



**CLARK COUNTY  
STAFF REPORT**

**DEPARTMENT/DIVISION:** Public Works / Engineering and Construction Division

**DATE:** June 17, 2014

**REQUEST:** Accept and Approve the 2013 Annual Bridge Report.

**CHECK ONE:**  Consent  Chief Administrative Officer

**PUBLIC WORKS GOALS:**

- Provide safe and efficient transportation systems within Clark County
- Continue responsible stewardship of public funds
- Promote family-wage job creation and economic development to support a thriving community
- Maintain a desirable quality of life
- Improve environmental stewardship and protection of natural resources
- Increase partnerships and foster an engaged, informed community
- Make Public Works a great place to work

**BACKGROUND:** Attached is the Annual Bridge Report for 2013, as required by Washington Administrative Code 136-20-060. The report summarizes the condition of 108 bridges within the county, including bridges owned by the Cities of Battle Ground, Camas, Washougal, Ridgefield, La Center and Vancouver. Of the 108 bridges, 73 are in good condition, 26 are in fair condition, and 1 in poor condition (Bridge # 230 – Fifth Plain Creek). The remaining 8 bridges are either railroad or pedestrian bridges which are only inspected with respect to roadway and pedestrian safety.

**COMMUNITY OUTREACH:** This report is an annual evaluation of the county's bridges, as required by State statutes.


**BUDGET AND POLICY IMPLICATIONS:** Improvements to agency owned bridges are programmed for repair, replacement or rehabilitation through the Six-Year Transportation Improvement Program (TIP).

**FISCAL IMPACTS:**  Yes (see Fiscal Impacts Attachment)  No

**ACTION REQUESTED:** Accept and approve the 2013 Annual Bridge Report.

**DISTRIBUTION:** Please retain one copy for the Board's files and return one copy to the Public Works Department indicating the action taken.

 6-9-14  
 For Tom Grange, P.E.  
 Engineering & Construction Division Manager

APPROVED:   
 CLARK COUNTY, WASHINGTON  
 BOARD OF COMMISSIONERS

  
 Heath H. Henderson, P.E.  
 Public Works Director/County Engineer

June 17, 2014  
 SR 129-14

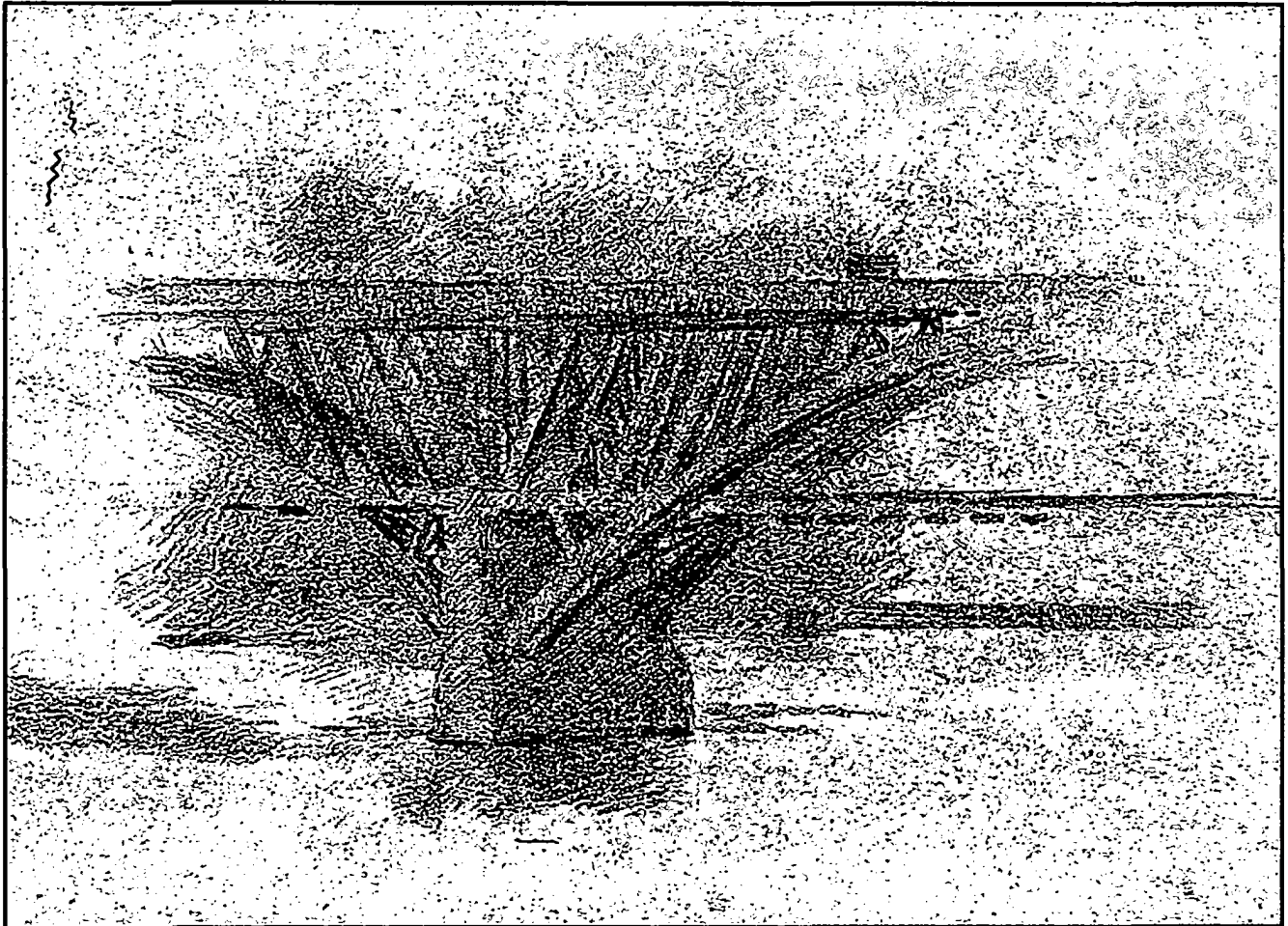
HH/TG/DWD/pam

cc: David Dolan, Carolyn Heniges, Susan Wilson, Bill Wright, Sandra Hall, & Jean Singer

PW14-061

*Handwritten initials/signature*

# 2013 Annual Bridge Report



Girard Avenue Bridge 1871 - Thomas Eakins

Prepared by the Clark County Public Works Engineering and Construction Division  
Submitted May 2014



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## I. INTRODUCTION

This bridge report is prepared by Clark County Public Works Department each year to fulfill the requirements of the Washington Administrative Code (WAC) 136-20-060. The WAC requires the County Engineer's report of bridge inspections as follows:

Each county engineer shall furnish the county legislative authority with a written resume of the findings of the bridge inspection effort. This resume shall be made available to said authority and shall be consulted during the preparation of the proposed six-year transportation program revision. The resume shall include the county engineer's recommendations as to replacement, repair or load restriction for each deficient bridge. The resolution of adoption of the six-year transportation program shall include assurances to the effect that the county engineer's report with respect to deficient bridges was available to said authority during the preparation of the program.

The bridge inspections follow the National Bridge Inspection Standards (NBIS) which are published in the Code of Federal Regulations, 23 CFR 650, subpart C. The NBIS sets the national standards for the proper safety inspection and evaluation of bridges and apply to all structures defined as highway bridges located on public roads. The County uses the Washington State Bridge Inspection Manual which details Washington State's policies and procedures for the condition and inspection of bridges.

This report summarizes the county's 2013 bridge programs, activities and findings. These programs help to prioritize the efforts for maintaining and preserving the county's bridges and identifying complete bridge replacements before they significantly impact the county's transportation network.

## II. BRIDGE INVENTORY

The county inspects and inventories 108 bridges located throughout Clark County. Of these bridges:

- 76 bridges are owned by Clark County. (2 of which are pedestrian bridges)
- 26 bridges are owned by cities and inspected under interagency agreements.
- 6 bridges are owned by the Railroad and inspected with respect to roadway safety.

Bridges are identified throughout this report by the bridge name followed by the bridge number, e.g., Betts Bridge No. 26. A complete bridge inventory spreadsheet is included in Table A in the Appendix. As referenced above, 26 bridges are wholly owned by the cities of Vancouver, Camas, Washougal, Ridgefield, Battle Ground and La Center and 6 are owned by BNSF Railroad or CCRR and are inspected with respect to roadway safety of the streets that pass under them. The following map, Clark County Bridge Locations Figure 1, illustrates the distribution of county-owned and city owned bridges throughout the county, in each commissioner's district.

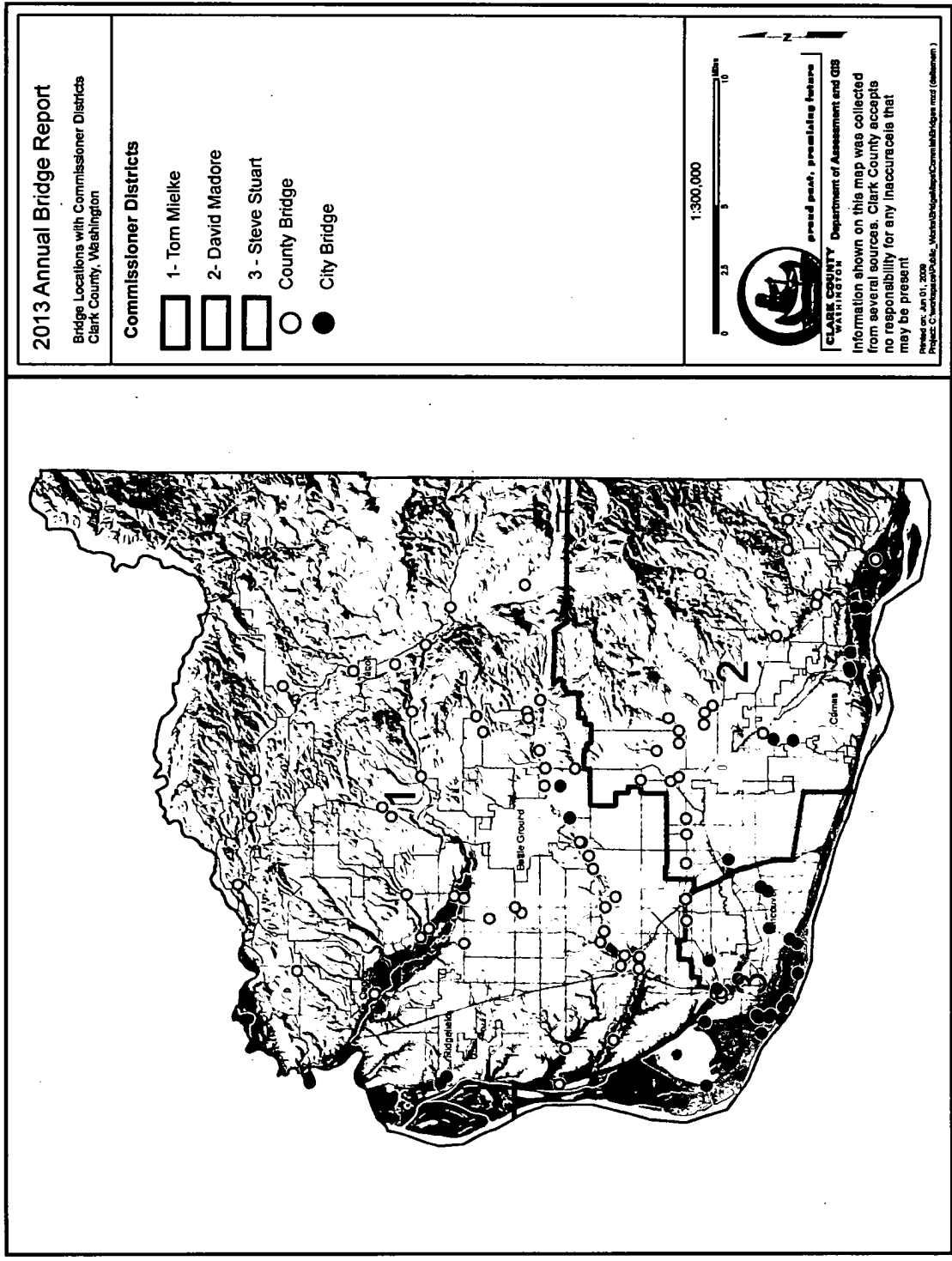


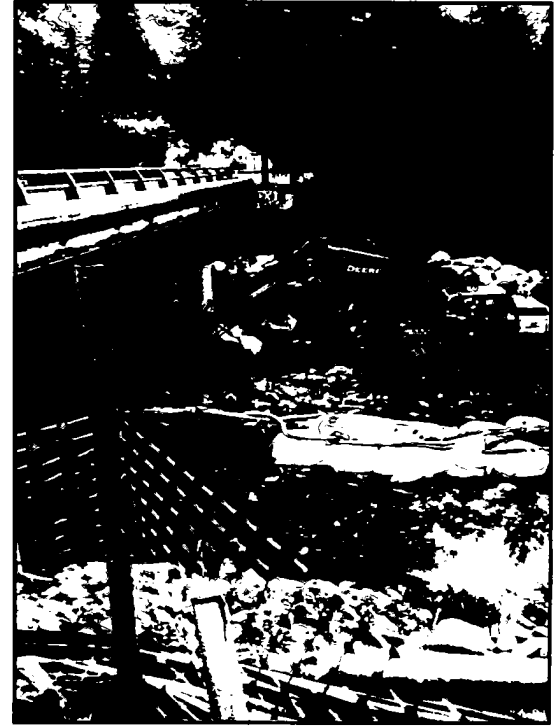
Figure 1 Clark County Bridge Locations Map

### III. BRIDGE INSPECTION FINDINGS AND REPAIRS

#### A. Bridge Inspection Findings

The National Bridge Inspection Standards (NBIS) mandates that public agencies inspect and report on all bridges at least once every two years. Under these standards, the county is required to document and report the current condition of each bridge, determine the degree of wear or deterioration, and recommend repairs or needed services. Bridges deficient in their conditions, such as load restricted bridges, may require more frequent inspections.

A total of 52 routine bridge inspections were conducted in late 2013 and early 2014. During these bridge inspections, our inspectors made an in-depth evaluation of the condition of the bridge structure and documented any observable deficiencies. When deficiencies were revealed they were noted in the report and a deficiency report was generated and provided to the operation and maintenance section for follow up. Any urgent structural or safety concerns are addressed promptly. No significant findings resulted from this year's bridge inspections.



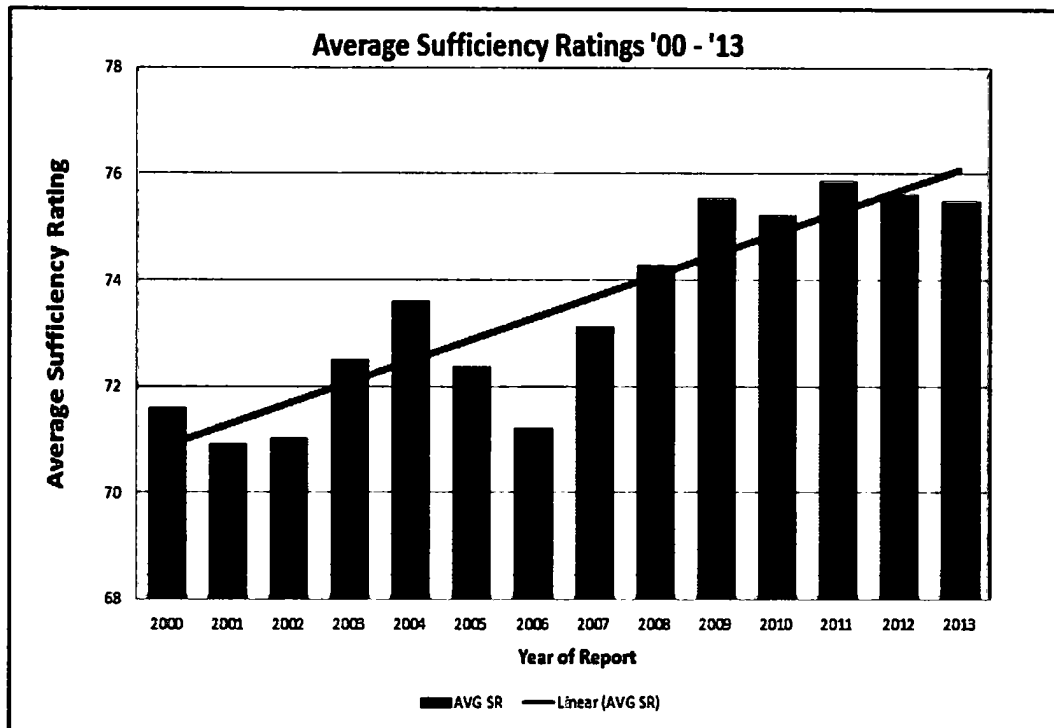
Pleasant Valley Bridge No. 33 Scour Repair (2013).

In addition to routine bridge inspection, several significant storm events brought high flow levels in streams and creeks and required scour specific inspection. A total of 40 of the County's bridges are considered scour critical or have unknown foundations, and can require special inspection after the events for erosion, debris and instability of stream banks.

As the bridge inspection reports were generated and reviewed, these reports were entered into Bridge Works, a bridge management application developed by the WSDOT Bridge Preservation office. This system acts as a master inventory of all structures that are the responsibility of WSDOT. They in turn verify compliance with the NBIS standards and report the information to Federal Highway Administration (FHWA).

One measure that provides an overview of the condition of the inventory is a rating factor known as the Sufficiency Rating (SR). The SR is a numeric value which indicates a bridge's relative ability to serve its intended purpose. The sufficiency rating is the summation of four calculated values: Structural Adequacy and Safety, Serviceability and Functional Obsolescence, Essentiality for Public Use and Special Reductions. The SR is a score calculated for each bridge using the ratings that the inspector assigns to individual features of the bridge. Geometric layout, traffic volume, and the length of the detour route are also used in calculating the SR. The SR ranges from zero (a bridge that is closed and cannot carry traffic loads) to 100 (a new bridge with no deficiencies). The average SR of the entire inventory provides a comparative look at the health of the inventory from one year to the next.

Overall, the SR for the county inventory of bridges shows a positive trend line with minor fluctuations from year to year. Due to the overall number of bridges in the inventory and the fact that the inventory continues to age, it is a significant accomplishment that we are able to maintain a positive trend in the SR. With only two new bridges anticipated with the six year plan, the upward trend will be adversely affected. Figure 2 illustrates the average annual SR over the last thirteen years, while Figure 3 depicts the age of the bridges as it relates to the bridge design life.



**Figure 2: Average annual Sufficiency Rating (SR) for bridges owned by Clark County with twelve year trend line.**

Generally speaking, bridges with a SR greater than 50 have a fair amount of useful life remaining. Bridges with a SR less than 50 require more attention and may need major repairs or complete replacement. The Bridge Replacement Advisory Committee (BRAC) which provides grants for bridge improvements are only screening bridges with a SR of 30 or less for replacement eligibility and a SR of 50 or less for rehabilitation eligibility. It is important to note that while the SR for the overall inventory is 75.52, there are a number of individual bridges with SR below 50. There is a direct correlation between the SR and the age of the bridge and we can expect the average SF rating to begin to decline if bridge maintenance and repairs needs are not address. In addition to using the SR as a measure of the condition of a bridge, the NBIS defines two types of deficient bridges – **structurally deficient (SD)** and **functionally obsolete (FO)**.

A **structurally deficient bridge (SD)** as defined by the FHWA, is one whose condition or design has impacted its ability to carry its intended traffic loads. Examples include bridges that have significant load carry elements that are found to be in poor condition due to deterioration or damage and/or the inadequacy of waterway opening provided by the bridge which causes flooding over the bridge deck or adjacent roadway causing significant traffic interruptions. The fact that a bridge is “structurally deficient” does not mean or imply that the bridge is unsafe or is likely to collapse. It does however indicate that when left open to traffic, it typically requires significant maintenance and repair to remain

## Clark County

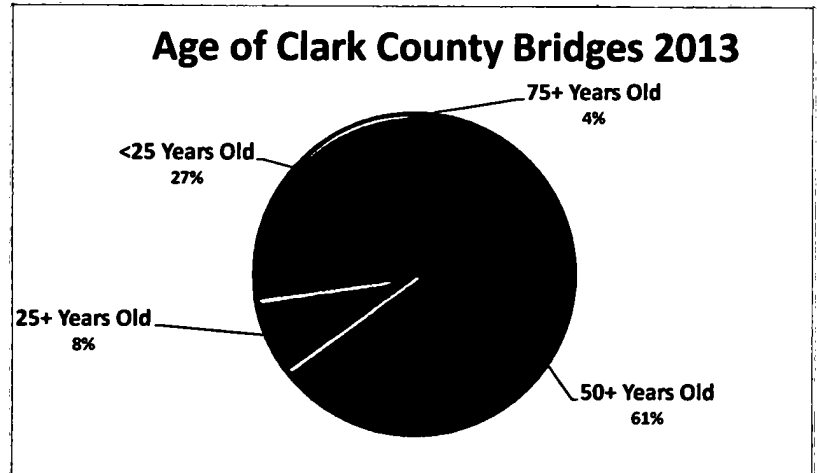
## 2013 Annual Bridge Report

in service and ultimately will require replacement or major rehabilitation to address the deficiencies. Currently, Clark County Bridge inventory has one structurally deficient bridge, Fifth Plain Bridge No. 230.

### **A functionally obsolete bridge (FO)**

is one in which the deck geometry, load carrying capacity, clearance, or approach roadway alignment has reduced its ability to adequately meet the traffic needs below accepted design standards. While structural deficiencies

are generally the result of deterioration of bridge components, functional obsolescence typically results from older bridge designs that are subject to increased traffic demands and are substandard structures as defined by the current bridge design codes. Examples include narrow lane/shoulder widths and height restrictions of less than 14 feet. Clark County Bridge inventory has 18 bridges that are listed as Functionally Obsolete (FO) while, the City of Camas has 3 and the Cities of Vancouver Ridgefield, Battle Ground and Washougal each have a single bridge listed as FO.



**Table 1: Functionally Obsolete & Structurally Deficient Bridges**

Agency	Number of Bridges	Functionality Obsolete (FO)	Structurally Deficient (SD)
Clark County	74	18	1
City of Vancouver	14	3	0
City of Camas	4	3	0
City of Washougal	3	1	0
City of Ridgefield	2	1	0
City of Battle Ground	2	1	0
City of La Center	1	0	0
Railroad (BNSF-5, CCRR-1)	5	N/A	N/A
Pedestrian Bridge (CC)	2	N/A	N/A

## IV. RESTRICTED BRIDGES

If a bridge deficiency is severe and repairs cannot restore full load capability to a bridge, load restriction signs for trucks are erected at each end of the bridge and heavy loads are restricted from the bridge. Currently Clark County has two weight-limited bridges in their inventory and one Height restricted bridge. The City of Vancouver has one height restricted bridge.



**Table 2: Load Limited Bridges in Clark County**

Bridge Name	Bridge No.	Action
Cedar Creek (County)	65	Weight Restricted
Kepfer (County)	102	Weight Restricted
CCRR U/C - Old 99 (County)	20141	Height Restricted
BNSF RR - Marine Park Way	99909-05	Height Restricted

## V. BRIDGE IMPROVEMENT PROGRAM (BIP)

In 2008 Clark County initiated a Bridge Improvement Program to develop a process for establishing a bridge priority system to assess bridge needs and provide a consistent ranking and scoring system for bridges needing repair, rehabilitation, or replacement.

The goals and objectives of the program are:

- Review and analyze deficiencies for all bridges and prepare cost estimates for repair, rehabilitation, or replacement.
- Develop a bridge matrix to score and rank bridges for priority funding.
- Cataloge the potential environmental permits required to repair deficiencies.
- Develop a Microsoft Access database containing all bridge information data systems that is easily expandable, calculates deficiency costs, and scores and ranks bridge improvements.
- Use the BIP to help guide project rankings and pursue funding through state and federal programs. (Bridges are funded differently than road projects by state and federal programs.)

The BIP incorporates previously completed scour and seismic vulnerability programs.

## VI. BRIDGE CONSTRUCTION/ACCOMPLISHMENTS IN 2013

In the fall of 2012 Washington State Department of Transportation announced the selection for BRAC funded projects. Of the eight projects submitted by Clark County all eight were selected totaling \$4million in federal funding. Design and permitting of the selected projects began in 2013.

Bridge Name	Bridge No.	Funding Requested For	Estimated Project Cost	Federal Funding
Fifth Plain Creek	230	Replacement	\$ 2,300,000	80%
Brush Prairie Creek	201	Seismic Retrofit	\$402,000	100%
Brush Prairie Creek	201	Scour Mitigation	\$385,000	100%
Van Atta	275	Seismic Retrofit	\$287,000	100%
Van Atta	275	Painting	\$32,000	100%
Big Tree Creek	120	Seismic Retrofit	\$379,000	100%
Big Tree Creek	120	Scour Mitigation	\$385,000	100%
Blair Zeek	252	Seismic Retrofit	\$486,000	100%

Two bridge projects were completed in 2013, the Dayton Bridge No. 75 and the Pleasant Valley Bridge No. 33 scour repair projects. In addition, design and permitting work continued on the Cedar Creek Bridge No. 65 Bridge Replacement Project, the 10th Avenue Bridge, the Fifth Plain Creek Bridge No. 230 Bridge Replacement Project, the Brush Prairie Creek No. 201 Seismic Retrofit and Scour Mitigation Project, the Big Tree No. 120 Seismic Retrofit and Scour Mitigation Project, the Van Atta Bridge No. 275 Seismic Retrofit and Painting Project and the Blair Zeek Bridge No. 252 Seismic Retrofit Project.

The County also upgraded bridge rail components on four bridges to bring them up to current standards as part of the 2013 Overlay Preservation Project.

## **VII. FUTURE PLANS**

It is anticipated that one of the eight 2012 BRAC funded projects will be constructed in the summer of 2014, – the Blair Zeek Bridge No. 252 Seismic Retrofit Project while the remaining seven BRAC funded projects are scheduled to be constructed in 2015.

The County is also moving forward with the design and permitting phase of the Cedar Creek Bridge No. 65 Replacement and the 10th Avenue Bridge which are funded by the County. We will also be upgrading bridge rail components on two bridges as part of the 2014 Overlay Preservation project.



Cougar Creek Bridge No. 1409 completed in 2012.

Other goals include:

- Expansion of our partnerships with local cities and neighboring counties to provide bridge inspection services.
- Continuing to support Clark County – Parks and Railroad – with their bridge needs. Facilitate the monitoring and assessment of their bridges and offering engineering support services as needed.
- Coordinating bridge barrier railing upgrades with requirements for guardrail improvements necessary through the annual County roads overlay program.
- Ongoing support and review of private bridge designs.
- Submission of applications for the 2014 BRAC selection.

## GLOSSARY OF BRIDGE TERMINOLOGY

**Abutment:** a substructure supporting the end of a single span, or the extreme end of a multispan superstructure and, in general, retaining or supporting the approach fill.

**Backwall:** the top-most portion of an abutment functioning primarily as a retaining wall to contain approach roadway fill.

**Bent:** a supporting unit of the beams of a span made up of one or more column or column-like members connected at their top-most ends by a cap, strut, or other horizontal member.

**BRAC:** Bridge Replacement Advisory Committee

**Bracing:** a system of tension or compression members or a combination of these, connected to the parts to be supported or strengthened by a truss or frame. It transfers wind, dynamic, impact, and vibratory stresses to the substructure and gives rigidity throughout the complete assemblage. Can also refer to diagonal members that tie two or more columns of a bent together.

**Cap:** the horizontally-oriented, top-most piece or member of a bent serving to distribute the beam loads upon the columns and to hold the beams in their proper relative positions.

**Chord:** in a truss, the upper-most and the lower-most longitudinal members, extending the full length of the truss.

**Compression:** a type of stress involving pressing together; tends to shorten a member; opposite of tension.

**Deck:** portion of a bridge that provides direct support for vehicular and pedestrian traffic.

**Elastomeric pads:** rectangular pads made of neoprene, found between the sub- and superstructure that bears the entire weight of the superstructure. Elastomeric pads can deform to allow for thermal movements of the superstructure.

**Endwall:** the wall located directly under each end of a bridge that holds back approach roadway fill. The endwall is part of the abutment.

**Fracture critical member:** a member in tension or with a tension element whose failure would probably cause a portion of or the entire bridge to collapse.

**Pier:** a structure comprised of stone, concrete, brick, steel, or wood that supports the ends of the spans of a multispan superstructure at an intermediate location between abutments. A pier is usually a solid structure as opposed to a bent, which is usually made up of columns.

**Pile:** a rod or shaft-like linear member of timber, steel, concrete, or composite materials driven into the earth to carry structure loads into the soil.

**Pinpile:** a series of two-inch-diameter pipes driven in a line into the ground to support the timber planks of a small retaining wall, typically used to prevent erosion under a bridge abutment.

**Post or column:** a member resisting compressive stresses, in a vertical or near vertical position.

**Scour:** erosive action of removing streambed material around bridge substructure due to water flow. Scour is of particular concern during high-water events.

**Short span bridge:** the characteristics of these bridges are a span less than 20 feet and typically supported by timber piles or shallow concrete footings.

**Soffit:** the underside of the bridge deck or sidewalk.

**Spall:** a concrete deficiency wherein a portion of the concrete surface is popped off from the main structure due to the expansive forces of corroding steel rebar underneath. This is especially common on older concrete bridges.

**Stringer:** a longitudinal beam (less than 30' long) supporting the bridge deck, and in large bridges, framed into or upon the floor beams.

**Sufficiency rating:** the sufficiency rating is a numeric value from 100 (a bridge in new condition) to 0 (a bridge incapable of carrying traffic). The sufficiency rating is the summation of four calculated values: Structural Adequacy and Safety, Serviceability and Functional Obsolescence, Essentiality for Public Use, and Special Reductions.

**Substructure:** the abutment, piers, grillage, or other structure built to support the span or spans of a bridge superstructure and includes abutments, piers, bents, and bearings.

**Superstructure:** the entire portion of a bridge structure which primarily receives and supports traffic loads and in turn transfers the reactions to the bridge substructure; usually consists of the deck and beams or, in the case of a truss bridge, the entire truss.

**Tension:** type of stress involving an action which pulls apart.

**Trestle:** a bridge structure consisting of beam spans supported upon bents. Trestles are usually made of timber and have numerous diagonal braces, both within each bent and from bent to bent.

**UBIT:** Under Bridge Inspection Truck

**Wheelrail:** a timber curb fastened directly to the deck, most commonly found on all-timber bridges.

**Wingwall:** walls that slant outward from the corners of the overall bridge that support roadway fill of the approach

**APPENDIX TO THE 2013 ANNUAL BRIDGE REPORT**

Table A – Bridge Condition Summary

Table B - Bridge Inventory Detail

Table C - Bridge Repairs

# Table A- Bridge Inventory

Bridge No.	Bridge Name	Location	Milepost No.	Bridge Type	Built date	Bridge Age	Atlas page	Bridge Condition	Sufficiency Rating	Structurally Deficient / Functionally	Scour Critical	Inventory Rating (Tons)	Inventory Rating Method	Operating Rating (Tons)	Operating Rating Method	Bridge Posted - Height (H), Weight (W)	NBI Repable	Municipal Code
<b>Clark County Public Works</b>																		
1	Klinefline	NE Highway 99	6.12	Prestressed Concrete Girder	2008	5	26	Good	96.45			54	Load and Resistance Factor Design	90	LRFD		Y	0000
2	Felida	NE Seward	3.46	Post Tensioned Box Girder	1985	28	25	Good	95.57			39	LRFD	99	LRFD		Y	0000
6	Gibbons Creek	SE Evergreen Way	0.82	Concrete Slab & Stringer	1940	73	4	Good	74.34	FO	Critical	29	LRFD	49	LRFD		Y	0000
11	Whipple Creek	NW 179th Street	4.36	Concrete Slab & Stringer	1963	50	25	Good	82.41		Unknown Foundation	33	LRFD	56	LRFD		Y	0000
12	Knappes Station	NW Krueger Road	2.78	Concrete Slab & Stringer	1962	51	24	Good	90.93			44	LRFD	73	LRFD		Y	0000
13	Burnt Bridge Crest	NE Hazel Dell Avenue	0.65	Stringers with 1-6 Pile Bent Deck	1996	17	17	Good	98.6			46	LRFD	77	LRFD		Y	0000
26	Bets	NE Salmon Creek Avenue	1.12	Prestressed Concrete Girder	2006	7	26	Good	99.38			51	LRFD	99	LRFD		Y	0000
30	Flatwood	NE 239th Street	0.45	Concrete Slab & Stringer	1951	62	36	Fair	62.86		Critical	22	LRFD	37	LRFD		Y	0000
32	Knowles	NE Salmon Creek Avenue	2.29	Concrete Slab & Stringer	1963	50	26	Good	76.9		Unknown Foundation	39	LRFD	65	LRFD		N	0000
33	Pleasant Valley	NE 50th Avenue	1.49	Prestressed Concrete Bulb-T Girder	1960	53	27	Good	72.73	FO	Critical	33	LRFD	55	LRFD		Y	0000
36	Wilson	NE 72nd Avenue	4.68	Concrete Slab & Stringer	1994	19	27	Good	94.86		Unknown Foundation	33	LRFD	55	LRFD		Y	0000
39	Glenwood	NE 139th Street	1.34	Concrete Slab & Stringer	1955	58	27	Good	70.14		Critical	27	LRFD	45	LRFD		N	0000
51	Dollar's Corner	NE 72nd Avenue	8.23	Precast Concrete Arch	1995	18	36	Good	93.98		Critical	45	LRFD	76	LRFD		Y	0000
54	Huber	NE 259th Street	10.57	Concrete Slab & Stringer	1951	62	36	Fair	63.04		Critical	22	LRFD	37	LRFD		N	0000
56	Pioneer	NE 259th Street	1.48	Concrete Slab & Stringer	1951	62	35	Good	68.24			26	LRFD	43	LRFD		N	0000
59	Bratton (Cattle Pass)	NE Jenny Creek Road	1.58	Culvert for Cattle Pass	1956	57	53	Good	75.08			22	LRFD	36	LRFD		N	0000
63	Carson	NE 67th Avenue	0.42	Concrete Slab & Stringer	1957	56	36	Good	74.43			24	LRFD	40	LRFD		Y	0000
65	Cedar Creek			Concrete Box Girder w/Cantilever Section	1946	67	53-54	Fair	52.44			18	LRFD	31	LRFD	W	Y	0000
69	Grist Mill Road	NE Grist Mill Road	0.65	Covered Timber Truss	1994	19	60	Good	83.19			38	WSD	58	WSD		Y	0000
75	Dayton	NE Cedar Creek Road	11.90	Concrete Slab & Steel Beam	1955	58	55	Fair	42.99	SD	Critical	22	LRFD	36	LRFD		Y	0000
94	Blaker	NE 142nd Ave	3.77	Concrete Slab & Stringer	1953	60	46	Good	77.47			27	LRFD	46	LRFD		N	0000
96	Rock Creek	Rock Creek Road	9.06	Concrete Slab on Solid	1949	64	46	Fair	63.5	FO		24	LRFD	39	LRFD		Y	0000
100	Helison	NE 172nd Avenue	6.40	Concrete Open Spandrel Ribbed Arch	1999	14	47	Good	96.19			32	LRFD	54	LRFD		Y	0000
102	Kepfer	JR Anderson Rd	1.72	Concrete Slab & Stringer	1959	54	45	Fair	47.45		Critical	18	LRFD	29	LRFD	W	Y	0000
107	JA Moore	JA Moore Road	2.37	Concrete Slab & Stringer	1954	59	45	Good	75.36		Unknown Foundation	32	LRFD	54	LRFD		N	0000
<b>Clark County Public Works</b>																		
108	Helman	JA Moore Road	1.82	Concrete Slab & Stringer	1958	55	44	Fair	49.75	FO		22	LRFD	37	LRFD		Y	0000
116	Lucia Falls	NE Hentwick Road	3.55	Pre-cast Concrete Slab & Prestressed Concrete Beams	2005	8	47	Good	83.91			41	LRFD	66	LRFD		Y	0000
120	Big Tree Creek	Lucia Falls Road	5.54	Concrete Slab & Stringers / Solid Concrete Bent	1959	54	48	Good	85.47		Critical	32	LRFD	53	LRFD		Y	0000
127	Arch McKee	Gerber McKee Road	0.43	Concrete Slab	1958	55	57	Good	72.36		Critical	27	LRFD	45	LRFD		N	0000
167	Vancamp	NE 217th Avenue	0.70	Prestressed Concrete Beams w/Concrete Deck & Abutments	1991	22	20	Good	98.07			58	LRFD	96	LRFD		Y	0000
168	Matney	NE 68th Street	2.27	Concrete Slab & Stringer	1955	58	20	Fair	57.99		Critical	19	LRFD	32	LRFD		Y	0000
169	Matney South	NE 232nd Avenue	0.19	Concrete Slab & Stringer	1953	60	21	Good	78.18		Critical	33	LRFD	55	LRFD		Y	0000
172	Lucambis	NE Goodwin Road	1.88	Concrete Slab & Stringer	1957	56	11	Fair	59.1	FO	Critical	40	LRFD	67	LRFD		Y	0000
196	Washougal River	NE Vernon Road	2.02	Prestressed Concrete Deck & Abutments	1998	15	14	Good	94.1	FO		42	LRFD	99	LRFD		Y	0000
201	Brush Prairie	NE 156th Street	0.05	Concrete Box Girder w/2 Open Pile Concrete Bents	1960	53	27	Fair	66.07		Critical	19	LRFD	32	LRFD		Y	0000
203	Boulder-Creek	NE Lessard Road	2.72	Steel Stringers w/Wood Deck	1960	53	22	Good	68.89		Critical	34	LRFD	57	LRFD		N	0000
205/30P	Padden Parkway Ped Bridge	I-205 Overcrossing	32.95	Prestressed Concrete Girders/Deck	2003	10	18					0	Not Rated	0	Not Rated		N	0000

# Table A- Bridge Inventory

211	None	NE 167th Avenue	1.92	Concrete Slab & Stringer	1963	50	28	Good	78.72	3	Critical	37	LRFD	57	LRFD	Y	0000	
212	JC Ward	NE 182nd Avenue	7.09	Concrete Slab & Stringer	1960	53	29	Good	78.05	7		36	LRFD	61	LRFD	Y	0000	
213	Morgan	NE 182nd Avenue	5.91	Concrete Slab & Stringer	1956	57	29	Fair	64.14	FO	Unknown Foundation	23	LRFD	38	LRFD	Y	0000	
216	John Ott	NE Risto Road	1.40	Concrete Slab & Stringer	1958	55	38	Fair	62.18	FO		23	LRFD	38	LRFD	Y	0000	
217	Venersborg	NE Risto Road	1.15	Concrete Slab & Stringer	1954	59	38	Fair	56.43	FO	Critical	19	LRFD	32	LRFD	Y	0000	
222	None	NE 167th Avenue	1.30	Concrete Slab & Stringer	1954	59	29	Fair	65.52	FO	Critical	34	LRFD	39	LRFD	Y	0000	
225	Dudley	NE 199th Street	1.00	Concrete Slab & Stringer	1962	51	39	Good	86.33	U	Unknown Foundation	39	LRFD	65	LRFD	Y	0000	
229	172nd Bridge	172nd Ave	0.50	Steel Girder	2009	4	20	Good	99.75	8		57	LRFD	95	LRFD	Y	0000	
230	Fifth Plain Creek	NE 88th Street	0.50	Concrete Slab & Stringer w/One Timber Bent	1949	64	20	Poor	27.95	SD		17	LRFD	28	LRFD	Y	0000	
231	China Ditch	NE Ward Road	1.89	Prestressed Conc Girder	2009	4	20	Good	98.53	8		40	LRFD	68	LRFD	Y	0000	
<b>Clark County Public Works</b>																		
232	Davis	NE Davis Road	0.64	Concrete Slab & Stringer	1953	60	28	Fair	63.12	3	Critical	32	LRFD	54	LRFD	N	0000	
242	Lewis River	Dole Valley Road	0.01	Concrete Slab & Stringer	1961	52	40	Good	87.92	8		36	LRFD	59	LRFD	Y	0000	
244	Rock Creek	Dole Valley Road	3.79	Glu-Lam Beam w/Wood Deck & Concrete Bent	1975	38	40	Good	68.06	FO	Unknown Foundation	33	Working Stress Design (WSD)	43	LRFD	Y	0000	
252	Blair Zeek	NE Blair Road	1.16	Concrete Slab & Stringer w/ 2 - 4 Concrete Column Bents	1961	52	12	Good	76.2	FO	Critical	36	LRFD	61	LRFD	Y	0000	
261	None	NE 118th Street	7.12	Concrete Slab & Stringer	1949	64	29	Good	81	7		23	LRFD	48	LRFD	N	0000	
266	Allworth	NE Allworth Road	1.36	Concrete Slab & Stringer	1954	59	38	Fair	65.53	5		23	LRFD	38	LRFD	N	0000	
267	Cresap	Cresap Road	0.24	Concrete Flat Slab	1956	57	38	Good	76.37	U	Unknown Foundation	26	LRFD	42	LRFD	N	0000	
272	None	NE 202nd Avenue	0.27	Concrete Slab & Stringer	1961	52	20	Good	71.52	3	Critical	29	LRFD	65	LRFD	N	0000	
273	Day Break	Daybreak Road	11.09	Concrete Deck, Steel Girders & One solid Concrete Bent	1966	47	36	Good	88.27	7		38	LRFD	59	LRFD	Y	0000	
274	Shanghai Creek	NE 212th Avenue	0.26	Concrete Slab & Stringer	1955	58	20	Good	74.44	U	Unknown Foundation	31	LRFD	51	LRFD	N	0000	
275	Van Atta	NE 112th Avenue	0.85	Wood Deck w/Steel Stringers & 1 Solid Concrete Bent	1960	53	27	Good	70.66	U	Unknown Foundation	31	LRFD	51	LRFD	Y	0000	
294	Lehto	NE Lehto Road	0.25	Concrete Sonowold Beams	1972	41	29	Good	67.04	FO	Critical	50	LRFD	83	LRFD	Y	0000	
299	London	CC London Road	0.31	Concrete Slab & Stringer	1955	58	48	Fair	62.29	U	Unknown Foundation	21	LRFD	34	LRFD	Y	0000	
307	Little Washougal	SE Blair Road	3.50	Concrete Slab & Beam	1959	54	13	Fair	50.98	5		20	LRFD	34	LRFD	Y	0000	
308	Bonneville	NE 222nd Avenue	0.06	Concrete Slab & Stringer	1955	58	20	Good	77.28	U	Unknown Foundation	30	LRFD	50	LRFD	N	0000	
320P	149th Walkway Ped Bridge	NE 149th St		Concrete Deck with Glu-Lam Girder	2005	8	25			8		0		0		N	0000	
326	NE 2nd Avenue	NE Second Avenue	0.10	Concrete Slab	1985	28	17	Good	89.47	5		33	LRFD	65	LRFD	Y	0000	
327	Alki Rd	Alki Rd	0.26	Concrete Slab	1985	28	17	Good	81.86	4		33	LRFD	65	LRFD	Y	0000	
330	Padden	Padden Parkway	1.92	Prestressed Concrete Bulb-T Girders w/Concrete Deck & Abutment	1999	14	18	Good	98.19	N		41	LF	69	LF	Y	0000	
331	Salmon Creek	Salmon Creek	0.70	Concrete Luten Arch	1923	90	28	Good	79.01	FO		72	Other	99	Other	Y	0000	
332	Woodlin Creek Bridge	Weaver Creek Rd	0.76	Concrete Box Culvert	1900	113	28	Fair	60.42	3	Critical	19	Unknown	36	Unknown	N	0000	
337	Lalonde Creek Culvert	Salmon Creek Avenue @ Lalonde Creek	0.01	Concrete Culvert	2003	10	26	Good	84.44	U	Unknown Foundation	24	LF	40	LF	N	0000	
338	Salmon Creek Culvert	NE 119th Street	0.01	Concrete Culvert	2002	11	26	Good	81.51	U	Unknown Foundation	22	LF	44	LF	N	0000	
339	Padden West Culverts	W. of Andreson	0.11	2 HDPE & 2 Metal	2003	10	18	Good	77.49	FO		99	LRFD	99	LRFD	Y	0000	
340	John Creek Culvert	NE Cedar Creek Road	14.38	Metal Culvert	1999	14	55	Good	80	6		99	LRFD	99	LRFD	N	0000	
341	Amboy/Cedar Creek Culvert	Amboy Road	8.89	Culvert	1999	14	48	Fair	60.15	FO		20	LRFD	33	LRFD	Y	0000	
342	Rockwell Creek	NE 23rd Avenue	0.21	Prestressed Concrete Girder	2004	9	26	Good	99.36	9		45	LF	97	LF	Y	0000	
1406	Little Washougal River	Little Washougal River	2.27	Concrete Stringer	1949	64	13	Fair	63.2	FO		23	LRFD	38	LRFD	Y	0000	
1409	Cougar Creek	Washougal River Road	5.16	Voided concrete slab Railroad Bridge carrying tracks	2012	1	14	Good	94.09	8		69	LRFD	91	LRFD	Y	0000	
20141	CCRR Undercrossing - Old Hwy 99	NE Hwy 99	10.00			17							Other		Other	H	0000	

# Table A- Bridge Inventory

City of Vancouver	5	Mimihaha	NE Mimihaha Street	1.09	Concrete Slab w/Concrete Pile Bents	1972	41	17	Good	91.71	N	29	LRFD	48	LRFD	Y	1350
	38	39th street RR Overcrossing	NW 39th Street		Concrete Deck w/Prestressed Concrete Girders	2010	3	16	Good	99.86	N	73	LRFD	99	LRFD	Y	1350
	162	Burton Road	NE Burton Road	0.99	Concrete Slab	2005	8	9	Good	96.29	8	84	LRFD	99	LRFD	Y	1350
	328	Corporate Woods Bridge	NE 110th Avenue	0.23	Concrete Slab w/Precast Concrete Channel Beams	1989	24	18	Good	98.44	U	33	LRFD	70	LRFD	Y	1350
	329	NE 15th Avenue Bridge	NE 15th Avenue	0.40	Concrete Slayed Girder???	1984	29	17	Good	94.72	8	45	LRFD	75	LRFD	Y	1350
	1350	Burnt Bridge Creek Culvert	NE Devline Road	10.00	Aluminum Culvert	1978	35	9	Good	76.86	6	40	LRFD	40	LRFD	N	1350
	1351	Port of Vancouver	NW 26th Avenue	10.00	Pier Cap	2000	13	7	Good	92.48	N	59		99		Y	1350
	1352	Burnt Bridge Creek	NE 86th Avenue	0.10	Prestressed Concrete Built w/Concrete Deck & Abutments	2001	12	9	Good	97.12	8	47	LRFD	81	LRFD	Y	1350
	4236	Evergreen Blvd Overpass	NE Blandford Drive	10.00	Concrete Slab & Steel Girder	1969	44	8	Good	78.49	N	48	LRFD	80	LRFD	Y	1350
	4891	Fruit Valley Rd Overpass	Fruit Valley Road	10.00	Concrete Slab	1948	65	16	Fair	56.62	FO	21	LRFD	35	LRFD	Y	1350
	501/8E	BNRR OC	Fourth Plain Blvd	1.60	Concrete Deck w/Welded Steel Girders	1962	51	7	Good	76.16	N	30	LF	50	LF	Y	1350
	501/8W	BNRR OC	Fourth Plain Blvd	1.60	Concrete Deck w/Prestressed Concrete Girders	1986	27	7	Good	81.28	N	49	LF	82	LF	Y	1350
	501/10C	Vancouver Lake Flushing Channel	SR501	5.30	Submerged Culvert	1950	23	15	Good	86.14	FO	99		99		Y	1350
<b>Not Reportable</b>																	
	99906-01	BNRR Columbia River O-xing	W. 8th - Columbia River Crossing Boise Cascade Paper (W 5th, Grant & W. 6th)	9.60	Steel Truss - Railroad	1908	105	7						Other	Other	Y	
	99906-02	BNRR at Boise Cascade O-xing		10.10	Railroad	1907	106	8								N	
	99906-03	Inn at the Quay - O-xing	Columbia Street	10.70	Railroad	1983	30	8						Other	Other	N	
	99906-04	BNRR-Columbia Shores O-xing	Columbia Shores Blvd	11.80	Railroad	1942	71	8						Other	Other	Y	
	99906-05	BNRR Marine Park Wy O-xing	Marine Park Way	12.80	Railroad	1908	105	8						Other	Other	H	
<b>City of Washougal</b>																	
	WASHOU-1	Orchard View	0.2 M south of J St	0.3	3-sided concrete box	2008	5	4	Good	97.94	8	41	LF	61	LF	Y	1385
	1402	BNFS RR U-xing	Washougal River Road	0.26	Prestressed Concrete Stringer	1965	48	4	Good	75.4	FO	41	LRFD	68	LRFD	Y	1385
	1404	Washougal River Bridge	Washougal River Road	0.32	Prestressed Concrete	1993	20	4	Good	90.07	5	22	LRFD	76	LRFD	Y	1385
<b>City of Camas</b>																	
	Camas-010	Washougal River Bridge	NE 3rd Avenue	0.35	Stringer/Multi-beam	1969	44	3	Fair	58.54	FO	46	Other	37	Other	Y	0145
	Camas-020	Division Street Bridge	Division Street	0.15	Concrete T Beams	1960	53	3	Fair	58.82	FO	17	LF	29	LF	Y	0145
	Camas-030	Crown Z Mill Water Ditch	Crown Z Mill Water Ditch	0.15	Concrete Multi-beam	1919	94	3	Fair	51.76	FO	17	LF	28	LF	W	0145
	Camas-040	Camas Meadows Drive	Camas Meadows Drive	0.10	Precast Concrete Arch	2000	13	11	Good	99.84	8	99	Not Rated	99	Not Rated	Y	0145
	Camas-050	Woodburn Drive	Woodburn Drive		Steel arch Culvert	2013	0	13	Good	93.13	8	99				Y	0145
<b>City of Ridgefield</b>																	
	Ridgefield-1	Gez Creek - Abrams Park	Division Street	0.01	Clu-Lam Stringer/Multi-beam	1975	38	34	Fair	63.88	FO	50	Load Factor	71	LF	Y	1085
	Ridgefield-2	Heron Ridge	Heron Drive	0.1	Concrete Deck Bulb	2003	10	34	Good	94.94	U	36	Admin	36	Admin	Y	1085
<b>City of Battle Ground</b>																	
	336	Woodfin Creek Culvert	Edson Blvd (199th St)	0.03	Concrete Box Culvert	2003	10	28	Good	96.5	U	99	LRFD	99	LRFD	Y	0060
	205	None	NE 142nd Avenue	0.79	Concrete Slab & Stringer	1958	55	28	Good	76.13	FO	39	LRFD	62	LRFD	Y	0000
<b>City of La Center</b>																	
	21	LaCenter	NE LaCenter Road	5.83	Continuous w/Prestressed W83G Girders & Cast-in-place Deck	2001	12	44	Good	82.37	B	84	LRFD	99	LRFD	Y	0080



**Table B - Bridge Condition State 2013**

Agency	Total Bridges in Program	Bridge Condition				Structurally Deficient	Functionally Obsolete	Scour Condition		Fracture Critical
		Good	Fair	Poor	Critical			Unknown Foundation		
Clark County	74	52	21	1	2	18	22	14	0	
City of Vancouver	13	12	1	0	0	1	0	1	1	
City of Washougal	3	3	0	0	0	1	0	0	0	
City of Camas	5	2	3	0	0	3	1	0	0	
City of Ridgefield	2	1	1	0	0	1	0	1	0	
City of Battle Ground	2	2	0	0	0	1	0	1	0	
City of La Center	1	1	0	0						
RailRoad (BNSF-5,CC-1)	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Pedestrian Bridges (CC)	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Totals</b>	<b>108</b>	<b>73</b>	<b>26</b>	<b>1</b>	<b>2</b>	<b>25</b>	<b>23</b>	<b>17</b>	<b>1</b>	

- > Good - Sufficiency Rating from 66.7 to 99.9
- > Fair - Sufficiency Rating from 33.3 to 66.6
- > Poor - Sufficiency Rating from 0 to 33.2
- > Structurally Deficient - Impacted ability to carry intended traffic loads.
- > Functionally Obsolete - Narrow structure and geometry are not based on current standards.
- > Scour Critical - Foundations considered unstable or shallow or stream is undermining stability of structure. Requires more extensive monitoring and inspection during and after flood events.
- > Fracture Critical - Defined as a structure with 2 load paths with steel members in tension, could cause immediate catastrophic failure if members fail. Requires more extensive inspection and testing.

# Table C - Bridge Repairs

City ID	Bridge Number	Bridge Name	Repair Description
		Clark County	
0000	0000000001	Klinefine	Sidewalk approach NE corner vehicle damage.
0000	0000000001	Klinefine	West Overlook rail missing a nut
0000	0000000002	FELIDA	Compression Seal -north end of bridge -concrete surrounding seal severely cracked, broken.
0000	0000000002	FELIDA	Trip hazard at settled walkway all for corners
0000	0000000006	GIBBONS CREEK	NW corner anchor needs to be raised to 27 inches
0000	0000000011	WHIPPLE CREEK	Minor crack opening at west deck joint.
0000	0000000011	WHIPPLE CREEK	NW corner traffic delineator is loose and needs reattachment.
0000	0000000011	WHIPPLE CREEK	Reseal the joints at both ends.
0000	0000000012	KNAPPS STATION	Classic scour hole developing @ center pier around concrete hex piles 1 - 4, estimated 6 to 7 feet deep but too deep and too far out to measure with equipment on hand. See what we can protect the pier with.
0000	0000000013	BURNT BRIDGE CREST	Clean moss off the girder fascia as necessary.
0000	0000000013	BURNT BRIDGE CREST	Monitor erosion at the base of Pier 3.
0000	0000000013	BURNT BRIDGE CREST	North approach joint needs to be resealed.
0000	0000000013	BURNT BRIDGE CREST	Paint over graffiti on parapets and pier walls.
0000	0000000013	BURNT BRIDGE CREST	remove leaves slip/fall hazard for pedestrians
0000	0000000013	BURNT BRIDGE CREST	Remove transient encampment and clean up garbage under bridge.
0000	0000000013	BURNT BRIDGE CREST	Replace bold cap cover on bridge rail - see note 684
0000	0000000013	BURNT BRIDGE CREST	Replace missing bolts in the NW and SW guardrail transitions.
0000	0000000013	BURNT BRIDGE CREST	Reseal AC overlay at pier caps.
0000	0000000013	BURNT BRIDGE CREST	reset cap block on SW wall
0000	0000000013	BURNT BRIDGE CREST	Seal AC pavement cracks as necessary.
0000	0000000013	BURNT BRIDGE CREST	Tighten loose fasteners on the NE section of guardrail.
0000	0000000021	LA CENTER	Chip out and patch back spill on coping
0000	0000000030	FLATWOOD	Brush slight obstruction on the up stream side should be cleaned out, adjacent wall slight under mining
0000	0000000030	FLATWOOD	Replace riprap at NW abutment.
0000	0000000032	KNOWLES	West footing needs to be monitored. Current this west footing approx. 10 ft. from south end and is starting to dig out the stream bed. (Not yet to the bottom of the footing).
0000	0000000032	KNOWLES	Bridge has no approach rails on any end. Can we install?
0000	0000000033	PLEASANT VALLEY	Monitor erosion at Abutment 4.
0000	0000000033	PLEASANT VALLEY	Old abutment needs stabilization or removal. Imminent danger of falling against South pier supports (Bent #2).
0000	0000000033	PLEASANT VALLEY	Remove loose gravel from sidewalk tripping hazard
0000	0000000033	PLEASANT VALLEY	Repaint areas of graffiti on the girders in Span 3 and Abutment 4.
0000	0000000033	PLEASANT VALLEY	Repair damaged guardrail at southeast quadrant of bridge.
0000	0000000033	PLEASANT VALLEY	Repair Drain SE corner that is eroding the bank under the concrete debris
0000	0000000036	WILSON	Approximately 3' length of south abutment (east side) being undermined by erosion. Cavity is 4" in height and extends 4 to 5" under abutment (see photos)
0000	0000000036	WILSON	Clean growth on girders near weep holes.
0000	0000000036	WILSON	Cracks in ACP at each end o bridge need patched. (done by 4/4/05 inspection)
0000	0000000036	WILSON	Joint at south end of bridge deck needs resealing
0000	0000000039	GLENWOOD	Edge of ACP needs filled with rock at approach rails.
0000	0000000056	PIONEER	Monitor NW retaining wall as the wall in leaning toward creek
0000	0000000056	PIONEER	Stabilize slope at SE, SW and NW corners of bridge with rip rap
0000	0000000059	BRATTON (CATTLE PASS)	Retaining wall crack repair
0000	0000000063	CARSON	Remove vegetation in upstream channel.
0000	0000000069	GRIST MILL	Bridge overhead clearance changed from 16'-1" to 15'-7". Clearance measured at SW corner of portal. Previous clearance appears to have been taken at centerline of portal.
0000	0000000069	GRIST MILL	Clean the graffiti damage from the South Abutment Backwall.
0000	0000000069	GRIST MILL	Expansion joints and bridge drains at each end of bridge need to be cleaned out.
0000	0000000069	GRIST MILL	Replace the missing sections of timber cladding at deck level.

# Table C - Bridge Repairs

0000	000000075	DAYTON	Girders need to be painted
0000	000000094	BLAKER	Clean moss and vegetation from abutments.
0000	000000094	BLAKER	Remove vegetation in upstream channel.
0000	000000094	BLAKER	Repair the spalls in the east overhang.
0000	000000094	BLAKER	Reseal the joints at each approach.
0000	000000096	ROCK CREEK	Monitor settlement at the east approach and seal the cracking in the asphalt.
0000	000000096	ROCK CREEK	Patch spalling and areas of poor consolidation in the slab, Abutment 1 and Pier 2 as necessary.
0000	000000100	HEISSON	Fall protection fence on south side under bridge should be removed.
0000	000000100	HEISSON	Recommend UBIT to look at spalling occurring on arch near girder.
0000	000000100	HEISSON	South end, west side @ expansion joint. 3' long area of joint seat is broken & has dropped down about 2". Recommend checking utility sleeve, under bridge, for erosion.
0000	000000102	KEPPER	Monitor the wingwall/abutment settlement at the SW corner.
0000	000000107	JA MOORE	Debris both rock and large woody material under the bridge needs removal for water way clearance
0000	000000108	HEITMAN	Chip out sleeve and repack concrete at utility through the southwest and northwest wingwalls.
0000	000000108	HEITMAN	Patch the cracks in the abutment.
0000	000000108	HEITMAN	Repair the spill in the east curb.
0000	000000108	HEITMAN	Seal the cracks in the AC at Abutment 1.
0000	000000116	LUCIA FALLS	On SW Approach the 3rd post has a missing bolt, the guard rail is not tied to the post at this location
0000	000000116	LUCIA FALLS	Recommend a 12 month routine inspection frequency and a 24 month UBIT inspection frequency. Routine frequency may be changed to 24 months after girder is repaired.
0000	0000000116	LUCIA FALLS	Repair Girder 1B by removing all loose concrete and scale, painting exposed strands with an epoxy paint, and patching spalled areas with grout.
0000	0000000116	LUCIA FALLS	The following WSBIS inventory items were updated as a result of this inspection: WB73-60, 64 & 67, WB75-46 & 49, and WB78-38. Please verify our findings. If changes are incorrect, please see the cover letter for instructions regarding updating this inf
0000	0000000120	BIG TREE CREEK	Monitor the riprap at the Southwest corner of wall and pedestrian bridge abutment.
0000	0000000120	BIG TREE CREEK	Repair the rock stabilization at the Northwest and Northeast corners.
0000	0000000127	ARCH MCKEE	Concrete base for delineator at southeast corner is 25% undermined.
0000	0000000127	ARCH MCKEE	Concrete base for delineator at southeast corner is 25% undermined.
0000	0000000127	ARCH MCKEE	Delineator post on NW corner is broken
0000	0000000127	ARCH MCKEE	Steel utility conduit on west side of bridge has pulled loose from brackets.
0000	0000000127	ARCH MCKEE	Steel utility conduit on west side of bridge has pulled loose from brackets.
0000	0000000167	VAN CAMP	Erosion bypassing paved channel SW corner
0000	0000000168	MATNEY	Add material at rock/block wingwalls that are undermined
0000	0000000169	MATNEY SOUTH	Broken conduit
0000	0000000169	MATNEY SOUTH	M&O Remove Debris from South Abutment
0000	0000000169	MATNEY SOUTH	M&O to place rip rap at NW corner
0000	0000000196	WASHOUGAL RIVER	Paint over the graffiti on the South Abutment.
0000	0000000196	WASHOUGAL RIVER	Remove bird nest girder A mid span
0000	0000000196	WASHOUGAL RIVER	Retrieve and place P marker on SE corner, Marker is over the bridge side near the concrete steps.
0000	0000000196	WASHOUGAL RIVER	Seal ac joint at SW corner of deck
0000	0000000205	NONE	Clean dirt and moss off the girders, pier and abutments. Repaint as necessary.
0000	0000000205	NONE	Patch cracks in the abutments and Girder E at Pier 2. Patch spall in Girder E at Pier 2.
0000	0000000205	NONE	Seal cracks in the AC wearing surface. Monitor settlement at NW approach.
0000	0000000211	NONE	Inspector noted debris collecting by rocks at NW abutment
0000	0000000213	MORGAN	Not for bridge records, but noted a "widow-maker" on SW approach (no danger of hitting bridge) that will come down in roadway.
0000	0000000216	JOHN OTT	10" cedar. Check to see if it is removed.
0000	0000000217	VENERSBORG	several pieces of woody debris built up across the river on span 1, picture
0000	0000000217	VENERSBORG	approach guardrail needs to be raised
0000	0000000217	VENERSBORG	Remove debris buildup on the north girder, outboard side.
0000	0000000217	VENERSBORG	Remove excess material which is causing a bump at the joints.

# Table C - Bridge Repairs

0000	0000000217	VENERSBORG	Repair/replace the joint
0000	0000000222	NONE	Remove car door in main channel upstream from bridge.
0000	0000000222	NONE	Re-pave the AC wearing surface.
0000	0000000230	FIFTH PLAIN CREEK	Monitor YELLOW TAGGED pile 2E.
0000	0000000230	FIFTH PLAIN CREEK	Repair RED TAGGED piles 2C and 2D. For the repair it is recommended that all the piles at pier 2 have strengthening using FRP jacketing with grouting. The jacket should start 1 ft. below the rot and extend full height of the pile.
0000	0000000232	DAVIS	Channel protection at downstream west end is undercut. Repair as necessary
0000	0000000232	DAVIS	D/S west footing beginning to be undercut. Needs channel protection
0000	0000000232	DAVIS	North side curb has a void where the guardrail bolt enters the curb. This may effect the function of the rail system.
0000	0000000242	LEWIS RIVER	Clear moss from girders and wingwalls.
0000	0000000242	LEWIS RIVER	Paint over graffiti at Abutment 1.
0000	0000000242	LEWIS RIVER	Patch spalls on girder bottom flanges as necessary.
0000	0000000242	LEWIS RIVER	Repair utility conduit bracket at SW wingwall.
0000	0000000242	LEWIS RIVER	Seal approach joint at Abutment 2.
0000	0000000244	ROCK CREEK	Divert/clean ditch NE end eroding wingwall/about
0000	0000000244	ROCK CREEK	Reinforce the Abutment 3 footing due to scouring.
0000	0000000244	ROCK CREEK	Reseal the joints at both abutments.
0000	0000000252	BLAIR ZEEK	Clean out drains
0000	0000000252	BLAIR ZEEK	Clear debris from south columns.
0000	0000000252	BLAIR ZEEK	S guard rail too low needs to be raised
0000	0000000252	BLAIR ZEEK	Settlement due to scour needs repair on both ends of the bridge
0000	0000000252	BLAIR ZEEK	South approach has settle between 1 and 2" smooth out with AC patch
0000	0000000266	ALLWORTH	Clear debris on upstream side of bridge.
0000	0000000273	DAY BREAK	North Approach has slight settlement east lane patch with AC for smooth transition
0000	0000000275	VAN ATTA	Clean and repaint all steel components, rail posts, and wood curbs.
0000	0000000275	VAN ATTA	Clean and repaint Girder E paint failing (see previous inspection reports).
0000	0000000275	VAN ATTA	Culvert upstream and to the south is half plugged, needs cleared (see previous inspection reports).
0000	0000000275	VAN ATTA	Remove debris on the upstream side of Pier 2. Remove falling tree on northwest bank.
0000	0000000275	VAN ATTA	Repair the spill in the AC in Span 1, right wheel line.
0000	0000000275	VAN ATTA	Replace split Guard rail post (see previous inspection reports).
0000	0000000294	LEHTO	pot holes in deck overlay
0000	0000000299	LANDON	Remove vegetation in upstream channel.
0000	0000000299	LANDON	Repair scour at West Abutment.
0000	0000000307	LITTLE WASHOUGAL	Remove bird nests
0000	0000000307	LITTLE WASHOUGAL	Remove Tar Paper from under bridge soffits so that deck can be seen for inspection.
0000	0000000326	N.E. 2ND AVENUE	Remove moss from the deck fascia and the roadway shoulder.
0000	0000000326	N.E. 2ND AVENUE	Repair the erosion at Abutment 2.
0000	0000000326	N.E. 2ND AVENUE	Repair the heaving at the south end.
0000	0000000326	N.E. 2ND AVENUE	Repair the settlement and cracking at the southeast corner.
0000	0000000327	ALKI ROAD	Add additional riprap as necessary.
0000	0000000327	ALKI ROAD	Remove moss from the deck fascia and the roadway shoulder
0000	0000000327	ALKI ROAD	Remove or cutback the tree at the southwest corner.
0000	0000000327	ALKI ROAD	Repair the 2' long crack in the south approach roadway.
0000	0000000327	ALKI ROAD	Repair the southwest rail terminal.
0000	000000330	PADDEN	Trip issue on side walk both sides, sidewalk settlement off structure. drift in AC transition or rack sidewalk back to grade
0000	00000331	SALMON CR	Rock pocket repair on both abutments near top of footing
0000	0000000332	WOODIN CREEK BRIDGE	Clear rock from the downstream shallow area to eliminate ponding and scour.
0000	00000339	PADDEN WEST CULVERTS	Remove trees and vegetation or the ends will become inaccessible and perhaps start clogging the culverts
0000	00000342	ROCKWELL CREEK	Roadway to approach slab shows a gap on both ends of the bridge, this should be filled with loop or crack sealant
0000	00001406	LITTLE WASHOUGAL R	Old Bridge abutments, particularly the north one, are close to pair 2&3. There is no fall protection for the remaining structure on a 12-16' vertical hazard. If still in county ROW maintenance should install fencing.

# Table C - Bridge Repairs

0000	00001406	LITTLE WASHOUGAL R	Repair potholes and spalling of asphalt at south approach joint.
0000	00001406	LITTLE WASHOUGAL R	Trash and brush dumped under NE side of bridge.
City of Battle Ground			
0060	0000000336	WOODIN CREEK CULVERT	8" diameter log across N. end of culvert needs to be removed. This tree is still across the mouth of the culvert and should be removed.
0060	0000000336	WOODIN CREEK CULVERT	Remove the vegetation and debris in the upstream channel.
City of Camas			
0145	CAMAS-010	WASHOUGAL RIVER BRIDGE	Add downspouts to drains on north side of bridge to prevent runoff from falling onto north stringer top flange.
0145	CAMAS-010	WASHOUGAL RIVER BRIDGE	Guardrail terminal on northeast is damaged; needs replacement
0145	CAMAS-010	WASHOUGAL RIVER BRIDGE	Scour calculations should be completed as soon as possible.
0145	CAMAS-010	WASHOUGAL RIVER BRIDGE	Steel sliding joint plate on southern half of Pier 2 (Outside EB lane) AC spall 12' x 4" x 1" exposing angle iron. several nut have rattled off causing noise and excess movement. Notified Norm Wurzer w/ COC 817-1561
0145	CAMAS-010	WASHOUGAL RIVER BRIDGE	WB 75-51 and WB 75-54 are coded "O" which is not a valid code. Also note that both the inventory and operating ratings are the same, indicating that one is incorrect.
0145	CAMAS-040	CAMAS MEADOWS	Terminal at NW corner needs repair/replace.
0145	CAMAS-060	LACAMAS	Grind a taper at bridge ends for smooth transitions onto and off of bridge.
0145	CAMAS-060	LACAMAS	River gauge rusted through and will likely fall over unless fixed
City of Ridgefield			
1085	RIDGEFD-1	GEE CREEK-ABRAMS PARK	Channel has large accumulation of storm debris upstream of bridge which is directing stream flow against the east bank.
City of Vancouver			
1350	0000000005	MINNEHAHA	Drains on the deck need to be unplugged
1350	0000000005	MINNEHAHA	East approach in eastbound lanes near joint - needs repair.
1350	0000000005	MINNEHAHA	Erosion under SE corner of bridge, apparently from drain pipe. Cannot find original exit of burried part of pipe due to dense blackberry growth.
1350	0000000005	MINNEHAHA	Heavy graffiti and tagging throughout, including "NO TRESSPASSING" signs.
1350	0000000005	MINNEHAHA	Homeless camps becoming extensive and unsanitary, unsafe to inspect alone.
1350	0000000005	MINNEHAHA	Object marker at SW corner of bridge is down and needs to be reinstalled.
1350	0000000005	MINNEHAHA	Replace the missing bolts in the guardrail end section at the concrete barrier
1350	0000000005	MINNEHAHA	SE deck drain partially plugged
1350	0000000005	MINNEHAHA	Sidewalk approaches need work to reduce a tripping hazard.
1350	0000000005	MINNEHAHA	Vehicle damage to concrete bridge railing on south side - approx 15' from east end of bridge. Handrail needs permanent replacement.
1350	0000000162	BURTON ROAD CORPORATE WOODS BRIDGE	Seal transverse crack in AC at west end of bridge
1350	00000328	BRIDGE	Approach sidewalks on down stream side heaved and a tripping hazard
1350	0000001351	PORT OF VANCOUVER	Clean out packed sand in both north and south expansion joints
1350	0000001351	PORT OF VANCOUVER	SE corner of concrete barrier transition has a triangle 12" long by 8" that should be patched.
1350	00001352	BURNT BRIDGE CREEK	Review settlement issues with geotechnical and structural experts for recommendations.
1350	00001352	BURNT BRIDGE CREEK	Sidewalk settlement SW corner needs fixed as it is a tripping hazard and an ADA issue
1350	00004236	EVERGREEN BLVD. OVERPASS	Both approaches are starting to settle and crack. Will need to address this soon.
1350	00004236	EVERGREEN BLVD. OVERPASS	Current guard rail on SW quad blocks pedestrian access to the sidewalk
1350	00004236	EVERGREEN BLVD. OVERPASS	Remove moss and vegetation from the structure and immediate vicinity

# Table C - Bridge Repairs

1350	0000004891	FRUIT VALLEY RD OVERPASS	Clean and unplug all drains. Clean debris from joints at both ends of bridge.
1350	0000004891	FRUIT VALLEY RD OVERPASS	Verified complete, repair unnecessary (JED/RCD 2009).
1350	0000004891	FRUIT VALLEY RD OVERPASS	Remove moss growth on approach sidewalks. Repair impact damage to transition in SE corner.
1350	0000004891	FRUIT VALLEY RD OVERPASS	Verified complete, repair unnecessary (JED/RCD 2009). Replace or repair Poured Joint Filler over Pier 2.
1350	0000004891	FRUIT VALLEY RD OVERPASS	(Removed repair as the joint over Pier 2 is a sliding plate joint, RGP 8/23/2005)
1350	0000004891	FRUIT VALLEY RD OVERPASS	Trees need trimming near NE corner of bridge that is blocking sidewalk.
1350	0000004891	FRUIT VALLEY RD OVERPASS	Wedge patch the north approach to eliminate potholes and provide a smooth transition for cars driving onto the bridge.
1350	0000501/8E	BNRR OC	Drains still plugged & need cleaned out.
1350	0000501/8E	BNRR OC	Expansion joints need to be cleaned out.
1350	0000501/8E	BNRR OC	Metal rail damaged on East side requires repair.
1350	0000501/8E	BNRR OC	North pedestrian rail has been damaged by vehicle impact @ expansion joint @ pier 3. Concrete broken off @ back of post & rail being held together with 2X4 & caution tape (Needs immediate attention)
1350	0000501/8E	BNRR OC	Remove all the loose concrete and clean all the rust off the exposed rebars in the Bottom Flange spalls in Girders SE and 5C. Concrete grout patch with High Strength Concrete.
1350	0000501/8E	BNRR OC	Sliding Expansion joints need cleaned out.
1350	0000501/8W	BNRR OC	This bridge needs vertical clearance posted. The actual vertical clearance is 14' -10". The vertical clearance posting should read 14'-7" on Span 5 Girders in industrial yard. Please verify our findings ...
1350	0000501/8W	BNRR OC	Several turfstone blocks on slope under bridge are displaced.
1350	0099906-03	INN AT THE QUAY City of Washougal	
1385	0000001402	BN/SF RR O/C	Drains need to be cleaned.
1385	0000001402	BN/SF RR O/C	Gurad rail on SE corner would direct errrent vehicle into blunt end of bridge rail
1385	0000001402	BN/SF RR O/C	NE Sidewalk needs repaired to fix tripping hazard, All sidewalks need to be fixed for tripping hazard. Midspan spall could cause a fall into traffic.
1385	0000001402	BN/SF RR O/C	Repair approach settlement.
1385	0000001402	BN/SF RR O/C	SW and SE sidewalks have trip hazards that could casue a pedestrian to fall in to traffic.
1385	0000001404	WASHOUGAL RIVER BRIDGE	BP rail missing verts
1385	0000001404	WASHOUGAL RIVER BRIDGE	Differential settliemt on sidewalk south end tripping hazard