington Avenue to Orting Avenue)	2025
Calistoga Street Chip Seal (Kansas Street to Corrin Avenue)	2025
Tacoma Avenue Chip Seal	2025
Stone Street Chip Seal (Headley Avenue to Mellinger Avenue)	2025
Eldredge Avenue Chip Seal (Calistoga Street to Kansas Street)	2025
Annual Crack Seal Budget \$25K	2025
Annual Pavement Reconstruction Budget \$150K	2025
<b>2026</b>	
Train Street Reconstruction (Eldredge Avenue to Ammons Lane)	2026
Corrin Avenue Overlay (South of Harman Way)	2026
Annual Chip Seal Budget \$30K	2026
Annual Crack Seal Budget \$25K	2026
Annual Pavement Reconstruction Budget \$150K	2026
<b>2027</b>	
Skinner Way Reconstruction (Calistoga Street to Belfair Avenue)	2027
Brown Street and Brown Way Overlay	2027
Annual Overlay Budget \$80K	2027
Annual Chip Seal Budget \$30K	2027
Annual Crack Seal Budget \$25K	2027
Annual Pavement Reconstruction Budget \$150K	2027
<b>2028</b>	
Bowlin Avenue Reconstruction (Parker Lane to Leber Street)	2028
Washington Avenue Overlay (South of Bridge Street)	2028
Annual Overlay Budget \$80K	2028
Annual Chip Seal Budget \$30K	2028
Annual Crack Seal Budget \$25K	2028
Annual Pavement Reconstruction Budget \$150K	2028
<b>2029</b>	
Old Pioneer Way Reconstruction (North of Chief Emmons Lane)	2029
Annual Overlay Budget \$80K	2029
Annual Chip Seal Budget \$30K	2029
Annual Crack Seal Budget \$25K	2029
Annual Pavement Reconstruction Budget \$150K	2029
* Crack Seal prior to scheduled reconstruction	
**Crack Seal prior to scheduled overlay	



## 4.3 NON-CONSTRUCTION ACTIVITIES

### 4.3.1 Inspection

This PMS is reliant on knowing the distresses present on streets, which is used to determine their overall quality. This knowledge will come from inspecting the pavement on a 6-year basis. All arterial and collector streets should be evaluated once every 2 years, while the local access streets should be split into a 6-year cycle with 1 section being looked at every 2 years. Table 9 shows the recommended split for the local access roads on a 3-section cycle, while Figure 4 on page 25 shows the groups on a map. Each year is budgeted \$50,000 (in addition to the project costs shown in Table 8) to allow for inspection and PMS updates. These updates should follow the prioritization process included in this report.

**Table 9. Annual Roadway Inspection Schedule**

Inspection Group	Year of Roadway Inspection							
	2022 (Baseline)	2024	2026	2028	2030	2032	2034	2036
Group 1 (northern neighborhoods)	●	●			●			●
Group 2 (north of Eldredge)	●		●			●		
Group 3 (south of Eldredge)	●			●			●	
Group 4 (non-local access)	●	●	●	●	●	●	●	●

### 4.3.2 Overall Rating by Section

For all newly reviewed segments, compare the ratings given during the recent inspection cycle to the previous inspection cycle. This report serves as the implementation point. The map of current distressed pavements will help in re-prioritization of segments not previously considered as high traffic or in high rate of distress.

### 4.3.3 Prioritization

Segments found to be in major distress or potentially hazardous that require emergency repair efforts will be communicated to the City engineer directly. Segments that have a poor rating and are in requirement of full reconstruction are prioritized for outside funding, while segments that need rehabilitative maintenance are also outside funding candidates. Segments in low need of repair have the benefit of low-cost maintenance options and should be addressed earlier rather than later. These are a target for funds and maintenance activity as these road segments are still within service life and this life can be extended cheaply.

### 4.3.4 Updating Treatments if Necessary

This section will be updated ongoing to incorporate new policy making activity relevant to the pavement treatment activities to be implemented with local guidance from FHWA or WSDOT. This section includes



treatment types that may have not been previously implemented by the city or are new maintenance technologies that, with local guidance, are being implemented.

### 4.3.5 Updating Program Costs

Costs in the baseline 6-year Workplan are based on 2023 construction costs escalated to the year of construction. Costs will need to be updated to reflect inflation, or else the cost estimates shown in this report will quickly become dated. A standard 3% inflation factor may be used for future cost estimating, although the National Highway Construction Cost Index (NHCCI) provides a more roadway specific inflation factor that could be interpolated to find a more accurate factor (Federal Highway Administration).

### 4.3.6 Revising TIP as Needed

The City's transportation improvement plan, or TIP, will need to be updated using this program as a resource. These updates should take place after the roadway assessments have taken place and the roadways that could use funding the most efficiently have been identified.

## 4.4 SUMMARY

The PMS begins with inspections of the roads. A Workplan would then be assembled or revised by including new inspection data and re-prioritizing the roads that can be most cost-effectively addressed per the new inspection, which leads to an expected budget. This budget allows funding to be chased and projects to be addressed. Finally, the PMS must be updated with new costs, treatments, and inspections as necessary.

# 5. ANNUAL WORKPLAN IMPLEMENTATION

## 5.1 INTRODUCTION

From the data collected, activities to implement the maintenance strategies can then be conducted. First is the project list, or annual pavement preservation workplan, which lays out a list of projects for the city to consider over the next six years. The project list will be evaluated at the start of every year, and this engineering analysis will lead to an annual project list with bid documents attached. These projects will go to bidding, be awarded, and then after the construction project will be inspected and tested. Finally, a post-construction report will be written about each maintenance project.

## 5.2 CONSTRUCTION

A project list covering the next six years has been established. The original version will cover 2024-2029, and it will be updated after the roadways are inspected. This list will prioritize projects based on the elements listed out in this program, while also considering the annual budget. Construction season is generally from April through September or mid-October, and these projects may need to plan around this timeline.



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## 5.2.1 Plan Sets and Engineering

PS&E need to be prepared annually for the program of projects and should be finalized as early in the year as possible, but no later than the end of March to allow the projects to be advertised for construction in the same calendar year.

## 5.2.2 Bidding

Projects with a schedule of less than 3 months will typically be advertised for bid by the end of March, and the bid should be finalized by the end of April. Projects scheduled for more than 3 months may need to begin during the next construction season or may take more than one construction season (esp. reconstruction projects).

## 5.2.3 Coordination with Other Agencies

Some projects in this program, especially those abutting State Route 162, may require coordination with WSDOT. Orting is in the WSDOT Olympic Region and could also contact the WSDOT Local Programs Headquarters for help with coordination.

Coordination with other agencies, especially Pierce County Roads, may be beneficial. This coordination could allow the price of projects to decrease through increasing the size of a project and the economy of scale.

## 5.2.4 Construction Management

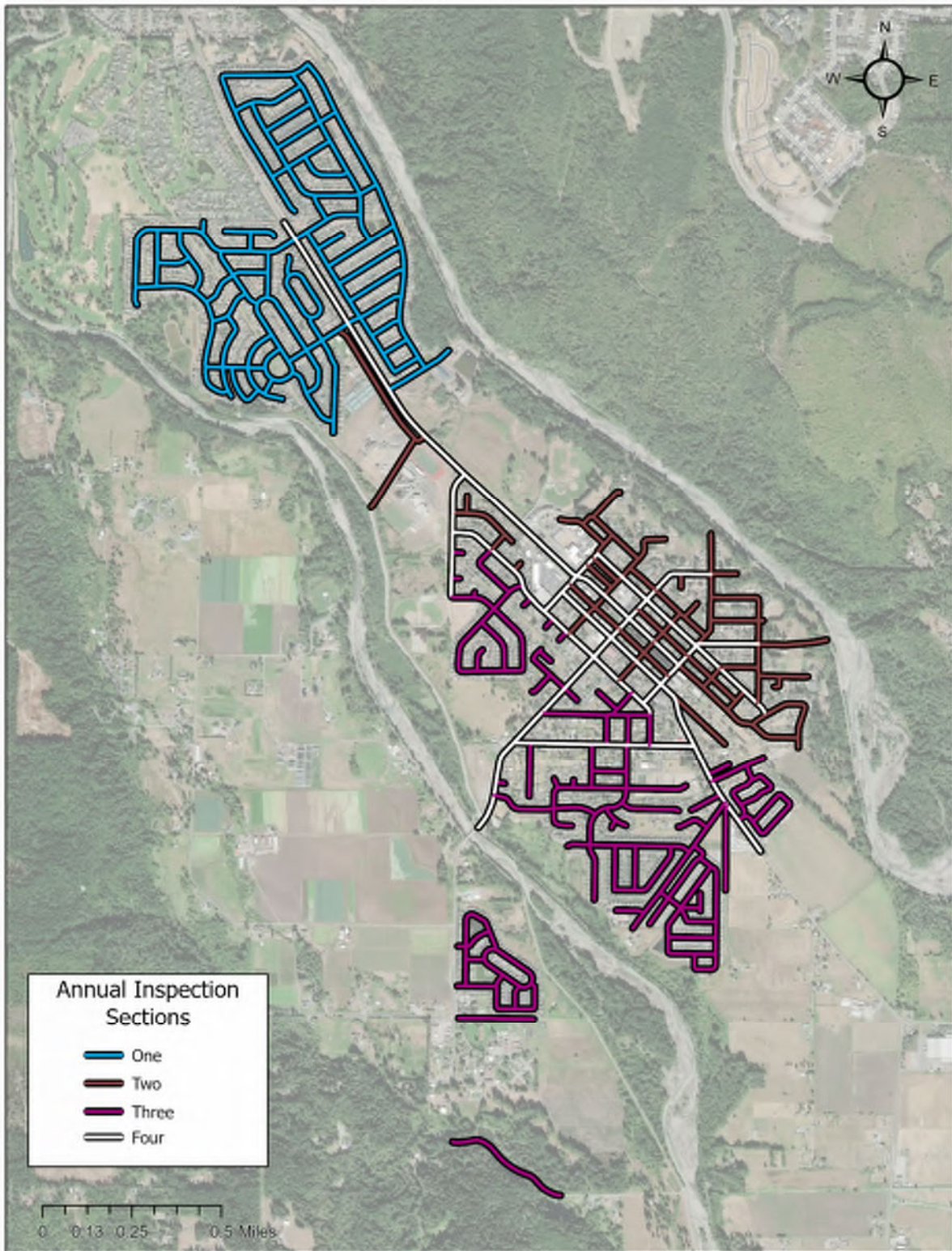
All of the work scheduled for one year can typically be completed under one PS&E and one construction management contract that can be included with the design of the project or contracted separately.

## 5.3 NON-CONSTRUCTION

### 5.3.1 Pavement Condition Assessment Updates

As an ongoing part of the pavement condition assessment program, this section is to include updates to policy and procedures around the Pavement Condition assessment. This should also include any additions and updates to the pavement network and updates on previous construction activities completed or referenced in the previous inspection cycle.

This section should include updates and revisions to the data collection process and app or assessment methodology.



**Figure 4. Annual Roadway Inspection Groups**



### 5.3.2 TIP Updates

This section should include any anticipated or upcoming and planned construction projects that address nearby pavement deficiencies. By taking inventory of upcoming projects, the city can dedicate resources to projects not incorporated as part of larger capital improvement or frontage development project.

### 5.3.3 PMS Updates

This section will incorporate future and ongoing updates and revisions to the pavement management system.

### 5.3.4 Administrative Updates

Section to be updated as annual reporting strategy is implemented. This includes personnel and policy updates related to the Pavement Maintenance program and assessment.

### 5.3.5 Funding Activities

As this program is implemented, this section will include funding that has been obtained or is being sought at the time of assessment for current and future projects. A major source of this funding is expected to be the Washington State Transportation Improvement Board, TIB, which distributes maintenance grants throughout the state. Another potential source of funding is the Safe Routes to School Program through WSDOT.

### 5.3.6 GIS Updates

Segments produced from the pavement management program inception are updated with new segment photos at time of inspection. These segments are also intended to be updated post construction or maintenance activity along a given segment, the compliance of this is up to the maintenance program administrator.

## 5.4 SUMMARY

This report is intended to serve as a starting point and as guidance for ongoing and future pavement maintenance activities and procedures. As the city grows and the needs change, the City and program administrator will need to make ongoing updates to this report to reflect the present and ongoing needs of the pavement system.

## 6. CONCLUSION

The pavement maintenance recommended and included in this report are intended to be used as a planning tool. Further engineering judgment and field verification is necessary before preparing final maintenance plans for each year.





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# **APPENDIX A**

## **2022 PAVEMENT CONDITION ASSESSMENT REPORT (ATTACHED WITHOUT APPENDICES)**

# 2022 Pavement Condition Assessment



**ORTIG**  
*Washington*

February 2023



**SCJ ALLIANCE**  
CONSULTING SERVICES

# 2022 Pavement Condition Assessment

## Project Information

Project: 2022 Pavement Condition Assessment

Prepared for: City of Orting  
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Jordan Graham, EIT  
Andrew Armstrong, EIT

**Project Reference** SCJ #21-000838, Phase 05, Task 01

Path: <N:\Projects\4270 City of Orting\21-000838 Orting 2021-24 On-Call PE Services\Phase 05 - Pavement Management\05.01 2022 Street Condition Assessment\Reports\Assessment Final Draft>

## PROJECT ENGINEER'S CERTIFICATION

I hereby certify that this Pavement Condition Assessment for the City of Orting has been prepared by me or under my supervision and meets the minimum standards of the City of Orting and normal standards of engineering practice.



2-12-23

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Lisa M. Reid, PE, PMP  
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206.739.5454



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Appendix B: SCJ Pavement Condition Evaluation App

Appendix C: Table of Assessment by Roadway Segments

Appendix D: Pavement Surface Condition Field Rating Manual for Asphalt Pavements

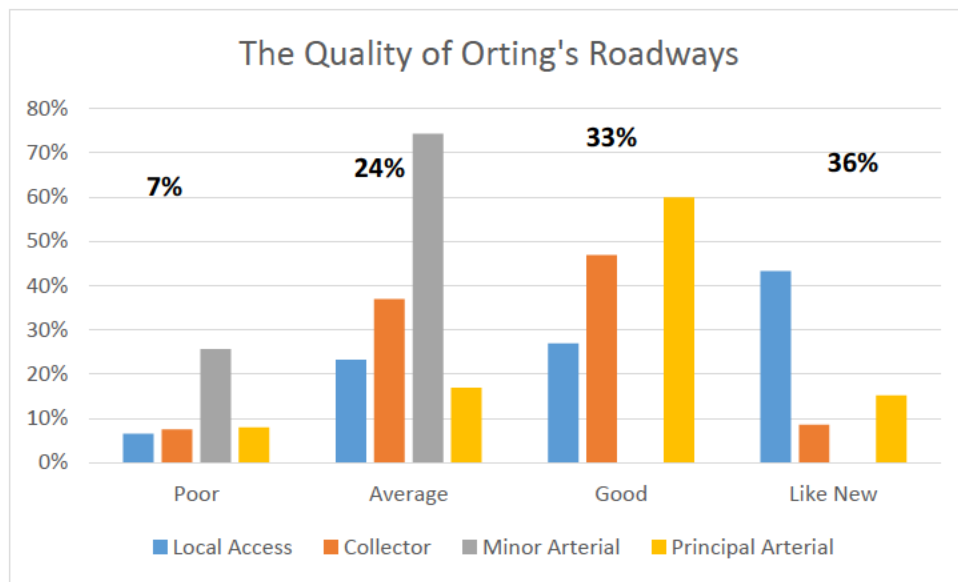


# 1. EXECUTIVE SUMMARY

SCJ Alliance performed this pavement condition assessment from September to October, 2022, to assess the City of Orting’s roadway network according to WSDOT’s recommended methods per the Northwest Pavement Management Association’s (NWPMA) Pavement Surface Condition Field Rating Manual for Asphalt Pavements (PSCFRM). This manual is included in Appendix D. The assessments were made by a two-person team to visually qualify and physically quantify various pavement distresses that are discussed further in Chapter 4.3 and include:

1. Rutting
2. Alligator Cracking
3. Longitudinal Wheel Path Cracking
4. Longitudinal Non-wheel Path Cracking
5. Transverse Cracking
6. Raveling and Aging
7. Flushing and Bleeding
8. Patching
9. Corrugation and Waves (not observed)
10. Sags and Humps
11. Block Cracking (not observed)
12. Pavement Edge Condition
13. Crack Seal Condition

Based on the cumulative presence or lack of these distresses, each roadway segment was given an overall rating of poor, average, good, or new. A summary of the overall quality of the City of Orting’s roadway network is shown in Figure 1 below. Roadway segments were primarily in good or like new quality, as seen in Figure 2 on page 8. Kansas Street and Old Pioneer Way were found to have multiple, consecutive, notably low-quality segments along their limits.



**Figure 1. Overall Pavement Condition Ratings Summarized by Functional Class**



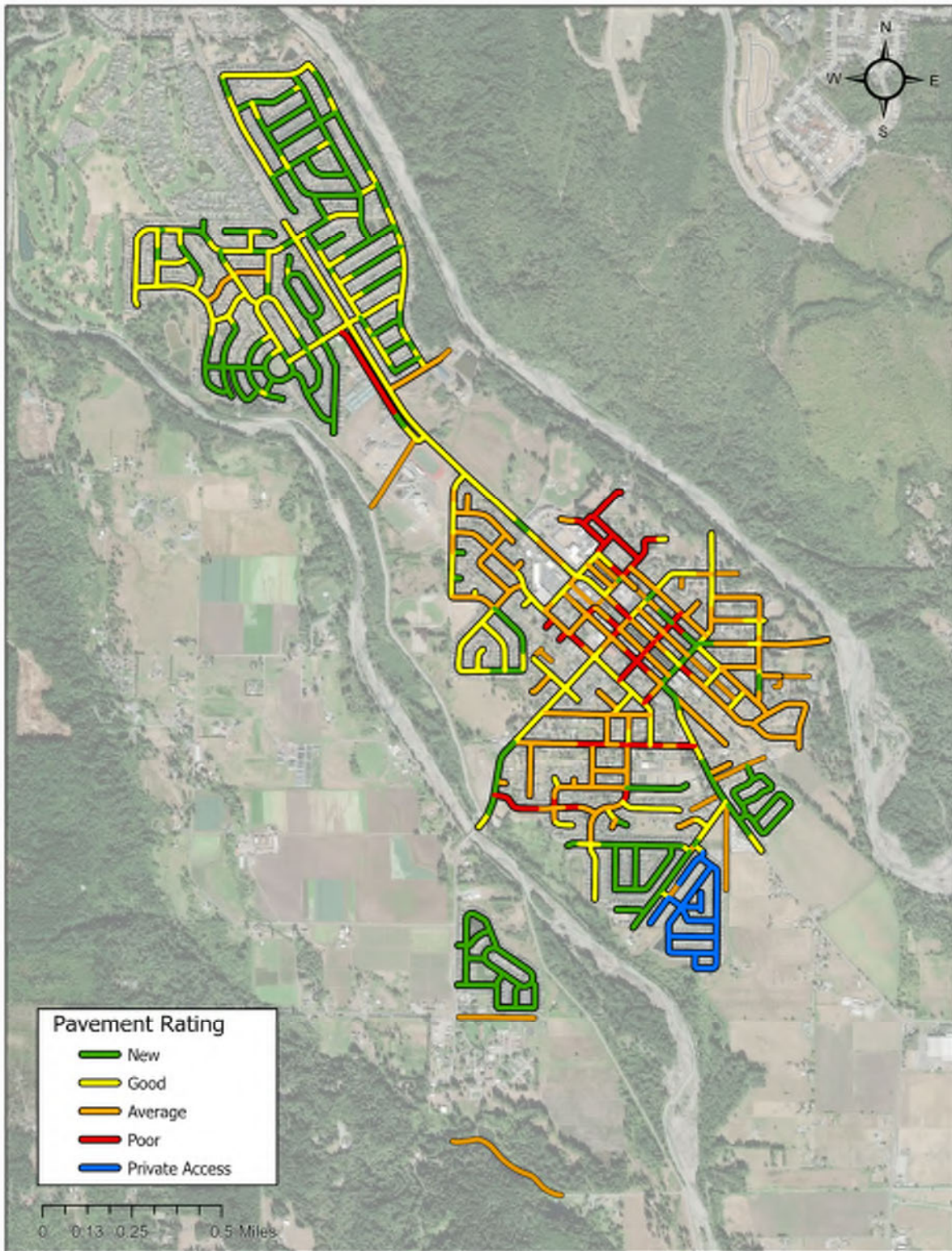


Figure 2. Roadways by Overall Rating



The most significant of the poor segments were along Kansas Street, which is a principal arterial south of downtown. This roadway was observed being used by commercial trucks to bypass downtown and the frequent high loads have deteriorated the pavement to a poor condition. At the time of assessment, a planned reconstruction of Kansas Street is scheduled to begin in 2024.

The other, notably poor roadway is Old Pioneer Way, which is a local access road that starts at State Route 162 (SR 162) and runs parallel for several blocks and dead-ends before reaching Lane Blvd. NW. There were both commercial and residential developments along this roadway and it is a much lower traffic roadway than Kansas Street. These two roads, combined with a few other sporadic segments, make up the roughly 7% of roads in Orting with a poor condition.

In addition, approximately 24% of the roadways were rated average and would also benefit from a variety of pavement and maintenance activities.

## 2. INTRODUCTION

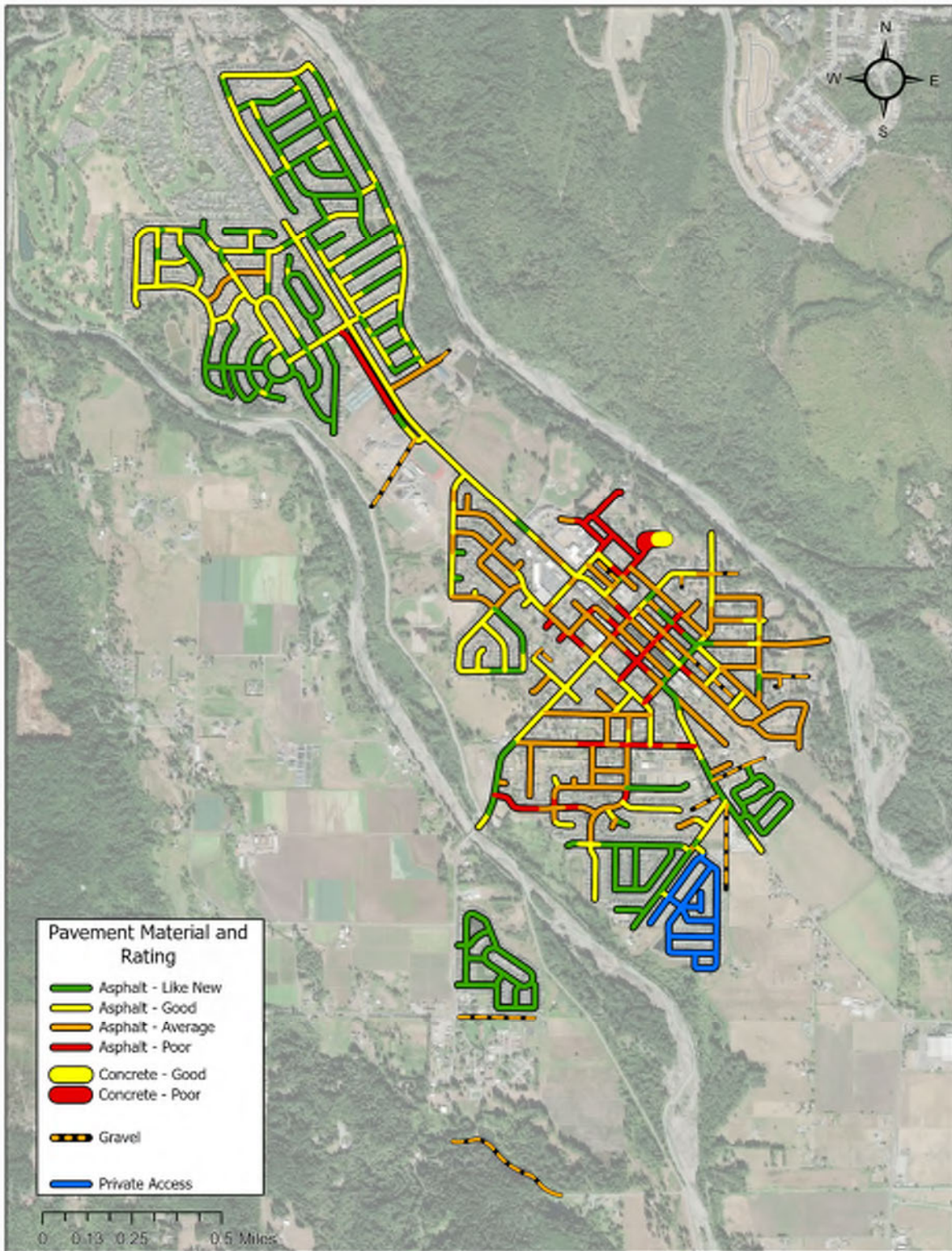
This report summarizes the methods and results of the pavement condition assessment that were conducted within the City of Orting limits. The report should be used to understand the condition evaluation process for future pavement condition assessments, to understand the current pavement condition ratings, and to understand the data contained in the city's GIS database. This pavement condition assessment was necessary to establish a baseline of the existing condition of the roads within the city. This report will serve as a basis for future projects and on-going pavement maintenance and preservation planning and programming.

This report contains a description of the roads in Orting and a description of the distresses assigned to roads. The roads of Orting are broken down by pavement type and functional classification. The distresses are broken down individually with photographs from the field and maps showing where these distresses were observed. For each segment, the cumulative frequency and severity of distresses were considered and an overall rating was assigned to provide a qualitative and comparative ranking as seen on Figure 1, page 7, and Figure 2, page 8.

## 3. CITY OF ORTING ROADWAY SYSTEM

### 3.1 CITY OF ORTING ROADWAY SYSTEM

The City of Orting roadway network includes 62.7 lane-miles of asphalt concrete pavement (ACP), 2.5 lane-miles of gravel, and 0.1 lane-miles of Portland concrete pavement (PCC). This corresponds to the network being 96% ACP, 3.9% gravel, and 0.1% PCC. PCC is found primarily on older, local access roads in the downtown core. Gravel roads were recorded on alleys through downtown as well as some side streets, especially those near the edge of town. The pavement material of each roadway segment is shown in Figure 3 on page 10.

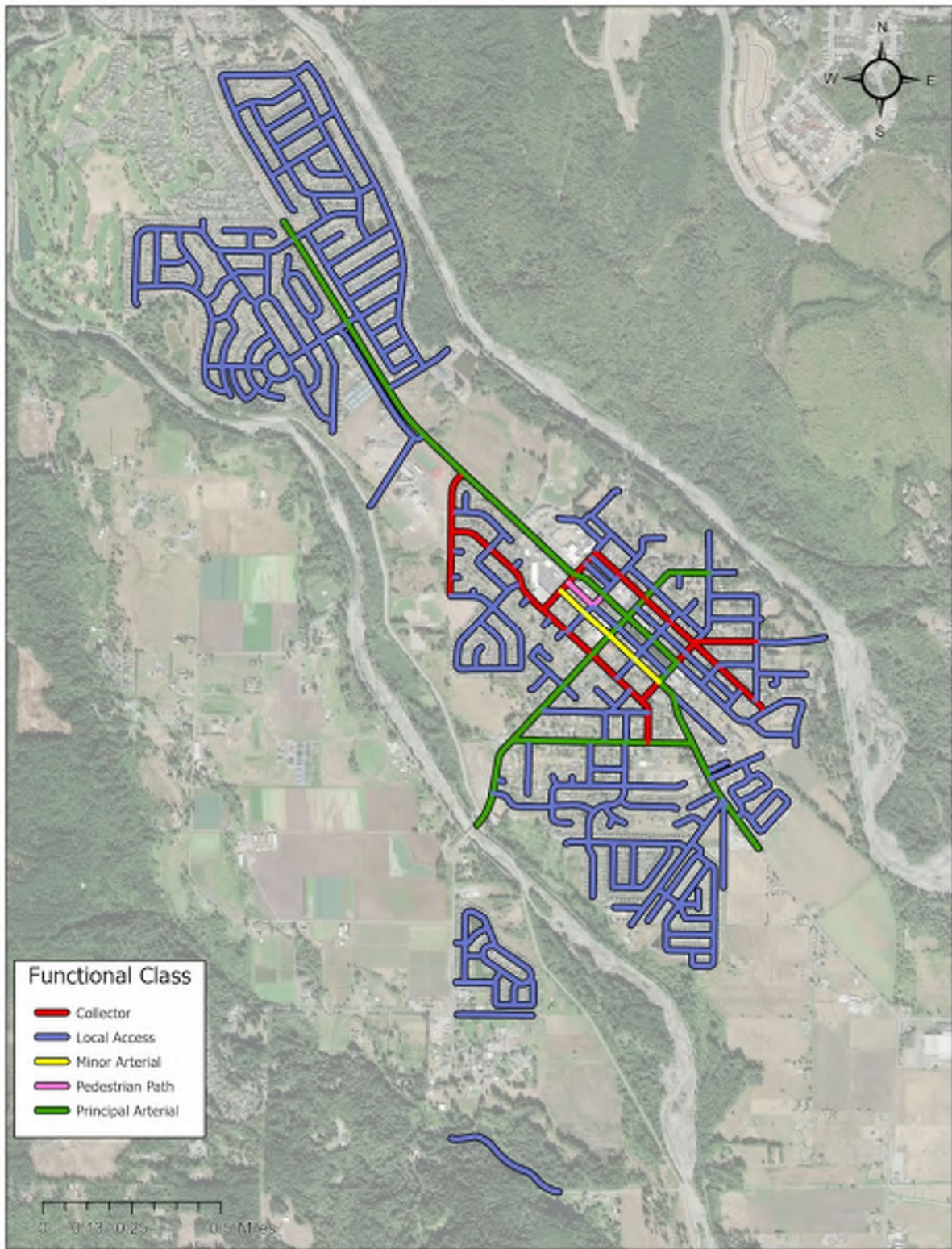


**Figure 3. Roadways by Material and Overall Rating**



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Orting's roads are assigned a functional classification based on the volume of traffic using each roadway and the purpose of the roadway. Orting has 49.7 lane-miles of local access roads (76%), 5.2 lane-miles of collector roads (8%), 0.8 lane-miles of minor arterial roads (1%), and 9.7 lane miles of principal arterial roads (15%). Functional classifications are shown in Figure 4 on page 12.



**Figure 4. Roadways by Functional Classifications**



## 3.2 GIS DATABASE

One of the priorities of the pavement evaluation was to establish a GIS database for the City of Orting so that a variety of infrastructure data could be better managed within GIS. To begin this effort, available data was pulled from Pierce County's GIS database and trimmed to Orting's city limits. This data was based on GIS nodes at intersections with links (roadways) connecting the appropriate nodes. For the purposes of the pavement condition assessment, these roadway links were further divided into segments that were approximately 250 feet in length to define manageable segments of roadway for the observation of the pavement condition. In general, these segments were recombined to be consistent with the GIS segments pulled from the Pierce County database. Exceptions were made based on significant differences in distresses present.

# 4. PAVEMENT CONDITION FIELD ASSESSMENT

## 4.1 INTRODUCTION

The first step in the development of a pavement management system is to inventory the existing roadway system to establish a baseline of the condition in time. From this assessment, a PMS can be developed based on field-collected data. It also sets a precedent by which the PMS can be updated and expanded as future pavement condition assessments are conducted.

This section covers the methods, distresses, segment evaluation, and overall rating process used in the pavement condition assessment. This section of the report includes excerpts from the PSCFRM that were expanded to describe each observable distress, along with photographs from the field and maps of where each of the distresses were present in Orting. This is intended to facilitate an understanding of the pavement condition assessment and provide consistent review data for future pavement condition assessments.

## 4.2 PAVEMENT CONDITION ASSESSMENT METHODOLOGY

### 4.2.1 Asphalt Concrete Paved Roadways

This pavement condition assessment followed NWPMA's PSCFRM (Manual) methodology as recommended by WSDOT. The Manual describes potential asphalt concrete pavement distresses, listed in Chapter 4.3, and recommends methods of qualitative and quantitative assessment based on both severity and extent. The PSCFRM lays out two options to qualify these severities and extents. Option A used the worst assigned severity and the total extent of the distress while Option B assigned the extent of each severity individually. For the purposes of this assessment, Option A was always used.

The Manual also discusses best practices for evaluating the roadways. These evaluations were done on foot, or in Phase 2, confirmed while on foot, and they were conducted by a 2-person team over a 2-month period. The observation team recorded the pavement condition for each segment defined in the GIS. Pavement condition overall ratings covered the whole traveled surface of the roadway, not an individual lane or direction of travel. Observed distresses and data that captured the severity and frequency of each distress were entered electronically in a proprietary SCJ software that was developed based on this manual and the use of GIS (see Appendix B).



Due to variability in site conditions or assessors, it is critical to have continuity between both the time of the assessment and assessors, and to collect the data within the same range of time and using the same methodology. The Orting Pavement Condition Assessment covered roadways within Orting’s city limits and took place in September and October 2022, in three independent phases conducted by the same 2-person team of engineers. Summer weather conditions were observed in all field visits.

The first phase of three covered principal arterials, minor arterials, and collector streets, as well as some central local access roads with the exception of SR 162, which is maintained by the WSDOT. The second phase covered the remaining local access roads and the third phase covered SR 162 through city limits. The segments observed in each phase are shown in Figure 5 on page 15.

Data collection varied from phase to phase as it was recognized that fewer pictures could cover the entire segment because the pavement condition of segments was nearly always consistent. Therefore, pictures were taken at 125’ intervals in Phase 1, but then at 250’ intervals in Phase 2. In Phase 3, a video was also taken to assist in the pavement condition observation because the roadway is under significant amounts of vehicular traffic.

#### 4.2.2 Portland Cement Concrete Paved Roadways

WSDOT doesn’t make a recommendation for how to assess the condition of PCC roadways, and no equivalent manual exists. Therefore, PCC roadways were evaluated using the PSCFRM distresses and the same methodology because rigid pavement surfaces such as PCC will exhibit similar failure characteristics as flexible, ACP.

#### 4.2.3 Gravel Roadways

Gravel roadways were qualitatively field rated without PSCFRM distress observations or evaluation. Access, maintenance, and service all factor into roadway surface construction materials, gravel while not excluded from the report, is not included in the PSCFRM.

#### 4.2.4 Private Access Roadways

Private access roadways were encountered in gated communities where vehicular access is restricted to property owners only. Each segment of private access roadway was evaluated where possible without disturbing private occupants and photographs only taken on the public portion of these segments.

*Majestic View Estates* is a private access, gated community located on the southern part of town. With the restricted access, no field assessment was made, and no GIS data collected. If these roadways are maintained by the City, future pavement condition assessments should be performed with coordinated access to these communities.

#### 4.2.5 Pedestrian Paths

Three segments consisting solely of pedestrian path were included as part of the assessment and given qualitative ratings using PSCFRM as a basis of assessment.

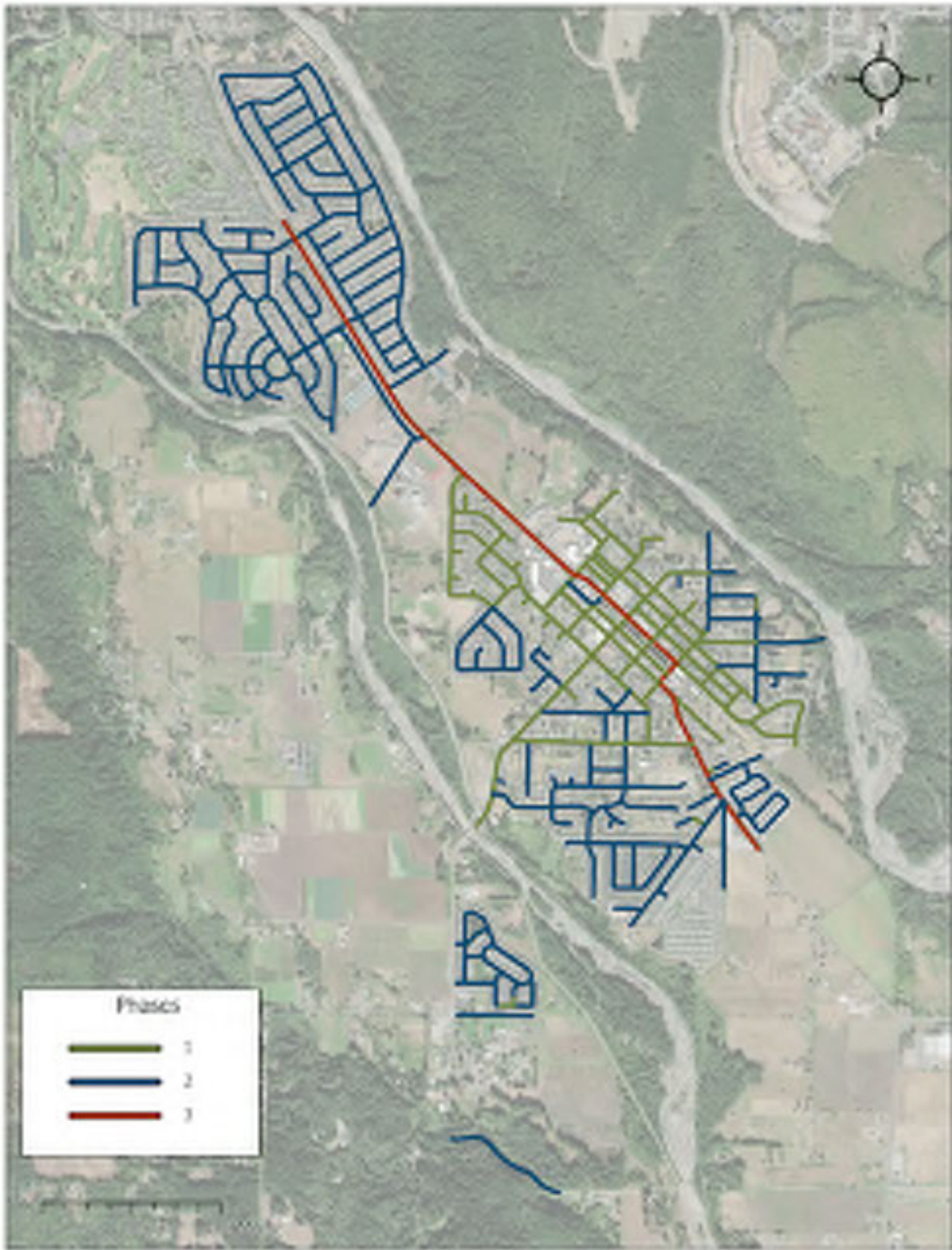


Figure 5. Roadways Assessed in Each Phase of Evaluation





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### 4.3 PAVEMENT CONDITION ASSESSMENT

The distresses that were evaluated in this pavement condition assessment come direction from the PSCFRM. Two distress types were included in the assessment but were not observed as noted below.

1. Rutting
2. Alligator Cracking
3. Longitudinal Wheel Path Cracking
4. Longitudinal Non-wheel Path Cracking
5. Transverse Cracking
6. Raveling and Aging
7. Flushing and Bleeding
8. Patching
9. Corrugation and Waves (not observed)
10. Sags and Humps
11. Block Cracking (not observed)
12. Pavement Edge Condition
13. Crack Seal Condition



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Each subsection below describes the distresses evaluated in this pavement condition assessment, information on how the severity and frequency was evaluated for each distress, potential causes for this type of failure, and in some cases, specific methods typically used to address these failures. Much of this information is borrow directly from the NWPMA's PSCFRM and is included here to support the baseline pavement condition assessment and subsequent pavement management planning and programming efforts. An example photo specific to the City of Orting and from this baseline pavement condition assessment has been included to indicate the potential worst case of each distress type assessed.

#### 4.3.1 Rutting

Rutting occurs when vehicle's wheels have forced the wheel path lower than the rest of the road (seen on Kansas Street, Figure 6 on page 2). Although, it can be due to the pavement being worn off, it is generally attributed to base material being displaced. Pavement being worn off can be fixed with a repave, but if the root cause was the base material, a full reconstruction is likely needed. Figure 7 on page 3 shows the locations where rutting was observed during this pavement condition assessment.

##### Severity

- Low – ¼ inch to ½ inch
- Medium – ½ inch to ¾ inch
- High – over ¾ inch

##### Frequency

- Not measured for rutting, applied to entire segment, or defined in a comment.



**Figure 6. Rutting on Kansas Street**

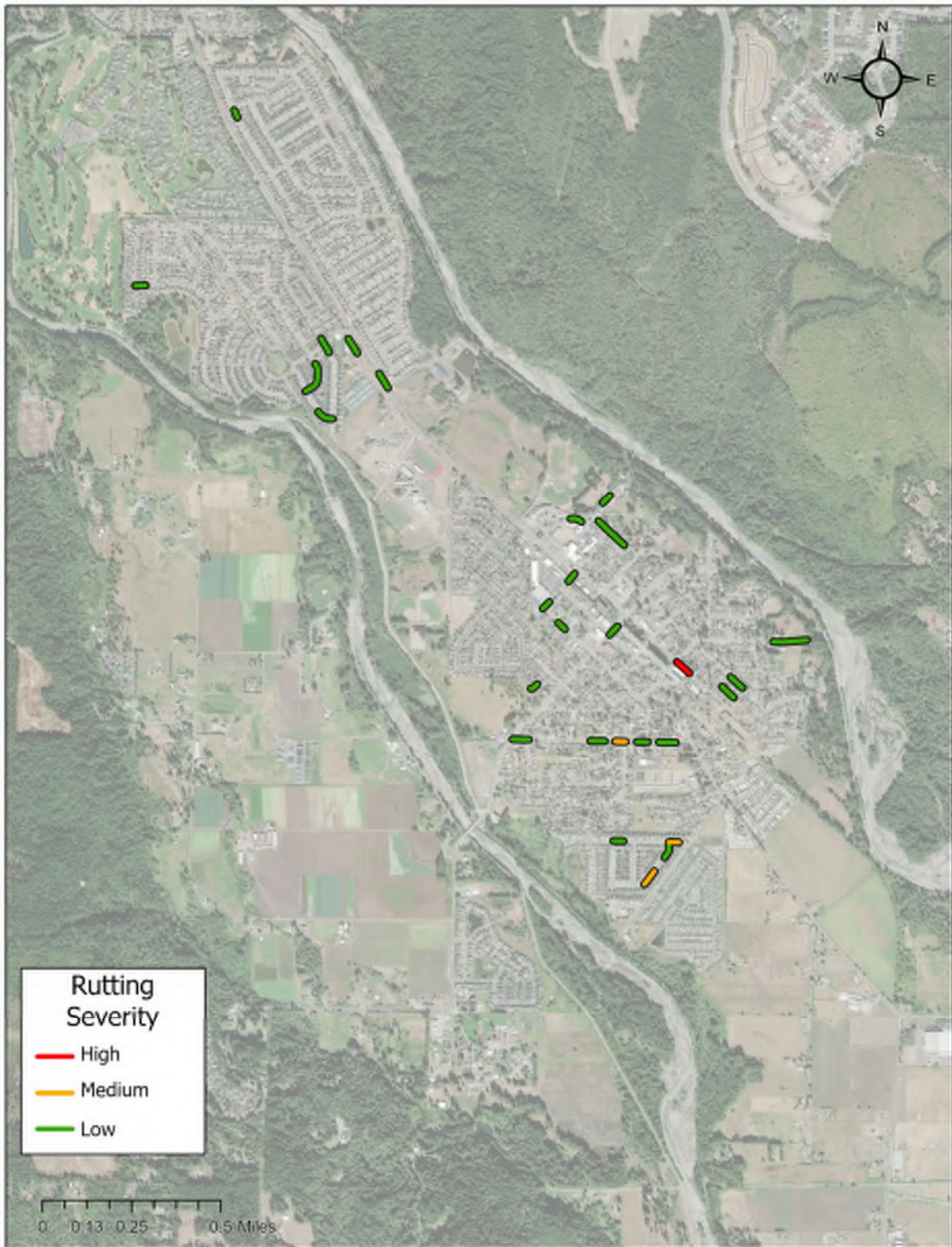


Figure 7. Rutting in Orting



### 4.3.2 Alligator Cracking

Alligator cracking is a distress due to wear where cracks connect extensively (see Figure 9 below). These interconnected cracks point to material beneath the pavement having settled and show the pavement is not receiving adequate support. This distress requires fixing the base materials as well as the pavement itself. Alligator cracking was mainly observed in the southern section of Orting, as seen in Figure 10 on page 6.

#### Severity

- Low – Branched, longitudinal, discontinuous thin cracks beginning to interconnect.
- Medium – Cracking is completely interconnected, and some spalling may appear at edge of cracks. Pavement pieces are still in place.
- High – Well developed pattern of cracking, spalling is very apparent, and pieces may be missing.



**Figure 8. Alligator Cracking Severities**

#### Frequency

- Percentage of each wheelpath affected per segment evaluated.



**Figure 9. Alligator Cracking on Varner Avenue**

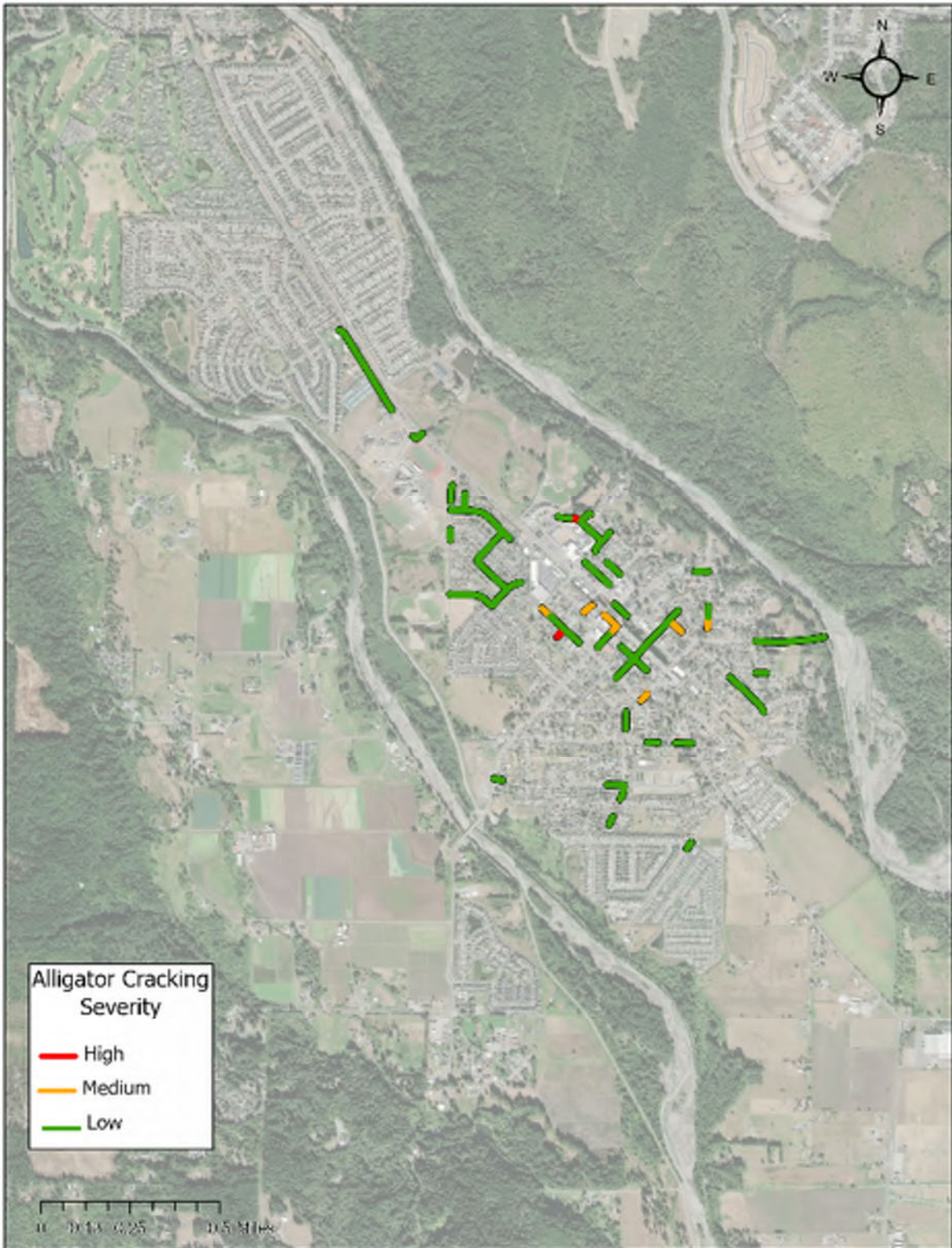


Figure 10. Alligator Cracking in Orting

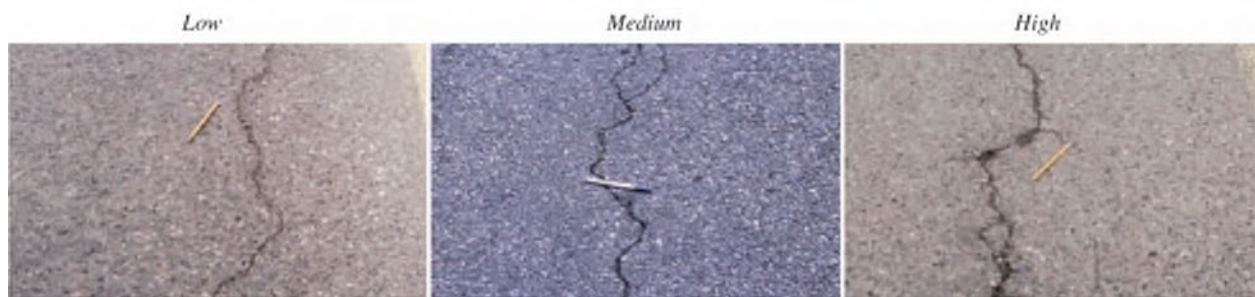


### 4.3.3 Longitudinal Wheelpath Cracking

Longitudinal wheelpath cracks run parallel to the roadway centerline and are in the wheel path of traffic (Figure 12 below). Although it is possible that these cracks are from poor joint construction, they may also be the beginning of alligator cracks forming. Depending on the cause, the repair methods vary from crack sealing to repaving. Longitudinal wheel path cracking was only observed in Orting at low severity, as seen in Figure 13 on 9.

#### Severity

- Low – Cracks have very little or no spalling and are less than ¼" in width
- Medium – Cracks have little or no spalling but are greater than ¼" in width
- High – Cracks are spalled, and pieces are visibly missing



**Figure 11. Longitudinal Wheelpath Cracking Severities**

#### Frequency

- Percentage of the length of each segment evaluated.





**Figure 12. Longitudinal Wheelpath Crack along Calistoga Street**

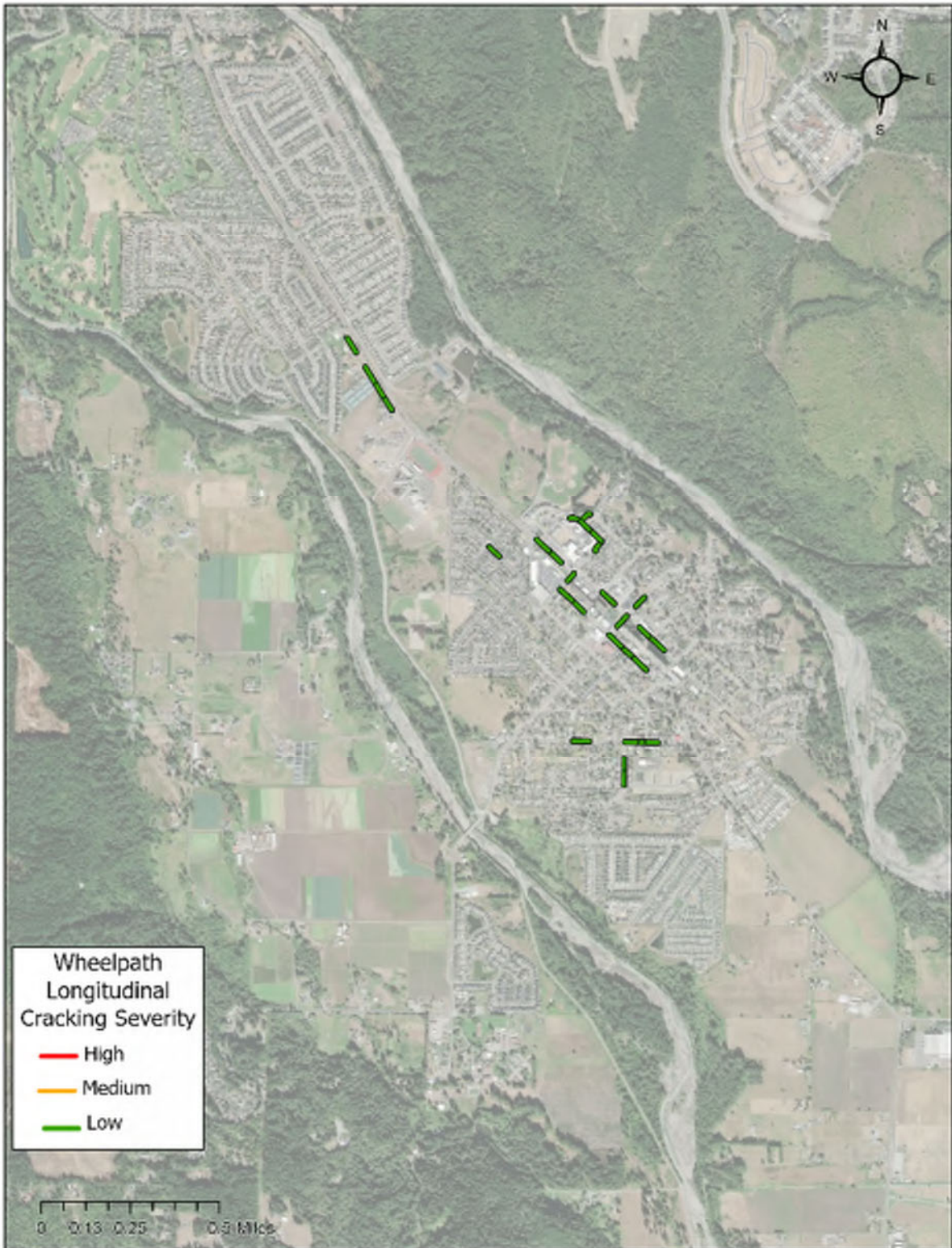


Figure 13. Longitudinal Wheelpath Cracking in Orting



#### 4.3.4 Longitudinal Non-Wheelpath Cracking

Longitudinal non-wheelpath cracks were seen on the centerline of many of Orting's roadways (Figure 15 below). These longitudinal cracks run parallel to the roadway centerline and are not in the wheel path of traffic. They are generally caused by poor joint construction. Crack sealing may be all the maintenance required, however, a repave is needed to truly fix the crack. Figure 16 on page 12 shows this distress was often seen on long stretches of the same road, indicating it was likely due to paving methods.

##### Severity

- Low – Cracks have very little or no spalling and are less than ¼" in width
- Medium – Cracks have little or no spalling but are greater than ¼" in width
- High – Cracks are spalled and pieces are visibly missing



**Figure 14. Longitudinal Non-Wheelpath Cracking Severities**

##### Frequency

- Percentage of the length of each segment evaluated.



**Figure 15. Longitudinal Non-Wheelpath Cracking along Bridge Street**

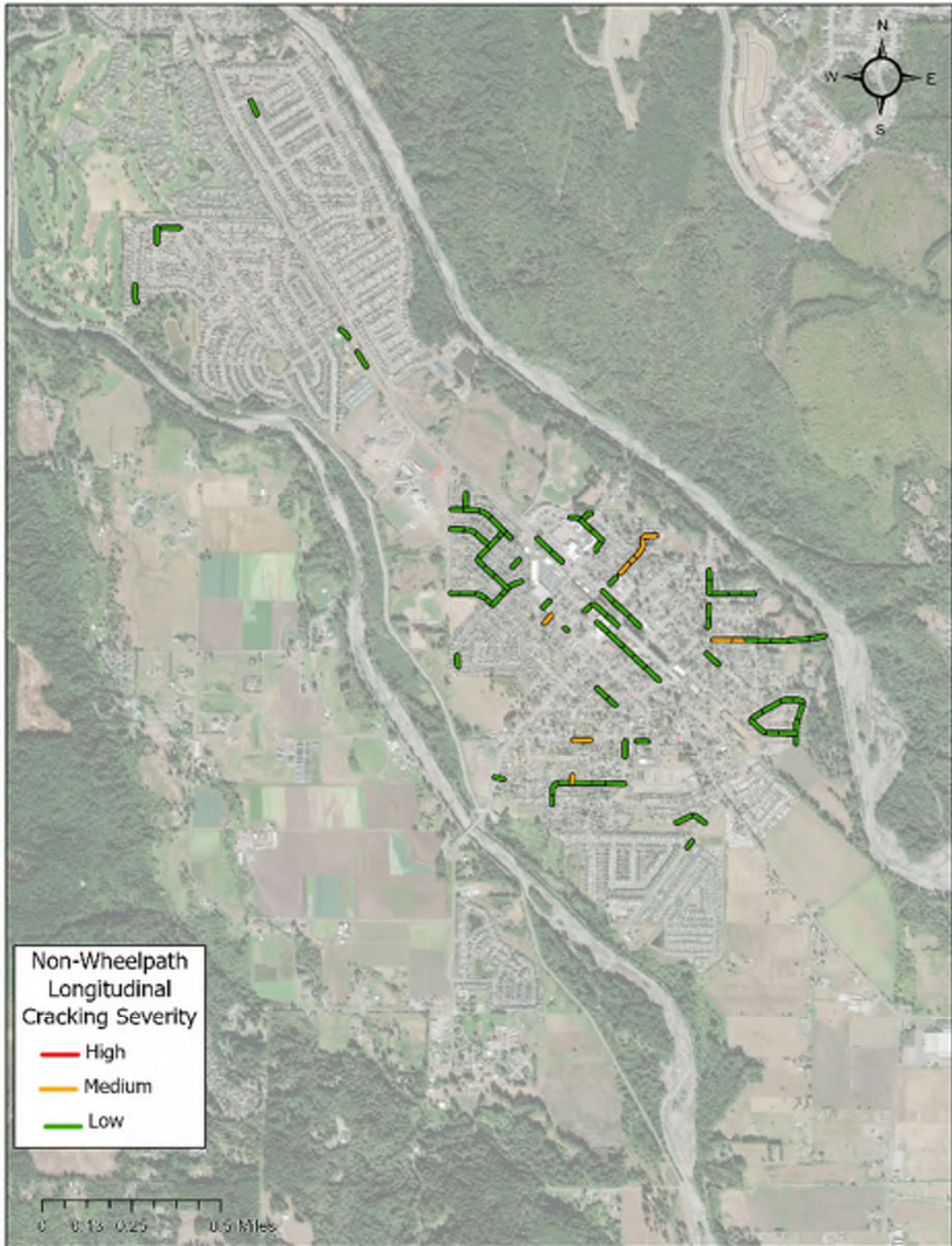


Figure 16. Longitudinal Non-Wheelpath Cracking in Orting

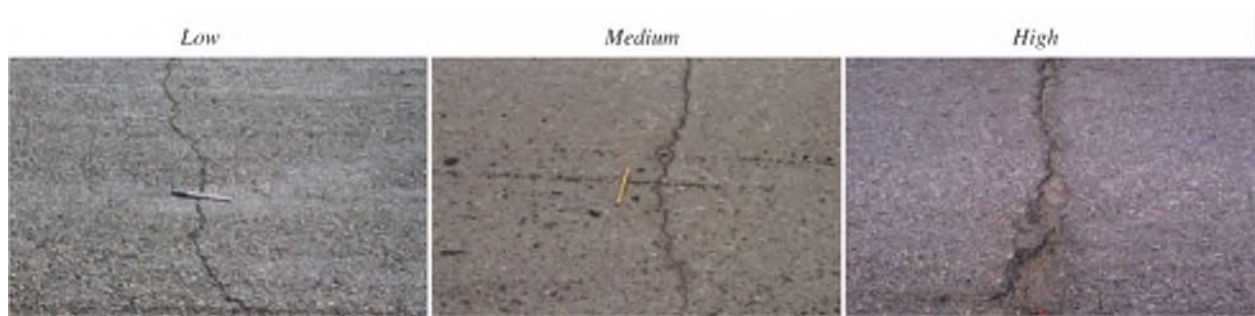


### 4.3.5 Transverse Cracking

Transverse cracks run perpendicular to the roadway centerline (Figure 18 below). These can be caused by pavement shrinkage at low temperatures, by binder hardening, or by the joints between concrete slabs when pavement is placed on top of concrete. Crack sealing will prevent water infiltration, but to fix the cracks, a repave may be required. Figure 19 on page 15 shows prominent transverse cracking along Washington Ave.

#### Severity

- Low – Cracks have very little or no spalling and are less than ¼" in width
- Medium – Cracks have little or no spalling but are greater than ¼" in width
- High – Cracks are spalled and pieces are visibly missing



**Figure 17. Transverse Cracking Severities**

#### Frequency

- Count of cracks observed per 100-foot section.



**Figure 18. Transverse Cracks on Belfair Avenue**

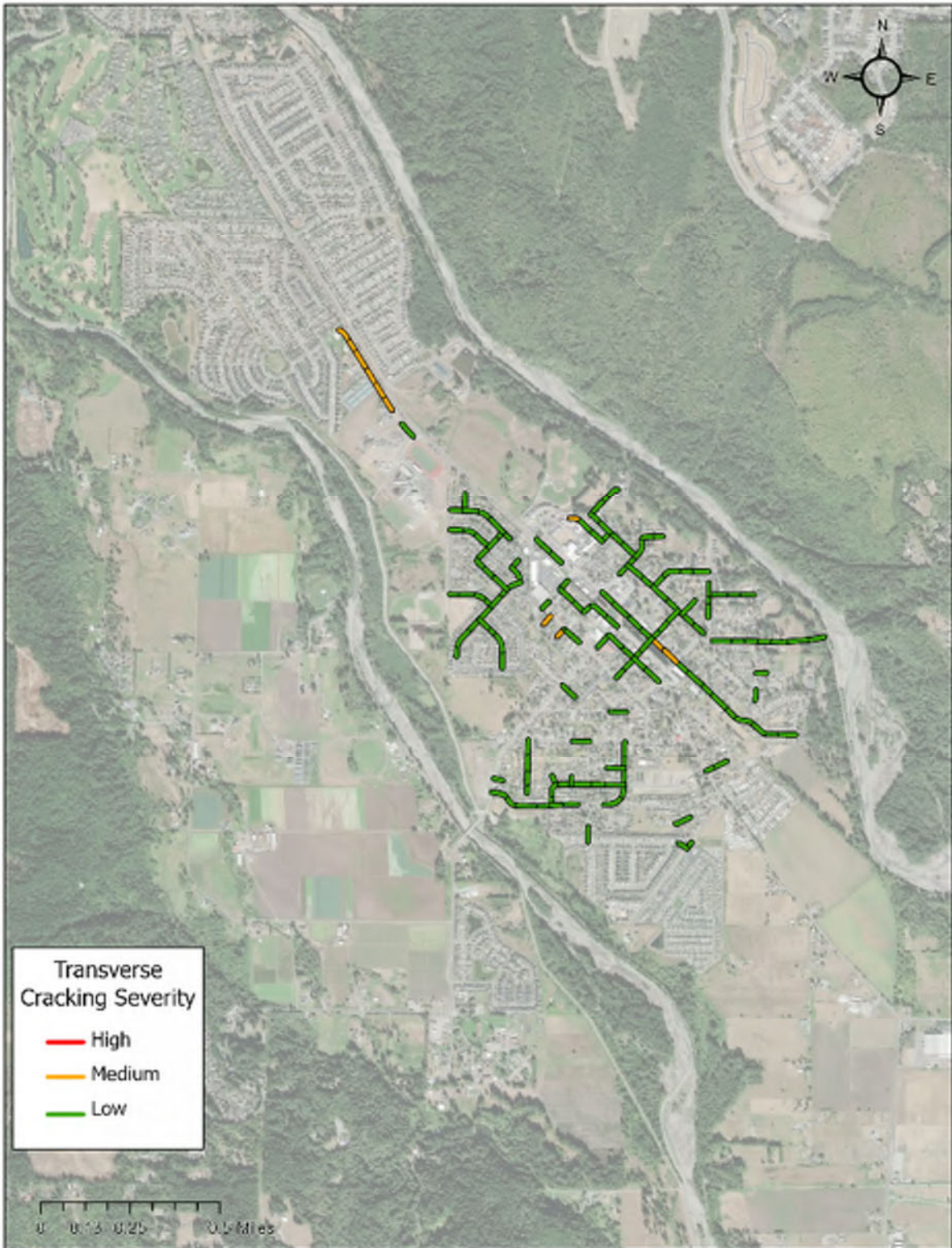


Figure 19. Transverse Cracking in Orting





### 4.3.6 Raveling and Aging

Raveling and aging can be seen when the roadway looks rough and worn (Figure 21 below). Aging specifically presents itself in the discoloration of a pavement surface and can be present without raveling. Aging is the indication of the beginnings of roadway failure. Raveling happens as aging pavement begins to see the aggregate separating, or the aggregate is no longer present in the pavement. Aging and Raveling are not indicative of any subbase failure. Pavement life and easily be resources or extended by chipseal or other maintenance activities prior to failure. Raveling and aging is the most common distress found during the assessment, as shown in Figure 22 on page 18.

#### Severity

- Low – Aggregate and/or binder has started to wear away.
- Medium – Aggregate and/or binder has worn away and the surface texture is rough and pitted.
- High – Aggregate and/or binder has worn away significantly and the surface texture is deeply pitted and very rough.



**Figure 20. Raveling and Aging Severities**

#### Frequency

- Extent of raveling observed is either localized, confined to the wheelpath, or across the entire lane.



**Figure 21. Raveling and Aging along Corrin Avenue**

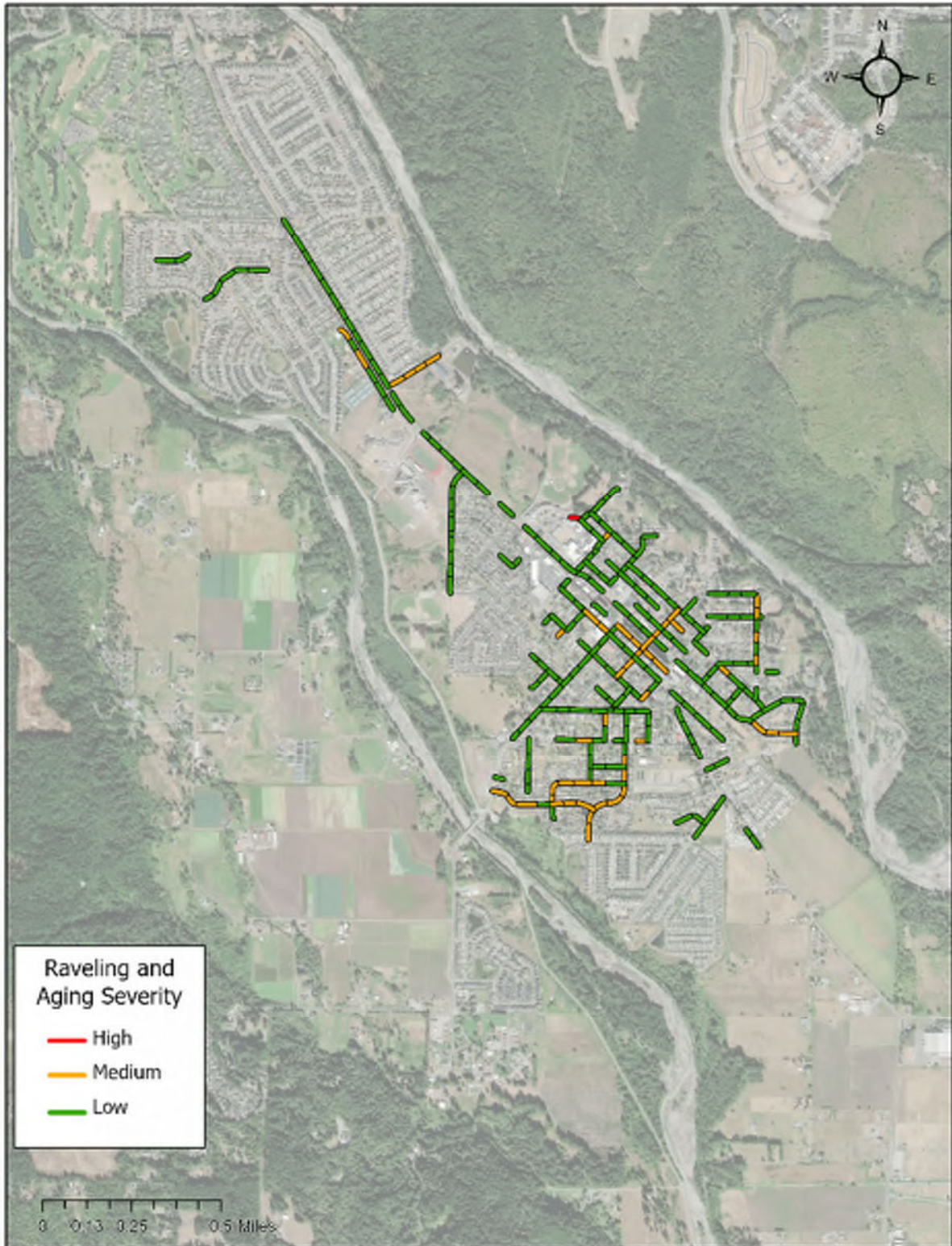


Figure 22. Raveling and Aging in Orting



### 4.3.7 Flushing and Bleeding

Flushing and bleeding look shiny on colder days and can approach a goeey look on hot days (cold day, ~60 degrees, shown in Figure 24 below). It occurs when there is excess binder in the pavement, causing it to bleed to the surface. Chip seals often lead to this condition as they get older. This distress can be halted by applying sand to soak up excess binder, but it likely needs a repave or slurry seal to permanently fix. Flushing and bleeding in Orting were assessed on limited segments of long of roads and are particularly indicative of a poor binder mix during asphalt roadway construction or asphalt roadway construction during weather elements that negatively impact curing of these binders. (Figure 25 on page 21).

#### Severity

- Low – Minor amounts of aggregate covered by excess asphalt
- Medium – Significant amount of the aggregate covered by excessive asphalt
- High – Most of the aggregate is covered by excessive asphalt



**Figure 23. Flushing and Bleeding Severities**

#### Frequency

- Extent of flushing observed is either localized, confined to the wheel path, or across the entire lane.



**Figure 24. Flushing and Bleeding on Park Place**

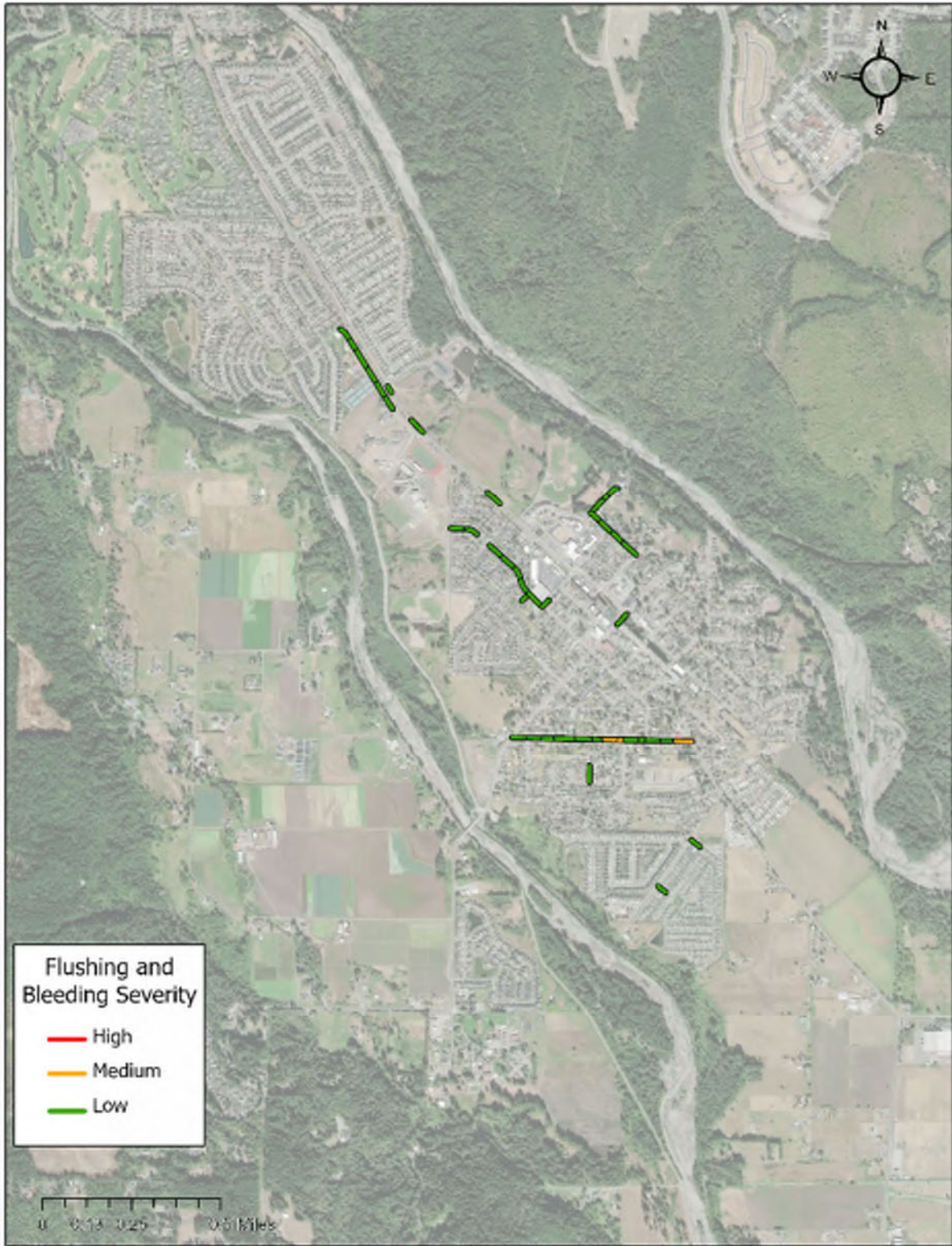


Figure 25. Flushing and Bleeding in Orting



### 4.3.8 Patching

Roadway patches occur anywhere the original construction of pavement has been cut into (Figure 27 below). Patching is a result of various activities. Patching can be the result of a utility repair below the roadway surface. Patching can occur to repair a failed portion of the roadway either a pothole or excessive cracking that affects a limited section of an otherwise good roadway. Patching can occur to address subgrade failures on the edges of pavement where the roadway width has been compromised. The assessment found a low frequency of patching and a high rate of patching success where patches are present. Patches failed are assessed by the type of failure present within the roadway segment and considered high severity if the patch has otherwise failed. No conditions of severe patching were assessed in the city of Orting. (Figure 28 on page 24).

#### Severity

- Low – Patch has at most low severity distress of any type.
- Medium – Patch has at most medium severity distress of any type.
- High – Patch has at most high severity distress of any type.



**Figure 26. Patching Severities**

#### Frequency

- Percentage of each wheelpath affected.



**Figure 27. Patching on Bridge Street**



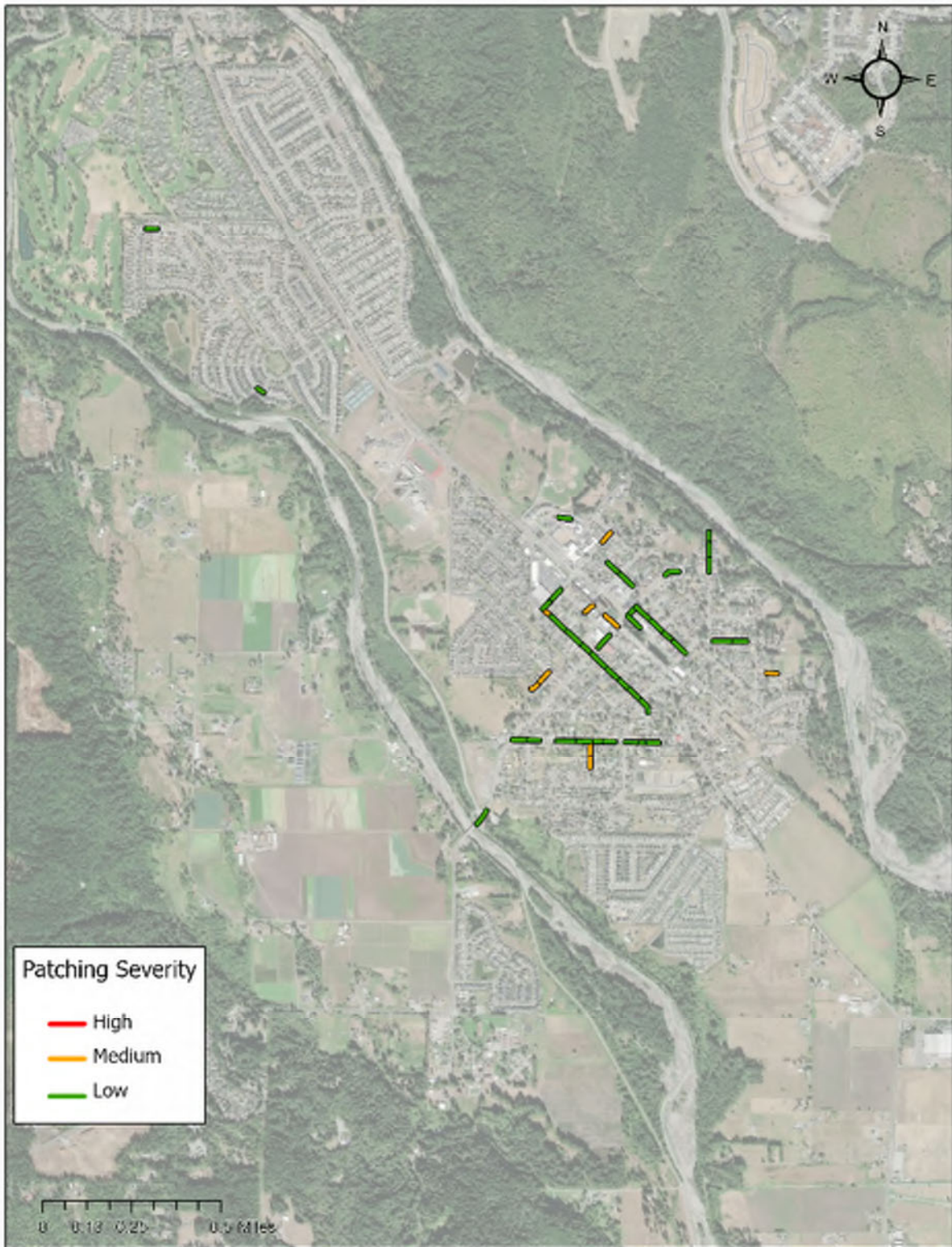


Figure 28. Patching in Orting



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### 4.3.9 Corrugation and Waves

This distress was not significant, although a few cases were noted, in the baseline pavement condition assessment performed for Orting.

#### Severity

- Low – ½ inch to 2 inches per 10 feet.
- Medium – 2 inches to 4 inches per 10 feet.
- High – Over 4 inches per 10 feet.

#### Frequency

- Extent of corrugations measured in square feet.

### ■ Sags and Humps

Sags and humps are localized low or high points in a roadway respectively (see sags in Figure 29 below). These may result from settlement, tree roots, pavement shoving, or subgrade swelling. Patching should fix this condition if it is localized while a repave may be more appropriate if an entire roadway sags and humps. Sags and humps of medium and high severity were present on the lowest rated roads in this assessment, Old Pioneer Way, and Kansas Street (Figure 30 on page 27).

#### Severity

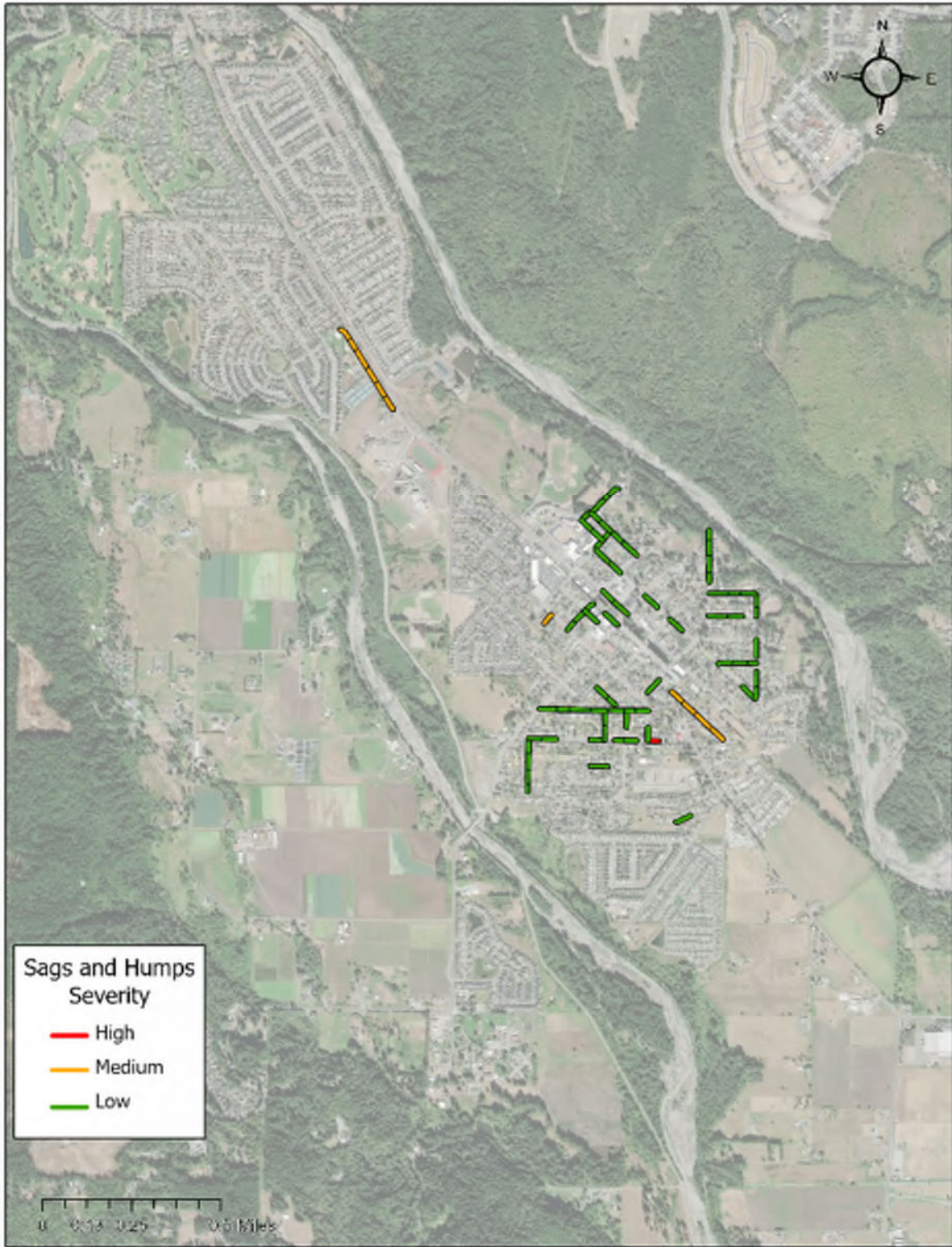
- Low – ½ inch to 2 inches per 10 feet.
- Medium – 2 inches to 4 inches per 10 feet.
- High – Over 4 inches per 10 feet.

#### Frequency

- Percentage of the lane-area affected.



**Figure 29. Sags along Hays Avenue**



**Figure 30. Sags and Humps in Orting**



### 4.3.11 Block Cracking

This distress was not significant, although a few cases were noted, in the baseline pavement condition assessment performed for Orting.

#### Severity – Block Size

- Low – 9 x 9 feet or greater.
- Medium – 5 x 5 feet to 8 x 8 feet blocks.
- High – 4 x 4 feet blocks or less.

#### Severity – Crack Size

- Low – Less than ¼ inch.
- Medium – Over ¼ inch.
- High – Spalled.

#### Frequency

- Not measured for rutting, applied to entire segment.

### ■ Pavement Edge Condition

Low severity edge condition, or edge raveling, is common and often occurs near gravel driveways as seen in Figure 31 below. It can lead to more severe edge conditions, such as potholes, or very severe conditions where the travel lane is effectively less than 10 feet wide. Treatment for edge raveling and potholing includes patching or half road patching depending on the severity of the patch. Edge conditions were mainly present in a low severity case, but also has some medium severity segments and one high severity segment, as seen in Figure 32 on page 30.

#### Severity – Crack Size

- Low – Edge Raveling.
- Medium – Edge Patching.
- High – Edge lane less than 10 feet.

#### Frequency

- Percentage of the length of each segment evaluated.



**Figure 31. Edge Raveling on Olive Street**

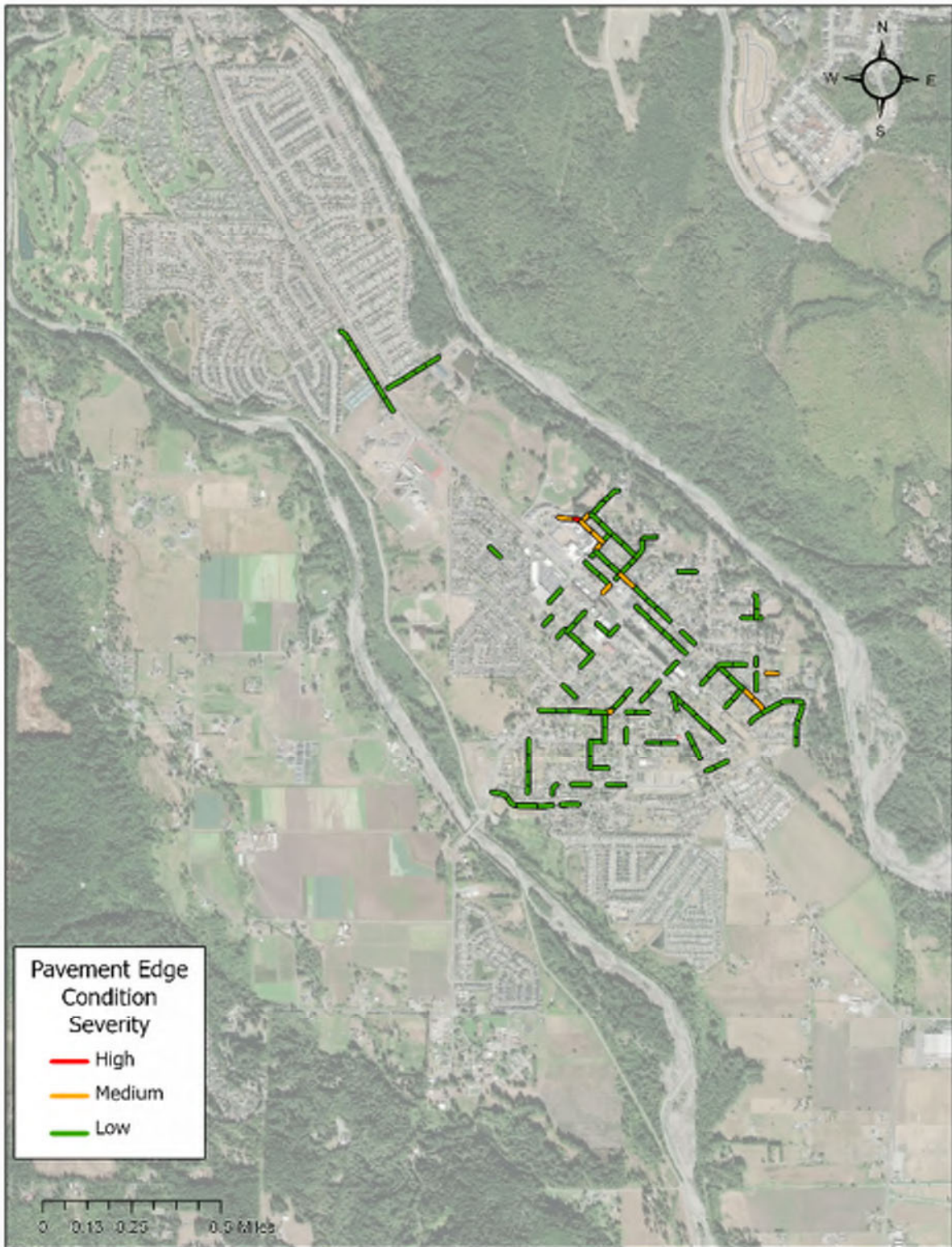


Figure 32. Edge Conditions in Orting



## Crack Seal Condition

Crack sealing is a valuable maintenance method for cracks as it limits water infiltrating the base material (see Figure 33 below). This, in turn, delays or prohibits the expensive maintenance methods aimed at fixing the base levels. It is important to know where cracks are present that have not been sealed, so the final condition rated the extent of crack sealing and if there were any new cracks forming through the seal. Figure 34 on page 32 shows all the locations crack sealing was observed in Orting.



**Figure 33. Crack Seal down Silvernail Street**



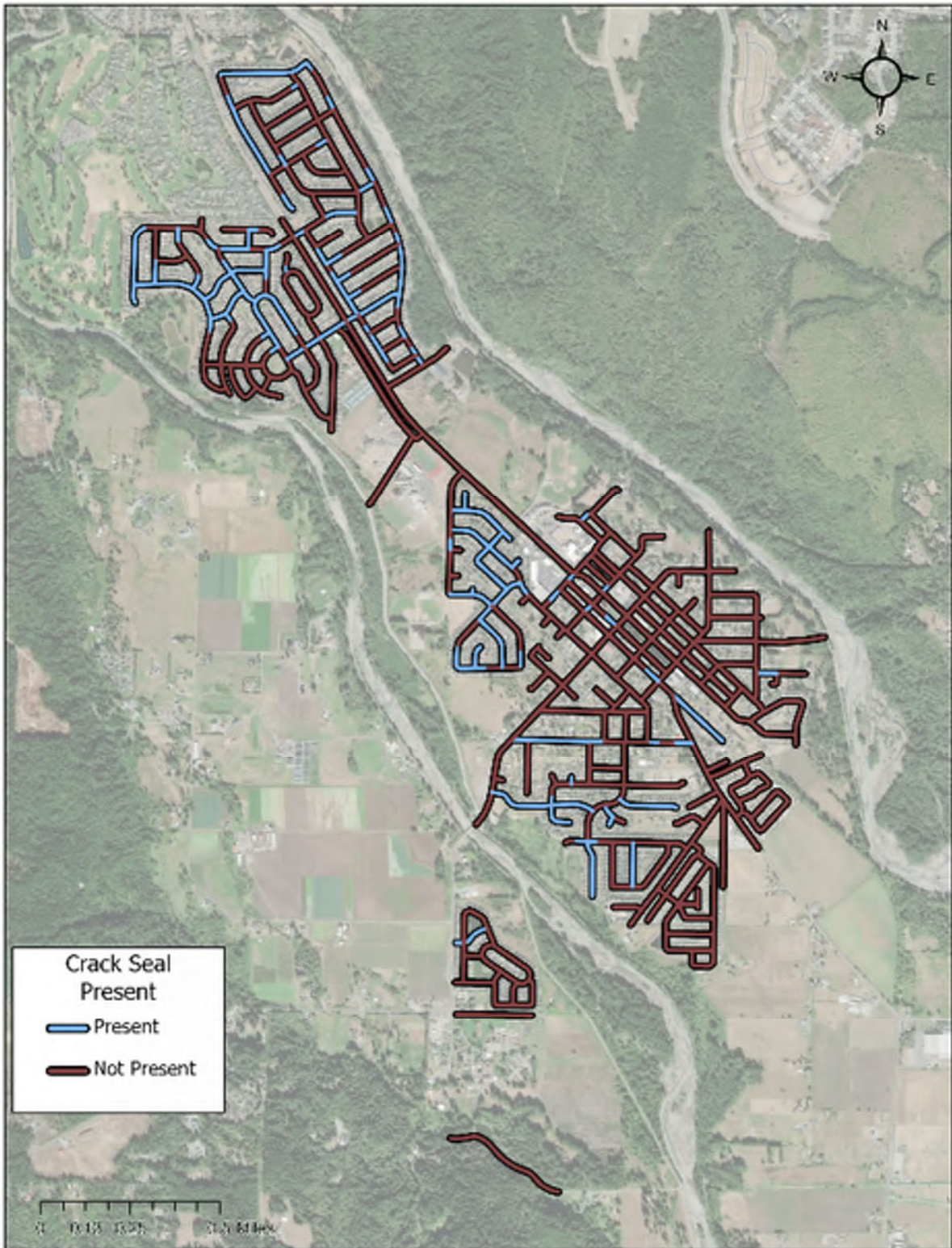


Figure 34. Crack Sealing in Orting



## 5. OVERALL PAVEMENT CONDITION RATINGS

### 5.1 INTRODUCTION

In order to compare and prioritize segments for inclusion in the City's pavement management system, it is helpful to have an overall rating of the pavement condition for each segment. With this data, segments can be prioritized for both maintenance and preservation actions and a plan to address them can be developed considering all segments, even though they experience different issues that, at times, have different solutions. This section describes how the overall rating was assigned for each segment and summarizes the condition of the city's roadway network.

### 5.2 OVERALL PAVEMENT CONDITION RATINGS METHODOLOGY

Based on the cumulative presence or lack-of, the distresses discussed in Section 4 and the severity and frequency of these distresses, we developed a weighted grading of pavement condition. This section describes how the overall rating was determined.

We collected field data for each segment and applied a rating scale based on the distresses found:

Not present (0); Low (1); Medium (2); High (3)

These severities are based on conditions specific to the distress type present, e.g., alligator cracking is rated based on the width of cracks and severity of roadway spalling, 0 being no alligator cracking and 3 being roadway spalling or large intrusive cracking. See individual distress sections for these rating metrics.

We then included a weighting factor on the significance of the distress type:

Alligator Cracking, Rutting (5)

Raveling and Aging, Corrugation and Waves (4)

Block Cracking, Longitudinal Wheel Path Cracking, Transverse Cracking, Crack Seal Condition, Flushing and Bleeding (3)

Patching, Sags and Humps (2)

Pavement Edge Condition, Longitudinal Non-wheel Path Cracking (1)

We included another factor based on the volume of the distress type included:

0 – 10%, 1-4, etc. (1)

11-25%, 4-9, etc. (1.2)

25%+, 10+, etc. (1.5)



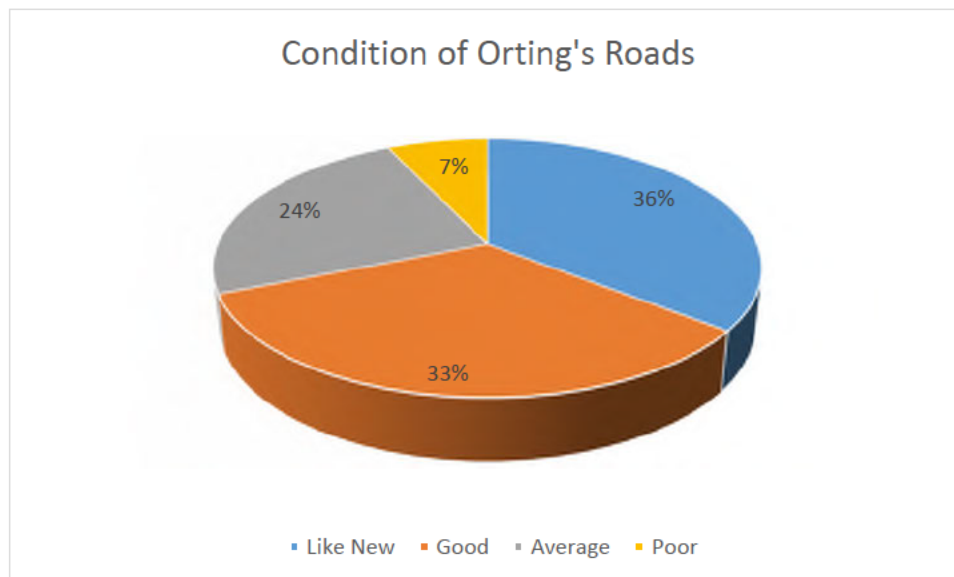
The purpose of these modification factors is to quantify the distresses in each segment in a way that allows them to be compared to like segments and compare typical distresses found. From these quantitative ratings, a qualitative rating of Like New, Good, Average, or Poor was determined. This overall rating will help us compare the segments to each other if different types of distresses are present so that we can prioritize maintenance and preservation activities to include in the multi-year pavement management program. A full list of roadway segments, along with their field pavement condition ratings, has been included in Appendix C and is also shown in Figure 2 on page 8.

### 5.3 SUMMARY OF OVERALL PAVEMENT CONDITION RATINGS

Figure 1 on page 7 shows the overall pavement condition ratings summarized by each roadway’s functional classification. This summary shows that 7% of the lane-miles are rated poor, 24% are rated average, 33% are rated good and the last 36% are rated like new (consolidated in Figure 35 below). As these figures demonstrate, the majority of the city’s roadway network is in good or new condition and likely does not need any pavement preservation and/or maintenance work at this time.

Approximately 24% of the remaining 31% roadway segments are rated in average condition and would likely benefit from pavement preservation and/or maintenance work to their usable life. Only 7% of the city’s network is rated in poor condition which would require more extensive reconstruction or replacement work. The most significant of the poor segments were along Kansas Street, which is a principal arterial south of downtown. This roadway was observed being used by commercial trucks to bypass downtown and the frequent high loads have deteriorated the pavement to a poor condition. At the time of assessment, a planned reconstruction of Kansas Street is scheduled for 2024.

The other, notably poor roadway is Old Pioneer Way, which is a local access road that starts at State Route 162 (SR 162) and runs parallel for several blocks and dead-ends before reaching Lane Blvd. NW. There were both commercial and residential developments along this roadway and it is a much lower traffic roadway than Kansas Street. These two roads, combined with a few other sporadic segments, make up the roughly 7% of roads in Orting with a poor condition.



**Figure 35. The Majority of Orting's Roadways are in a Good or Like New Condition**



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## 6. NEXT STEPS

The next step in the development of the city's Pavement Management System is to prioritize the poor and average sections and identify a list of projects to be programmed annually so that the City can pursue funding for this work. This will be done by considering the overall pavement condition ratings and functional classifications along with other considerations to prioritize each segment and then packaging like work into phases of pavement preservation and maintenance activities. A separate PMS report will include this work.



## APPENDIX B

### REFERENCES

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# APPENDIX C

## PRESERVATION TREATMENT UNIT COSTS

**FINAL UNIT CONSTRUCTION COSTS**

Crack Seal	\$2.30 per lf of lane	\$12,144 cost per lane mile
Chip Seal	\$12.20 per lf of lane	\$64,416 cost per lane mile
Mill and Fill	\$44.80 per lf of lane	\$236,544 cost per lane mile
Reconstruction	\$142.10 per lf of lane	\$750,288 cost per lane mile

**LEGEND**

	from uba
	calculation
	user input

Crack Seal		Chip Seal		Mill and Fill (grind and overlay)		Reconstruction	
\$4.63	per lf	\$10.00	per sy	\$36.65	per sy	\$116.25	per sy
8%	mobilization		All inclusive cost per prior research and confirmed with WSDOT UBA	10%	mobilization	10%	mobilization
\$0.33	per lf, mobilization			\$3.33	per sy, mobilization	\$10.57	per sy, mobilization
\$4.10	per lf, crack seal			\$11.50	per sy, planing bituminous pavement	\$45.20	per cy, roadway excavation incl. haul
5%	% of construction cost for traffic control			\$175.00	per ton, HMA CL. 1/2 IN. PG 58H-22	15	depth (in)
\$0.21	per lf, traffic control			\$358.75	per cy, HMA CL. 1/2 IN. PG 58H-22	\$18.83	per sy, roadway excavation incl. haul
				2	depth (in)	\$41.58	per ton, csbc
				\$19.93	per sy, HMA CL. 1/2 IN. PG 58H-22	\$76.92	per cy, csbc
				6%	% of construction cost for traffic control	9	depth (in)
				\$1.89	per sy, traffic control	\$19.23	per sy, csbc
						\$175	per ton, HMA CL. 1/2 IN. PG 58H-22
						\$358.75	per cy, HMA CL. 1/2 IN. PG 58H-22
						6	depth (in)
						\$59.79	per sy, HMA CL. 1/2 IN. PG 58H-22
						8%	% of construction cost for traffic control
						\$7.83	per sy, traffic control

Adjusting costs to lane width per LF			
11 lf wide lane (average)			assumes 6" HMA on 9" CSTC
1 lf of lane length		9.0 sy/sf	9.0 sy/sf
		\$12.20 per lf of lane	\$44.80 per lf of lane
Assume, on average, cracking runs 1x the length of the lane			\$142.10 per lf of lane
0.5 lf crack per length of lane	\$2.30 per lf of lane		



---

# **APPENDIX D**

## **PROGRAM COSTS**



**Workplan Table**

<b>RECONSTRUCTION PROJECT</b>	<b>Construction Cost (in 2023 dollars)</b>	<b>Linear Feet of La</b>	<b>Year Start</b>	<b>Year End</b>	<b>Yearly Cost</b>
Train Street Reconstruction (Eldredge Avenue to Ammons Lane)	\$415,000	2917	2026	2026	\$415,000.00
Skinner Way Reconstruction (Calistoga Street to Belfair Avenue)	\$273,000	1,915	2027	2027	\$273,000.00
Bowlin Avenue Reconstruction (Parker Lane to Leber Street)	\$260,000	1,828	2028	2028	\$260,000.00
Old Pioneer Way Reconstruction (North of Chief Emmons Lane)	\$404,000	2,842	2029	2029	\$404,000.00
Kansas Street Reconstruction (Budgeted Separately)					
Whitehawk Boulevard Extension (Budgeted Separately)					
Annual TBD Reconstruction After 2024 (TBD)	\$900,000	NA	2024	2029	\$150,000.00
<b>OVERLAY PROJECT</b>	<b>Construction Cost (in 2023 dollars)</b>	<b>Linear Feet of La</b>	<b>Year Schedu</b>	<b>Year End</b>	<b>Yearly Cost</b>
Corrin Avenue Overlay (Whitesell Street to Bridge Street)	\$179,000	3,986	2024	2024	\$179,000.00
Eldredge Avenue Overlay (Whitesell Street to Calistoga Street)	\$90,000	1,990	2024	2024	\$90,000.00
Anderson Street Overlay (Williams Street to Boatman Avenue)	\$99,000	2,203	2024	2024	\$99,000.00
Orting Avenue Overlay (Callendar Street to Whitehawk Boulevard)	\$61,000	1,358	2024	2024	\$61,000.00
Deeded Lane Overlay (Calistoga Street to Eldredge Avenue)	\$145,000	3,216	2025	2025	\$145,000.00
Ammons Lane Overlay (Leber Street to River Avenue)	\$135,000	2,994	2025	2025	\$135,000.00
Corrin Avenue Overlay (South of Harman Way)	\$93,000	2,060	2026	2026	\$93,000.00
Brown Street and Brown Way Overlay	\$134,000	2,983	2027	2027	\$134,000.00
Washington Avenue Overlay (South of Bridge Street)	\$150,000	3,330	2028	2028	\$150,000.00
Annual Overlay After 2026 (TBD)	\$240,000	NA	2027	2029	\$80,000.00
<b>CHIP SEAL PROJECT</b>	<b>Construction Cost (in 2023 dollars)</b>	<b>Linear Feet of La</b>	<b>Year Schedu</b>	<b>Year End</b>	<b>Yearly Cost</b>
Olive Street Chip Seal	\$10,000	749	2025	2025	\$10,000.00
Whitehawk Boulevard Chip Seal (Washington Avenue to Orting Avenue)	\$69,000	5,617	2025	2025	\$69,000.00
Calistoga Street Chip Seal (Kansas Street to Corrin Avenue)	\$52,000	4,222	2025	2025	\$52,000.00
Tacoma Avenue Chip Seal	\$22,000	1,770	2025	2025	\$22,000.00
Stone Street Chip Seal (Headley Avenue to Mellinger Avenue)	\$12,000	982	2025	2025	\$12,000.00
Eldredge Avenue Chip Seal (Calistoga Street to Kansas Street)	\$41,000	3,313	2025	2025	\$41,000.00
Annual Chip Seal After 2025 (TBD)	\$120,000	NA	2026	2029	\$30,000.00
<b>CRACK SEAL PROJECT</b>	<b>Construction Cost (in 2023 dollars)</b>	<b>Linear Feet of La</b>	<b>Year Schedu</b>	<b>Year End</b>	<b>Yearly Cost</b>
Boatman Avenue/Cloud Street/Nunnally Avenue Crack Seal (Lane Boulevard to Colorossi Circle)	\$9,000	3,871	2024	2024	\$9,000.00
Icey Street Crack Seal (East of Grinnell Avenue)	\$4,000	1,729	2024	2024	\$4,000.00
Grinnell Avenue Crack Seal (South of Balmer Street)	\$4,000	1,642	2024	2024	\$4,000.00
Williams Boulevard/Avenue/Court Crack Seal (West of Headley Avenue)	\$8,000	3,356	2024	2024	\$8,000.00
Williams Street Crack Seal (Ozzie Street to Williams Avenue)	\$7,000	2,845	2024	2024	\$7,000.00
Mellinger Avenue Crack Seal (Williams Street to Williams Boulevard)	\$4,000	1,685	2024	2024	\$4,000.00
Nunally Avenue Crack Seal (Cloud Street to Williams Boulevard)	\$5,000	1,960	2024	2024	\$5,000.00
Lane Boulevard Crack Seal (Nunnally Avenue to Washington Avenue)	\$5,000	2,086	2024	2024	\$5,000.00
Thompson Avenue Crack Seal (Callendar Street to Groff Avenue)	\$4,000	1,688	2024	2024	\$4,000.00
Calistoga Street Crack Seal (Ammons Lane to River Avenue)	\$5,000	1,831	2024	2024	\$5,000.00
Callendar Street Crack Seal (Thompson Avenue to Groff Avenue)	\$4,000	1,676	2024	2024	\$4,000.00
Train Street Reconstruction (Eldredge Avenue to Ammons Lane)*	\$7,000	2917	2024	2024	\$7,000.00
Skinner Way Reconstruction (Calistoga Street to Belfair Avenue)*	\$5,000	1,915	2024	2024	\$5,000.00
Bowlin Avenue Reconstruction (Parker Lane to Leber Street)*	\$5,000	1,828	2024	2024	\$5,000.00
Old Pioneer Way Reconstruction (North of Chief Emmons Lane)*	\$7,000	2,842	2024	2024	\$7,000.00
Corrin Avenue Overlay (South of Harman Way)**	\$5,000	2,060	2024	2024	\$5,000.00
Brown Street and Brown Way Overlay**	\$7,000	2,983	2024	2024	\$7,000.00

Washington Avenue Overlay (South of Bridge Street)**	\$8,000	3,330	2024	2024	\$8,000.00
Annual Crack Seal After 2024 (TBD)	\$125,000	NA	2025	2029	\$25,000.00

\* Crack Seal prior to scheduled reconstruction

\$4,132,000.00



**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: Pavement Management &amp; ADA Transition Funding</b>	<b>AB23-XX</b>	<b>Public Works</b>		
		<b>9.6.23</b>		
	<b>Department:</b>	PW/Administration		
	<b>Date Submitted:</b>	August 24, 2023		
<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>	Discussion			
<b>Submitted By:</b>	Scott Larson			
<b>Fiscal Note:</b> None				
<b>Attachments:</b> Funding Memorandum, Pavement Assessment, ADA Self Assessment				
<b>SUMMARY STATEMENT:</b>				
See attached memorandum outlining funding options for pavement preservation and the ADA transition plan.				
<b>RECOMMENDED ACTION:</b> Discussion. If there is going to be a funding recommendation, an Ordinance will have to be drafted.				
<b>FUTURE MOTION:</b> None				



# Memo

To: CM Williams, CM Moore

From: Scott Larson, City Administrator

cc: Marshal Mauer, Public Works Director; John Bielka, Capital Projects Manager

Date: August 24, 2023

Re: Funding for Pavement Preservation and ADA Transition Plan

---

## Street Condition Assessment:

1. In 2011 the council adopted Ordinance No. 920, establishing a Transportation Benefit District for the purpose of a stable funding source to maintain existing motorized transportation facilities, as existing resources were found to be inadequate for this purpose, by assessing a \$20 per vehicle tax paid at the time of vehicle license renewal.
2. In 2015 the council adopted Ordinance No. 2015-972 which dissolved the District and absorbed it under the "City" government continuing with established plan and goals of street preservation and maintenance.
3. In 2016 council adopted Resolution No. 2016-29 modifying permissible uses of TBD funding to include non-motorized transportation facilities.
4. In 2020 Council adopted Ordinance No. 2020-1058 which reduced the TBD fee to \$0.00 following passage of I-976.
5. In October of 2020 the Washington State Supreme Court found I-976 unconstitutional, allowing cities to continue assessing transportation benefit district fees.
6. In 2022, the council adopted a goal of completing a street assessment and coming up with a plan to pay for said maintenance.

The TBD fee was the city's primary source of revenue for street maintenance (chip seal/grind & overlay) of our city streets. In 2022 council approved a scope and budget for SCJ Alliance to complete a street assessment and propose a maintenance program for council to consider. The tenants of this program would be consistent cost over time with the goal of addressing pavement maintenance over a 7-10-year timeframe.

SCJ Alliance proposed a 6-year schedule to complete recommended street maintenance which would cost more than is annually feasible. Staff recommend looking to spend about \$100 thousand internal dollars (funding to be determined) and leverage those funds with Transportation Improvement Board pavement preservation grant funds.

## ADA Self Assessment

SCJ alliance completed an ADA self-assessment of city facilities within the Right of Way. To maintain eligibility for federal transportation funds, the city has to demonstrate progress on addressing non-compliant facilities. The assessment determined that there are a large portion of the city's pedestrian ramps that do not meet the 2012 standards, which are the most current standards. SCJ shows in their assessment what a 10-year replacement timeline would look like, which would cost approximately \$400 thousand per year. This amount is not feasible for the city to collect and spend internally. Staff believe that committing \$50,0000 per year to ramp replacements, along with grant funds for the same, we can make adequate progress on this by starting with areas that are most used, or areas that the public identifies as being a hinderance to their mobility.

## Funding Options

With the assumption that we are looking at funding these projects through mechanisms allowed under Chapter 36.73 RCW, the Transportation Benefit Districts statute, the two primary options are, as outlined by the Municipal Research and Service Center (MRSC):

### Sales and Use Taxes

The most common TBD funding source is a sales and use tax of up to 0.3% (RCW 82.14.0455, RCW 36.73.040(3)(a)).

Effective July 1, 2022, 0.1% of this sales tax may (optionally) be imposed councilmanically (by a majority vote of the governing board), as long as the TBD includes all of the territory within the jurisdiction(s) forming the TBD. Otherwise, the sales tax must be approved by a simple majority of voters.

These sales tax may generally not exceed 10 years, but they may be renewed for additional 10-year periods with voter approval or a vote of the governing board, as appropriate. The TBD sales tax may only exceed 10 years for the repayment of debt, in which case the ballot measure should state the intended use and duration of the debt service.

In recent years, voters have approved the vast majority of all proposed TBD sales and use taxes...

### Vehicle License Fees

Another common TBD funding source is a vehicle license fee (RCW 82.80.140, RCW 36.73.040(3)(b)). Initiative 976, approved by voters in 2019, would have eliminated the ability to impose any TBD vehicle license fees. However, this initiative was ruled unconstitutional by the state Supreme Court in 2020 (Garfield County Transp. Auth. et al. v. State et al.).

TBDs may impose councilmanic vehicle license fees up to \$50 without voter approval, subject to the following conditions, or may impose fees up to \$100 with voter approval.

A TBD may impose a nonvoted vehicle license fee up to \$20 at any time, but a TBD may only impose a nonvoted vehicle license fee above \$20 as follows:

- Up to \$40, but only if a \$20 fee has been in effect for at least 24 months.
- Up to \$50, but only if a \$40 fee has been in effect for at least 24 months. Any nonvoted fee higher than \$40 is subject to potential referendum, as provided in RCW 36.73.065(6).

Any license fees over these amounts, up to a maximum of \$100, must be approved by a simple majority of voters. However, most jurisdictions have opted for the councilmanic (nonvoted) fees. The only TBD to successfully pass a voted vehicle license fee is the Seattle TBD, where voters approved a \$60 fee increase in 2014 after rejecting a similar increase in 2011. A handful of other jurisdictions have attempted voted TBD license fees without success, including Bremerton, Burien, and Edmonds (all in 2009) and King County (in 2014).

Based on the city’s prior experience with TBD fees and sales taxes here are the estimated revenues each source would raise:

Fee	Estimated Revenue
Tab Fee (\$20) <sup>1</sup>	\$140,000
Sales Tax (0.1%)	\$100,000
Voter Approved Sales Tax (up to 0.3%)	\$300,000

The table below shows TBD revenue since 2015:

Year	Revenue	Population	\$/capita
2015	127,848.60	7,501	17.04
2019	132,580.80	7,785	17.03
2017	135,991.35	8,126	16.74
2018	138,512.55	8,415	16.46
2019 <sup>2</sup>	140,898.45	8,735	16.13
2020	42,995.70	9,041	-
2021	178.20	9,010	-
2022	19.80	9,055	-
2023	0.00	9,110	-
Grand Total	719,025.45		

<sup>1</sup> It is estimated that the city would receive approximately \$15.50 per capita for license tab fees of \$20 per registered vehicle.

<sup>2</sup> 2019 was the city’s last full year of TBD fees.



# Self-Evaluation and ADA Program Access Plan

City of Orting

**Prepared For:**  
City of Orting

**Prepared By:**  
SCJ Alliance  
Lisa M. Reid, PE, PMP  
1201 Third Ave, Suite 550  
Seattle, WA 98101  
206.739.5454

**DRAFT** July 2023





# Self-Evaluation and ADA Program Access Plan

## Project Information

Project: ADA Program Access Plan  
Prepared for: City of Orting  
John Bielka, PE  
104 Bridge St S. Orting, WA 98360

## Project Representative

Prepared by: SCJ Alliance  
1201 Third Ave, Suite 550  
Seattle, WA 98101  
206.739.5454  
scjalliance.com

Contact: Lisa M. Reid, PE, PMP

Project Reference: SCJ #000383

Path: \\ad.scj.io\Global\Projects\4270 City of Orting\21-000838 Orting 2021-24 On-Call PE Services\Phase 12 - Transportation and Traffic Engineering\12.01 ADA Transition Plan\Program Access Plan Draft\Orting ADA Program Access Plan Rough Draft LMR.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.



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Prepared by Andrew Armstrong, EIT

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Approved by Lisa M. Reid, PE, PMP

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## 1 Introduction

The City of Orting (City) is committed to providing equal access to its programs, services, and activities to all its residents. This Self-Evaluation and ADA Program Access Plan (Plan) is a living document which will help guide planning and implementation for removing accessibility barriers within the City’s jurisdiction. Public comments are always welcome and the City will update the plan periodically.

## 2 Legal Requirements

The American with Disabilities Act (ADA) and the Rehabilitation Act of 1973, Section 504, requires cities with fewer than fifty employees, that is a recipient, or subrecipient, of federal financial assistance, to prepare a Self-Evaluation and ADA Program Access Plan. The ADA also dictates that public entities must reasonably modify its policies, practices, and procedures to avoid discrimination against people with disabilities. WSDOT discusses these requirements in its Local Agency Guidelines (LAG) Manual.

### 2.1 Legal Mandate

The ADA is a civil rights law for persons with disabilities that’s purpose is to provide a “clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities.” This law, passed in 1990, followed the Rehabilitation Act of 1973, and both combine to describe the City’s responsibilities for ADA accessibility. This Program Access Plan is a requirement of the Rehabilitation Act, specifically Section 504, shown below.

*No otherwise qualified individual with a disability in the United States shall, solely by reason of his or her disability, be excluded from the participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. This part applies to each recipient of Federal financial assistance from the Department of Transportation and to each program or activity that receives such assistance. (Section 504)*

#### 2.1.1 Title I of the ADA

Title I of the ADA addresses employment practices and prohibits discriminating against qualified individuals with disabilities. This discrimination is prohibited in a number of areas, including but not limited to application processes, hiring, employment termination, promotion, compensation, and training. The City is an equal employment opportunity employer and complies with Title I.

#### 2.1.2 Title II of the ADA

Title II of the ADA, which adopts much of Section 504 of the Rehabilitation Act of 1973, is the one addressed in this Plan. It prohibits the City from denying equal opportunity to services, programs, and activities to persons with disabilities. This prohibition applies whether the denial is direct or indirect.

### 2.2 ADA Self-Evaluation and Program Access Plan Requirements

This Plan is intended to provide a framework for the continuous improvement of City programs and facilities for people with disabilities. This Plan addresses facilities within the public right-of-way, especially curb ramps, and is intended to be updated as barriers are removed, programs change, and/or new facilities come under control of the City. Programs offered by the City must be accessible to all people. The administrative requirements of this plan include:

**Commented [LMR1]:** John - we need to:  
1. Identify an ADA Coordinator (we designated you in 2.4)  
2. Develop a grievance process (typically a submittal form online)

- Designation of an ADA Coordinator responsible for overseeing Title II compliance,
- Development of an ADA grievance/complaint procedure,
- Completion of a self-evaluation of facilities, programs, and services,
- Development of a program access plan where the self-evaluation identifies any accessibility deficiencies.

This Plan identifies and makes recommendations to correct practices that result in limitations on access. As part of the self-evaluation, the City:

- Identifies the city's programs, activities, and services
- Reviews the policies, practices, and procedures that govern the administration of the City's programs, activities, and services
- Provides opportunity for public comment
- Makes the report available to the public
- Correct and programs, activities, and services that are not consistent with the requirements

This Plan identifies barriers for people with disabilities and a schedule to remove these barriers over time and includes:

- A list of the physical barriers in the City's facilities that limit the accessibility of its programs, activities, or services to individuals with disabilities
- A detailed outline of the methods to be used to remove these barriers and make the facilities accessible
- A schedule for taking the steps necessary to achieve compliance with ADA Title II
- Provide opportunity for the public to provide comment on the Transition Plan
- The name of the individual responsible for the plan's implementation

This Plan is an assessment of the City's right-of-way facilities to find if there are barriers to City programs for people with disabilities. The facilities with barriers have been identified and summarized in Chapter 3.

### 2.3 Public Involvement

The ADA requires the involvement of people with disabilities in the development and review of the ADA Self-Evaluation and Program Access Plan. A public grievance policy will be adopted along with the implementation of this plan to address current and on-going ADA related barriers as they are identified and as public infrastructure and policy are updated.

### 2.4 ADA Coordinator

The City Capital Projects Manager was designated as the ADA Coordinator. This position is responsible for ensuring the accessibility of all programs, services, and activities of the City. The City's ADA Coordinator is:

John Bielka  
104 Bridge Street South  
Orting, WA 98360

**Commented [LMR2]:** John - We still need to coordinate with the City on the policies, practices and procedures and discuss with you and the Council how to get public input on this.

**Commented [LMR3]:** John - Based on the completion of the first two bullets, we'll likely have recommended actions for the second two to implement corrections or adjustments.

**Commented [JG4]:** Do these apply to our program access plan

**Commented [AA5R4]:** Yes

**Commented [AA6R4]:** Per lag manual 29.3, section on program access plan

JBielka@cityoforting.org  
(360) 893-9014

## 2.5 Requesting Accommodation

Requests should be made to the ADA Coordinator as soon as the need for accommodation is known. Requests should be made as follows:

Requests for accommodation at City meetings or events should include:

- The requestor's contact information (name, address, email, and telephone number)
- A description of the program, service, or activity where the accommodation is required
- The location of said program, service, or activity
- A brief description of the reasoning behind the needed accommodation

Requests for materials in alternate **formats** should include:

- The requestor's contact information (name, address, email, and telephone number)
- A name and description of the City document or materials to be reformatted
- Desired formatting of said materials
- A brief description of the reasoning behind the needed reformatting

**Commented [LMR7]:** John - Generally this means readable PDFs and 508 compliant documents. Does not include translation services.

## 2.6 Filing a Grievance

The City has a formal grievance procedure in place to allow residents a way to file complaints on:

- City policies and how it provides services, activities, and programs to persons with disabilities
- Alleged violations of Title II of the ADA by the City or its representatives

This grievance procedure does not preclude filing a complaint of discrimination with any appropriate state or federal agency. Use of this grievance procedure is not a prerequisite in the pursuit of other remedies.

Step 1: To file a grievance, send a letter or an email to the ADA Coordinator with all of the information below:

- Contact information for the person filing the grievance (full name, address, and phone number)
- Contact information for the person discriminated against, if different than the person filing the grievance (full name, address, and phone number)
- The name and address of the program, service, facility, or activity where the incident took place
- A description of the incident, the date(s) it occurred, and the name(s) of any city employees involved
- Any other information that may support the grievance

The ADA Coordinator will notify the person filing the grievance if any additional information is needed. If the requested information is not provided, the ADA Coordinator will close the grievance.

Step 2: The ADA Coordinator will meet with or contact the person filing within 20 days of receiving the grievance to discuss.

**Commented [LMR8]:** John - The City needs to review this and put something in place for public reporting of ADA issues. This is a recommended approach based on other cities.

Step 3: Within 30 calendar days of that meeting or discussion, the ADA Coordinator will respond in a format accessible to the person filing the grievance explaining the City's position and offering options for resolution.

If the response does not resolve the issue in a satisfactory manner, the decision may be appealed to the mayor within 10 calendar days of receiving the response. The appeal should be in writing and explain why the City's response is unsatisfactory, at which point steps 1-3 will begin again with the mayor as the primary contact.

All formal grievances received, appeals, and responses from the City will be kept on file for at least 3 years.

## 2.7 Undue Burden

If the City can demonstrate that an action would result in a fundamental alteration in the nature of its program or activity, would create a direct threat to the participant or others, or would represent an undue financial and administrative burden, it is not required to take it. This determination must be based on an evaluation of all resources available for use in the city and alternative solutions must be examined.

## 2.8 Public Outreach

This Plan has been posted on the City's website, with the goal of receiving input and comments from the general public. These comments should be directed to the ADA Coordinator. This plan will be updated once per year to show completed projects as well as comments or changes suggested by the public as appropriate.

## 2.9 State and Local Requirements

Facilities in the public right of way must be compliant with the 2011 Public Right-of-Way Accessibility Guidelines (PROWAG).

## 2.10 Public Notice Requirements

The City's ADA provisions and grievance/complaint procedures are required to be posted both internally and externally. Posting on the City's website counts as external posting. The ADA provisions shall contain a brief description of how ADA accessibility is addressed in its employment, communications, policies, and resolution of complaints. Both ADA provisions and grievance/complaint procedures must be made available in alternative formats that address the needs of persons with disabilities.

# 3 Self-Evaluation of Policies, Procedures, and Programs

## 3.1 Introduction

Programs, services, and activities offered by the City must be accessible for all people. This section details the review of current Public Works policies and programs. The findings and recommendations contained in this section will serve as a basis for the implementation of specific improvements for providing access to City programs as required by the ADA.



## 3.2 Programmatic Modification

The ADA Coordinator, or designee, will follow-up with department staff to review the recommendations in this section. The ADA Coordinator, or designee, will coordinate with needed parties on the removal of barriers to accessibility when they are found.

## 3.3 Self-Evaluation Findings

### 3.3.1 Public Right of Way

#### 3.3.1.1 City Facilities, Streets, and Parks

Publicly accessible facilities evaluated for this plan include:

- Main Park
- North Park
- City Hall
- Old City Hall
- Cemetery Building
- Library Building
- Whitehawk Park
- Rainier Meadows Park
- Gratzer Ballfield
- Skate Park

These facilities were evaluated due to their accessibility to the public, and all were found to be sufficiently accessible.

#### 3.3.1.2 Public Streets and Curb Ramps

Facilities evaluated for this Plan includes curb ramps and pedestrian activated signals throughout the City's public right-of-way. The facilities were evaluated over a month-long period in early 2023 (March to April with additional reviews performed in July 2023) using criteria from the PROWAG. These facilities were evaluated both in the field and using Google Street View, and the results are compiled in a GIS database. Of the City's approximately 605 existing curb ramps, 104 were found to be compliant with the PROWAG as shown in Figure 1. Of the 501 of non-compliant curb ramps, 28 are simply missing the detectable warning strip (DWS), and the remainder, 473, need to be completely replaced because elements of the curb ramp do not meet width or grade standards.

Commented [LMR9]: Andrew - I think compliant ramps should be shown in green, and non-compliant ramps in red in Figure 1. Then in Figure 2 use red or orange for full replacement and orange or yellow for DWS. These colors are more intuitive than what is shown. Also - I think the legends are wrong.

Commented [AA10R9]: This makes sense - will update.

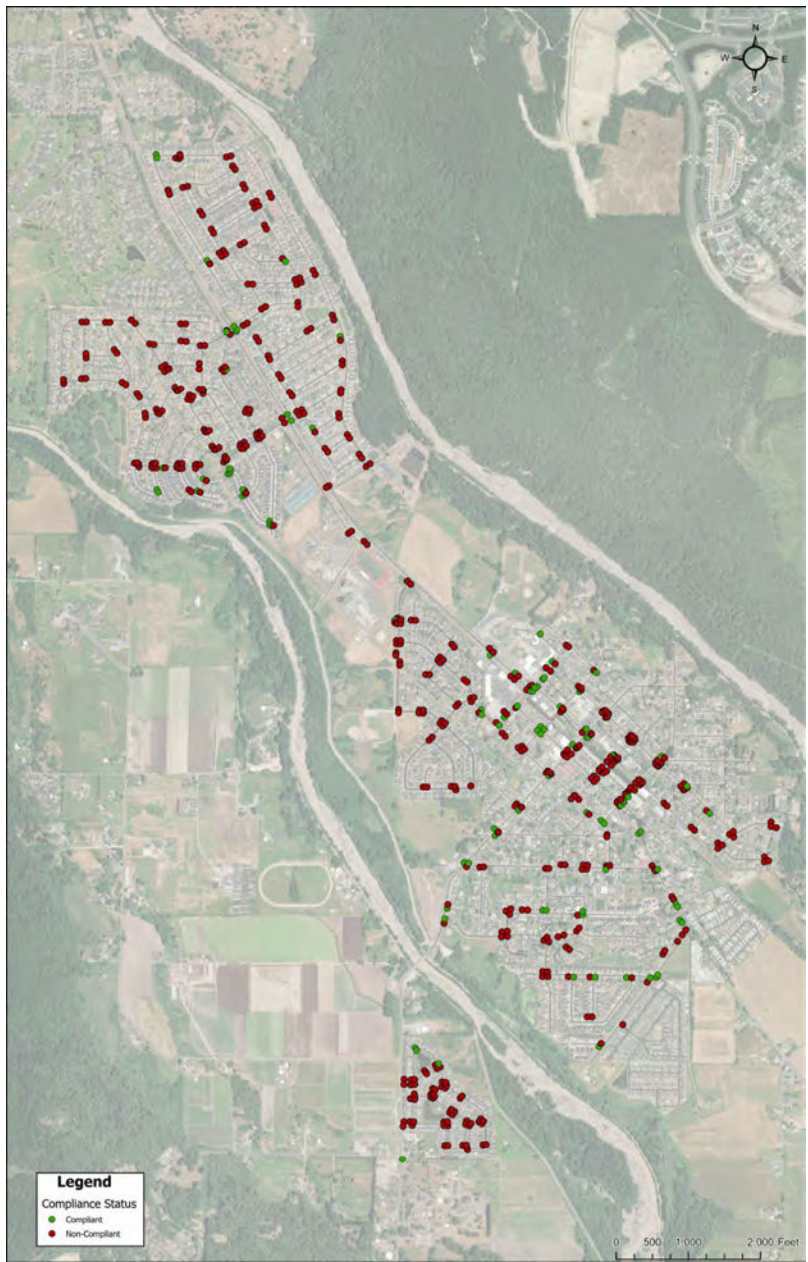


Figure 1. Curb Ramps Labeled by ADA Compliance

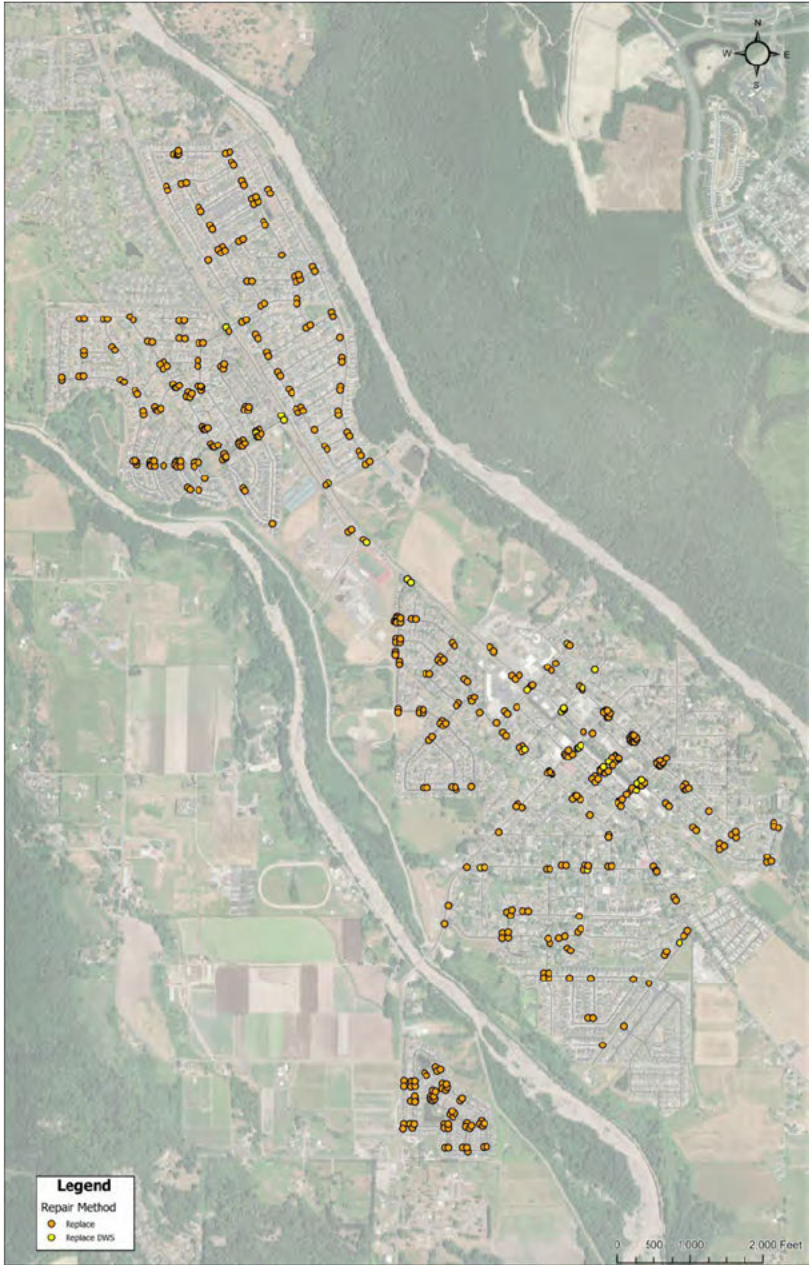


Figure 2. Noncompliant Curb Ramps labeled by Repair Method Needed

Commented [LMR11]: Andrew - it looks like all the blue ones from figure 1 (Compliant) are noted as Replace here (green)???. Is one of these labelled incorrectly?

### 3.3.2 Programs, Services, and Activities

#### 3.3.2.1 Public Meetings, Hearings, and Events

#### 3.3.2.2 Printed Materials

#### 3.3.2.3 Website

#### 3.3.2.4 Contracting/Purchasing

#### 3.3.2.5 Emergency Management Programs

#### 3.3.2.6 Staff Training

**Commented [LMR12]:** John -

We need to complete this section considering public engagement with respect to physical disabilities, hearing, sight, etc. May need to just discuss with you.

## 4 ADA Program Access Plan

### 4.1 Introduction

According to the ADA, localities that receive financial aid from the federal government and have less than fifty employees are required to create a self-evaluation and an ADA Program Access Plan. Public institutions are required by the ADA to make reasonable modifications to their policies, practices, and procedures in order to prevent discrimination against individuals with disabilities. This Plan is a dynamic document that outlines the programmatic steps the City will take to remove all barriers to accessibility under its purview. This plan complies with Section 504 of the Rehabilitation Act's standards as well as the ADA's requirements for accessibility to public programs, services, and activities.

### 4.2 Prioritization of Barrier Removal

Removal of barrier prioritization will follow the methods laid out by WSDOT. They are:

#### Highest Priority

- Priority identified through public input or complaints received, and
- Areas with high concentrations of populations with disabilities (based on Census data),
- Intersections and roadway segments serving facilities including:
  - Government offices
  - Public schools
  - Hospitals, health clinics and health centers
  - Transit facilities (includes bus stops)

#### Second Highest Priority

- Areas with medium/mid-range concentrations of populations with disabilities (based on Census data)
- Intersections and roadway segments serving facilities including:
  - Public housing
  - sports arenas
  - licensing offices
  - libraries
  - shopping malls

- supermarkets
- strip retail centers
- other major employment sites

**Third Highest Priority**

- Areas with lower/low-range concentrations of populations with disabilities (based on Census data),
- Intersections and roadway segments serving facilities including:
  - Industrial areas
- Other areas not classified as high or medium priority

**4.3 Barrier Removal Schedule**

The barrier removal schedule includes all noncompliant ramps and is organized by the priority of each curb ramp. Curb ramp reference numbers, locations, repair method(s), and cost ranges are included for each project area, generally an intersection. This schedule should be used as a planning tool and further inspection may be required to determine if a full curb ramp replacement will be necessary based on future degradation. The estimates below include both DWS and curb ramp replacement.

Commented [AA13]: Do we want all projects laid out as shown? If so, I think a table is a cleaner way to show. Let me know if you agree.

**Table 1. Highest Priority Curb Ramps**

ID No.	Location (Highest Priority)	Repair Method	Cost Range
165-166	Lane Blvd & Washington Ave	2 DWS replacements	\$720 – 960
214-215	Washington Ave N & Rocky Rd NE	2 full replacements	\$0*
225-226	Ptarmigan Ridge Elementary	2 DWS replacements	\$720 – 960
227-228	Old Pioneer Way & Washington Ave	2 DWS replacements	\$720 – 960
229-230	Washington Ave & Whitehawk Blvd	2 DWS replacements	\$720 – 960
231-238	Whitehawk Blvd & Corrin Ave	8 full replacements	\$32,000 – \$48,000
239-242	Whitehawk Blvd & Eldridge Ave	4 full replacements	\$16,000 – \$24,000
292-293 & 297	Washington Ave & Whitesell St	3 full replacements	\$12,000 – \$18,000
299	Whitesell St. & Rainer Ln	1 full replacement	\$4,000 – \$6,000
300-301	Whitesell St. & Varner Ave	2 full replacements	\$8,000 – \$12,000
588-591	Washington Ave and High School	4 full replacements	\$16,000 – \$24,000
592 & 594	Washington Ave and High School	2 full replacements	\$8,000 – \$12,000
598 & 599	Orting City Hall	2 DWS replacements	\$720 – 960
600 & 601	Washington Ave and High School	2 full replacements	\$8,000 – \$12,000

\*the curb ramps at this location will be superseded (replaced) by the pedestrian bridge project on Washington Ave.

Table 2. Second Highest Priority Curb Ramps

ID No.	Location (2 <sup>nd</sup> Highest Priority)	Repair Method	Cost Range
285	Whitesell St & Eldredge Ave	1 full replacement	\$4,000 – \$6,000
287-289	Whitesell St & Corrin Ave	3 full replacements	\$12,000 – \$16,000
290-291	Whitesell St & Scoyoc Ave	2 full replacements	\$8,000 – \$12,000
305 – 306	Leber St & Varner Ave	2 full replacements	\$8,000 – \$12,000
307 – 308	Leber St & Varner Ave	2 DWS replacements	\$720 – 960
316 & 318	Leber St & Washington Ave	2 DWS replacements	\$720 – 960
321 – 324	Corrin Ave & Leber St	4 full replacements	\$16,000 – \$24,000
331 – 335	Corrin Ave & Calistoga St	5 full replacements	\$20,000 – \$30,000
336 – 337	Vanscoyoc Ave & Calistoga St	2 full replacements	\$8,000 – \$12,000,
338-339	Vanscoyoc Ave & Calistoga St	2 DWS replacements	\$720 – 960
341	Washington Ave & Calistoga St	1 full replacement	\$4,000 – \$6,000
369-370 & 372-376	Washington Ave & Calistoga St	7 full replacements	\$28,000 – \$42,000
377-386	Varner Ave & Calistoga St	10 full replacements	\$40,000 – \$60,000
436-441	Washington Ave & River Ave	6 full replacements	\$24,000 – \$36,000
595	Rainer Lane & Calistoga St	1 full replacement	\$4,000 – \$6,000

Table 3. Lowest Priority Curb Ramps

ID No.	Location (Lowest Priority)	Repair Method	Cost Range
3-8	Ames St NE Midblock	6 full replacements	\$24,000 – \$36,000
9-10	Burr St & Riddell Ave	2 full replacements	\$8,000 – \$12,000
11-12	Burr St & Hardtke Ave	2 full replacements	\$8,000 – \$12,000
13-14	Burr St & Hansberry Ave	2 full replacements	\$8,000 – \$12,000
15-16	Fielding St & Hardtke Ave	2 full replacements	\$8,000 – \$12,000
17-18	Fielding St & Hansberry Ave	2 full replacements	\$8,000 – \$12,000
19-20	Gipple St & Hardtke Ave	2 full replacements	\$8,000 – \$12,000
21-24	Gipple St & Hansberry Ave	4 full replacements	\$16,000 – \$24,000
25-26	Gipple St & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
28	Johns St & Riddell Ave	1 full replacement	\$4,000 – \$6,000
29-32	Johns St & Kendall St	4 full replacements	\$16,000 – \$24,000
33	Johns St & Michell Lane	1 full replacement	\$4,000 – \$6,000
35-36	Johns St & Hansberry Ave	2 full replacements	\$8,000 – \$12,000
37	Michell Lane & Hansberry Ave	1 full replacement	\$4,000 – \$6,000
39-40	Kendall St & Hardtke Ave NE	2 full replacements	\$8,000 – \$12,000

ID No.	Location (Lowest Priority)	Repair Method	Cost Range
41-44	Kendall St & Hansberry Ave	4 full replacements	\$16,000 – \$24,000
45-46	Kendall St & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
47-48	Williams Blvd & Hardtke Ave NE	2 full replacements	\$8,000 – \$12,000
49-50	Williams Blvd & Hansberry Ave	2 full replacements	\$8,000 – \$12,000
51-52	Williams Blvd & Washington Ave	2 full replacements	\$8,000 – \$12,000
56- 57	Williams Blvd & Riddell Ave	2 full replacements	\$8,000 – \$12,000
58-59	Lawson Ct & Riddell Ave	2 full replacements	\$8,000 – \$12,000
60-61	Mazza St & Hansberry Ave	2 full replacements	\$8,000 – \$12,000
62-63	Mazza St & Riddell Ave	2 full replacements	\$8,000 – \$12,000
64-65	Mazza Sr & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
66-67	Nelsen St & Riddell Ave	2 full replacements	\$8,000 – \$12,000
69	Nelsen St & Daffodil Ave	1 full replacement	\$4,000 – \$6,000
70-71	Roberts St & Riddell Ave	2 full replacements	\$8,000 – \$12,000
72-73	Roberts St & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
74-75	Lane Blvd & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
76-79	Lane Blvd & Riddell Ave	4 full replacements	\$16,000 – \$24,000
81	Silvernail St & Riddell Ave	1 full replacement	\$4,000 – \$6,000
82-83	Silvernail St & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
84-85	Voss St & Riddell Ave	2 full replacements	\$8,000 – \$12,000
86-87	Voss St & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
88-89	Weaver St & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
90-91	Rocky Rd & Daffodil Ave	2 full replacements	\$8,000 – \$12,000
92-93	Williams Ct & Williams St	2 full replacements	\$8,000 – \$12,000
94-95	Mellinger Ave & Williams St	2 full replacements	\$8,000 – \$12,000
96-97	Mellinger Ave & Stone St	2 full replacements	\$8,000 – \$12,000
98-99	Mellinger Ave & Williams Blvd NW	2 full replacements	\$8,000 – \$12,000
100-101	Headley Ave & Williams Blvd NW	2 full replacements	\$8,000 – \$12,000
102-103	Headley Ave & Stone St	2 full replacements	\$8,000 – \$12,000
104-105	Noble Ave NW & Williams Blvd NW	2 full replacements	\$8,000 – \$12,000
106-107	Headley Ave & Williams St	2 full replacements	\$8,000 – \$12,000
108- 109	Nunnally Ave & Williams Blvd NW	2 full replacements	\$8,000 – \$12,000
110-111	Jurin Ave & Whitley St	2 full replacements	\$8,000 – \$12,000
112-113	Jurin Ave & Williams Blvd NW	2 full replacements	\$8,000 – \$12,000
114-117	Anderson St & Nunnally Ave	4 full replacements	\$16,000 – \$24,000
118-119	Anderson St & Williams St	2 full replacements	\$8,000 – \$12,000
120-121	Anderson St & Boatman Ave	2 full replacements	\$8,000 – \$12,000
122-123	Ozzie St & Williams St	2 full replacements	\$8,000 – \$12,000
124-127	Ozzie St & Vanogle Lane	4 full replacements	\$16,000 – \$24,000
128-131	Ozzie St & Nunnally Ave	4 full replacements	\$16,000 – \$24,000
132-135	Cloud St & Nunnally Ave	4 full replacements	\$16,000 – \$24,000

ID No.	Location (Lowest Priority)	Repair Method	Cost Range
136-139	Cloud St & Nunnally Ave	4 full replacements	\$16,000 – \$24,000
140 & 143	Sigafoos Ave NW & Ross Ave NW	2 full replacements	\$8,000 – \$12,000
144-146	Spangler St & Williams St	3 full replacements	\$12,000 – \$16,000
147	Spangler St & Williams St	1 DWS replacement	\$360– \$480
148-153	Spangler St & Van Ogle Lane	6 full replacements	\$24,000 – \$36,000
154-157	Sigafoos Ave & Ross Ave	4 full replacements	\$16,000 – \$24,000
158-163	Spangler St & O Farrell Lane	5 full replacements	\$20,000 – \$30,000
168-173	Lane Blvd & Sigafoos Ave	5 full replacements	\$20,000 – \$30,000
174-179	Lane Blvd & Boatman Ave	6 full replacements	\$24,000 – \$36,000
180-183	Lane Blvd & Nunnally Ave	4 full replacements	\$16,000 – \$24,000
184-187	Nunnally Ave & O Farrell Lane	4 full replacements	\$16,000 – \$24,000
188-191	Nunnally Ave & Colorossi Cir	4 full replacements	\$16,000 – \$24,000
193	Spangler St & Antonie Lane	1 full replacement	\$4,000 – \$6,000
194-197	Spangler St & Colorossi Cir	4 full replacements	\$16,000 – \$24,000
199	Geels Way & Colorossi Cir	1 full replacement	\$4,000 – \$6,000
206-207	Boatman Ave & Williams Blvd NW	2 full replacements	\$8,000 – \$12,000
210-211	Antonie Ln & O Farrell Lane	2 full replacements	\$8,000 – \$12,000
213	Geels Way & O Farrell Lane	1 full replacement	\$4,000 – \$6,000
216 & 220	Boatman Ave & Louise Wise Ave	2 full replacements	\$8,000 – \$12,000
224	Sigafoos Ave & Louise Wise Ave	1 full replacement	\$4,000 – \$6,000
243-244	Whitehawk Blvd & Service Rd	2 full replacements	\$8,000 – \$12,000
245-246	Corrin Ave & Corrin Ct	2 full replacements	\$8,000 – \$12,000
247-248	Whitehawk Blvd & Whitehawk Ct	2 full replacements	\$8,000 – \$12,000
249-250	Whitehawk Blvd & Orting Ave	2 full replacements	\$8,000 – \$12,000
251-252	Corrin Ave & Rowe St	2 full replacements	\$8,000 – \$12,000
253-256	Eldredge Ave & Rowe St	4 full replacements	\$16,000 – \$24,000
257-258	Kensington Ave & Rowe St	2 full replacements	\$8,000 – \$12,000
259-262	Orting Ave & Orting Ct	4 full replacements	\$16,000 – \$24,000
263-264	Eldredge Ave & Callendar Ct	2 full replacements	\$8,000 – \$12,000
265-267	Eldredge Ave & Callendar St	3 full replacements	\$12,000 – \$16,000
268-269	Kensington Ave & Callendar St	2 full replacements	\$8,000 – \$12,000
270-273	Orting Ave & Callendar St	4 full replacements	\$16,000 – \$24,000
274-275	Thompson Ave & Callendar St	2 full replacements	\$8,000 – \$12,000
276-277	Groff Ave & Burnett Ct	2 full replacements	\$8,000 – \$12,000
278-280	Groff Ave & Thompson Ave	3 full replacements	\$12,000 – \$16,000
281	Groff Ave & Orting Ave	1 full replacement	\$4,000 – \$6,000



ID No.	Location (Lowest Priority)	Repair Method	Cost Range
282-284	Eldredge Ave & Eldredge Ct	3 full replacements	\$12,000 – \$16,000
302	Bowlin Ave & Parker Lane	1 full replacement	\$4,000 – \$6,000
303-304	Bowlin Ave & Whitesell St	2 full replacements	\$8,000 – \$12,000
309	Eldredge Ave & Whitesell Ct	1 DWS replacement	\$360 – 480
310	Eldredge Ave & Whitesell Ct	1 full replacement	\$4,000 – \$6,000
311 & 313	Eldredge Ave & Leber Ct	2 full replacements	\$8,000 – \$12,000
312 & 314	Eldredge Ave & Leber Ct	2 DWS replacements	\$720 – 960
319	Bowlin Ave & Leber St	1 DWS replacement	\$360 – 480
320	Bowlin Ave & Leber St	1 full replacement	\$4,000 – \$6,000
325-326, 328-330	Eldredge Ave & Calistoga St	5 full replacements	\$20,000 – \$30,000
347	Varner Ave & Calistoga St	1 DWS replacement	\$360 – 480
348-351	Varner Ave & Calistoga St	4 full replacements	\$16,000 – \$24,000
353-354	Varner Ave & Calistoga St	2 full replacements	\$8,000 – \$12,000
356-357	Eldredge Ave & Train St	2 DWS replacements	\$720 – 960
358	Eldredge Ave & Train St	1 full replacement	\$4,000 – \$6,000
359-362	Corrin Ave & Train St	4 full replacements	\$16,000 – \$24,000
363-367	Vanscoyoc Ave & Train St	5 full replacements	\$20,000 – \$30,000
368	Vanscoyoc Ave & Train St	1 DWS replacement	\$360 – 480
388	Eldredge Ave & Taylor St	1 full replacement	\$4,000 – \$6,000
389	Eldredge Ave & Taylor St	1 DWS replacement	\$360 – 480
390-391 & 393	Tacoma Ave & Calistoga St	3 full replacements	\$12,000 – \$16,000
397	Deeded Lane & Calistoga St	1 full replacement	\$4,000 – \$6,000
398-399	Kansas St & Calistoga St	2 full replacements	\$8,000 – \$12,000
401-402	Kansas St & Coe Lane	2 full replacements	\$8,000 – \$12,000
403-404	Kansas St & Ford Lane	2 full replacements	\$8,000 – \$12,000
405-406	Kansas St & Hays Ave	2 full replacements	\$8,000 – \$12,000
407-410	Kansas St & Grinnell Ave	4 full replacements	\$16,000 – \$24,000
411-413	Kansas St & Eldredge Ave	3 full replacements	\$12,000 – \$16,000
415	Eldredge Ave & River Ave	1 full replacement	\$4,000 – \$6,000
416	Deeded Lane & Eldredge Ave	1 DWS replacement	\$360 – 480
417	Deeded Lane & Eldredge Ave	1 full replacement	\$4,000 – \$6,000
419	Corrin Ave & Harman Way	1 full replacement	\$4,000 – \$6,000
420-422	Kansas St & Harman Way	3 full replacements	\$12,000 – \$16,000
425-427 & 431	Corrin Ave & River Ave	4 full replacements	\$16,000 – \$24,000
432-435	Vanscoyoc Ave & River Ave	4 full replacements	\$16,000 – \$24,000
442 & 444	Varner Ave & River Ave	2 full replacements	\$8,000 – \$12,000

ID No.	Location (Lowest Priority)	Repair Method	Cost Range
443 & 445	Varner Ave & River Ave	2 DWS replacements	\$720 – 960
446-449	Varner Ave & River Ave	4 full replacements	\$16,000 – \$24,000
450-451	Bridge St & River Ave	2 full replacements	\$8,000 – \$12,000
452-453	Washington Ave & Hardefeldt St	2 full replacements	\$8,000 – \$12,000
454-458	Varner Ave & Hardefeldt St	5 full replacements	\$20,000 – \$30,000
460-461	Washington Ave & Olive St	2 full replacements	\$8,000 – \$12,000
462	Varner Ave & Olive St	1 full replacement	\$4,000 – \$6,000
464-466	Washington Ave & Brown St	3 full replacements	\$12,000 – \$16,000
467-469	Varner Ave & Brown St	3 full replacements	\$12,000 – \$16,000
470-472	Washington Ave & Brown Way	3 full replacements	\$12,000 – \$16,000
473-475	Brown St & Brown Way	3 full replacements	\$12,000 – \$16,000
476	Skinner Way & Calistoga St	1 full replacement	\$4,000 – \$6,000
478-481	Skinner Way & Belfair Ave	4 full replacements	\$16,000 – \$24,000
482-484	Belfair Ave & Johnson Ct	3 full replacements	\$12,000 – \$16,000
485-486	Belfair St & Cammarano Ct	2 full replacements	\$8,000 – \$12,000
487-488	Belfair St & Ford Lane	2 full replacements	\$8,000 – \$12,000
489	Belfair St & Grinnell Ave	1 full replacement	\$4,000 – \$6,000
492-494	Skinner Way & Grinnell Ave	3 full replacements	\$12,000 – \$16,000
495-496	Coplan St & Grinnell Ave	2 full replacements	\$8,000 – \$12,000
497-498	Coplan St & Coplan Ct	2 full replacements	\$8,000 – \$12,000
499-500	Icey St & Grinnell Ave	2 full replacements	\$8,000 – \$12,000
501-504	Balmer St & Grinnell Ave	4 full replacements	\$16,000 – \$24,000
505	Balmer St & Koehler Ave	1 full replacement	\$4,000 – \$6,000
507	Balmer St & Carrier Ave	1 full replacement	\$4,000 – \$6,000
509-510	Buell St & Carrier Ave	2 full replacements	\$8,000 – \$12,000
515	Park Pl & Beckett Lane	1 DWS replacement	\$360 – 480
516	Balmer St & Beckett Lane	1 full replacement	\$4,000 – \$6,000
519	Maple Lane & Beckett Lane	1 full replacement	\$4,000 – \$6,000
520-521	McMahon Lane & Beckett Lane	2 full replacements	\$8,000 – \$12,000
522-523	BTWN McMahon Lane & Harman Way	2 full replacements	\$8,000 – \$12,000
525-527	Harrison Lane & Harman Way	3 full replacements	\$12,000 – \$16,000
528-529	Erickson Lane & Harman Way	2 full replacements	\$8,000 – \$12,000
530	Harman Way & Beckett Lane	1 full replacement	\$4,000 – \$6,000
531-532	Robin St & Calistoga Ave	2 full replacements	\$8,000 – \$12,000
534-536	Robin St & Eagle Ave	3 full replacements	\$12,000 – \$16,000
537-540	Robin St & Blue Jay Ave	4 full replacements	\$16,000 – \$24,000
541-544	Hawk Ave & Blue Jay Ave	4 full replacements	\$16,000 – \$24,000
545-547 & 602	Mockingbird St & Eagle Ave	4 full replacements	\$16,000 – \$24,000

ID No.	Location (Lowest Priority)	Repair Method	Cost Range
548-549	Cardinal St & Calistoga Ave	2 full replacements	\$8,000 – \$12,000
550-553	Cardinal St & Eagle Ave	4 full replacements	\$16,000 – \$24,000
556-558	Cardinal St & Phoenix Ave	3 full replacements	\$12,000 – \$16,000
560-563	Hawk Ave & Goldfinch Ave	4 full replacements	\$16,000 – \$24,000
564-565	Starling St & Blue Jay Ave	2 full replacements	\$8,000 – \$12,000
566-568	Starling St & Quail Ave	3 full replacements	\$12,000 – \$16,000
569-570	Starling St & Goldfinch Ave	2 full replacements	\$8,000 – \$12,000
571 & 573-575	Hawk Ave & Mockingbird St	4 full replacements	\$16,000 – \$24,000
576-577	Hawk Ave BTW Phoenix Ave & Mockingbird St	2 full replacements	\$8,000 – \$12,000
578-581 & 605	Hawk Ave & Phoenix Ave	5 full replacements	\$20,000 – \$30,000
582-583	Hawk Ave BTW Phoenix Ave & Goldfinch Ave	2 full replacements	\$8,000 – \$12,000
584	Williams Blvd & Washington Ave	1 full replacement	\$4,000 – \$6,000
603-604	Cardinal St & Eagle Ave	2 full replacements	\$8,000 – \$12,000
606-609	Hawk Ave & Quail Ave	4 full replacements	\$16,000 – \$24,000

#### 4.4 Curb Ramp Barrier Removal Triggers

Curb ramps are sorted first into two categories, compliant and noncompliant. Compliant ramps will remain, while noncompliant ramps are sorted into two further categories, replace or replace detectable warning strip. This is based on if the barrier is due to the characteristics of the ramp or the DWS.

Ramps found to be non-compliant may have elements that are compliant and can be preserved in order to reduce cost. However, the cost to benefit analysis of what elements are to remain should be conducted prior to bidding any ramp reconstruction work, to verify compliance when constructed.

#### 4.5 Barrier Removal Budget

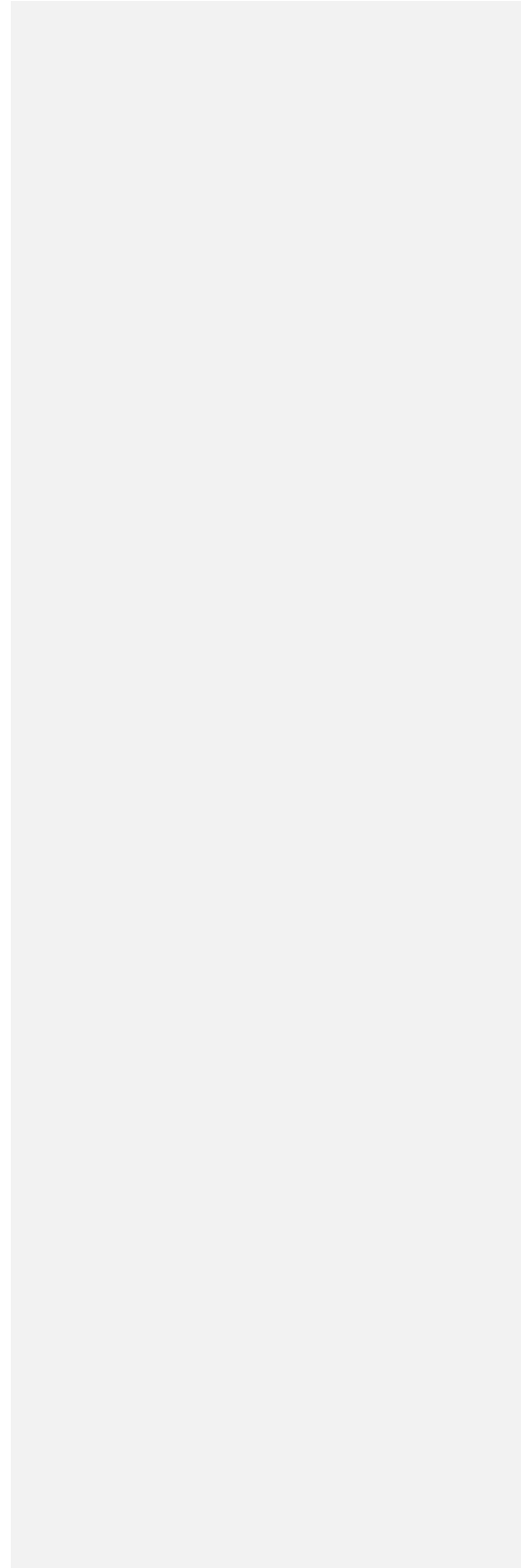
The budget for barrier removal allows for 35 curb ramps to be replaced each year with an annual budget of \$311,000 in 2023 dollars (see Appendix B for a detailed breakdown). This budget was set by the amount of curb ramps that need to be replaced and a schedule of fixing all curb ramps within 15 years. Grant opportunities, such as Safe Routes to School, can help with funding for these projects. Additionally, these barriers removals can be included in other roadway project costs. Roadway maintenance projects, in particular reconstruction, should be planned with ADA repairs in mind as they may necessitate reconstruction of ADA facilities.

Commented [LMR14]: Add the annual cost

Commented [LMR15R14]: And note that some may be included in project costs.

# Appendix A

## References



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Wonch, William. (2022, June). *Local Agency Guidelines*. WSDOT. Received July 13, 2023, from <https://www.wsdot.wa.gov/publications/manuals/fulltext/M36-63/LAG.pdf>.

Office of the Assistant Secretary for Administration & Management. Section 504, Rehabilitation Act of 1973. U.S. Department of Labor. Received July 13, 2023, from <https://www.dol.gov/agencies/oasam/centers-offices/civil-rights-center/statutes/section-504-rehabilitation-act-of-1973>

# Appendix B

Estimate

Commented [LMR16]: The final line is not Construction Grand Total, it is the Total Cost.

City of Orting - 2023 ADA Replacement Estimate  
Costs per Year

Year #	Year	Cost
1	2024	\$320,000
2	2025	\$330,000
3	2026	\$340,000
4	2027	\$350,000
5	2028	\$360,000
6	2029	\$371,000
7	2030	\$382,000
8	2031	\$394,000
9	2032	\$410,000
10	2033	\$420,000
11	2034	\$430,000
12	2035	\$440,000
13	2036	\$460,000
14	2037	\$470,000
15	2038	\$480,000
<b>TOTAL COST</b>		<b>\$5,957,000</b>

City of Orting - 2023 ADA Replacement Estimate  
Costs per Year

ITEM #	DESCRIPTION	UNIT	UNIT PRICE (2023)	TOTAL QTY.	SUBTOTAL
1	Curb Ramp (removal and replacement)	EA	35	5,000.00	\$175,000

CONSTRUCTION SUBTOTAL (2023)	\$175,000
DESIGN CONTINGENCY (20%)	\$35,000
SUBTOTAL	\$210,000

PERMITTING (5%)	\$10,500
DESIGN (15%)	\$31,500
CITY PM/ADMINISTRATION (3%)	\$6,300
CONSTRUCTION MANAGEMENT (15%)	\$31,500
MANAGEMENT RESERVE (10%)	\$21,000

<b>TOTAL COST</b>	<b>\$311,000</b>
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*\*Total Curb Ramps = 521 → 35 per year*



City of Orting - 2023 ADA Replacement Estimate  
Costs per Year

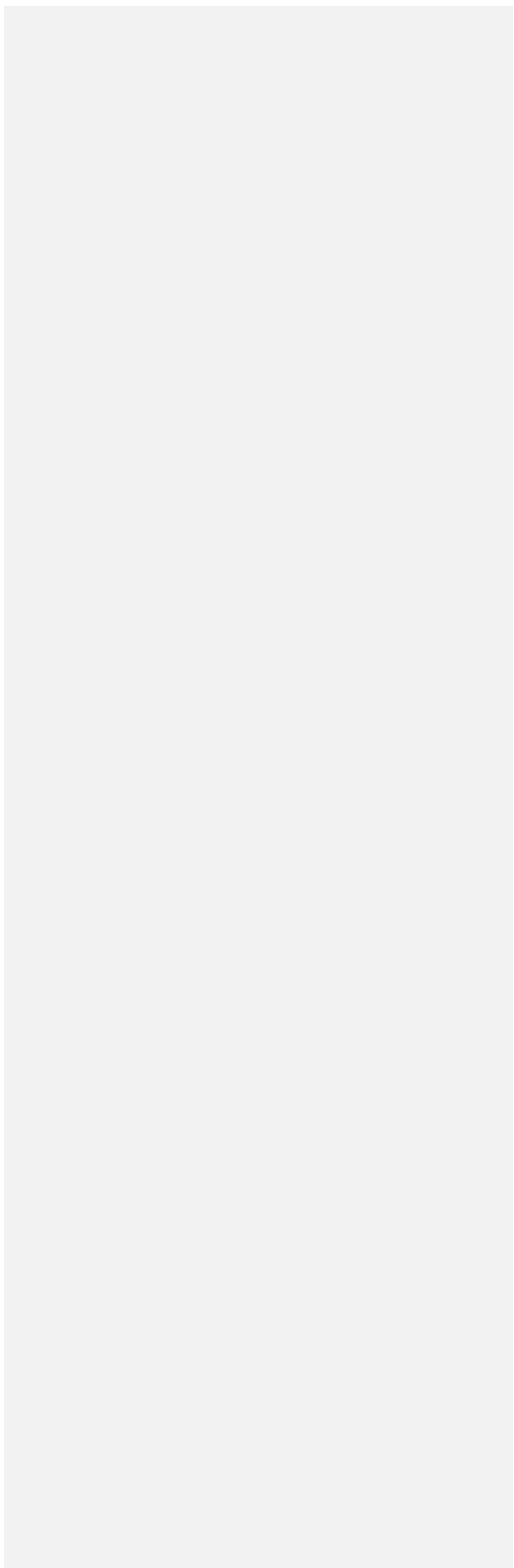
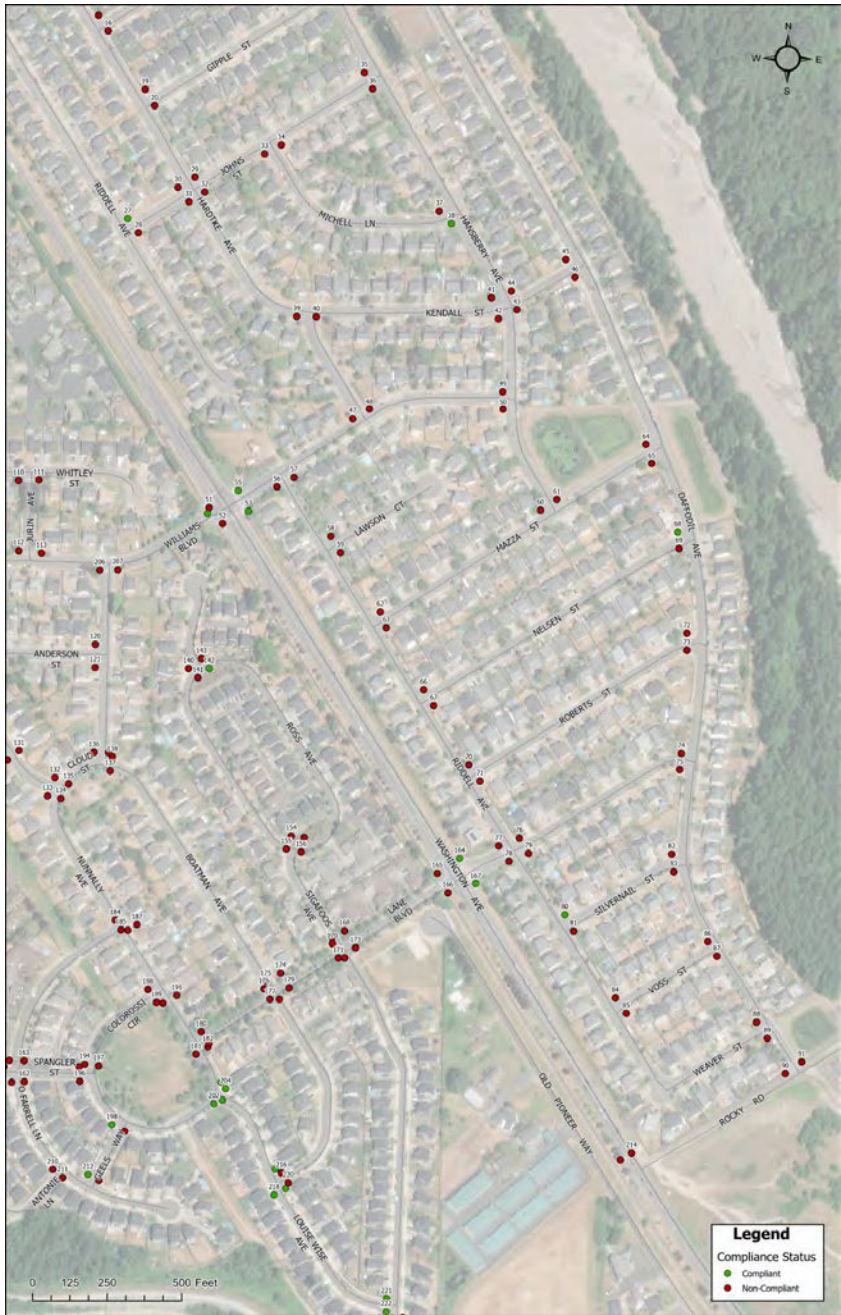
Project Development Level	Design Contingency	Inflation/yr	Permitting	Design	City PM/Admin	Construction Management	Management Reserve
Planning (<\$250k)	50%	3%	5%	25%	5%	25%	10%
Planning (\$250k-\$1M)	30%	3%	5%	15%	3%	15%	10%
Planning (>\$1M)	30%	3%	5%	12%	3%	15%	10%
30% Design (<\$250k)	30%	3%	5%	25%	5%	25%	10%
30% Design (\$250k-\$1M)	20%	3%	5%	15%	3%	15%	10%
30% Design (>\$1M)	20%	3%	5%	12%	3%	15%	10%
60% Design (<\$250k)	20%	3%	N/A	N/A	5%	25%	10%
60% Design (\$250k-\$1M)	10%	3%	N/A	N/A	3%	15%	10%
60% Design (>\$1M)	10%	3%	N/A	N/A	3%	15%	10%
90% Design (<\$250k)	N/A	3%	N/A	N/A	5%	25%	10%
90% Design (\$250k-\$1M)	N/A	3%	N/A	N/A	3%	15%	10%
90% Design (>\$1M)	N/A	3%	N/A	N/A	3%	15%	10%
Final Design (<\$250k)	N/A	3%	N/A	N/A	5%	25%	10%
Final Design (\$250k-\$1M)	N/A	3%	N/A	N/A	3%	15%	10%
Final Design (>\$1M)	N/A	3%	N/A	N/A	3%	15%	10%

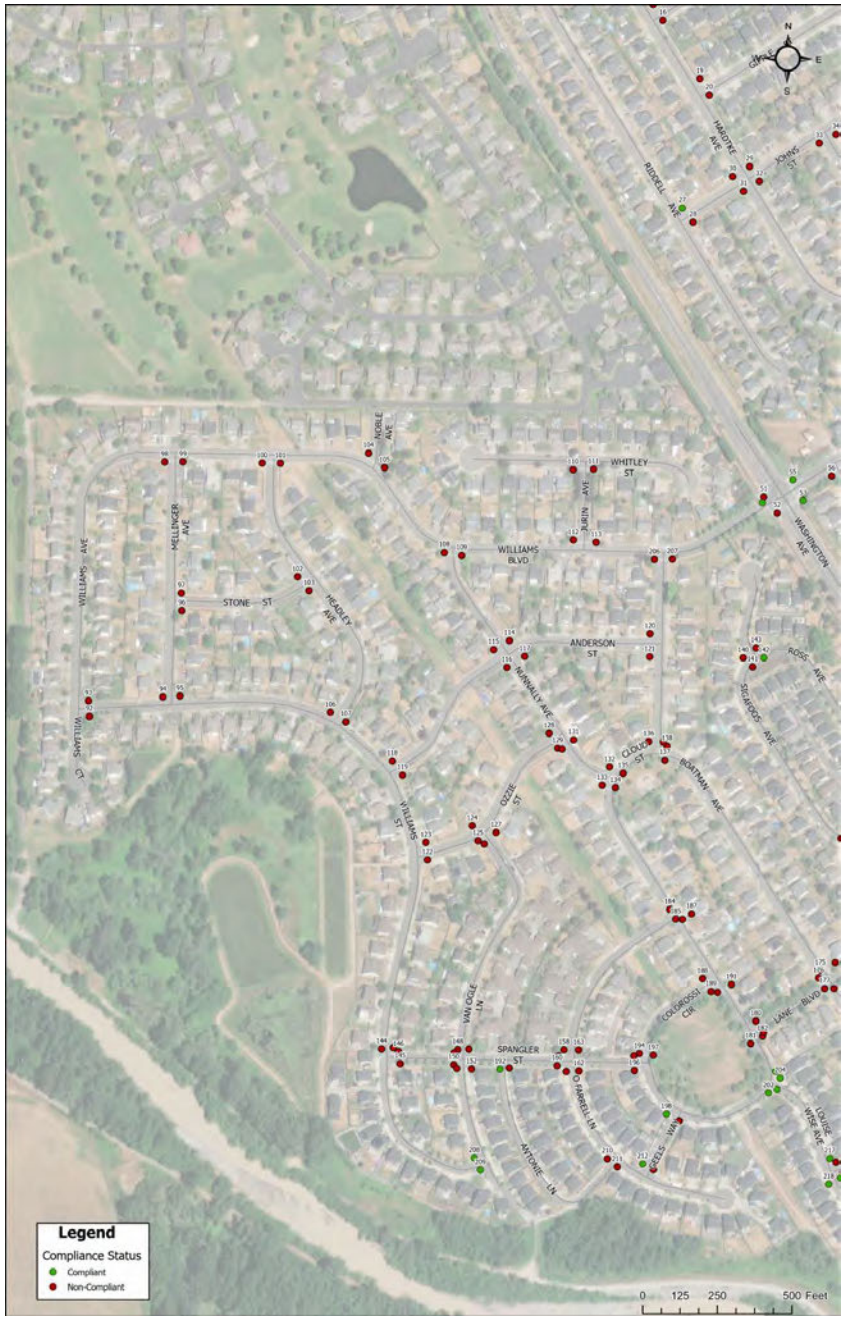
## Appendix C

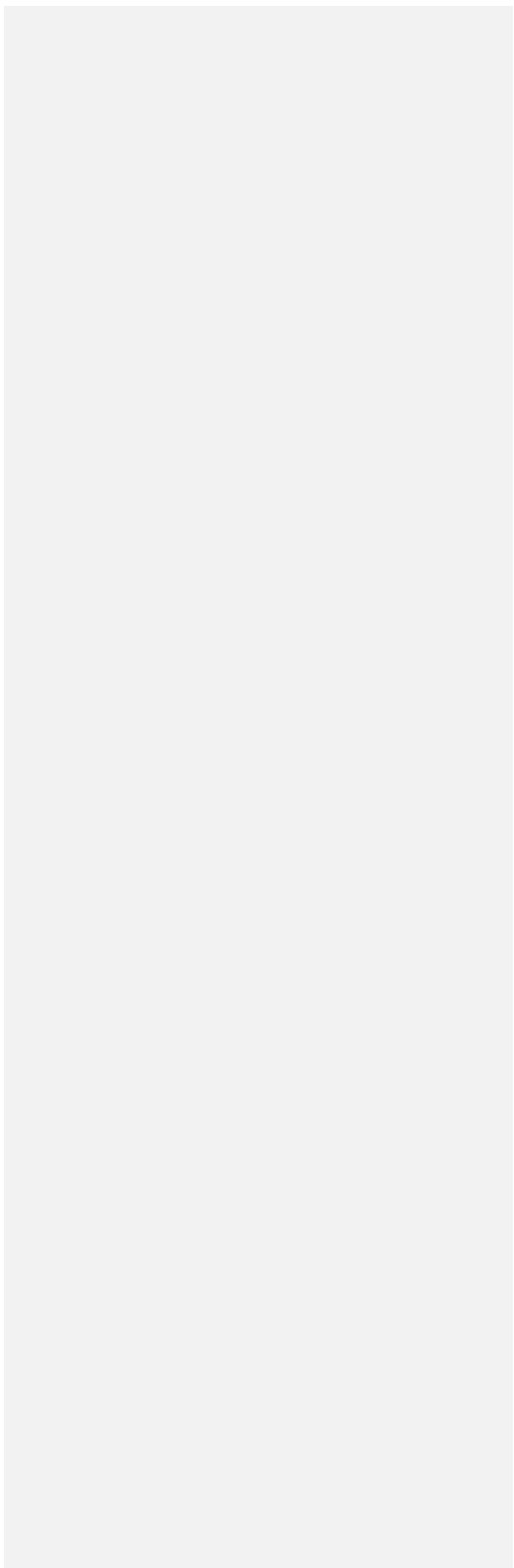
### Zoomed In Maps

**Commented [LMR17]:** Can we show the ramp number on the blown up maps?? Otherwise - we need to have some correlation between the numbered ramps and the actual locations. Also - check the legends. Complaint vs non compliant should be labeled "Compliance Status".





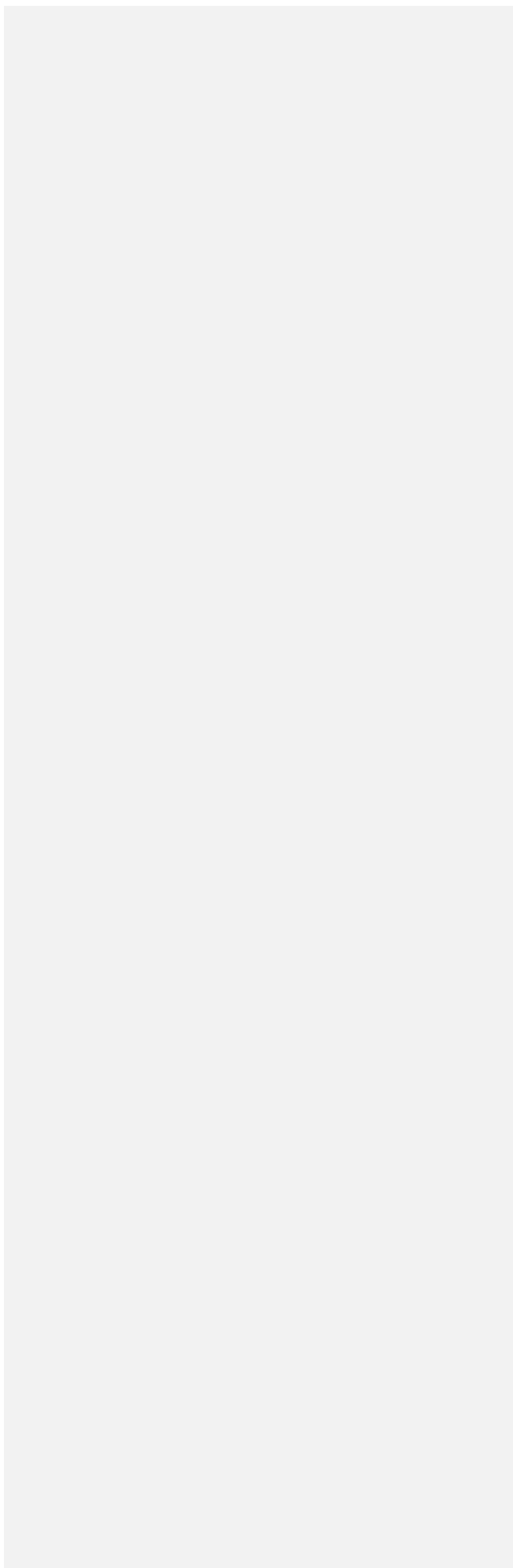
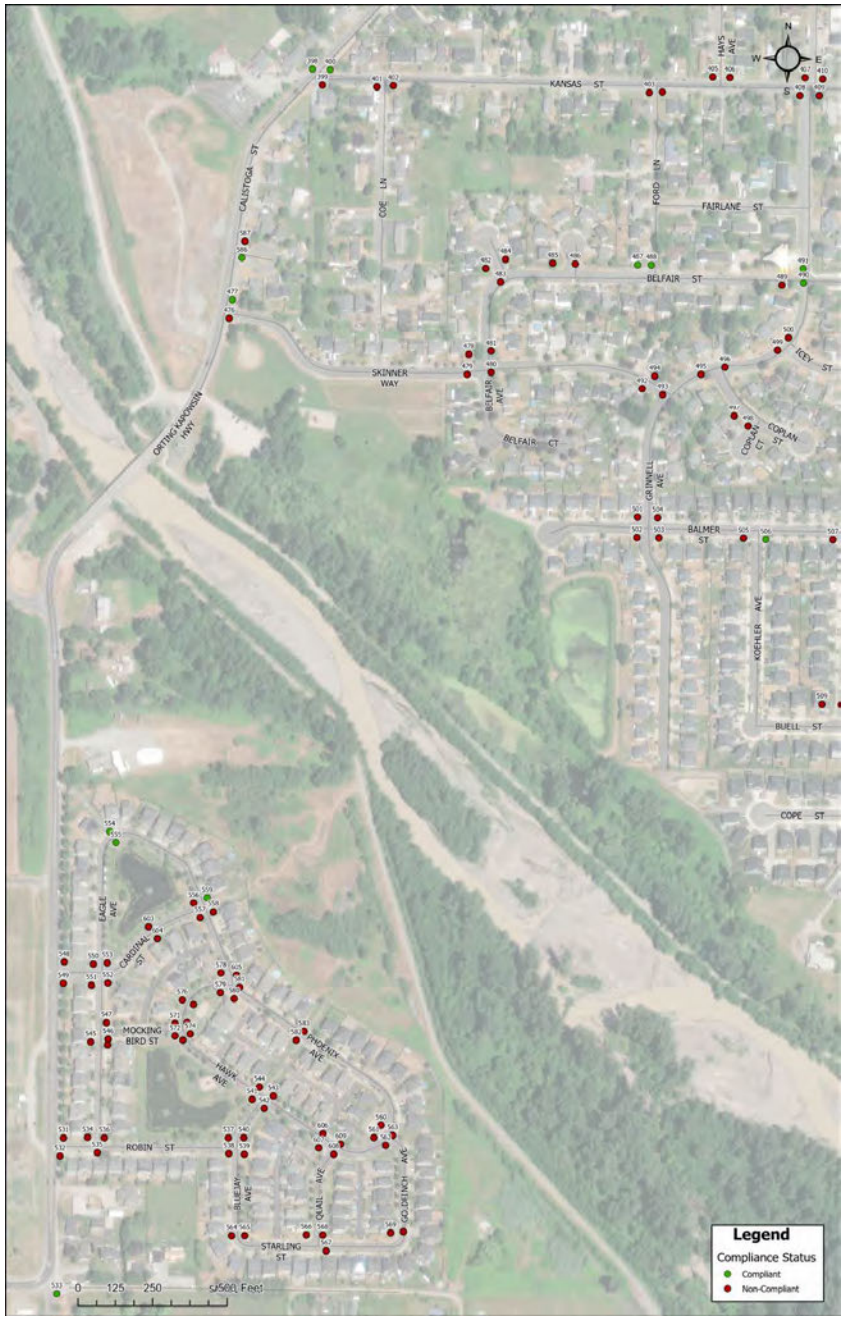


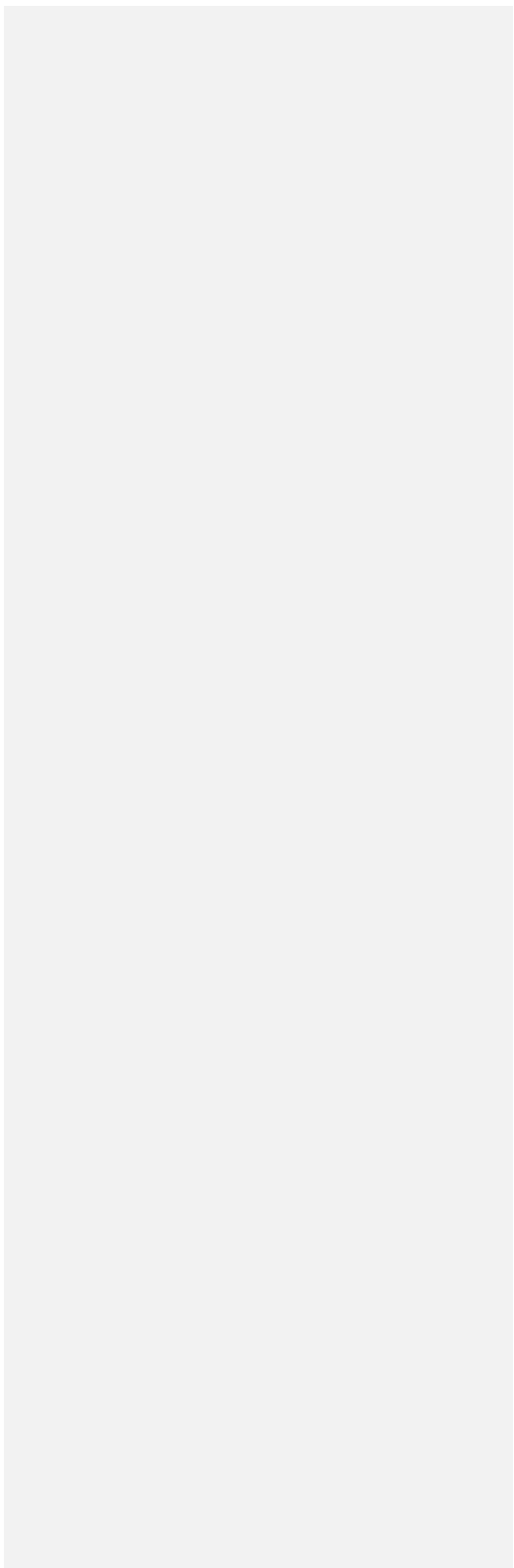
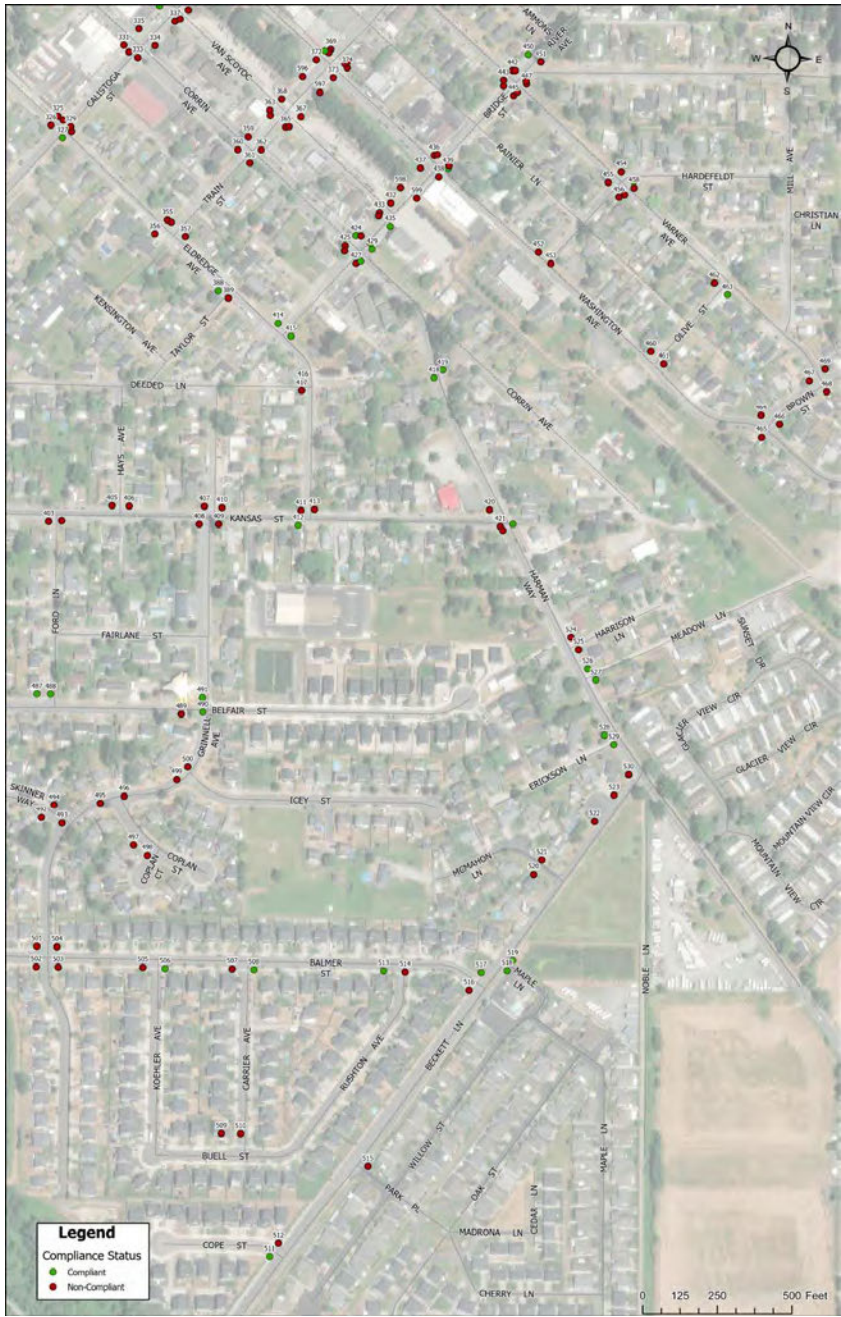


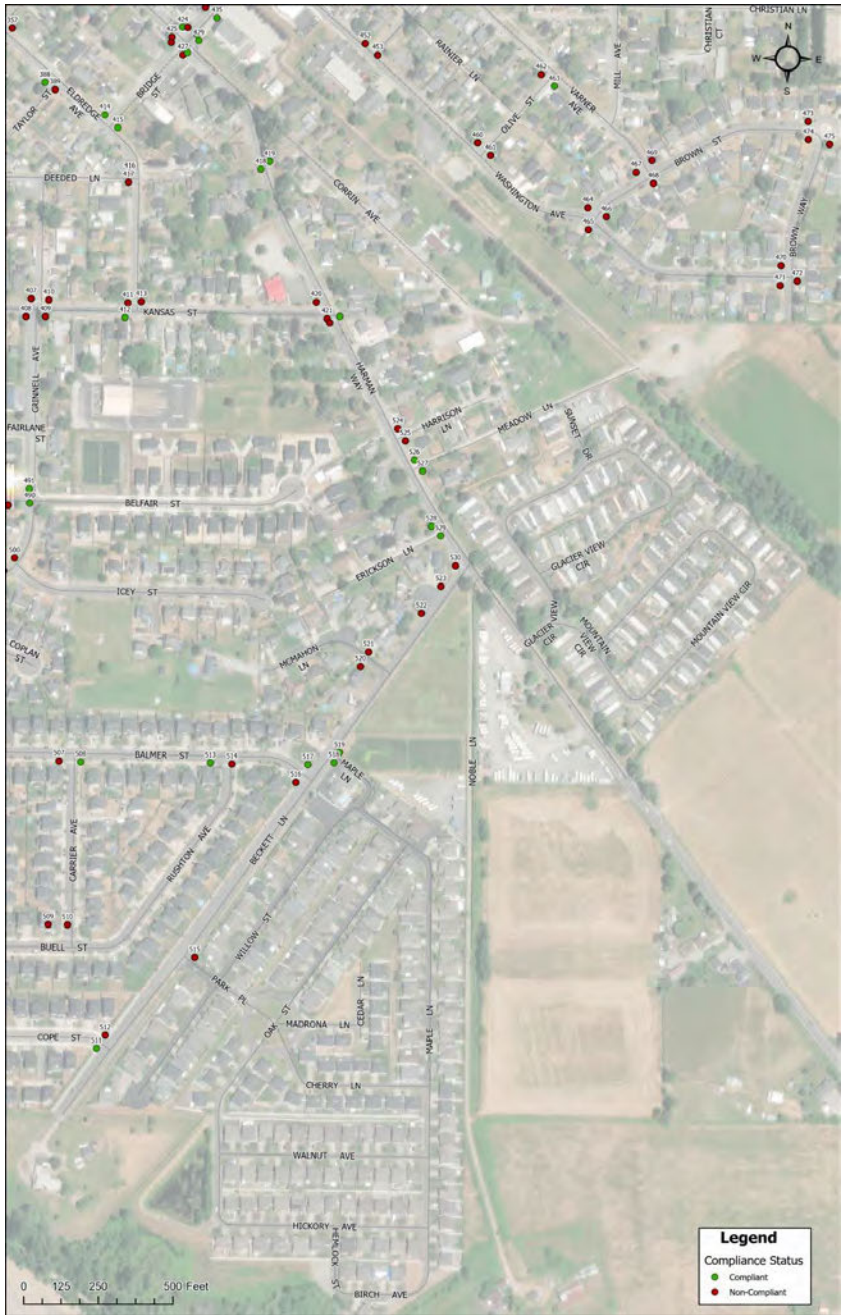


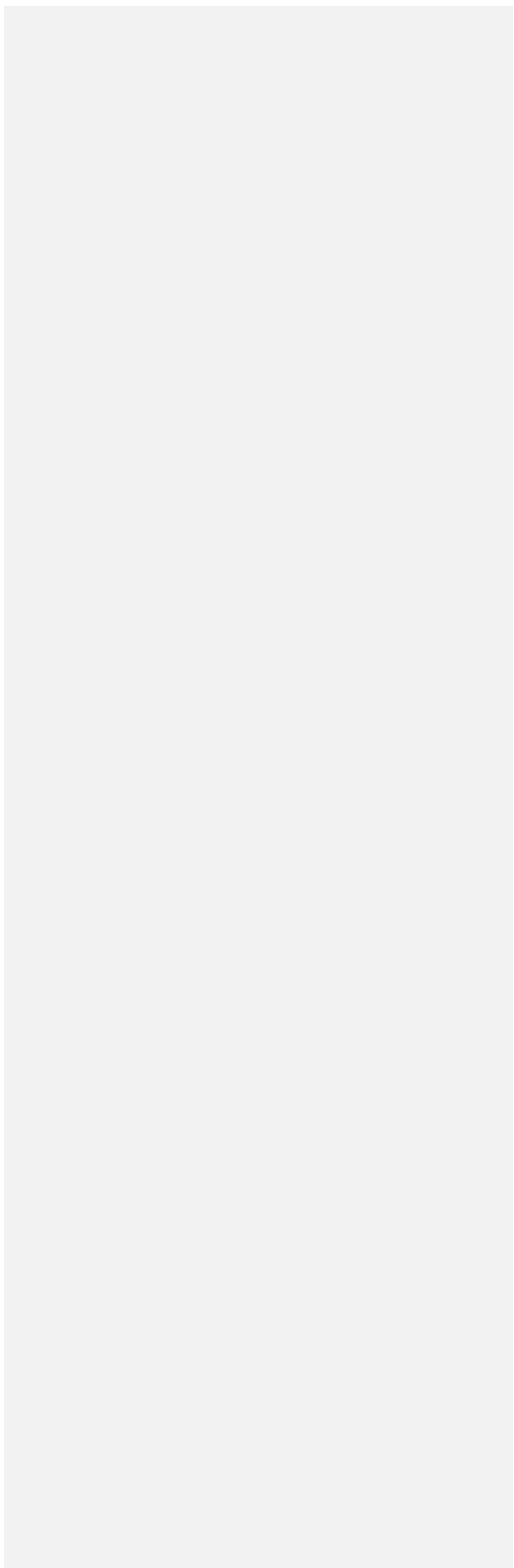


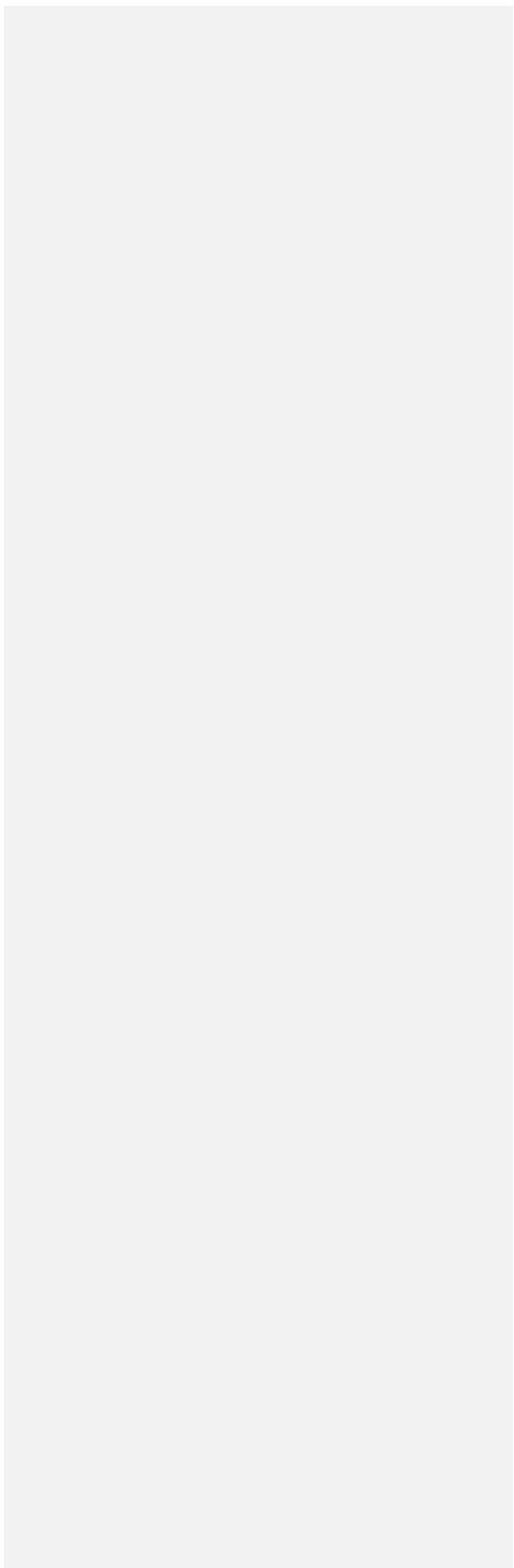
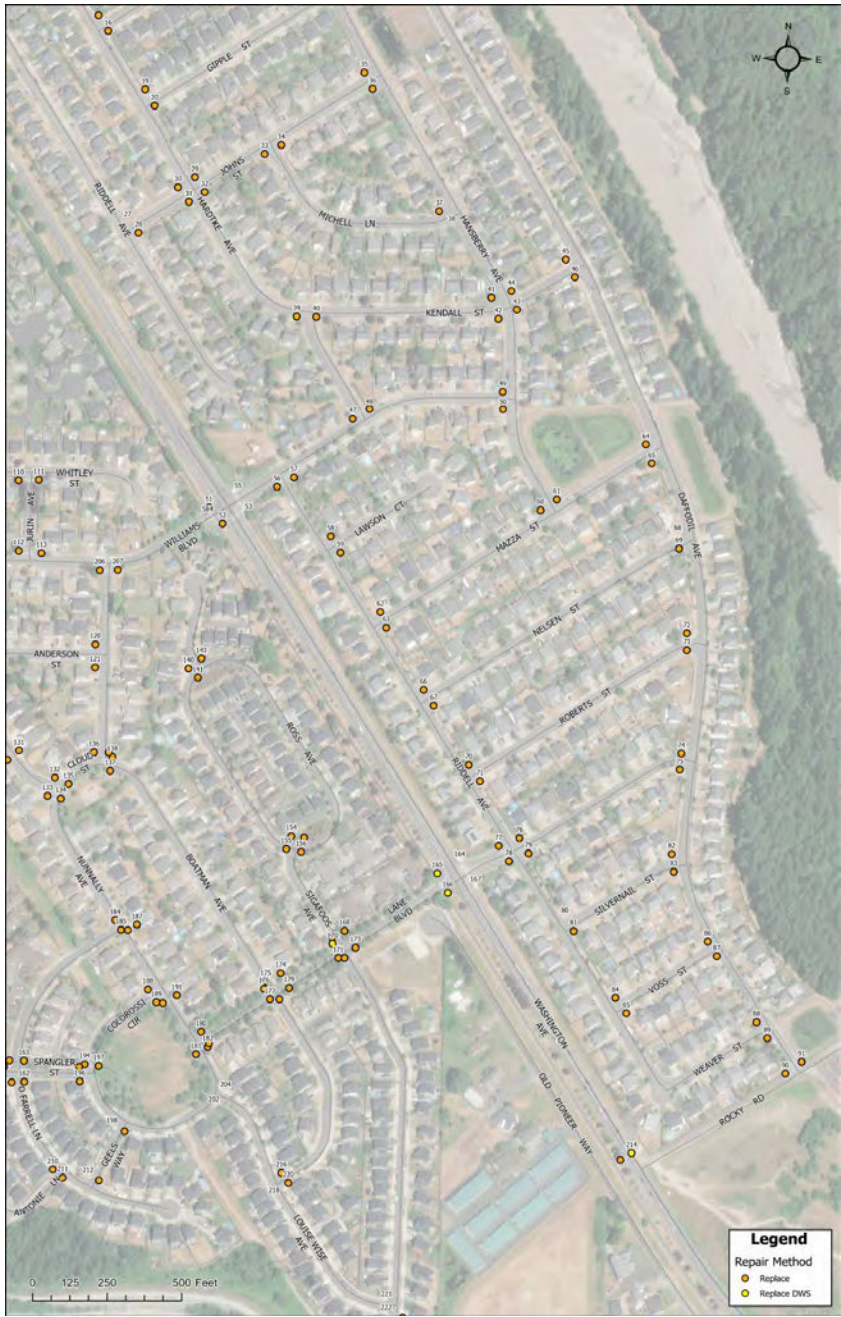


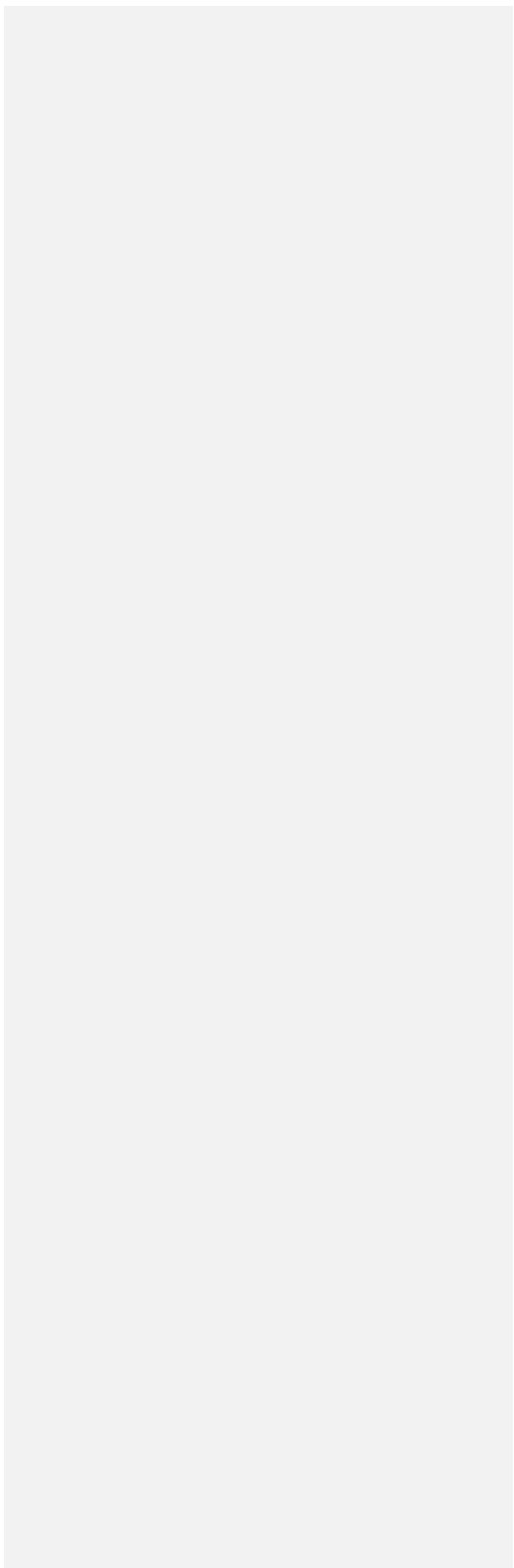


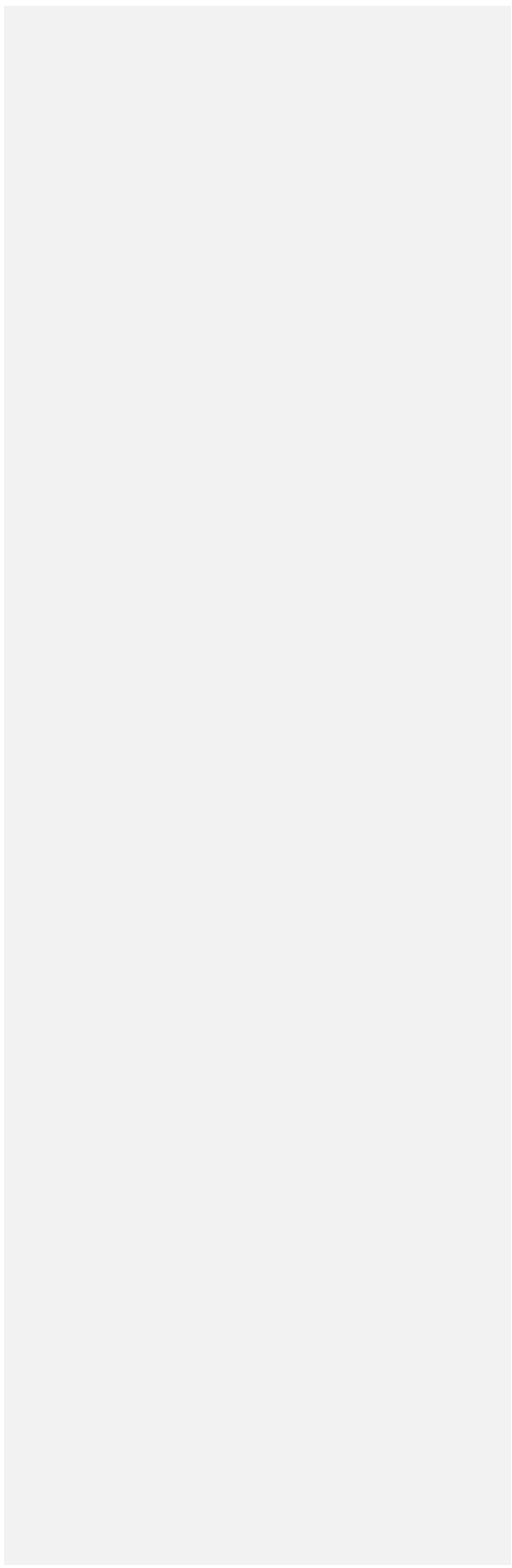


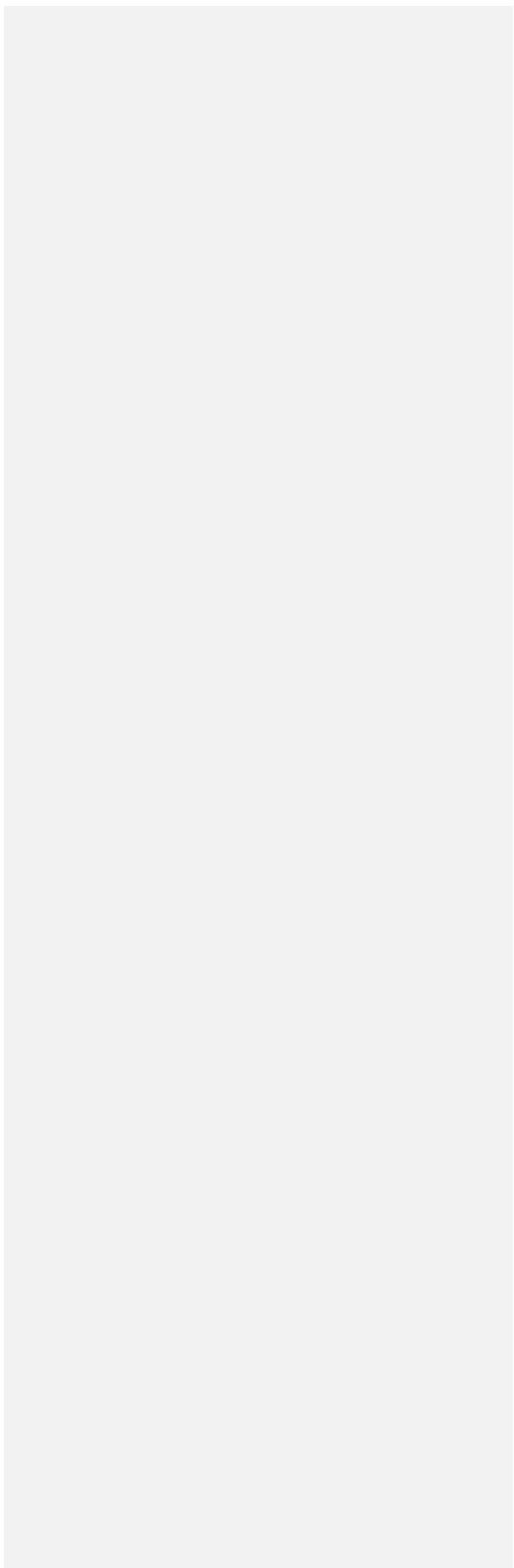




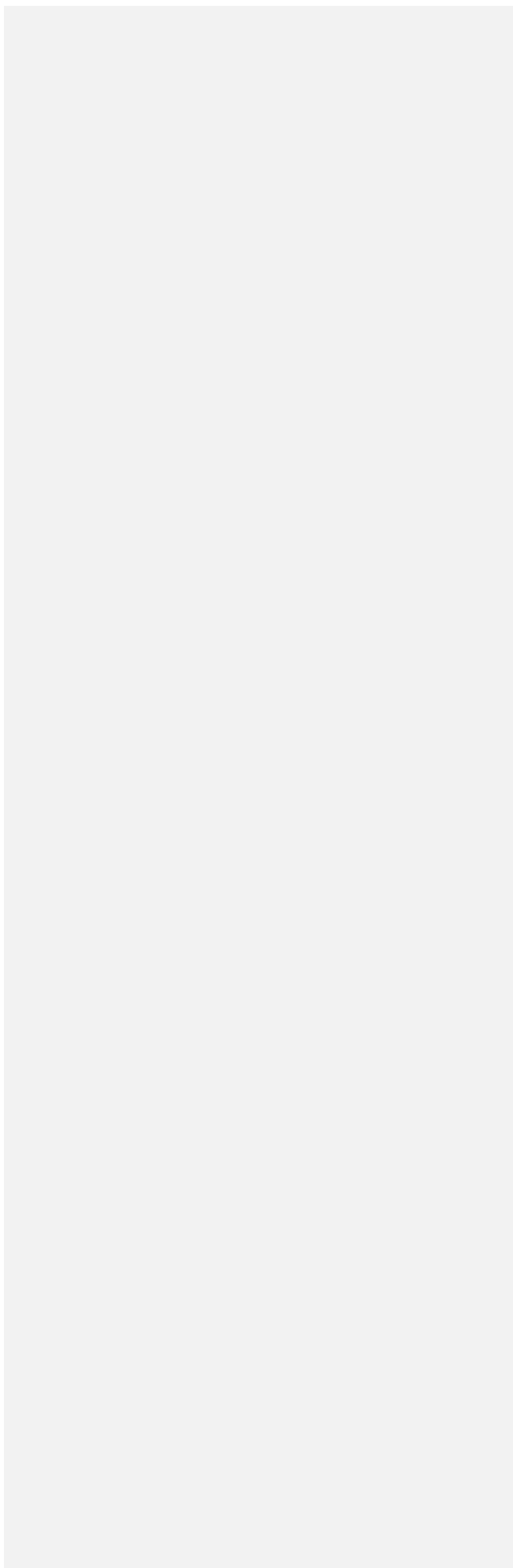






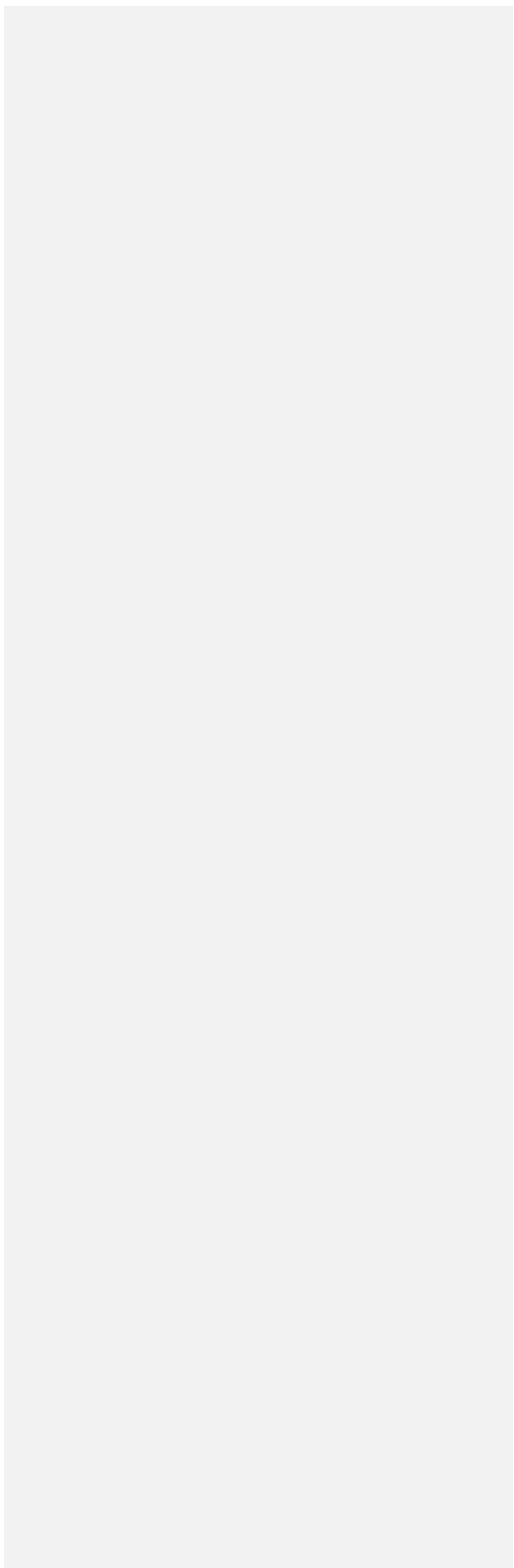














**City of Orting  
Council Agenda Summary Sheet**

	<b>Agenda Bill #</b>	<b>Recommending Committee</b>	<b>Study Session Dates</b>	<b>Regular Meeting Dates</b>
<b>Subject: Public Works Legislative Priorities</b>	<b>AB23-XX</b>	<b>PW</b>		
		<b>9.6.23</b>		
	<b>Department:</b>	Public Works		
	<b>Date Submitted:</b>	9/1/23		
<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>	None			
<b>Submitted By:</b>	Scott Larson			
<b>Fiscal Note:</b> None				
<b>Attachments:</b> None				
<b>SUMMARY STATEMENT:</b>				
<p>Staff are working on pulling legislative priorities together as a comprehensive City of Orting legislative priorities document. Items related to public works currently include the following:</p> <ol style="list-style-type: none"> <li>1. Funding for utilities that need to move facilities due to Fish Passage Projects</li> <li>2. WSDOT transportation policy: the current WSDOT policy about expanding facilities is in conflict with the growth management act. WSDOT needs to provide revised guidance to recognize that transportation facilities are needed to accommodate planned growth especially in areas that are not dense enough for public transit or other multimodal options.</li> </ol>				
<b>RECOMMENDED ACTION:</b> Discussion.				
<b>FUTURE MOTION:</b> None				



**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: SEPA Exemption</b>	<b>AB23-XX</b>	<b>PW</b>		
		<b>9.6.23</b>		
	<b>Department:</b>	Planning		
	<b>Date Submitted:</b>	8.24.23		
<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>	None			
<b>Submitted By:</b>	Scott Larson/MillieAnne VanDeavender			
<b>Fiscal Note:</b> None				
<b>Attachments:</b> Memorandum				
<b>SUMMARY STATEMENT:</b>				
<p>The city has received inquiries over the past few years regarding our code’s SEPA exemption for various types of development. The attached memorandum outlines SEPA exemptions for cities, and provides information on several other neighboring jurisdictions. Staff are recommending that the exemptions be increased in the following way:</p> <ol style="list-style-type: none"> <li>1. Increase dwelling use exemption from 4 to 9 units;</li> <li>2. Increase commercial building exemption from 4,000 sq ft to 12,000 sq ft;</li> <li>3. Increase parking lots from 20 to 40 spaces; and</li> <li>4. Increase landfills and excavations from 500 cubic yards to 1,000 cubic yards.</li> </ol> <p>If this is something that council would like to move forward with amending, the request will be sent to the planning commission for additional fact finding and public hearing before coming back to the council with a recommendation.</p>				
<b>RECOMMENDED ACTION:</b> Discussion - Send to study session or planning commission?				
<b>FUTURE MOTION:</b> None				




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<b>TO:</b>	Public Works Committee	<b>DATE:</b>	September 7, 2023
<b>FROM:</b>	MillieAnne VanDevender, AICP Josh Kubitza, AICP Contract City Planners	<b>PROJECT TYPE:</b>	Municipal Code
		<b>SUBJECT:</b>	Potential Amendments to OMC 15-4-3, SEPA Exemptions

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Some applicants for development projects in Orting have raised concerns about the city’s SEPA environmental review categorical exemption thresholds found in OMC 15-4-3. There is sentiment that the current thresholds for requiring SEPA review are too low, which can unnecessarily add time and expense to the development process for smaller projects. Washington State law allows each community the opportunity to raise the SEPA environmental review exemption levels, which Orting has not revised since 2003. Therefore, staff is seeking direction from the Committee and Council on whether there is a desire to increase the types of minor new construction projects that qualify for a categorical exemption from SEPA.

### Background

The State established which proposed actions (projects) are categorically exempt from threshold determination and EIS requirements (WAC 197-11-800), as well as minimum and maximum exemption levels. Currently, the City’s exempt levels match the minimum State levels, except Orting has a higher threshold for filling land and excavations. The table below shows a comparison of Orting’s thresholds and the minimum and maximum exemption levels allowed by the State.

	Orting	WAC 197-11-800 minimum	WAC 197-11-800 maximum
# of residential units exempt from SEPA review	• 4 dwelling units	• 4 single family • 4 multi-family	• 30 single family • 100 single family less than 1,500 sf in size • 200 multifamily
Agricultural Structures	10,000 sf	10,000 sf	40,000 sf
Office, School, Commercial, recreational, service, or storage	4,000 sf and 20 parking spaces	4,000 sf and 20 parking spaces	30,000 sf and 90 parking spaces
Parking Lots	20 parking spaces	20 parking spaces	30,000 sf and 90 parking spaces
Landfills and Excavations	500 cumulative cubic yards	100 cubic yards or when associated with an exempt project	1,000 cubic yards

We compared the exemption levels in Orting to nearby jurisdictions to gain a better understanding of the SEPA categorical exemption levels in the surrounding communities that may compete for development. The table below shows the SEPA Threshold for Categorical Exemption by project type for Orting, three cities in the area, and Pierce County.

	Orting	Puyallup	Bonney Lake	Buckley	Pierce County
<b># of Residential Units exempt from SEPA review</b>	4 dwelling units	<ul style="list-style-type: none"> <li>• 4 single family</li> <li>• 4 multi-family</li> </ul>	<ul style="list-style-type: none"> <li>• 30 single family</li> <li>• 100 single family less than 1,500 sf</li> <li>• 200 multifamily</li> </ul>	<ul style="list-style-type: none"> <li>• 4 single family</li> <li>• 4 multi-family</li> </ul>	20 dwelling units
<b>Agricultural Structures</b>	10,000 sf	10,000 sf	40,000 sf	10,000 sf	30,000 sf
<b>Office, School, Commercial, recreational, service, or storage</b>	4,000 sf and 20 parking spaces	4,000 sf and 20 parking spaces	30,000 sf and 90 parking spaces	4,000 sf and 20 parking spaces	12,000 sf and 40 parking spaces
<b>Parking Lots</b>	20 parking spaces	40 parking spaces	30,000 sf and 90 parking spaces	20 parking spaces	40 parking spaces
<b>Landfills and Excavations</b>	500 cumulative cubic yards	500 cubic yards	1,000 cubic yards	100 cubic yards	500 cubic yards

The City of Bonney Lake has adopted the highest exemption levels in this comparison, which is significantly higher than the other communities. However, Bonney Lake’s exemption levels match the maximum exemption levels the State allows.

### Process

A community has the option to increase the categorical exemption levels by following a specific process outlined in WAC 197-11-800(1)(c). Through that process, a community may adopt the maximum level or a level between the minimum and maximum level, depending on the desired outcome and on existing regulations.

All development proposals, whether they are exempt from SEPA review or not, are subject to the requirements for environmental analysis, protection, and mitigation for impacts to the elements of the environment listed in WAC 197-11-444. The listed elements include many aspects of the environment such as water, land, air quality, light and glare, the use of emergency services, and many others. If the City decides to increase the exemption levels, we must show that exempt projects would still meet the requirements for analysis, protection, and mitigation by some other established means such as adopted development regulations or through specific mitigation. A full analysis of Orting’s regulations has not been done at this point, but the City currently has development regulations for protecting the environment and mitigating impacts. These regulations include the following:



- Environmentally critical areas regulations,
- Regulations for property in flood prone areas, and
- Impact fees for schools and transportation.

The City would also be required to document how specific adopted development regulations and applicable state and federal laws provide adequate protections for cultural and historic resources when exemption levels are raised.

Additionally, the City would be required to demonstrate that there are established requirements and practices for providing notice and comment opportunities for the public, affected tribes, and agencies regarding permitting of development projects included in these increased exemption levels. Along these same lines, the City would be required to provide a minimum 60-day notice of proposed exemption levels to affected tribes, agencies with expertise, affected jurisdictions, the department of ecology, and the public and provide an opportunity for comment.

### Suggested Amendments

Staff is seeking input to determine the appropriate categorical exemption levels for SEPA. City leaders may have specific reasons for determining that the current levels are sufficient, and no change is necessary. Or this may be an opportunity to increase the levels to reduce perceived or actual obstacles to development. As described above, there is a specific process the City would undertake to increase the levels, and the time required for the research and analysis may be seen as a deterrent or disadvantage. On the other hand, the benefits to raising the levels could be an increase in infill development as well as housing and development in general, which may provide added opportunities for affordable housing while ensuring necessary and required environmental reviews and protections are in place.

If the City decides to work on increasing the exemptions levels, we suggest the residential levels be raised to nine dwelling units because that is the number of lots allowed through the short plat process. This would ensure that each preliminary plat goes through the SEPA process while allowing a smaller subdivision to avoid this review. We would also suggest increasing the Office, School, Commercial, recreational, service, or storage and parking exemption levels to 12,000 sf and 40 parking spaces, like Pierce County. There are numerous regulations for commercial structures such as Architectural Design Review and there are specific lighting and landscaping requirements for parking lots. Additionally, we would recommend increasing the landfill and excavation exemption level to 1,000 cubic yards because of the various existing regulations pertaining to stormwater.

The code section that would be changing is copied below with suggested threshold levels shown underlined and in blue and the existing levels shown with the strikethrough feature and in red.

#### **OMC 15-14-3-2: FLEXIBLE THRESHOLDS FOR CATEGORICAL EXEMPTIONS:**

A. The city establishes the following exempt levels for minor new construction under WAC 197-11-800(1)(c) based on local conditions:

1. For residential dwelling units in WAC 197-11-800(1)(b)(i): Up to ~~four (4)~~ nine (9) dwelling units, cumulative.
2. For agricultural structures in WAC 197-11-800(1)(b)(ii): Up to ten thousand (10,000) square feet, cumulative.

3. For office, school, commercial, recreational, service or storage buildings in WAC 197-11-800(1)(b)(iii): Up to ~~four thousand (4,000)~~ twelve thousand 12,000 square feet and up to ~~twenty (20)~~ forty (40) parking spaces, cumulative.

4. For parking lots in WAC 197-11-800(1)(b)(iv): Up to ~~twenty (20)~~ forty (40) parking spaces, cumulative.

5. For landfills and excavations in WAC 197-11-800(1)(c)(v): Up to ~~five hundred (500)~~ one thousand (1,000) cumulative cubic yards.

B. Whenever the city establishes new exempt levels under this section, it shall send them to the department of ecology, headquarters office, Olympia, WA 98504, under WAC 197-11-800(1)(c). (Ord. 778, 10-30-2003, eff. 11-11-2003)

c: Scott Larson, City Administrator - City of Orting  
Wayne Carlson, Principal – AHBL, Inc.

\\ahbl.com\data\projects\2019\2190800\30\_PLN\Working\_Files\36 Code\SEPA\Staff memo - SEPA Update.docx





**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>	<b>AB23-XX</b>	<b>N/A</b>		<b>XX.XX.XX</b>
2023 Budget Amendment	<b>Department:</b>	Finance		
	<b>Date Submitted:</b>	<b>8.8.2023</b>		
<b>Cost of Item:</b>		<u>Total Budget increase: \$55,000</u>		
<b>Amount Budgeted:</b>		<u>N/A</u>		
<b>Unexpended Balance:</b>		<u>N/A</u>		
<b>Bars #:</b>		Various		
<b>Timeline:</b>				
<b>Submitted By:</b>		Gretchen Russo		
<b>Fiscal Note:</b> See Exhibit A & B				
<b>Attachments:</b> Ordinance 2023-XXXX, Exhibit A				
<b>SUMMARY STATEMENT:</b>				
<p><u>Water Fund:</u> Request to increase the 2023 Water Fund by \$55,000 for additional staff and vector rental costs to complete the city-wide inspection of water lines for lead.</p>				
<b>RECOMMENDED MOTION: <u>Motion:</u></b>				
<p>To Adopt Ordinance No. 2023-XXXX an ordinance of the City of Orting, Washington, amending Ordinance No. 2022-1099, adopting the city of Orting 2023 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.</p>				

CITY OF ORTING  
WASHINGTON  
**ORDINANCE NO. 2023-XXXX**

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**AN ORDINANCE OF THE CITY OF ORTING, WASHINGTON, AMENDING ORDINANCE NO. 2022-1099, ADOPTING THE CITY OF ORTING 2023 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 2023 budget pursuant to Ordinance No. 2022-1099; 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 2023 budget year and desires to amend the 2023 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 2.** The 2023 Adopted Budget for the City of Orting for the period January 1, 2023 through December 31, 2023, 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 14th DAY OF DECEMBER, 2022.**

CITY OF ORTING

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Joshua Penner, Mayor

ATTEST/AUTHENTICATED:

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Kimberly Agfalvi, City Clerk

Approved as to form:

---

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:

**Exhibit A: Explanation of Amendments to 2023 Budget**

**Water Fund**

The city is required to meet a federal statute to test all city water pipes for lead. In order to meet this deadline requirement, the City needs to increase the Vactor Truck Rental budget line.

Once the testing has been completed, this information needs to be added to the City's Activov program which tracks the City's assets.

**Water Fund**

<i>Beginning Fund Balance</i>	<i>\$3,194,393</i>
<i>Revenue Budget</i>	<i>\$2,082,466</i>
<i>Actual Revenue (as of 8.8.23)</i>	<i>\$1,420,674</i>
<i>Expenditure Budget</i>	<i>\$2,548,318</i>
<i>Actual Expenditures (as of 8.8.23)</i>	<i>\$1,107,965</i>
<i>Original Expenditure Budget</i>	<i>\$2,548,318</i>
<i>Vactor Truck Rental</i>	<i>\$19,000</i>
<i>Term Limited GIS Technician Position</i>	<i><u>\$36,000</u></i>
<i>Amended Budget</i>	<i>\$2,626,318</i>

2023 Budget, Exhibit A  
Summary of Expenses

<u>Fund</u>		<u>2023 Budget</u>
General Fund	-	\$4,024,323.93
City Streets		\$9,521,820.05
Cemetery		\$83,870.00
Parks Department		\$382,431.75
Tourism Fund		\$5,000.00
TBD		\$280,000.00
Police Department Drug		\$126.00
Transportation Impact		\$400,000.00
Water		\$2,548,318.35
Water Resource Recovery		\$18,868,796.11
Stormwater		\$3,651,969.98
Cemetery Perpetual Fund		\$400.00
<u>Skinner Estate Fund</u>	-	<u>\$2,000.00</u>
Total Appropriations		\$39,769,056.18



Appendix B

# 2023 Job Classifications and Pay Ranges

<u>Position</u>	<u>Range</u>	<u>Approved FTE</u>		<u>Department</u>	<u>Salary (Low &amp; High)</u>	
		<u>Positions</u>			<u>Low</u>	<u>High</u>
<b>Unrepresented Employees</b>						
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	18	1		GG	60,382.70	67,961.26
Events & Activities Coordinator	17	1		GG	58,623.98	65,981.81
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	150,961.60
Public Works Director	42	1		PW	122,745.60	138,151.25
Term Limited Landscape Maintenance	1	1		PW	36,532.53	41,117.68
Supported Employment	1	0.2		PW	6,240.00	6,240.00
<b>Police Wages (Per CBA)</b>						
Officer	P24	7		Police	80,321.90	93,119.10
Detective	P26	1		Police	87,777.66	95,923.36
Lieutenant	P28	2		Police	107,095.87	107,095.87
<b>Public Works and Administrative Staff (Per CBA)</b>						
Sr. Accountant	21	1		GG	63,433.81	71,395.32
Accountant I	17	1		GG	56,360.12	63,433.81
Permit & PW Support	17	1		GG	56,360.12	63,433.81
Court Clerk	16	0.5		GG	54,718.56	61,586.23
Admin Asst. PW	21	1		PW	63,433.81	71,395.32
PW Supervisor	29	1		PW	80,356.06	90,441.45
Wastewater Plant Supervisor	35	1		PW	95,949.33	107,991.82
Water Plant Supervisor	27	1		PW	75,743.29	85,249.74
Wastewater OIT	15			PW	53,124.82	59,792.45
Wastewater I	18	3		PW	58,050.92	65,336.83
Wastewater II	22			PW	65,336.83	73,537.17
Wastewater III	27			PW	75,743.29	85,249.74
Water OIT	15			PW	53,124.82	59,792.45
Water I	18	3		PW	58,050.92	65,336.83
Water II	22			PW	65,336.83	73,537.17
Water III	25			PW	71,395.32	80,356.06
Maintenance Worker I	15	6		PW	53,124.82	59,792.45
Maintenance Worker II	20			PW	61,586.23	69,315.84
Stormwater Worker I	16	2		PW	54,718.56	61,586.23
Stormwater Worker II	21			PW	63,433.81	71,395.32
Code Enforcement	24	1		GG	69,315.84	78,015.59
Police Records Clerk I	15	1		GG	53,124.82	59,792.45

Appendix B

## 2023 Job Classifications and Pay Ranges

<u>Position</u>	<u>Range</u>	<u>Approved FTE</u>		<u>Salary (Low &amp; High)</u>	
		<u>Positions</u>	<u>Department</u>	<u>Low</u>	<u>High</u>
<b>Unrepresented Employees</b>					
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	18	1	GG	60,382.70	67,961.26
Events & Activities Coordinator	17	1	GG	58,623.98	65,981.81
HR Clerk	21	1	GG	65,981.81	74,263.10
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	150,961.60
Public Works Director	42	1	PW	122,745.60	138,151.25
Term Limited Landscape Maintenance	1	1	PW	36,532.53	41,117.68
Supported Employment	1	0.2	PW	7,306.51	8,223.54
Term Limited GIS Technician	18	0.5	PW	30,191.35	33,980.63
*PW Operations Manager	36	1	PW	102,797.50	115,699.50
<b>Police Wages (Per CBA)</b>					
Officer	P24	7	Police	80,321.90	93,119.10
Detective	P26	1	Police	87,777.66	95,923.36
Lieutenant	P28	2	Police	107,095.87	107,095.87
<b>Public Works and Administrative Staff (Per CBA)</b>					
Sr. Accountant	21	1	GG	65,981.81	74,263.10
Accountant I	17	1	GG	58,623.98	65,981.81
Permit & PW Support	17	1	GG	58,623.98	65,981.81
Court Clerk	16	0.5	GG	56,916.49	64,060.01
Admin Asst. PW	21	1	PW	65,981.81	74,263.10
*PW Supervisor	29	1	PW	83,583.78	94,074.28
Wastewater Plant Supervisor	35	1	PW	99,803.40	112,329.61
Water Plant Supervisor	30	1	PW	86,091.29	96,896.51
Wastewater OIT	15	3	PW	55,258.72	62,194.18
Wastewater I	18	3	PW	60,382.70	67,961.26
Wastewater II	22	3	PW	67,961.26	76,491.00
Wastewater III	27	3	PW	78,785.73	88,674.03
Water OIT	15	3	PW	55,258.72	62,194.18
Water I	17	3	PW	58,623.98	65,981.81
Water II	21	3	PW	65,981.81	74,263.10
Water III	25	3	PW	74,263.10	83,583.78
Maintenance Worker I	15	6	PW	55,258.72	62,194.18
Maintenance Worker II	20	6	PW	64,060.01	72,100.10
Maintenance Worker Lead	22	6	PW	67,961.26	76,491.00
Stormwater Worker I	16	2	PW	56,916.49	64,060.01
Stormwater Worker II	21	2	PW	65,981.81	74,263.10
Code Enforcement	24	1	GG	72,100.10	81,149.30
Police Records Clerk I	15	1	GG	55,258.72	62,194.18

# CITY OF ORTING- 2023 WAGE MATRIX

COLA: 3.00% Pol COLA: 6.1%

Step	A	B	C	D	E
<b>Range</b>	<b>PW &amp; Administrative Staff</b>				
1	\$17.56	\$18.09	\$18.63	\$19.19	<del>\$19.77</del>
2	\$18.09	\$18.63	\$19.19	\$19.77	<del>\$20.36</del>
3	\$18.63	\$19.19	\$19.77	\$20.36	<del>\$20.97</del>
4	\$19.19	\$19.77	\$20.36	\$20.97	<del>\$21.60</del>
5	\$19.77	\$20.36	\$20.97	\$21.60	<del>\$22.25</del>
6	\$20.36	\$20.97	\$21.60	\$22.25	<del>\$22.92</del>
7	\$20.97	\$21.60	\$22.25	\$22.92	<del>\$23.60</del>
8	\$21.60	\$22.25	\$22.92	\$23.60	<del>\$24.31</del>
9	\$22.25	\$22.92	\$23.60	\$24.31	<del>\$25.04</del>
10	\$22.92	\$23.60	\$24.31	\$25.04	<del>\$25.79</del>
11	\$23.60	\$24.31	\$25.04	\$25.79	<del>\$26.57</del>
12	\$24.31	\$25.04	\$25.79	\$26.57	<del>\$27.36</del>
13	\$25.04	\$25.79	\$26.57	\$27.36	<del>\$28.18</del>
14	\$25.79	\$26.57	\$27.36	\$28.18	<del>\$29.03</del>
15	\$26.57	\$27.36	\$28.18	\$29.03	<del>\$29.90</del>
16	\$27.36	\$28.18	\$29.03	\$29.90	<del>\$30.80</del>
17	\$28.18	\$29.03	\$29.90	\$30.80	<del>\$31.72</del>
18	\$29.03	\$29.90	\$30.80	\$31.72	<del>\$32.67</del>
19	\$29.90	\$30.80	\$31.72	\$32.67	<del>\$33.65</del>
20	\$30.80	\$31.72	\$32.67	\$33.65	<del>\$34.66</del>
21	\$31.72	\$32.67	\$33.65	\$34.66	<del>\$35.70</del>
22	\$32.67	\$33.65	\$34.66	\$35.70	<del>\$36.77</del>
23	\$33.65	\$34.66	\$35.70	\$36.77	<del>\$37.88</del>
24	\$34.66	\$35.70	\$36.77	\$37.88	<del>\$39.01</del>
25	\$35.70	\$36.77	\$37.88	\$39.01	<del>\$40.18</del>
26	\$36.77	\$37.88	\$39.01	\$40.18	<del>\$41.39</del>
27	\$37.88	\$39.01	\$40.18	\$41.39	<del>\$42.63</del>
28	\$39.01	\$40.18	\$41.39	\$42.63	<del>\$43.91</del>
29	\$40.18	\$41.39	\$42.63	\$43.91	<del>\$45.23</del>
30	\$41.39	\$42.63	\$43.91	\$45.23	<del>\$46.58</del>
31	\$42.63	\$43.91	\$45.23	\$46.58	<del>\$47.98</del>
32	\$43.91	\$45.23	\$46.58	\$47.98	<del>\$49.42</del>
33	\$45.23	\$46.58	\$47.98	\$49.42	<del>\$50.90</del>
34	\$46.58	\$47.98	\$49.42	\$50.90	<del>\$52.43</del>
35	\$47.98	\$49.42	\$50.90	\$52.43	<del>\$54.00</del>
36	\$49.42	\$50.90	\$52.43	\$54.00	<del>\$55.62</del>
37	\$50.90	\$52.43	\$54.00	\$55.62	<del>\$57.29</del>
38	\$52.43	\$54.00	\$55.62	\$57.29	<del>\$59.01</del>
39	\$54.00	\$55.62	\$57.29	\$59.01	<del>\$60.78</del>
40	\$55.62	\$57.29	\$59.01	\$60.78	<del>\$62.61</del>
41	\$57.29	\$59.01	\$60.78	\$62.61	<del>\$64.48</del>
42	\$59.01	\$60.78	\$62.61	\$64.48	<del>\$66.42</del>
43	\$60.78	\$62.61	\$64.48	\$66.42	<del>\$68.41</del>
44	\$62.61	\$64.48	\$66.42	\$68.41	<del>\$70.46</del>
45	\$64.48	\$66.42	\$68.41	\$70.46	<del>\$72.58</del>
46	\$66.42	\$68.41	\$70.46	\$72.58	<del>\$74.76</del>
47	\$68.41	\$70.46	\$72.58	\$74.76	<del>\$77.00</del>
48	\$70.46	\$72.58	\$74.76	\$77.00	<del>\$79.31</del>
49	\$72.58	\$74.76	\$77.00	\$79.31	<del>\$81.69</del>
50	\$ 74.76	\$ 77.00	\$ 79.31	\$ 81.69	<del>\$84.14</del>
51	\$ 77.00	\$ 79.31	\$ 81.69	\$ 84.15	<del>\$86.67</del>

matches 2023 Budget rates

# CITY OF ORTING- 2020 WAGE MATRIX

COLA: 3.50% Pol COLA: 8.0% Pol MKT Increase: 0.0%  
 Sgt. MKT Increase: 0.0%

Step	C	D	E	F	G	H	
<b>Range</b>	Police						
P24	\$38.62	\$39.78	\$40.98	\$42.20	\$43.47	\$44.77	<b>Off</b>
P26			\$42.20	\$43.47	\$44.78	\$46.12	<b>Det</b>
P28						\$51.49	<b>Lt</b>

# CITY OF ORTING- 2020 WAGE MATRIX

COLA: 2.28% Pol COLA: 4.0% Pol MKT Increase: 0.0%  
 Sgt. MKT Increase: 0.0%

Step	A	B	C	D	E	
Range						
9	\$22.25	\$22.92	\$23.60	\$24.31	\$25.04	
10	\$22.92	\$23.60	\$24.31	\$25.04	\$25.79	
11	\$23.60	\$24.31	\$25.04	\$25.79	\$26.57	
12	\$24.31	\$25.04	\$25.79	\$26.57	\$27.36	
13	\$25.04	\$25.79	\$26.57	\$27.36	\$28.18	<b>\$52,086.65</b>
14	\$25.79	\$26.57	\$27.36	\$28.18	\$29.03	
15	\$26.57	\$27.36	\$28.18	\$29.03	\$29.90	
16	\$27.36	\$28.18	\$29.03	\$29.90	\$30.80	
17	\$28.18	\$29.03	\$29.90	\$30.80	\$31.72	
18	\$29.03	\$29.90	\$30.80	\$31.72	\$32.67	
19	\$29.90	\$30.80	\$31.72	\$32.67	\$33.65	
20	\$30.80	\$31.72	\$32.67	\$33.65	\$34.66	
21	\$31.72	\$32.67	\$33.65	\$34.66	\$35.70	
22	\$32.67	\$33.65	\$34.66	\$35.70	\$36.77	
23	\$33.65	\$34.66	\$35.70	\$36.77	\$37.88	
24	\$34.66	\$35.70	\$36.77	\$37.88	\$39.01	
25	\$35.70	\$36.77	\$37.88	\$39.01	\$40.18	
26	\$36.77	\$37.88	\$39.01	\$40.18	\$41.39	
27	\$37.88	\$39.01	\$40.18	\$41.39	\$42.63	
28	\$39.01	\$40.18	\$41.39	\$42.63	\$43.91	
29	\$40.18	\$41.39	\$42.63	\$43.91	\$45.23	
30	\$41.39	\$42.63	\$43.91	\$45.23	\$46.58	
31	\$42.63	\$43.91	\$45.23	\$46.58	\$47.98	
32	\$43.91	\$45.23	\$46.58	\$47.98	\$49.42	
33	\$45.23	\$46.58	\$47.98	\$49.42	\$50.90	
34	\$46.58	\$47.98	\$49.42	\$50.90	\$52.43	
35	\$47.98	\$49.42	\$50.90	\$52.43	\$54.00	
36	\$49.42	\$50.90	\$52.43	\$54.00	\$55.62	
37	\$50.90	\$52.43	\$54.00	\$55.62	\$57.29	
38	\$52.43	\$54.00	\$55.62	\$57.29	\$59.01	
39	\$54.00	\$55.62	\$57.29	\$59.01	\$60.78	
40	\$55.62	\$57.29	\$59.01	\$60.78	\$62.61	
41	\$57.29	\$59.01	\$60.78	\$62.61	\$64.48	
42	\$59.01	\$60.78	\$62.61	\$64.48	\$66.42	
43	\$60.78	\$62.61	\$64.48	\$66.42	\$68.41	
44	\$62.61	\$64.48	\$66.42	\$68.41	\$70.46	
45	\$64.48	\$66.42	\$68.41	\$70.46	\$72.58	
46	66.41887	68.41144	70.46378	72.57769	74.75502	
47	68.41144	70.46378	72.57769	74.75502	76.99767	

48	70.46378	72.57769	74.75502	76.99767	79.3076
49	72.58	74.7552	77.0016	79.31165	81.691
50	74.7552	77.0016	79.3104	81.692	84.14276
51	77.0016	79.3104	81.692	84.1464	86.67079