

## P2 Bridge Preservation - Replacement/Rehab Projects

### 2013-15 Bien Priority Array

(Sorted by Priority Number)

13-15 #	Bridge Number	Bridge Name	Mile post	Region	Length	Future work Description
9	167/13	SR 167 OVER RR	0.64	Olympic	211	Rehabilitate Bridge
10	12/12S	WISHKAH R HERON CS1415	0.08	Olympic	235	Rehabilitate Bridge
11	302/105	PURDY BR	15.69	Olympic	550	Rehabilitate Bridge
24	300/1	MISSION CR	0.28	Olympic	51	Replace Bridge

Total Number of Bridges = 4



## P2 Bridge Preservation - Replacement/Rehab Projects

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10	12/12S	WISHKAH R HERON CS1415	0.08	Olympic	235	Rehabilitate Bridge
9	167/13	SR 167 OVER RR	0.64	Olympic	211	Rehabilitate Bridge
24	300/1	MISSION CR	0.28	Olympic	51	Replace Bridge
11	302/105	PURDY BR	15.69	Olympic	550	Rehabilitate Bridge

Total Number of Bridges = 4



# Bridge Preservation Program

# Bridge Replacement Form

Bridge Number: 12 / 12S	Structure ID 000000LM	Bridge Name: HERON STREET BRIDGE	Milepost: 0.08	Region: Olympic
Year Built / YR Widened: 1949	Bridge Type: Steel(open)Girder - Swing Span	Number of Main/Appr span 2 / 1	Sufficiency Rating: 43.75 SD	
Bridge Width (curb-curb): 28.0 ft	Bridge Length: 235 ft	Max Span: 93 ft	 <p><b>Bridge Deck View</b></p>	
Average Daily Traffic: 15,000	Truck% 12%	Number of Lanes: 2		
Vertical Clearance: NA	Detour Length (miles): 2	Appr Rdway Width: 30.0 ft		
Design Load: H 20	HS: 1.21	Load Restricted Bridge? <input type="checkbox"/>		
Op Rating: 64.00	A1: 1.41	BL Load:	 <p><b>Bridge Profile View</b></p>	
Inv Rating: 39.00	A2: 1.42	CL-8 Load:		
	A3: 1.71	SA Load:		
<p align="center"><b>Bridge Inspection Information</b></p> <p>Date Inspected: 3/8/2011      Structr Adequacy: 4</p> <p>Superstr Code: 5                      Safe Load: 5</p> <p>Substr Code: 4                      Deck Geometry: 3</p> <p>Deck Code: 3                      Underclearance: 9</p> <p>Scour: 5                      Waterway: 8</p>				
<p align="center"><b>Proposed Bridge Replacement / Rehab Information</b></p> <p>New Bridge Width:              ft      Bridge \$'s:</p> <p>New Bridge Length:              ft.      Total \$'s:      \$7,000,000</p> <p>Priority Array #: 10</p> <p>PIN Number:                      Repl/Rehab Year:</p> <p>WIN Number:                      Ad Date:</p> <p>Contract Number:                      Funding Cat:      P2</p>				
<p><b>THE BRIDGE IS CLASSIFIED "SD" DUE TO THE SUBSTRUCTURE CONDITION.</b></p> <p>This is a steel swing span bridge that was built with untreated timber piles. The bridge sags during operation due to additional weight added after the grid deck was replaced in 1990. The existing grid deck will likely need to be replaced when the bridge is rehabilitated.</p> <p>A previous review has determined that the center pier should be reinforced with four new shaft foundations to reinforce this bridge against future seismic activity.</p> <p>This project will rehabilitate the bridge.</p>				



# Bridge Preservation Program

# Bridge Replacement Form

Bridge Number: 167 / 13	Structure ID 0001784A	Bridge Name: SR 167 OVER RR	Milepost: 0.64	Region: Olympic
Year Built / YR Widened: 1934	Bridge Type: Concrete T-Beam	Number of Main/Apr span 5 / 0	Sufficiency Rating: 25.04 SD	
Bridge Width (curb-curb): 48.0 ft	Bridge Length: 211 ft	Max Span: 50 ft	<p align="center"><b>Bridge Deck View</b></p> 	
Average Daily Traffic: 28,097	Truck% 4%	Number of Lanes: 4		
Vertical Clearance: NA	Detour Length (miles): 2	Appr Rdway Width: 52.0 ft		
Design Load: H 15	HS: 0.83	Load Restricted Bridge? <input type="checkbox"/>		
Op Rating: 35.00	A1: 1.17	BL Load:	<p align="center"><b>Bridge Profile View</b></p> 	
Inv Rating: 21.00	A2: 1.16	CL-8 Load:		
	A3: 1.29	SA Load:		
<b>Bridge Inspection Information</b>				
Date Inspected: 10/14/2010	Structr Adequacy: 4			
Superstr Code: 4	Safe Load: 5			
Substr Code: 6	Deck Geometry: 2			
Deck Code: 5	Underclearance: 5			
Scour: N	Waterway: 9			
<b>Proposed Bridge Replacement / Rehab Information</b>				
New Bridge Width: ft	Bridge \$'s:			
New Bridge Length: ft	Total \$'s: \$3,246,500			
Priority Array #: 9				
PIN Number: 316730A	Repl/Rehab Year:			
WIN Number: C16730A	Ad Date:			
Contract Number:	Funding Cat: P2			
<p>Concrete girder webs have hairline vertical and diagonal cracks. Girders have scattered small delaminations and spalls. Pier 2 girder haunches have leaching diagonal cracks. Diaphragm haunches have longitudinal leaching cracks. Concrete sidewalk soffit has many areas with shallow spalls and rusty exposed transverse rebar as well as transverse rusty leaching cracks. Sidewalk supports have diagonal cracks; some of which are leaching - especially the west side in Span 4. WEST SIDEWALK: Concrete sidewalk supports on the west side of Span 4 have large spalls, hairline to wide cracks, delaminations, and exfoliation. In March of 2006, due to these conditions, Olympic Region Bridge Maintenance constructed and installed steel bracing along the length of both sides of Girder 4A to support the west sidewalk.</p> <p>This project will rehabilitate the concrete girders and sidewalk.</p>				



# Bridge Preservation Program

# Bridge Replacement Form

Bridge Number: 300 / 1	Structure ID 0007342A	Bridge Name: MISSION CR	Milepost: 0.28	Region: Olympic
Year Built / YR Widened: 1963	Bridge Type: Treated Timber Long. Laminated		Number of Main/Appr span 3 / 0	Sufficiency Rating: 32.72 SD
Bridge Width (curb-curb): 26.0 ft	Bridge Length: 51 ft	Max Span: 17 ft	<b>Bridge Deck View</b>	
Average Daily Traffic: 6,584	Truck% 5%	Number of Lanes: 2		
Vertical Clearance: NA	Detour Length (miles): 50	Appr Rdway Width: 28.0 ft		
Design Load: HS 20	HS: 1.05	Load Restricted Bridge? <input type="checkbox"/>	<b>Bridge Profile View</b>	
Op Rating: 38.00	A1: 1.32	BL Load:		
Inv Rating: 28.00	A2: 1.39	CL-8 Load:		
	A3: 1.60	SA Load:		
<b>Bridge Inspection Information</b>				
Date Inspected: 2/27/2012	Structr Adequacy: 4			
Superstr Code: 7	Safe Load: 5			
Substr Code: 4	Deck Geometry: 2			
Deck Code: 7	Underclearance: 9			
Scour: 3	Waterway: 6			
<b>Proposed Bridge Replacement / Rehab Information</b>				
New Bridge Width: 42 ft	Bridge \$'s:			
New Bridge Length: 56 ft.	Total \$'s: \$8,129,567			
Priority Array #: 24				
PIN Number:	Repl/Rehab Year:			
WIN Number:	Ad Date:			
Contract Number:	Funding Cat: P2			
<p><b>THIS BRIDGE IS CLASSIFIED "SD" BASED ON A SUBSTRUCTURE / SCOUR CONDITION.</b>                  This is a 3 span Treated Timber bridge built in 1963 with 2 intermediate piers in the waterway. The intermediate pierwalls are on spread footings. Bridge has been closed due to scour failure in the past.</p> <p>Substructure coded a "4" due to scour where Pier 3 has previously experienced settlement. A Scour report says The calculated scour depth is well below the bottom of the foundations shown on the original layout sheet and notes in the file indicate the bridge has experienced a failure due to scour in 1966 and was repaired. The previous recommend scour repair of riprap placement around the piers has been completed.</p> <p>The Olympic Region completed a scoping estimate to the replace the bridge that may need to be updated.</p>				



# Bridge Preservation Program

# Bridge Replacement Form

Bridge Number: 302 / 105	Structure ID 000000JQ	Bridge Name: PURDY BRIDGE	Milepost: 15.69	Region: Olympic
Year Built / YR Widened: 1936 / 1966	Bridge Type: Concrete Box	Number of Main/Appr span 5 / 0	Sufficiency Rating: 24.45 SD	
Bridge Width (curb-curb): 20.0 ft	Bridge Length: 550 ft	Max Span: 190 ft	<p align="center"><b>Bridge Deck View</b></p> 	
Average Daily Traffic: 21,346	Truck% 3%	Number of Lanes: 2		
Vertical Clearance: NA	Detour Length (miles): 50	Appr Rdway Width: 26.0 ft		
Design Load: H 15	HS: 0.88	Load Restricted Bridge? <input checked="" type="checkbox"/>		
Op Rating: 37.00	A1: 1.21	BL Load: 19,500	<p align="center"><b>Bridge Profile View</b></p> 	
Inv Rating: 22.00	A2: 1.09	CL-8 Load: 32,500		
	A3: 1.06	SA Load: 32,500		
<b>Bridge Inspection Information</b>				
Date Inspected: 6/13/2012	Structr Adequacy: 4			
Superstr Code: 6	Safe Load: 5			
Substr Code: 4	Deck Geometry: 2			
Deck Code: 6	Underclearance: 9			
Scour: 5	Waterway: 8			
<b>Proposed Bridge Replacement / Rehab Information</b>				
New Bridge Width: ft	Bridge \$'s:			
New Bridge Length: ft	Total \$'s: \$4,000,000			
Priority Array #: 11				
PIN Number:	Repl/Rehab Year:			
WIN Number:	Ad Date:			
Contract Number:	Funding Cat: P2			

**THIS BRIDGE IS CLASSIFIED "SD" DUE TO THE SUBSTRUCTURE CODE.**  
 The capacity of the bridge to carry vehicular traffic is low because of its age and poor shear strength design.

Substructure coded "4" based on Piers 3 and 4 pier walls heavily spalled in all four corners with rebar that is corroded through and missing, and other areas where exposed rebar is heavily corroded and covered with marine life. The pier walls are box structures with interior voids, and the corner spalls have reduced the wall thickness in areas from 16" to about 7" thick. The reduced wall thickness near and below the water surface increases the likelihood of local failure of the submerged pier walls.

This project will rehabilitate the piers and the concrete box superstructure.



## P2 Bridge Preservation - Bridge Repair

### 2011-13 Bien Priority Array

(Sorted by Priority Number)

11-13 #	Bridge Number	Bridge Name	Region	Repair Description	Bridge Item\$'s
1	16/110E	TACOMA NARROWS	Olympic	Replace Finger Exp Jnt at Tower #4	\$300,000
1	167/38	24TH ST E OVER SR 167	Olympic	Replace damaged PCG	\$500,000
2	16/110E	TACOMA NARROWS	Olympic	Replace Maintenance Traveler	\$3,000,000
20	104/5.1	HOOD CANAL-W.A. BUG	Olympic	Replace 18 anchor cables	\$3,000,000
29	5/342W-S	MCALLISTER CR	Olympic	Repair Concrete Columns	\$200,000
45	101/269	FULTON CR	Olympic	Repair Concrete Columns	\$320,000
46	101/432E	KENNEDY CR	Olympic	Repair Concrete Columns	\$720,000
47	101/432W	KENNEDY CR	Olympic	Repair Concrete Columns	\$720,000
48	167/32E	VALLEY AVE & UPRR O'	Olympic	Replace Expansion Joint	\$100,000
54	167/40E	8TH ST E O'XING	Olympic	Repair Bridge Rail	\$25,000
56	410/31	WHITE R (STUCK R)	Olympic	Replace Exp Joints	\$108,000
58	12/12N	WISHKAH R CS1413	Olympic	Rehab deteriorated Conc	\$100,000
63	107/4	CHEHALIS R	Olympic	Replace Timber Deck	\$1,600,000
73	101/115N-W	N-W RAMP	Olympic	Replace Exp Jnt	\$40,000

Total Number of Bridges = 14

Totals \$ = \$10,733,000



## P2 Bridge Preservation - Bridge Repair

### 2011-13 Bien Priority Array

(Sorted by Bridge Number)

11-13 #	Bridge Number	Bridge Name	Region	Repair Description	Bridge Item\$'s
29	5/342W-S	MCALLISTER CR	Olympic	Repair Concrete Columns	\$200,000
58	12/12N	WISHKAH R CS1413	Olympic	Rehab deteriorated Conc	\$100,000
1	16/110E	TACOMA NARROWS	Olympic	Replace Finger Exp Jnt at Tower #4	\$300,000
2	16/110E	TACOMA NARROWS	Olympic	Replace Maintenance Traveler	\$3,000,000
73	101/115N-W	N-W RAMP	Olympic	Replace Exp Jnt	\$40,000
45	101/269	FULTON CR	Olympic	Repair Concrete Columns	\$320,000
46	101/432E	KENNEDY CR	Olympic	Repair Concrete Columns	\$720,000
47	101/432W	KENNEDY CR	Olympic	Repair Concrete Columns	\$720,000
20	104/5.1	HOOD CANAL-W.A. BUG	Olympic	Replace 18 anchor cables	\$3,000,000
63	107/4	CHEHALIS R	Olympic	Replace Timber Deck	\$1,600,000
48	167/32E	VALLEY AVE & UPRR O'	Olympic	Replace Expansion Joint	\$100,000
1	167/38	24TH ST E OVER SR 167	Olympic	Replace damaged PCG	\$500,000
54	167/40E	8TH ST E O'XING	Olympic	Repair Bridge Rail	\$25,000
56	410/31	WHITE R (STUCK R)	Olympic	Replace Exp Joints	\$108,000

Total Number of Bridges = 14

Totals \$ = \$10,733,000

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 5 / 342W-S		Structure ID 0008100H		Bridge Name: MCALLISTER CR		Milepost: 114.09		Region: Olympic	
Year Built / YR Widened: 1968		Bridge Type: CS		Bridge Length: 168 ft		Bridge Width (curb-curb): 23.0 ft		Sufficiency Rating: 84.57	
Average Daily Traffic: 830		Truck% 2%		Freight Route T1		Num of Lanes: 1			
Date Inspected: 7/27/2006		Structr Adequacy: 5		Superstr Code: 7		Safe Load: 5			
Substr Code: 5		Scour: 8		BMS Element Num: 227		BMS Element Descr: Concrete Submerged Pile/Column			
BMS Element Quantity: 8		Project Number:		2011-13 Priority#: 29		2009-11 Priority#: 32			
Repair Year: 2016		CPMS Ad Date:		Bridge \$'s: \$200,000		Repair Total\$'s: \$350,000		 	
<b>Repair Description:</b>		Repair salt water deteriorated columns @ piers 2 & 4.		<b>COMMENTS</b>		The columns are showing signs of corrosion in the reinforcing steel. Repair with fiberglass jackets.			

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 12 / 12N	Structure ID 0002311A	Bridge Name: WISHKAH R CS1413	Milepost: 0.08	Region: Olympic
Year Built / YR Widened: 1925 / 2003	Bridge Type: BAS ST CTB CS	Bridge Length: 363 ft	Bridge Width (curb-curb): 27.0 ft	Sufficiency Rating: 42.98
Average Daily Traffic: 7,500	Truck% 12%	Freight Route	Num of Lanes: 2	
Date Inspected: 6/6/2005	Structr Adequacy: 4	Superstr Code: 5	Safe Load: 5	
Substr Code: 5	Scour: 3			
BMS Element Num: 110	BMS Element Descr: Concrete Girder			
BMS Element Quantity: 0				
Project Number:	2011-13 Priority#: 58	Repair Year:	2009-11 Priority#: 68	
CPMS Ad Date:	Bridge \$'s:	Repair Total\$'s:	\$100,000	
				
<b>Repair Description:</b> Rehabilitate deteriorated concrete elements.				
<b>COMMENTS</b>				

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 16 / 110E	Structure ID 0003418A	Bridge Name: TACOMA NARROWS	Milepost: 7.28	Region: Olympic
Year Built / YR Widened: 1949	Bridge Type: SSusS SG CTB	Bridge Length: 5,978 ft	Bridge Width (curb-curb): 46.3 ft	Sufficiency Rating: 39.88 FO
Average Daily Traffic: Truck% 48,000	Freight Route T1	Num of Lanes: 4		
Date Inspected:	Structr Adequacy:			
Superstr Code:	Safe Load:			
Substr Code:	Scour:			
BMS Element Num:	BMS Element Descr:			
BMS Element Quantity:				
Project Number:	2011-13 Priority#:	1		
Repair Year: 2012	2009-11 Priority#:			
CPMS Ad Date:	Bridge \$'s:			
	Repair Total\$'s:	\$500,000		



### Repair Description:

Replace Expansion Joint and supports at Tower 4

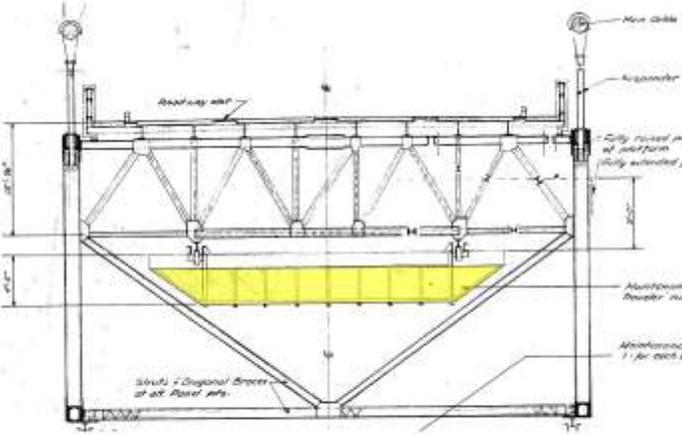
### COMMENTS

The support system for the steel supporting the Finger Expansion Joint at Tower 4 is deteriorated and in need of replacement.

Total cost estimated @ \$500,000 until a thorough review can be done.

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 16 / 110E		Structure ID 0003418A		Bridge Name: TACOMA NARROWS		Milepost: 7.28		Region: Olympic	
Year Built / YR Widened: 1949		Bridge Type: SSusS SG CTB		Bridge Length: 5,978 ft		Bridge Width (curb-curb): 46.3 ft		Sufficiency Rating: 39.88 FO	
Average Daily Traffic: Truck% 48,000		Freight Route T1		Num of Lanes: 4					
Date Inspected:		Structr Adequacy:							
Superstr Code:		Safe Load:							
Substr Code:		Scour:							
BMS Element Num:		BMS Element Descr:		BMS Element Quantity:					
Project Number:		2011-13 Priority#:		2					
Repair Year: 2012		2009-11 Priority#:							
CPMS Ad Date:		Bridge \$'s:							
		Repair Total\$'s:		\$3,500,000					
 <p><b>FIGURE 1- Maintenance Traveler</b></p>									
<p><b>Repair Description:</b> Replace Maintenance Traveler</p>									
<p><b>COMMENTS</b></p>									
<p>The Top traveler and rail is 70 years old and in need of replacement. There are sections of the rail track at the towers that is deteriorating. Bridge Maintenance crews use this traveler system to perform maintenance on the bridge.</p> <p>Total cost estimated @ \$3,500,000 until a thorough review can be done.</p>									

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 101 / 115N-W		Structure ID 0012643A		Bridge Name: N-W RAMP		Milepost: 83.12		Region: Olympic	
Year Built / YR Widened: 1985		Bridge Type: SG		Bridge Length: 1,456 ft		Bridge Width (curb-curb): 20.0 ft		Sufficiency Rating: 96.26	
Average Daily Traffic: 4,623		Truck% 0%		Freight Route		Num of Lanes: 1			
Date Inspected: 6/7/2005		Structr Adequacy: 6		Superstr Code: 7		Safe Load: 5			
Substr Code: 6		Scour: N		BMS Element Num: 415		BMS Element Descr: Bolt Down Panel - Molded Rubbe			
BMS Element Quantity: 80 LF		Project Number: 2011-13 Priority#: 73		Repair Year: 2009-11 Priority#: 84		Bridge \$'s: \$40,000			
CPMS Ad Date:		Repair Total\$'s: \$120,000							
		<h2>No Photo Available</h2>							
<b>Repair Description:</b> Replace bolt down panels expansion joint system.									
<b>COMMENTS</b>									
The rubber bolt down expansion joints are deteriorated. The new Expansion Joint will be RCS with Polyester Concrete headers.  Bridge Item cost based on \$500 / ft. Total project cost based on \$1,500 / ft.									

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 101 / 269		Structure ID 0000987A		Bridge Name: FULTON CR		Milepost: 313.55		Region: Olympic	
Year Built / YR Widened: 1926		Bridge Type: CTB		Bridge Length: 127 ft		Bridge Width (curb-curb): 24.0 ft		Sufficiency Rating: 46.21 FO	
Average Daily Traffic: 2,063		Truck% 17%		Freight Route		Num of Lanes: 2			
Date Inspected: 7/12/2006		Structr Adequacy: 5		Superstr Code: 7		Safe Load: 5			
Substr Code: 5		Scour: 3		BMS Element Num: 227		BMS Element Descr: Concrete Submerged Column			
BMS Element Quantity: 8		Project Number:		2011-13 Priority#: 45		2009-11 Priority#: 54			
Repair Year: 2016		CPMS Ad Date:		Bridge \$'s: \$320,000		Repair Total\$'s: \$600,000		 	
<b>Repair Description:</b>		Repair and encase section of concrete columns exposed to saltwater.							
<b>COMMENTS</b>									

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 101 / 432E		Structure ID 0006383B		Bridge Name: KENNEDY CR		Milepost: 356.17		Region: Olympic	
Year Built / YR Widened: 1960		Bridge Type: CVS		Bridge Length: 129 ft		Bridge Width (curb-curb): 28.0 ft		Sufficiency Rating: 66.79 FO	
Average Daily Traffic: 8,357		Truck% 7%		Freight Route		Num of Lanes: 2			
Date Inspected: 7/25/2006		Structr Adequacy: 5		Superstr Code: 6		Safe Load: 5			
Substr Code: 5		Scour: 3		BMS Element Num: 227		BMS Element Descr: Concrete Submerged Column			
BMS Element Quantity: 18		Project Number:		2011-13 Priority#: 46		2009-11 Priority#: 55			
Repair Year: 2016		CPMS Ad Date:		Bridge \$'s: \$720,000		Repair Total\$'s: \$1,080,000			
<p><b>Repair Description:</b> Clean and encase concrete columns</p>									
<p><b>COMMENTS</b></p>									
<p>Need to get current pictures of the columns.</p>									

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 101 / 432W		Structure ID 0006383A		Bridge Name: KENNEDY CR		Milepost: 356.17		Region: Olympic	
Year Built / YR Widened: 1960		Bridge Type: CVS		Bridge Length: 129 ft		Bridge Width (curb-curb): 28.0 ft		Sufficiency Rating: 57.77 FO	
Average Daily Traffic: 8,357		Truck% 7%		Freight Route		Num of Lanes: 2			
Date Inspected: 7/24/2006		Structr Adequacy: 5		Superstr Code: 7		Safe Load: 5			
Substr Code: 5		Scour: 3		BMS Element Num: 227		BMS Element Descr: Concrete Submerged Column			
BMS Element Quantity: 18		Project Number:		2011-13 Priority#: 47		2009-11 Priority#: 56			
Repair Year: 2016		CPMS Ad Date:		Bridge \$'s: \$720,000		Repair Total\$'s: \$1,080,000		<div style="text-align: center; font-size: 2em; font-weight: bold; transform: rotate(-10deg);">No Photo Available</div>	
<div style="text-align: center; font-size: 2em; font-weight: bold; transform: rotate(-10deg);">No Photo Available</div>		<div style="text-align: center; font-size: 2em; font-weight: bold; transform: rotate(-10deg);">No Photo Available</div>							
				<b>Repair Description:</b> Clean and encase concrete columns					
<b>COMMENTS</b>									
Need to get current pictures of the columns.									

Bridge Number: 104 / 5.1	Structure ID 0011964A	Bridge Name: HOOD CANAL-WEST HALF	Milepost: 13.93	Region: Olympic
Year Built / YR Widened: 1982	Bridge Type: CFP PCG STRus	Bridge Length: 4,245 ft	Bridge Width (curb-curb): 28.0 ft	Sufficiency Rating: 47.98
Average Daily Traffic: 13,327	Truck%:	Detour (miles):	Num of Lanes: 2	
Date Inspected:	Structr Adequacy:	Superstr Code:	Safe Load:	
Substr Code:	Scour:			
BMS Element Num: <b>148</b> BMS Element Descr: <b>Floating Bridge - Anchor Cable</b> BMS Element Quantity: <b>18 Each</b>				
Project Number:	2009-11 Priority#:	53		
Repair Year: 2014	2011-13 Priority#:	20		
CPMS Ad Date:	Bridge \$'s:	\$5,040,000		
	Repair Total\$'s:	\$5,891,760		
				
<p><b>Repair Description:</b>                  Replace 18 anchor cables and purchase 1 spare cable.</p>				
<p><b>COMMENTS</b></p>				
<p>The bridge has 24 anchor cables that are 3 inches in diameter, of which 18 are 29 years old. These 18 should be programmed for replacement when they reach 30 years old. This project also needs to include the purchase of 1 spare cable in case of a need to replace a cable by an emergency. Cables - An, As, Bs, Dn, Fs, Gn, Gs, Hn, Hs, Jn, Js, L1n, L1s, L2s, Mn, Ms.</p>				
<p>Bridge Item estimate (\$250,000 installation + \$30,000 materials) per cable x 18 cables. = \$5,040,000. Total cost = \$5,891,760</p>				



# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 107 / 4		Structure ID 0005827A		Bridge Name: CHEHALIS R		Milepost: 6.83		Region: Olympic	
Year Built / YR Widened: 1958		Bridge Type: ST CBOX TTT		Bridge Length: 1,302 ft		Bridge Width (curb-curb): 26.0 ft		Sufficiency Rating: 40.45SD	
Average Daily Traffic: 4,392		Truck% 16%		Freight Route		Num of Lanes: 2			
Date Inspected: 3/19/2007		Structr Adequacy: 5		Superstr Code: 6		Safe Load: 5			
Substr Code: 5		Scour: 3		BMS Element Num: 31		BMS Element Descr: Timber Deck			
BMS Element Quantity: 20,226 SF		Project Number: 2011-13 Priority#: 63		Repair Year: 2009-11 Priority#: 73		Bridge \$'s: \$1,600,000			
CPMS Ad Date:		Repair Total\$'s: \$3,200,000							
<b>Repair Description:</b> Remove and replace the timber deck and bridge rails on the timber approach span.									
<b>COMMENTS</b>									
The timber deck has many areas that are deteriorated as evident by the failure in the ACP overlay. The Olympic Region Maintenance office indicates that they have repaired the timber deck in many areas. Four patched areas have replaced 4 deck planks with one 12" x 4" timber. Most spans between the timber piers have cracks in the ACP.									

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 167 / 32E		Structure ID 0009075D		Bridge Name: VALLEY AVE & UPRR O'XIN		Milepost: 7.22		Region: Olympic	
Year Built / YR Widened: 1973		Bridge Type: PCG		Bridge Length: 925 ft		Bridge Width (curb-curb): 50.5 ft		Sufficiency Rating: 94.49	
Average Daily Traffic: 26,125		Truck% 8%		Freight Route		Num of Lanes: 2			
Date Inspected: 12/12/2006		Structr Adequacy: 7		Superstr Code: 7		Safe Load: 5			
Substr Code: 7		Scour: N		BMS Element Num: 409		BMS Element Descr: Steel Sliding Plate Exp Joint			
BMS Element Quantity: 100		Project Number:		2011-13 Priority#: 48		Repair Year:			
CPMS Ad Date:		2009-11 Priority#: 57		Bridge \$'s: \$100,000		Repair Total\$'s: \$250,000			
		<h2>No Photo Available</h2>							
<b>Repair Description:</b> Replace Expansion joints @ piers 4 and 6.									
<b>COMMENTS</b> Bridge Item cost based on \$1,000 / ft. Total project cost based on \$2,500 / ft.									

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 167 / 38		Structure ID 0016597A		Bridge Name: 24TH ST E OVER SR 167		Milepost: 9.61		Region: Olympic					
Year Built / YR Widened: 2004		Bridge Type: PCG		Bridge Length: 382 ft		Bridge Width (curb-curb): 69.8 ft		Sufficiency Rating: 48.22					
Average Daily Traffic: Truck% 8,832		Freight Route		Num of Lanes: 5									
Date Inspected: 11/12/2008		Structr Adequacy: 3		Superstr Code: 3						Safe Load: 5		Substr Code: 7	
BMS Element Num: 115		BMS Element Descr: <b>Prestress Concrete Girder</b>								BMS Element Quantity: 134			
Project Number:		2011-13 Priority#: 1		Repair Year: 2011						2009-11 Priority#:		Bridge \$'s: \$500,000	
CPMS Ad Date:		Repair Total\$'s: \$800,000											
													
<b>Repair Description:</b> Replace the south outside prestress girder over the north bound lanes.													
<b>COMMENTS</b>													
The south outside prestress girder over the north bound lanes was damaged by a truck impact on Dec 16 2009. The Bridge Preservation Office has determined that this girder cannot be repaired and needs to be replaced.													

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 167 / 40E		Structure ID 0010558A		Bridge Name: 8TH ST E O'XING		Milepost: 10.62		Region: Olympic	
Year Built / YR Widened: 1977		Bridge Type: PCG		Bridge Length: 185 ft		Bridge Width (curb-curb): 38.0 ft		Sufficiency Rating: 91.36	
Average Daily Traffic: 26,125		Truck% 8%		Freight Route		Num of Lanes: 2			
Date Inspected: 12/5/2005		Structr Adequacy: 7		Superstr Code: 7		Safe Load: 5			
Substr Code: 7		Scour: N		BMS Element Num: 331		BMS Element Descr: Concrete Bridge Rail			
BMS Element Quantity: 56		Project Number:		2011-13 Priority#: 54		Repair Year:			
CPMS Ad Date:		2009-11 Priority#: 64		Bridge \$'s: \$25,000		Repair Total\$'s: \$50,000			
									
<p><b>Repair Description:</b> Replace 56 feet of bridge rail.</p>									
<p><b>COMMENTS</b></p>									
<p>Southeast six sections of bridge rail has severe exfoliation of top 1 foot, and requires repair/replacement. Also, Northwest end section has severe exfoliation of top 1 foot, and requires repair/replacement. -- (Revised the priority to 2 from 4 per GCS. RLS 12/19/05).</p>									

# Bridge Preservation Program (P2)

# Bridge Repair Form

Bridge Number: 410 / 31	Structure ID 0008746A	Bridge Name: WHITE R (STUCK R)	Milepost: 8.99	Region: Olympic
Year Built / YR Widened: 1971	Bridge Type: PCG CBox	Bridge Length: 442 ft	Bridge Width (curb-curb): 102.0 ft	Sufficiency Rating: 86.46
Average Daily Traffic: 44,586	Truck% 7%	Freight Route	Num of Lanes: 6	
Date Inspected: 8/31/2005	Structr Adequacy: 6	Safe Load: 5	Scour: 8	
Superstr Code: 6	BMS Element Num: <b>415</b>			
Substr Code: 7	BMS Element Descr: <b>Exp Jnt - Rubber Bolt down</b>			
BMS Element Quantity: 216		BMS Element Num: <b>415</b>		
Project Number: 2011-13 Priority#: <b>56</b>		Repair Year: 2009-11 Priority#: <b>66</b>		
CPMS Ad Date:		Bridge \$'s: <b>\$108,000</b>		
		Repair Total\$'s: <b>\$216,000</b>		
				
<b>Repair Description:</b>				
Replace rubber bolt down expansion joints.				
<b>COMMENTS</b>				
Bridge Item cost based on \$500 / ft. Total project cost based on \$1,000 / ft.				

## P2 Bridge Preservation - Concrete Deck Repair / Overlay Projects



### 2011-13 Bien Priority Array

(Sorted by Priority Number)



09-11 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
34	110/15	BOGACHIEL RIVER	8.64	Olympic	\$191,197	\$572,688
53	5/417	CLOVER CR	125.64	Olympic	\$679,875	\$1,473,287
63	303/12	PORT WASHINGTON CS1840	0.73	Olympic	\$2,358,130	\$4,029,608
Total Number of Bridges = 3				Totals \$ =	\$3,229,202	\$6,075,583



## P2 Bridge Preservation - Concrete Deck Repair / Overlay Projects



### 2011-13 Bien Priority Array

(Sorted by Bridge Number)



09-11 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
53	5/417	CLOVER CR	125.64	Olympic	\$679,875	\$1,473,287
34	110/15	BOGACHIEL RIVER	8.64	Olympic	\$191,197	\$572,688
63	303/12	PORT WASHINGTON CS1840	0.73	Olympic	\$2,358,130	\$4,029,608
Total Number of Bridges = 3				Totals \$ =	\$3,229,202	\$6,075,583





BRIDGE NUMBER: 5 / 417	BRIDGE NAME: CLOVER CR	REGION: Olympic	MILEPOST: 125.64
YEAR BUILT / YR WIDENED: 1957	CONTRACT NO.(S): 05523 , 09574 , 12808	SUFFICIENCY RATING: 85.00	
BRIDGE TYPE: CS DECK TYPE: Conc cast-in-place DECK THICKNESS: 13.0 in. (Main Span)	BRIDGE WIDTH (curb-curb): 194.0 ft. BRIDGE LENGTH: 69 ft. AVERAGE DAILY TRAFFIC (ADT): 125,772 NUMBER OF LANES: 10	EXISTING WEARING SURFACE AND DECK PROTECTION TYPE: LMC Overlay Year Applied - 1985 Overlay Thickness - 1.5 inches	
<b>VERTICAL CLEARANCE</b> VC Type: NA			
<b>BRIDGE RAIL</b> BRIDGE RAIL TYPE: WSDOT CODE - 60 New Jersey Barrier RAIL MEETS CURRENT STANDARDS?: YES SIDEWALK / CURB WIDTH: 0.0 Lt 0.0 Rt			
<b>EXPANSION JOINTS</b>		<b>DECK PROTECTIVE SYSTEM RECOMMENDATIONS</b> PROTECTIVE OVERLAY RECOMMENDED?: YES TYPE RECOMMENDED: Rapid Set LMC Overlay	
		<b>RESURFACING COMMENT</b> The existing LMC is debonding and breaking up near the ends of the bridge. The Olympic Region Maintenance Office reports that the concrete overlay has debonded in the vicinity of their deck repair areas.  We recommend removing and replacing the existing LMC Overlay with a new 1.0" Polyester or 1.5" Rapid Set Concrete overlay.	
REVIEWED BY: <i>Bruce Thill</i>		DATE: 2/22/2010	



BRIDGE NUMBER: <b>110 / 15</b>	BRIDGE NAME: <b>BOGACHIEL RIVER</b>	REGION: <b>Olympic</b>	MILEPOST: <b>8.64</b>
YEAR BUILT / YR WIDENED: <b>1967</b>	CONTRACT NO.(S):	SUFFICIENCY RATING: <b>60.86 SD</b>	
BRIDGE TYPE: <b>SB CS</b> DECK TYPE: <b>Conc cast-in-place</b> DECK THICKNESS: (Main Span) <b>7.0 in.</b>		EXISTING WEARING SURFACE AND DECK PROTECTION TYPE: <b>orig conc with ACPmem</b>	
BRIDGE WIDTH (curb-curb): <b>26.0 ft.</b>	BRIDGE LENGTH: <b>288 ft.</b>		
AVERAGE DAILY TRAFFIC (ADT): <b>1,190</b>	NUMBER OF LANES: <b>2</b>		
<b>VERTICAL CLEARANCE</b> VC Type: <b>NA</b>			
<b>BRIDGE RAIL</b>			
BRIDGE RAIL TYPE: <b>Conc Base - Type S</b>			
RAIL MEETS CURRENT STANDARDS?: <b>YES</b>	SIDEWALK / CURB WIDTH: <b>0.4 Lt 0.4 Rt</b>		
<b>EXPANSION JOINTS</b>		<b>DECK PROTECTIVE SYSTEM RECOMMENDATIONS</b>	
Modifications will be required to accommodate the proposed overlay.		PROTECTIVE OVERLAY RECOMMENDED?: <b>Yes</b>	TYPE RECOMMENDED: <b>Mod Conc</b>
		COMMENTS: Bridge Inspection results indicates that nearly 13% of the concrete deck is deteriorated.  We recommend removal of the existing asphalt and membrane then hydromill the concrete deck and apply a 1.5" mod conc overlay.	
		REVIEWED BY: <i>Bruce Thill</i>	DATE: <b>2/26/2010</b>

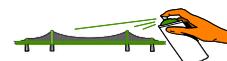


BRIDGE NUMBER: <b>303 / 12</b>	BRIDGE NAME: <b>PORT WASHINGTON CS1840</b>	REGION: <b>Olympic</b>	MILEPOST: <b>0.73</b>
YEAR BUILT / YR WIDENED: <b>1958</b>	CONTRACT NO.(S): <b>05565 , XE2784 , 13916 , 14490</b>	SUFFICIENCY RATING: <b>48.91 SD</b>	
BRIDGE TYPE: <b>SG CBOX CTB</b> DECK TYPE: <b>Lightweight Conc</b> DECK THICKNESS: (Main Span) <b>6.5 in.</b>		EXISTING WEARING SURFACE AND DECK PROTECTION TYPE: <b>Polyester Overlay</b> Year Applied - 1991 Overlay Thickness - 0.8 inches	
BRIDGE WIDTH (curb-curb): <b>55.0 ft.</b>	BRIDGE LENGTH: <b>1,717 ft.</b>		
AVERAGE DAILY TRAFFIC (ADT): <b>40,253</b>	NUMBER OF LANES: <b>4</b>		
<b>VERTICAL CLEARANCE</b>			
VC Type: <b>NA</b>			
<b>BRIDGE RAIL</b>			
BRIDGE RAIL TYPE: <b>Conc Base - Type 2</b>			
RAIL MEETS CURRENT STANDARDS?: <b>NO</b>	SIDEWALK / CURB WIDTH: <b>4.0 Lt 4.0 Rt</b>		
<b>EXPANSION JOINTS</b>		<b>DECK PROTECTIVE SYSTEM RECOMMENDATIONS</b>	
No modifications required at this time.		PROTECTIVE OVERLAY RECOMMENDED?: <b>Yes</b>	TYPE RECOMMENDED: <b>ACP w/Memb</b>
		COMMENTS: Bridge Inspections indicate existing overlay is deteriorating.  We recommend removal of the existing 3/4" Polyester overlay and adding a new membrane and 0.12' HMA.	
		REVIEWED BY: <b>Bruce Thill</b>	DATE: <b>2/26/2010</b>

## P2 Bridge Preservation - Steel Bridge Painting Projects

### 2011-13 Bien Priority Array

(Sorted by Priority Number)

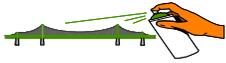


11-13 #	Bridge Number	Bridge Name	Mile Post	Region	Yr Work Planned	Total Project\$
8	5/345W	NISQUALLY R	114.86	Olympic	2012	\$3,303,835
9	5/345E	NISQUALLY RIVER	114.86	Olympic	2012	\$3,445,000
12	101/125W	HOQUIAM R-SIMPSON CS141	86.76	Olympic	2012	\$4,147,000
18	101/125E	HOQUIAM R-RIVERSIDE 1417	87.31	Olympic	2015	\$3,939,000
21	101/310	SOL DUC R	194.30	Olympic	2015	\$756,000
22	101/322	SOL DUC RIVER #5	212.46	Olympic	2015	\$1,029,000
23	107/4	CHEHALIS R	6.83	Olympic	2015	\$2,233,000
24	101/256	BIG QUILCENE R	296.67	Olympic	2015	\$847,000
25	109/10	HUMPTULIPS R	10.24	Olympic	2015	\$1,582,000
52	101/115	CHEHALIS R	83.12	Olympic	2019	\$9,142,500
53	305/10	AGATE PASS	6.82	Olympic	2019	\$10,289,500
64	507/114	DESCHUTES R	20.43	Olympic	2021	\$412,500
67	7/105	MASHEL R	27.91	Olympic	2021	\$272,250
71	165/10	CARBON RIVER	11.50	Olympic	2021	\$671,250
73	101/308	CALAWAH R	192.36	Olympic	2021	\$1,113,000
Total Number of Bridges = 15					Total Project \$ =	\$43,182,835

## P2 Bridge Preservation - Steel Bridge Painting Projects

### 2011-13 Bien Priority Array

(Sorted by Bridge Number)



11-13 #	Bridge Number	Bridge Name	Mile Post	Region	Yr Work Planned	Total Project\$
9	5/345E	NISQUALLY RIVER	114.86	Olympic	2012	\$3,445,000
8	5/345W	NISQUALLY R	114.86	Olympic	2012	\$3,303,835
67	7/105	MASHEL R	27.91	Olympic	2021	\$272,250
52	101/115	CHEHALIS R	83.12	Olympic	2019	\$9,142,500
18	101/125E	HOQUIAM R-RIVERSIDE 1417	87.31	Olympic	2015	\$3,939,000
12	101/125W	HOQUIAM R-SIMPSON CS141	86.76	Olympic	2012	\$4,147,000
24	101/256	BIG QUILCENE R	296.67	Olympic	2015	\$847,000
73	101/308	CALAWAH R	192.36	Olympic	2021	\$1,113,000
21	101/310	SOL DUC R	194.30	Olympic	2015	\$756,000
22	101/322	SOL DUC RIVER #5	212.46	Olympic	2015	\$1,029,000
23	107/4	CHEHALIS R	6.83	Olympic	2015	\$2,233,000
25	109/10	HUMPTULIPS R	10.24	Olympic	2015	\$1,582,000
71	165/10	CARBON RIVER	11.50	Olympic	2021	\$671,250
53	305/10	AGATE PASS	6.82	Olympic	2019	\$10,289,500
64	507/114	DESCHUTES R	20.43	Olympic	2021	\$412,500
Total Number of Bridges = 15					Total Project \$ =	\$43,182,835

# Steel Bridge Paint Form

2011-13 Biennium Priorities

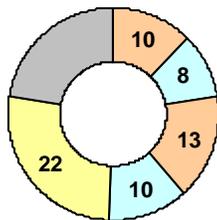


Bridge Number: 5 / 345E		Bridge Name: NISQUALLY RIVER		Milepost: 114.86	Region: Olympic
Year Built 1937	Bridge Type: ST PCB		Steel Span Length: 323 ft.	Width (curb-curb): 42.6 ft.	Steel Tonnage: 530
Paint Age: 22	Paint Color: Evergreen	34097	Steel Surf. Area: 79,500 sqft	BMS Cond State 2: 23,850 sqft	BMS Cond State 3: 4,500 sqft
Next Paint Year: 2012	2011-13 Rank: 9	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$3,445,000

## Past Paint History

Years	Cycle
1988	10
1978	13
1965	8
1957	10
1947	

### Painting Cycle



■ = Current Paint Age



May 2009 bridge inspection report notes:

Heavy accumulation of dirt and debris on and inside the truss bottom chords, heaviest in many panel point connections. Rust blooms and some rivet section loss inside bottom chords. Some pack rust noted. Some Laminar rust along top flange of steel floor beams. Top flange rust on steel stringers. Many of the top sway braces between the two truss over the roadway deck are heavily rusted.

Fatigue cracks in the steel stringers were repaired by contract in 2009.

Next Paint Project:

Full removal of the existing lead paint system is required. The new paint system will include a zinc primer and moisture cured urethane.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

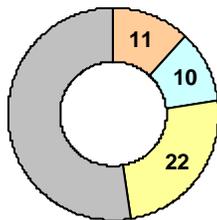


Bridge Number: 5 / 345W		Bridge Name: NISQUALLY R		Milepost: 114.86	Region: Olympic
Year Built 1967	Bridge Type: ST PCB		Steel Span Length: 322 ft.	Width (curb-curb): 48 ft.	Steel Tonnage: 506
Paint Age: 22	Paint Color: Evergreen	34097	Steel Surf. Area: 75,900 sqft	BMS Cond State 2: 26,565 sqft	BMS Cond State 3: 3,795 sqft
Next Paint Year: 2012	2011-13 Rank: 8	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$3,303,835

## Past Paint History

Years	Cycle
1988	10
1978	11
1967	

## Painting Cycle



■ = Current Paint Age



April 2009 bridge inspection report notes:

The paint is thin and chalky throughout. There is peeling paint, surface rust and rust blooms inside the steel bottom chord and other members.

### Next Paint Project:

Full removal of the existing lead paint system is required. The new paint system will include a zinc primer and moisture cured urethane.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

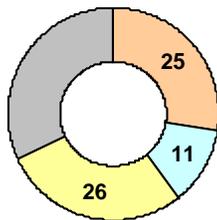


Bridge Number: 7 / 105		Bridge Name: MASHEL R		Milepost: 27.91	Region: Olympic
Year Built 1948	Bridge Type: SB		Steel Span Length: 195 ft.	Width (curb-curb): 24 ft.	Steel Tonnage: 99
Paint Age: 26	Paint Color: Steel Gray	26329	Steel Surf. Area: 10,890 sqft	BMS Cond State 2: 700 sqft	BMS Cond State 3: 500 sqft
Next Paint Year: 2021	2011-13 Rank: 67	Past Due / Due / OK Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$272,250

## Past Paint History

Years	Cycle
1984	11
1973	25
1948	

### Painting Cycle



■ = Current Paint Age



### Bridge Inspection note:

Paint is peeling on the outside edges of bottom flange of rolled girders and riveted girders. Top flange surface rust on steel girders.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

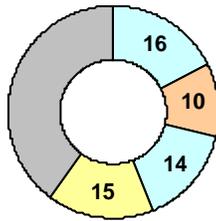


Bridge Number: 101 / 115		Bridge Name: CHEHALIS R		Milepost: 83.12	Region: Olympic
Year Built 1955	Bridge Type: BAS SG CBOX CTB		Steel Span Length: 606 ft.	Width (curb-curb): 28 ft.	Steel Tonnage: 2,438
Paint Age: 15	Paint Color: 26307 Light Gray	Steel Surf. Area: 365,700 sqft	BMS Cond State 2: 0 sqft	BMS Cond State 3: 0 sqft	
Next Paint Year: 2019	2011-13 Rank: 52	Past Due / Due / OK Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$9,142,500

## Past Paint History

Years	Cycle
1995	14
1981	10
1971	16
1955	15

## Painting Cycle



= Current Paint Age



# Steel Bridge Paint Form

2011-13 Biennium Priorities

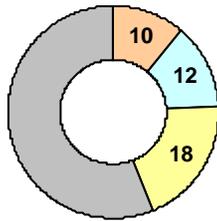


Bridge Number: 101 / 125E		Bridge Name: HOQUIAM R-RIVERSIDE 1417		Milepost: 87.31	Region: Olympic
Year Built 1970	Bridge Type: SL SB		Steel Span Length: 465 ft.	Width (curb-curb): 28 ft.	Steel Tonnage: 606
Paint Age: 18	Paint Color: Steel Gray	26329	Steel Surf. Area: 90,900 sqft	BMS Cond State 2: 10,000 sqft	BMS Cond State 3: 0 sqft
Next Paint Year: 2015	2011-13 Rank: 18	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$3,939,000

## Past Paint History

Years	Cycle
1992	12
1980	10
1970	

## Painting Cycle



= Current Paint Age



# Steel Bridge Paint Form

2011-13 Biennium Priorities

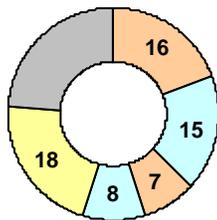


Bridge Number: 101 / 125W		Bridge Name: HOQUIAM R-SIMPSON CS1412		Milepost: 86.76	Region: Olympic
Year Built 1928	Bridge Type: BAS ST CG CST		Steel Span Length: 470 ft.	Width (curb-curb): 20 ft.	Steel Tonnage: 638
Paint Age: 18	Paint Color: Steel Gray	26329	Steel Surf. Area: 95,700 sqft	BMS Cond State 2: 87,200 sqft	BMS Cond State 3: 8,500 sqft
Next Paint Year: 2012	2011-13 Rank: 12	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$4,147,000

## Past Paint History

Years	Cycle
1992	8
1984	7
1977	15
1962	16
1946	

## Painting Cycle



■ = Current Paint Age



The bridge was rehabilitated in 2007 thru 2008.

Bridge Inspector's notes:

Primer coat on bascule span stringer and floorbeams is failed. Paint is peeled off exposing red lead primer. Paint is failed on floor system bracing. Paint is moldy on the bascule floor system beams and is peeled off in large areas exposing red lead. The paint is covered with wet dirt and moss in many parts of the floor system. Paint on the west 150 ft. steel truss bottom chord is rusted through and blistered along the 4" diameter utility.

Next Painting Project - Full removal of all the existing paint is required.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

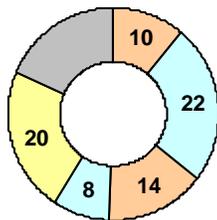


Bridge Number: 101 / 256		Bridge Name: BIG QUILCENE R		Milepost: 296.67	Region: Olympic
Year Built 1936	Bridge Type: ST CTB	Steel Span Length: 240 ft.	Width (curb-curb): 24 ft.	Steel Tonnage: 121	
Paint Age: 20	Paint Color: Evergreen	34097	Steel Surf. Area: 18,150 sqft	BMS Cond State 2: 5,000 sqft	BMS Cond State 3: 1,500 sqft
Next Paint Year: 2015	2011-13 Rank: 24	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$847,000

## Past Paint History

Years	Cycle
1990	8
1982	14
1968	22
1946	10
1936	

### Painting Cycle



■ = Current Paint Age



The 1990 painting project specified that areas on top of the bottom chord that entrap water on the sidewalk side of the bridge were to receive 16 mils of coal tar epoxy. Bridge Inspectors Notes:  
Top coat of paint is peeling on bottom flanges of steel stringers. Paint underneath is still intact with very little rust, mostly on top flange at the deck. Paint peeling on face of top chord of thru truss approximately 30% to previous layer of paint.

Next Paint Project will require full paint removal.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

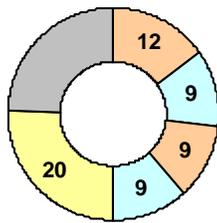


Bridge Number: 101 / 308		Bridge Name: CALAWAH R		Milepost: 192.36	Region: Olympic
Year Built 1938	Bridge Type: ST CTB	Steel Span Length: 170 ft.	Width (curb-curb): 24 ft.	Steel Tonnage: 159	
Paint Age: 20	Paint Color: Evergreen	34097	Steel Surf. Area: 23,850 sqft	BMS Cond State 2: 23,350 sqft	BMS Cond State 3: 500 sqft
Next Paint Year: 2021	2011-13 Rank: 73	Past Due / Due / OK Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$1,113,000

## Past Paint History

Years	Cycle
1990	9
1981	9
1972	9
1963	12
1951	

### Painting Cycle



■ = Current Paint Age



### Bridge Inspection Notes:

The paint system has widespread flaking, especially on inside surfaces of members. The top surfaces of the top chords, top lateral and sway bracing have extensive areas of exposed rusty steel.

Next Paint Project will require full paint removal.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

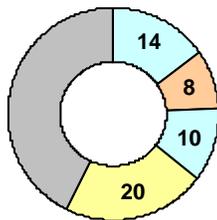


Bridge Number: 101 / 310		Bridge Name: SOL DUC R		Milepost: 194.30	Region: Olympic
Year Built 1958	Bridge Type: ST CTB	Steel Span Length: 150 ft.	Width (curb-curb): 26 ft.	Steel Tonnage: 108	
Paint Age: 20	Paint Color: Evergreen	Steel Surf. Area: 16,200 sqft	BMS Cond State 2: 8,100 sqft	BMS Cond State 3: 1,620 sqft	
Next Paint Year: 2015	2011-13 Rank: 21	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$756,000

## Past Paint History

Years	Cycle
1990	10
1980	8
1972	14
1958	

## Painting Cycle



■ = Current Paint Age



### Bridge Inspection Note:

The steel stringers have scattered areas of peeling paint. The top surfaces of the top chord members have rust blooms and peeling paint. The bottom chord interiors have paint failure causing active corrosion on the inside surfaces, at the rivet heads, and at the plate edges.

Next Paint Project will require full paint removal.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

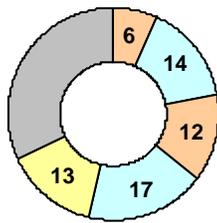


Bridge Number: 101 / 322		Bridge Name: SOL DUC RIVER #5		Milepost: 212.46	Region: Olympic
Year Built 1948	Bridge Type: ST CTB		Steel Span Length: 160 ft.	Width (curb-curb): 24 ft.	Steel Tonnage: 147
Paint Age: 13	Paint Color: Evergreen	34097	Steel Surf. Area: 22,050 sqft	BMS Cond State 2: 4,400 sqft	BMS Cond State 3: 1,100 sqft
Next Paint Year: 2015	2011-13 Rank: 22	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$1,029,000

## Past Paint History

Years	Cycle
1997	17
1980	12
1968	14
1954	6
1948	

### Painting Cycle



= Current Paint Age



### Bridge Inspection Notes:

Paint on the stringers is starting to peel in the webs and flanges with light rust. Some areas of the bottom chord has peeling paint. 15% of the paint is missing on the top chords of the truss.

Next Paint Project will require full paint removal.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

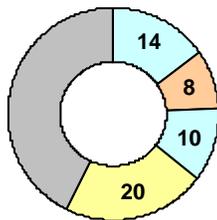


Bridge Number: 107 / 4		Bridge Name: CHEHALIS R		Milepost: 6.83	Region: Olympic
Year Built 1958	Bridge Type: ST CBOX TTT		Steel Span Length: 300 ft.	Width (curb-curb): 26 ft.	Steel Tonnage: 319
Paint Age: 20	Paint Color: Evergreen	34097	Steel Surf. Area: 47,850 sqft	BMS Cond State 2: 32,000 sqft	BMS Cond State 3: 3,000 sqft
Next Paint Year: 2015	2011-13 Rank: 23	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$2,233,000

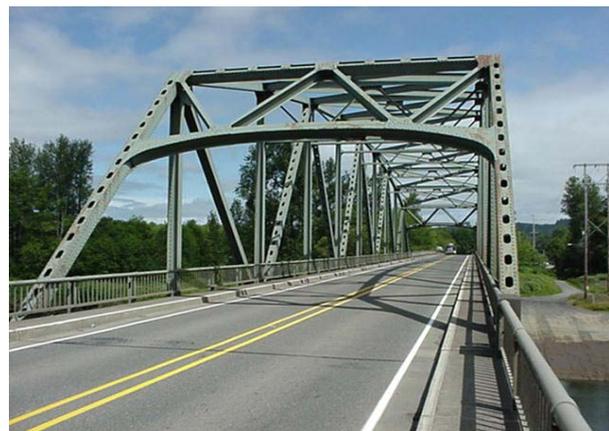
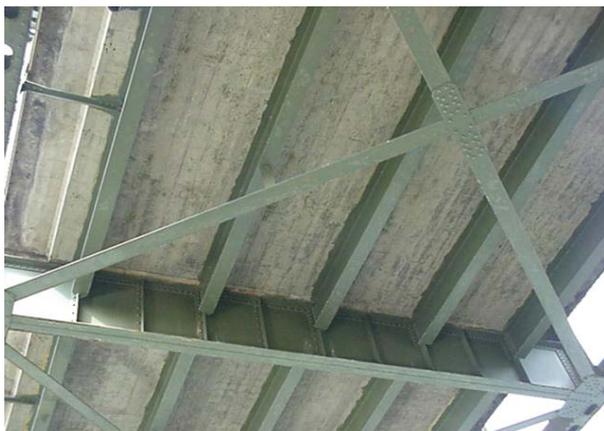
## Past Paint History

Years	Cycle
1990	10
1980	8
1972	14
1958	

## Painting Cycle



■ = Current Paint Age



### Bridge Inspector's Notes:

Peeling paint is typical, especially on and in the bottom chords. The stringer and floorbeam top flanges as well as the truss portal tops and west truss above deck members all have surface rust. The truss also has a few rust blooms.

### Next Paint Project:

Pressure wash bridge with 5,000psi  
 Assume about 15% of the bridge will need rust to be spot blasted  
 Prime blasted areas then Overcoat with two new paint layers

# Steel Bridge Paint Form

2011-13 Biennium Priorities

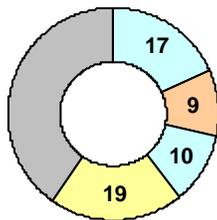


Bridge Number: 109 / 10		Bridge Name: HUMPTULIPS R		Milepost: 10.24	Region: Olympic
Year Built 1956	Bridge Type: ST CTB	Steel Span Length: 234 ft.	Width (curb-curb): 26 ft.	Steel Tonnage: 226	
Paint Age: 19	Paint Color: Evergreen	Steel Surf. Area: 33,900 sqft	BMS Cond State 2: 8,500 sqft	BMS Cond State 3: 7,800 sqft	
Next Paint Year: 2015	2011-13 Rank: 25	Past Due / Due / OK Past Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$1,582,000

## Past Paint History

Years	Cycle
1991	10
1981	9
1972	17
1955	

## Painting Cycle



■ = Current Paint Age



## Bridge Inspector's Notes:

Paint is chalky throughout with scattered rust blooms especially on the upper areas of the truss. Many areas of peeling paint and rusty rivet heads on the bottom chord of the truss with areas of exposed metal. Top flanges of upper cross bracing have areas of peeling paint and exposed metal.

Scattered small areas of peeling paint in a few places on lower 10 feet of vertical and diagonal members.

Floorbeams have areas of paint missing on both top and bottom flanges exposing metal which is rusting.

## Next Paint Project:

Pressure wash bridge with 5,000psi

Assume about 20% of the bridge will need rust to be spot blasted

Prime blasted areas then Overcoat with two new paint layers

# Steel Bridge Paint Form

2011-13 Biennium Priorities

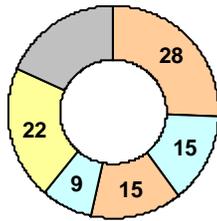


Bridge Number: 165 / 10		Bridge Name: CARBON R		Milepost: 11.50	Region: Olympic
Year Built 1921	Bridge Type: SA TTT		Steel Span Length: 240 ft.	Width (curb-curb): 17.4 ft.	Steel Tonnage: 179
Paint Age: 22	Paint Color: Evergreen	34097	Steel Surf. Area: 26,850 sqft	BMS Cond State 2: 1,000 sqft	BMS Cond State 3: 270 sqft
Next Paint Year: 2021	2011-13 Rank: 71	Past Due / Due / OK Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$671,250

## Past Paint History

Years	Cycle
1988	9
1979	15
1964	15
1949	28
1921	

### Painting Cycle



■ = Current Paint Age



**No Photo Available**

**No Photo Available**

The timber bridge deck was replaced in 1995 as part of contract 14575.

A fire started on the north timber approaches in March of 1998. The fire damaged the paint on a portion of the north tower and arch.

The inspection report indicates:

The steel arches and compression struts have areas of thin paint with moss growth and rust blooms on rivets and between plates. The paint on the stringers and floor beams is generally in good condition with a few rust blooms.

# Steel Bridge Paint Form

2011-13 Biennium Priorities

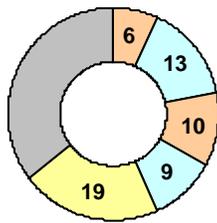


Bridge Number: 305 / 10		Bridge Name: AGATE PASS		Milepost: 6.82	Region: Olympic
Year Built 1950	Bridge Type: ST CTB	Steel Span Length: 1020 ft.	Width (curb-curb): 26 ft.	Steel Tonnage: 1,583	
Paint Age: 19	Paint Color: Evergreen	Steel Surf. Area: 237,450 sqft	BMS Cond State 2: 71,000 sqft	BMS Cond State 3: 23,000 sqft	
Next Paint Year: 2019	2011-13 Rank: 53	Past Due / Due / OK Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$10,289,500

## Past Paint History

Years	Cycle
1991	9
1982	10
1972	13
1959	6
1953	

## Painting Cycle



■ = Current Paint Age



### Bridge Inspector's notes:

Floorbeams in general have thin chalky paint and essentially no topcoat. Many stringers have thin and flaking paint on flanges. Welded steel girders in Span 13 have small areas of flaking and thin paint as well as holidays. Piers 16 and 17 steel columns have peeling rough paint on struts and cross bracing. Paint is generally in deteriorating condition due to age, weather and poor surface preparation.

### Next Paint Project:

Pressure wash bridge with 5,000psi  
 Assume about 10% of the bridge will need rust to be spot blasted  
 Prime blasted areas then Overcoat with two new paint layers

# Steel Bridge Paint Form

2011-13 Biennium Priorities

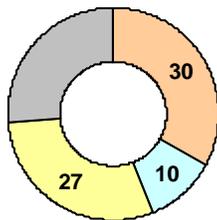


Bridge Number: 507 / 114		Bridge Name: DESCHUTES R		Milepost: 20.43	Region: Olympic
Year Built 1943	Bridge Type: SB		Steel Span Length: 202 ft.	Width (curb-curb): 26.4 ft.	Steel Tonnage: 150
Paint Age: 27	Paint Color: Evergreen	34097	Steel Surf. Area: 16,500 sqft	BMS Cond State 2: 500 sqft	BMS Cond State 3: 200 sqft
Next Paint Year: 2021	2011-13 Rank: 64	Past Due / Due / OK Due	CPMS Ad date:	Paint Pin Number:	Future Paint Cost: \$412,500

## Past Paint History

Years	Cycle
1983	10
1973	30
1943	

## Painting Cycle



■ = Current Paint Age



**No Photo Available**

This bridge is a riveted steel girder with a wood deck.

The inspection report notes that the top flange of steel stringers have laminar and seam rust up to 1/8". Stringers are mud stained, with rust stains and peeling paint on webs and bottom flanges.

The paint looks in relatively good condition. There is some rusting along the edges of the top and bottom flange.

## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Priority Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
1	5/445E	SR7&CW RR OC (CMSTP&P)	133.71	Olympic		\$2,000,000
3	8/104S	SR 101 OC MUD BAY	20.63	Olympic		\$626,500
4	8/104N	SR 101 OC MUD BAY	20.63	Olympic		\$626,500
5	20/15	SNC RR OC (CMSTPP)	9.16	Olympic	\$84,000	\$386,000
8	12/114	BN RR OC (NP)	44.92	Olympic	\$102,000	\$443,000
9	107/4	CHEHALIS R	6.83	Olympic	\$134,000	\$435,000
11	101/427	US 101 OC, LOST LK RD	348.08	Olympic	\$69,000	\$286,000
13	5/433	S-N RAMP OC	132.26	Olympic	\$503,000	\$891,238
14	5/437	S M ST OC	132.84	Olympic	\$379,000	\$668,547
15	5/445W	SR7&CW RR OC (CMSTP&P)	133.71	Olympic	\$1,518,000	\$2,696,582
16	5/455	EAST T ST SEWER OC	135.17	Olympic	\$526,000	\$933,045
48	5/332	PACIFIC AVE OC	107.45	Olympic	\$233,261	\$419,869
66	5/463	I-5 OC, PORTER WAY	139.06	Olympic	\$184,000	\$329,779
120	5/418	I-5 OC, BRIDGEPORT WAY	125.86	Olympic	\$728,794	\$1,311,829
121	5/411W	FT LEWIS RD OC	120.87	Olympic	\$472,098	\$849,776
122	5/411SCD	SBCD FT LEWIS RD OC	120.87	Olympic	\$311,592	\$560,865
123	5/411NCD	NBCD FT LEWIS RD OC	120.87	Olympic	\$247,440	\$445,391
124	5/411E	FT LEWIS RD OC	120.87	Olympic	\$331,881	\$597,386
125	5/406	I-5 OC, OLD NISQUALLY RD	116.70	Olympic	\$45,733	\$82,319
126	5/345W	NISQUALLY R	114.86	Olympic	\$387,998	\$698,396
127	5/342W	MCALLISTER CR	114.09	Olympic	\$231,875	\$417,374
128	5/342E	MCALLISTER CR	114.09	Olympic	\$232,304	\$418,146
129	5/341	I-5 OC, MERIDIAN RD	113.08	Olympic	\$139,953	\$251,915
130	5/339	I-5 OC, CARPENTER RD	110.40	Olympic	\$148,319	\$266,973
131	5/337W	MARTIN WAY OC	109.14	Olympic	\$364,012	\$655,222
132	5/337E	MARTIN WAY OC	109.14	Olympic	\$253,578	\$456,440
134	5/325S-W	HENDERSON BLVD,UPRR OC	105.46	Olympic	\$240,603	\$433,085
135	5/325A	N-14TH RAMP,OWR&N RR OC	105.45	Olympic	\$485,942	\$874,695
136	5/321	CAPITOL LAKE	104.52	Olympic	\$1,505,059	\$2,709,105
137	5/309	I-5 OC, 113TH AVE SW	97.22	Olympic	\$111,326	\$200,386
138	5/304	I-5 OC, 183RD AVE SW	89.84	Olympic	\$436,942	\$786,496
154	410/31	WHITE R (STUCK R)	8.99	Olympic	\$712,547	\$1,282,585
157	16/12E	CEDAR ST OC	0.62	Olympic		
158	16/12W	CEDAR ST OC	0.62	Olympic		
163	16/20W	SNAKE LAKE BR	1.57	Olympic	\$163,000	\$292,377
170	16/20E	SNAKE LAKE BR	1.57	Olympic	\$243,000	\$436,550
171	7/122	SR 512 OC	52.54	Olympic	\$147,274	\$265,092
172	16/15W	UNION AVE OC	1.15	Olympic		
173	16/15E	UNION AVE OC	1.15	Olympic		



## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Priority Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
184	512/21N	WOODLAND AVE OC	6.84	Olympic	\$216,579	\$389,842
185	512/21S	WOODLAND AVE OC	6.84	Olympic	\$216,832	\$390,298
186	512/23N	FRUITLAND AVE OC	7.22	Olympic	\$213,593	\$384,467
187	512/23S	FRUITLAND AVE OC	7.22	Olympic	\$190,108	\$342,194
188	512/15N	WALLER RD OC	4.35	Olympic	\$120,918	\$217,652
189	512/15S	WALLER RD OC	4.35	Olympic	\$120,918	\$217,652
190	512/29S	15TH AVE SW OC	9.84	Olympic	\$168,597	\$303,475
191	512/31N	MERIDIAN ST OC	10.06	Olympic	\$148,676	\$267,617
192	512/31S	MERIDIAN ST OC	10.06	Olympic	\$163,636	\$294,545
194	303/12	PORT WASHINGTON CS1840	0.73	Olympic	\$3,257,122	\$5,862,820
195	167/34E	WEST VALLEY HWY OC	7.56	Olympic	\$313,291	\$563,924
196	512/29N	15TH AVE SW OC	9.84	Olympic	\$245,355	\$441,639
197	512/19	SR 512 OC, CANYON RD	5.86	Olympic	\$288,365	\$519,057
198	16/130E	ROSEDALE RD OC	12.76	Olympic	\$407,006	\$732,610
199	16/130W	ROSEDALE RD OC	12.77	Olympic	\$216,409	\$389,535
201	161/10	SR 161 OVER SR 512	25.67	Olympic	\$159,231	\$286,615
202	99/400	I-5 OC	0.00	Olympic	\$366,212	\$659,182
204	167/30E	W-S RAMP OC	7.05	Olympic	\$150,695	\$271,250
205	167/32E	VALLEY AVE & UPRR O'XING	7.22	Olympic	\$1,374,142	\$2,473,456
210	3/123E	ERLAND POINT RD OC	40.44	Olympic	\$108,301	\$194,941
211	3/123W	ERLAND POINT RD OC	40.44	Olympic	\$99,292	\$178,725
212	410/39N	166TH AVE E OC	11.46	Olympic	\$97,114	\$174,804
213	3/124E	CHICO I/C OC	41.09	Olympic	\$108,603	\$195,485
214	3/124W	CHICO I/C OC	41.09	Olympic	\$121,077	\$217,939
215	101/350	MORSE CR	252.16	Olympic	\$149,127	\$268,429
217	7/130	SR 7 OC, 38TH ST	57.45	Olympic	\$717,503	\$1,291,505
218	16/120	SR 16 OC, OLYMPIC I/C	10.74	Olympic	\$75,708	\$136,274
225	512/40N	SR 167 OC	11.99	Olympic	\$185,620	\$334,115
226	3/130W	ANDERSON HILL RD OC	44.70	Olympic	\$118,349	\$213,028
227	305/10	AGATE PASS	6.82	Olympic	\$385,457	\$693,822
231	3/128E	NEWBERRY HILL RD OC	43.48	Olympic	\$82,819	\$149,074
232	3/128W	NEWBERRY HILL RD OC	43.48	Olympic	\$98,720	\$177,695
235	12/25	WYNOOCHEE R	8.33	Olympic	\$85,800	\$154,440
236	162/2	SR 410 OC	0.01	Olympic	\$123,761	\$222,770
238	410/32	SR 410 OC, LINDEN DR	9.32	Olympic	\$88,391	\$159,103
241	101/428	MILL CREEK	348.44	Olympic	\$96,899	\$174,418
255	512/13	SR 512 OC, PORTLAND AVE	3.71	Olympic	\$44,715	\$80,487
259	101/425	GOLDSBOROUGH CR & RR O	346.51	Olympic	\$475,585	\$856,053
260	101/426	MATLOCK RD OC	346.79	Olympic	\$140,822	\$253,480



## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Priority Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
262	101/430E	SKOOKUM CR NP RY OC	353.81	Olympic	\$303,815	\$546,866
263	101/430W	SKOOKUM CR NP RY OC	353.81	Olympic	\$303,573	\$546,431
264	510/9	BN RR OC (NP)	6.48	Olympic	\$34,056	\$61,301
265	510/10	BN RR OC (NP)	6.63	Olympic	\$61,276	\$110,296
269	12/59N	BN RR OC (NP)	20.59	Olympic	\$167,387	\$301,297
270	12/59S	BN RR OC (NP)	20.59	Olympic	\$157,229	\$283,011
271	121/15	I-5 OC, SR 121	7.63	Olympic	\$134,431	\$241,976
275	3/15	SHERWOOD CR	20.36	Olympic	\$269,500	\$485,100
276	12/31N	SYLVIA CR NP RY OC	9.65	Olympic	\$629,008	\$1,132,214
277	12/31S	SYLVIA CR NP RY OC	9.65	Olympic	\$638,066	\$1,148,519
281	8/7N	CLOQUALLAM CR	1.10	Olympic	\$97,339	\$175,210
282	8/7S	CLOQUALLAM CR	1.10	Olympic	\$97,009	\$174,616
285	512/25	9TH ST SW OVER SR 512	8.37	Olympic	\$158,147	\$284,665
286	7/113	S. FORK MUCK CR	36.92	Olympic	\$182,441	\$328,393
287	12/60N	US 12 OC	21.34	Olympic	\$142,824	\$257,083
288	12/60S	US 12 OC	21.34	Olympic	\$142,780	\$257,004
289	12/34N	SR 107 OC CMSTPP RR	10.24	Olympic	\$1,150,853	\$2,071,535
290	12/34S	SR 107 OC CMSTPP RR	10.24	Olympic	\$1,164,515	\$2,096,127
291	105/108	JOHNS R	37.23	Olympic	\$473,209	\$851,776
292	105/104	SOUTH BAY - ELK RIVER	32.07	Olympic	\$579,744	\$1,043,539
297	166/24	SR 166 OC	4.04	Olympic	\$342,513	\$616,523
298	507/116	WEYERHAEUSER RR OC	21.18	Olympic	\$80,322	\$144,580
300	101/310	SOL DUC R	194.30	Olympic	\$63,800	\$114,840
301	101/312	LAKE CR	198.49	Olympic	\$148,748	\$267,746
303	101/314	SOL DUC RIVER #2	203.15	Olympic	\$246,554	\$443,797
304	101/316	SOL DUC RIVER	203.66	Olympic	\$63,800	\$114,840
305	512/33	SR 512 UC 7TH	10.86	Olympic	\$245,636	\$442,144
306	104/1	S-E RAMP, US 101 OC	0.02	Olympic	\$246,367	\$443,461
308	101/266	DUCKABUSH R	310.22	Olympic	\$63,800	\$114,840
310	16/8	SR 16 OC, S25TH ST	0.40	Olympic		
311	507/102	SKOOKUMCHUCK RIVER BR	6.10	Olympic	\$53,570	\$96,426
312	101/138	W FK HOQUIAM R	96.69	Olympic	\$144,639	\$260,350
313	101/147	BIG CREEK	102.61	Olympic	\$238,524	\$429,343
314	101/320	SOL DUC R	211.55	Olympic	\$346,935	\$624,482
315	101/322	SOL DUC RIVER #5	212.46	Olympic	\$263,010	\$473,418
316	101/149	HUMPTULIPS OVERFLOW	108.84	Olympic	\$435,639	\$784,149
317	101/150	HUMPTULIPS R	109.00	Olympic	\$483,681	\$870,626
318	116/5	PORTAGE CANAL	2.67	Olympic	\$770,484	\$1,386,871
319	112/20	CLALLAM R	19.00	Olympic	\$120,291	\$216,523



## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Priority Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
321	117/1	US 101 OC, SR 117	0.00	Olympic	\$144,579	\$260,241
322	7/105	MASHEL R	27.91	Olympic	\$36,300	\$65,340
323	512/38	SR 512 OC, BENSTON DR	11.59	Olympic	\$117,898	\$212,216
359	512/1	I-5 OC	0.00	Olympic	\$219,000	\$393,258
Total Number of Bridges = 121				Total\$ =	\$35,178,150	\$67,341,845

## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Bridge Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
275	3/15	SHERWOOD CR	20.36	Olympic	\$269,500	\$485,100
210	3/123E	ERLAND POINT RD OC	40.44	Olympic	\$108,301	\$194,941
211	3/123W	ERLAND POINT RD OC	40.44	Olympic	\$99,292	\$178,725
213	3/124E	CHICO I/C OC	41.09	Olympic	\$108,603	\$195,485
214	3/124W	CHICO I/C OC	41.09	Olympic	\$121,077	\$217,939
231	3/128E	NEWBERRY HILL RD OC	43.48	Olympic	\$82,819	\$149,074
232	3/128W	NEWBERRY HILL RD OC	43.48	Olympic	\$98,720	\$177,695
226	3/130W	ANDERSON HILL RD OC	44.70	Olympic	\$118,349	\$213,028
138	5/304	I-5 OC, 183RD AVE SW	89.84	Olympic	\$436,942	\$786,496
137	5/309	I-5 OC, 113TH AVE SW	97.22	Olympic	\$111,326	\$200,386
136	5/321	CAPITOL LAKE	104.52	Olympic	\$1,505,059	\$2,709,105
135	5/325A	N-14TH RAMP,OWR&N RR OC	105.45	Olympic	\$485,942	\$874,695
134	5/325S-W	HENDERSON BLVD,UPRR OC	105.46	Olympic	\$240,603	\$433,085
48	5/332	PACIFIC AVE OC	107.45	Olympic	\$233,261	\$419,869
132	5/337E	MARTIN WAY OC	109.14	Olympic	\$253,578	\$456,440
131	5/337W	MARTIN WAY OC	109.14	Olympic	\$364,012	\$655,222
130	5/339	I-5 OC, CARPENTER RD	110.40	Olympic	\$148,319	\$266,973
129	5/341	I-5 OC, MERIDIAN RD	113.08	Olympic	\$139,953	\$251,915
128	5/342E	MCALLISTER CR	114.09	Olympic	\$232,304	\$418,146
127	5/342W	MCALLISTER CR	114.09	Olympic	\$231,875	\$417,374
126	5/345W	NISQUALLY R	114.86	Olympic	\$387,998	\$698,396
125	5/406	I-5 OC, OLD NISQUALLY RD	116.70	Olympic	\$45,733	\$82,319
124	5/411E	FT LEWIS RD OC	120.87	Olympic	\$331,881	\$597,386
123	5/411NCD	NBCD FT LEWIS RD OC	120.87	Olympic	\$247,440	\$445,391
122	5/411SCD	SBCD FT LEWIS RD OC	120.87	Olympic	\$311,592	\$560,865
121	5/411W	FT LEWIS RD OC	120.87	Olympic	\$472,098	\$849,776
120	5/418	I-5 OC, BRIDGEPORT WAY	125.86	Olympic	\$728,794	\$1,311,829
13	5/433	S-N RAMP OC	132.26	Olympic	\$503,000	\$891,238
14	5/437	S M ST OC	132.84	Olympic	\$379,000	\$668,547
1	5/445E	SR7&CW RR OC (CMSTP&P)	133.71	Olympic		\$2,000,000
15	5/445W	SR7&CW RR OC (CMSTP&P)	133.71	Olympic	\$1,518,000	\$2,696,582
16	5/455	EAST T ST SEWER OC	135.17	Olympic	\$526,000	\$933,045
66	5/463	I-5 OC, PORTER WAY	139.06	Olympic	\$184,000	\$329,779
322	7/105	MASHEL R	27.91	Olympic	\$36,300	\$65,340
286	7/113	S. FORK MUCK CR	36.92	Olympic	\$182,441	\$328,393
171	7/122	SR 512 OC	52.54	Olympic	\$147,274	\$265,092
217	7/130	SR 7 OC, 38TH ST	57.45	Olympic	\$717,503	\$1,291,505
281	8/7N	CLOQUALLAM CR	1.10	Olympic	\$97,339	\$175,210
282	8/7S	CLOQUALLAM CR	1.10	Olympic	\$97,009	\$174,616
4	8/104N	SR 101 OC MUD BAY	20.63	Olympic		\$626,500



## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Bridge Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
3	8/104S	SR 101 OC MUD BAY	20.63	Olympic		\$626,500
235	12/25	WYNOOCHEE R	8.33	Olympic	\$85,800	\$154,440
276	12/31N	SYLVIA CR NP RY OC	9.65	Olympic	\$629,008	\$1,132,214
277	12/31S	SYLVIA CR NP RY OC	9.65	Olympic	\$638,066	\$1,148,519
289	12/34N	SR 107 OC CMSTPP RR	10.24	Olympic	\$1,150,853	\$2,071,535
290	12/34S	SR 107 OC CMSTPP RR	10.24	Olympic	\$1,164,515	\$2,096,127
269	12/59N	BN RR OC (NP)	20.59	Olympic	\$167,387	\$301,297
270	12/59S	BN RR OC (NP)	20.59	Olympic	\$157,229	\$283,011
287	12/60N	US 12 OC	21.34	Olympic	\$142,824	\$257,083
288	12/60S	US 12 OC	21.34	Olympic	\$142,780	\$257,004
8	12/114	BN RR OC (NP)	44.92	Olympic	\$102,000	\$443,000
310	16/8	SR 16 OC, S25TH ST	0.40	Olympic		
157	16/12E	CEDAR ST OC	0.62	Olympic		
158	16/12W	CEDAR ST OC	0.62	Olympic		
173	16/15E	UNION AVE OC	1.15	Olympic		
172	16/15W	UNION AVE OC	1.15	Olympic		
170	16/20E	SNAKE LAKE BR	1.57	Olympic	\$243,000	\$436,550
163	16/20W	SNAKE LAKE BR	1.57	Olympic	\$163,000	\$292,377
218	16/120	SR 16 OC, OLYMPIC I/C	10.74	Olympic	\$75,708	\$136,274
198	16/130E	ROSEDALE RD OC	12.76	Olympic	\$407,006	\$732,610
199	16/130W	ROSEDALE RD OC	12.77	Olympic	\$216,409	\$389,535
5	20/15	SNC RR OC (CMSTPP)	9.16	Olympic	\$84,000	\$386,000
202	99/400	I-5 OC	0.00	Olympic	\$366,212	\$659,182
312	101/138	W FK HOQUIAM R	96.69	Olympic	\$144,639	\$260,350
313	101/147	BIG CREEK	102.61	Olympic	\$238,524	\$429,343
316	101/149	HUMPTULIPS OVERFLOW	108.84	Olympic	\$435,639	\$784,149
317	101/150	HUMPTULIPS R	109.00	Olympic	\$483,681	\$870,626
308	101/266	DUCKABUSH R	310.22	Olympic	\$63,800	\$114,840
300	101/310	SOL DUC R	194.30	Olympic	\$63,800	\$114,840
301	101/312	LAKE CR	198.49	Olympic	\$148,748	\$267,746
303	101/314	SOL DUC RIVER #2	203.15	Olympic	\$246,554	\$443,797
304	101/316	SOL DUC RIVER	203.66	Olympic	\$63,800	\$114,840
314	101/320	SOL DUC R	211.55	Olympic	\$346,935	\$624,482
315	101/322	SOL DUC RIVER #5	212.46	Olympic	\$263,010	\$473,418
215	101/350	MORSE CR	252.16	Olympic	\$149,127	\$268,429
259	101/425	GOLDSBOROUGH CR & RR O	346.51	Olympic	\$475,585	\$856,053
260	101/426	MATLOCK RD OC	346.79	Olympic	\$140,822	\$253,480
11	101/427	US 101 OC, LOST LK RD	348.08	Olympic	\$69,000	\$286,000
241	101/428	MILL CREEK	348.44	Olympic	\$96,899	\$174,418
262	101/430E	SKOOKUM CR NP RY OC	353.81	Olympic	\$303,815	\$546,866



## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Bridge Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
263	101/430W	SKOOKUM CR NP RY OC	353.81	Olympic	\$303,573	\$546,431
306	104/1	S-E RAMP, US 101 OC	0.02	Olympic	\$246,367	\$443,461
292	105/104	SOUTH BAY - ELK RIVER	32.07	Olympic	\$579,744	\$1,043,539
291	105/108	JOHNS R	37.23	Olympic	\$473,209	\$851,776
9	107/4	CHEHALIS R	6.83	Olympic	\$134,000	\$435,000
319	112/20	CLALLAM R	19.00	Olympic	\$120,291	\$216,523
318	116/5	PORTAGE CANAL	2.67	Olympic	\$770,484	\$1,386,871
321	117/1	US 101 OC, SR 117	0.00	Olympic	\$144,579	\$260,241
271	121/15	I-5 OC, SR 121	7.63	Olympic	\$134,431	\$241,976
201	161/10	SR 161 OVER SR 512	25.67	Olympic	\$159,231	\$286,615
236	162/2	SR 410 OC	0.01	Olympic	\$123,761	\$222,770
297	166/24	SR 166 OC	4.04	Olympic	\$342,513	\$616,523
204	167/30E	W-S RAMP OC	7.05	Olympic	\$150,695	\$271,250
205	167/32E	VALLEY AVE & UPRR O'XING	7.22	Olympic	\$1,374,142	\$2,473,456
195	167/34E	WEST VALLEY HWY OC	7.56	Olympic	\$313,291	\$563,924
194	303/12	PORT WASHINGTON CS1840	0.73	Olympic	\$3,257,122	\$5,862,820
227	305/10	AGATE PASS	6.82	Olympic	\$385,457	\$693,822
154	410/31	WHITE R (STUCK R)	8.99	Olympic	\$712,547	\$1,282,585
238	410/32	SR 410 OC, LINDEN DR	9.32	Olympic	\$88,391	\$159,103
212	410/39N	166TH AVE E OC	11.46	Olympic	\$97,114	\$174,804
311	507/102	SKOOKUMCHUCK RIVER BR	6.10	Olympic	\$53,570	\$96,426
298	507/116	WEYERHAEUSER RR OC	21.18	Olympic	\$80,322	\$144,580
264	510/9	BN RR OC (NP)	6.48	Olympic	\$34,056	\$61,301
265	510/10	BN RR OC (NP)	6.63	Olympic	\$61,276	\$110,296
359	512/1	I-5 OC	0.00	Olympic	\$219,000	\$393,258
255	512/13	SR 512 OC, PORTLAND AVE	3.71	Olympic	\$44,715	\$80,487
188	512/15N	WALLER RD OC	4.35	Olympic	\$120,918	\$217,652
189	512/15S	WALLER RD OC	4.35	Olympic	\$120,918	\$217,652
197	512/19	SR 512 OC, CANYON RD	5.86	Olympic	\$288,365	\$519,057
184	512/21N	WOODLAND AVE OC	6.84	Olympic	\$216,579	\$389,842
185	512/21S	WOODLAND AVE OC	6.84	Olympic	\$216,832	\$390,298
186	512/23N	FRUITLAND AVE OC	7.22	Olympic	\$213,593	\$384,467
187	512/23S	FRUITLAND AVE OC	7.22	Olympic	\$190,108	\$342,194
285	512/25	9TH ST SW OVER SR 512	8.37	Olympic	\$158,147	\$284,665
196	512/29N	15TH AVE SW OC	9.84	Olympic	\$245,355	\$441,639
190	512/29S	15TH AVE SW OC	9.84	Olympic	\$168,597	\$303,475
191	512/31N	MERIDIAN ST OC	10.06	Olympic	\$148,676	\$267,617
192	512/31S	MERIDIAN ST OC	10.06	Olympic	\$163,636	\$294,545
305	512/33	SR 512 UC 7TH	10.86	Olympic	\$245,636	\$442,144
323	512/38	SR 512 OC, BENSTON DR	11.59	Olympic	\$117,898	\$212,216



## P2 Bridge Preservation - Seismic Retrofit

### 2011-13 Bien Priority Array

(Sorted by Bridge Number)

11-13 #	Bridge Number	Bridge Name	Mile post	Region	Bridge Item\$'s	Total\$'s
225	512/40N	SR 167 OC	11.99	Olympic	\$185,620	\$334,115
Total Number of Bridges = 121				Total\$ =	\$35,178,150	\$67,341,845

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0007326A		<b>Bridge Name:</b> SR7&CW RR OC (CMSTP&P)		<b>Route:</b> 5	<b>Milepost:</b> 133.71	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/445E						<b>County:</b> Pierce
<b>Location:</b> 1.5 N JCT SR 16	<b>Detour Length:</b> 1 miles	<b>Longitude:</b> ° ' " 122 25 54	<b>Latitude:</b> ° ' " 47 14 0	<b>Structure Length:</b> 817 ft.		<b>Out to Out Width:</b> 59 ft.
<b>Feature Intersected:</b> SR 7 & CMSTP&P RY		<b>PGA (500 yr):</b> %g	<b>PGA (1000 yr):</b> 40.5% %g	<b>Span Type:</b> CBox		<b>Main Spans:</b> 10 <b>Appr. Spans:</b> 0
<b>Year Built:</b> 1964	<b>ADT:</b> 94120	<b>11-13 Rank:</b> 1	<b>Skew Angle:</b> 0	<b>Pier Type:</b> Single Column Pier	<b>Footing Type:</b> Spread footing	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 15 %					



**Bridge Notes:**

Piers 2-S thru 8-S, each has a 3'-0"x 15'-0" column.

**Retrofit Program Notes:**

Prior to 2008, the future HOV projects through Tacoma was planning on replacing the bridge. The current plan is to leave this bridge in service and rename it 5/445 HOV.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Analyze to determine if retrofit is needed. Possible retrofit would be to add steel Jackets or apply carbon fiber to columns.

<b>Overall Retrofit Status:</b>	P
<b>Single Column Pier Status:</b>	R
<b>Multi Column Pier Status:</b>	N
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005738A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 8/104S		SR 101 OC MUD BAY		8	20.63	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
10.1 E GRAYS HB	1 miles	123 0 42 "	47 4 30 "	186 ft.		33 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 3	
SR 101 MUD BAY		29.98 %g	39.3% %g	CBox	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1958	<b>ADT:</b> 16000	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1981	<b>Truck Pct:</b> 10 %	3	0	Single Column Pier		



**Bridge Notes:**

Piers 2 and 3, each has a 5'-0" diameter column on spread footing. Ties are #4 @ 12". Vertical #11 bars have 2'-4" lap splices at top of footing. Footings have no top mat. End piers, 1 and 4, are cantilever "L" abutments. Each abutment has two rocker bearings.

**Retrofit Program Notes:**

To be completed under PIN 300813A. To go to ad in 2009.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Install Col. Jacket at Piers 2 and 3. Excavate to top of Footings. Install Catcher Blocks & Transv. Restrainers at Piers 1 & 4.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** R  
**Multi Column Pier Status:** N  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005738B		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 8/104N		SR 101 OC MUD BAY		8	20.63	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
10.1 E GRAYS HB	1 miles	123 0 42	47 4 30	186 ft.		33 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 3	
US 101		29.98 %g	39.3% %g	CBox	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1958	<b>ADT:</b> 16000	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1981	<b>Truck Pct:</b> 10 %	4	0	Single Column Pier		



**Bridge Notes:**

Piers 2 and 3, each has a 5'-0" diameter column on spread footing. Ties are #4 @ 12". Vertical #11 bars have 2'-4" lap splices at top of footing. Footings have no top mat. End piers, 1 and 4, are cantilever "L" abutments. Each abutment has two rocker bearings.

**Retrofit Program Notes:**

To be completed under PIN 300813A. To go to ad in 2009.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Install Col. Jacket at Piers 2 and 3. Excavate to top of Footings. Install Catcher Blocks & Transv. Restrainers at Piers 1 & 4.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** R  
**Multi Column Pier Status:** N  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005166A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 20/15		SNC RR OC (CMSTPP)		20	9.16	<b>County:</b> Jefferson
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
9.2 E JCT US 101	2 miles	122 48 58	48 5 25	228 ft.		30 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 4	
CMSTPP RR (ABANDONED)		30.38 %g	40.1% %g	CS	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1956	<b>ADT:</b> 16000	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 10 %	5	0	Single Column Pier		



**Bridge Notes:**

Intermediate Piers, Piers 2, 3 and 4, each has a 4'-0" diameter column on spread footing. #4 hoops spaced at 12" spacing. Vertical #13 bars have 2'-10" lap splices at top of footings. Footings have no top mat. End Piers 1 and 5, each has two 2'-0" square columns on combined spread footing. Hinge at top of column.

**Retrofit Program Notes:**

Engineering analysis needed to determine bridge elements requiring retrofit. Cost estimate based on an assumption to retrofit columns with steel jackets.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Install Column Jacket at Piers 2, 3 and 4 (1 ea. 3 total, 4' dia.). Excavate to top of Footings.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** R  
**Multi Column Pier Status:** N  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0007406A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 12/114		BN RR OC (NP)		12	44.92	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
6.1 E GRAYS HBR	2 miles	123° 2' 12"	46° 48' 6"	261 ft.		32.6 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 5	
NP RY		26.34 %g	34.7% %g	CS	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1964	<b>ADT:</b> 8500	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 14 %	8	0	Single Column Pier		



**Bridge Notes:**

Piers 2 thru 5, each has a 4'-0" diameter column on spread footings. These columns have #4 hoops @ 12". Vertical #11 bars have 4'-2" min. lap splices at top of footing. Footing without top mat. End piers, 1 and 6 are stub "L" abutments with laminated elastomeric bearing pads.

**Retrofit Program Notes:**

Engineering analysis needed to determine bridge elements requiring retrofit. Cost estimate based on an assumption to retrofit columns with steel jackets.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Install Column Jacket at Piers 2, 3, 4 and 5. Excavate to top of Footings.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** R  
**Multi Column Pier Status:** N  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005827A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 107/4		CHEHALIS R		107	6.83	<b>County:</b> Grays Harbor
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
6.9 N JCT US 101	25 miles	123 36 11.2	46 57 34.6	1302 ft.		32.8 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 1	
CHEHALIS R		30.6 %g	41.6% %g	STrus CBox TTC	<b>Appr. Spans:</b> 42	
<b>Year Built:</b> 1958	<b>ADT:</b> 4392	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 16 %	9	0	Single Column Pier		



**Bridge Notes:**

South approach spans are timber trestle spans. Piers 1 and 4, each has two 2'-6"x5'-2" columns. Columns split to two 2'-6" sq. columns at El. 12.50. #3 hoops @ 12". Piers 2 and 3 are pier walls. Piers 5 and 6, each has a 5'-0" diameter column on pile footing. #4 hoops spaced at 12" spacing. Vertical #11 bars have 2'-4" lap splices at top of footings. Footings have no top mat.

**Retrofit Program Notes:**

Retrofit programed under PIN 310710B. Cost estimate based on an assumption to retrofit columns with steel jackets.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Seismic analysis required to determine retrofit scope.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** R  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0009121A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 101/427		US 101 OC, LOST LK RD		101	348.08	<b>County:</b> Mason
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
4.5 S JCT SR 102	13 miles	123° 6' 30"	47° 11' 30"	251 ft.		29 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 2	
US 101		31.09 %g	40.6% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1972	<b>ADT:</b> 949	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 10 %	11	0	Single Column Pier	Spread footing	



**Bridge Notes:**

Pier 2 is a single column pier. Column section varies, 4'-6" x 4'-6" at top of pedestal. 9'-0" x 4'-6" at bottom of X-beam. Vertical #11 bars have 7'-9" lap splices at top of pedestal. #4 hoops & #4 ties @ 6". Footing has top mat. End piers, 1 and 3, are cantilever abutments.

**Retrofit Program Notes:**

Seismic analysis performed by HDR in May 2008.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Install Partial Height Column Jacket at Pier 2. Excavate to top of footing.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** R  
**Multi Column Pier Status:** N  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0006145B		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/433		S-N RAMP OC		5	132.26	<b>County:</b> Pierce
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
4.9 N JCT SR 512	1 miles	122 27 44.83	47 13 46.06	195 ft.		121 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 3	
S-N RAMP ER17		31.05 %g	40.6% %g	CBox	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1960	<b>ADT:</b> 159711	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1973	<b>Truck Pct:</b> 15 %	13	14	Pier with more than two columns	Spread footing	



**Bridge Notes:**

Piers 2 and 3, each has ten 3'-0" diameter columns. Retrofit south 9 column each pier only. These columns have #4 hoops @ 12", #10 bars with 3'-8" splices (for 6 columns built in 1960) and #4 @6", #9 bars with 3'-6" splices (for 3 columns built in 1973) . Footing without top mat.

**Retrofit Program Notes:**

Engineering analysis needed to determine bridge elements requiring retrofit. Cost estimate based on an assumption to retrofit columns with steel jackets.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Retrofit columns at Piers 2 and 3. (9 ea. 18 total, 3' dia.)

<b>Overall Retrofit Status:</b>	R
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0006088B		<b>Bridge Name:</b> S M ST OC		<b>Route:</b> 5	<b>Milepost:</b> 132.84	<b>Region:</b> Olympic <b>County:</b> Pierce
<b>Bridge Number:</b> 5/437		<b>Longitude:</b> 122° 27' 2.07"	<b>Latitude:</b> 47° 13' 49.12"	<b>Structure Length:</b> 232 ft.		<b>Out to Out Width:</b> 160 ft.
<b>Location:</b> 0.5 N JCT SR 16	<b>Detour Length:</b> 1 miles	<b>PGA (500 yr):</b> 31.02 %g	<b>PGA (1000 yr):</b> 40.5% %g	<b>Span Type:</b> CBox	<b>Main Spans:</b> 3 <b>Appr. Spans:</b> 2	
<b>Feature Intersected:</b> S M ST	<b>Year Built:</b> 1959 <b>Year Rebuilt:</b> 1989	<b>ADT:</b> 188241 <b>Truck Pct:</b> 15 %	<b>11-13 Rank:</b> 14	<b>Skew Angle:</b> 5	<b>Pier Type:</b> Pier with more than two columns	<b>Footing Type:</b> Spread footing
						
<b>Bridge Notes:</b> Piers 2 and 3, each has nine 3'-0" diameter columns. Retrofit south 8 column each pier only. These columns have #4 hoops @ 12", #11 bars with 4'-2" splices . Footing without top mat.				<b>Retrofit Program Notes:</b> Engineering analysis needed to determine bridge elements requiring retrofit. Cost estimate based on an assumption to retrofit columns with steel jackets.		
<b>Completed Retrofit Notes:</b>				<b>Remaining Retrofit Notes:</b> Retrofit columns at Piers 2 and 3. (8 ea. 16 total, 3' dia.)		
<b>Overall Retrofit Status:</b> R		<b>Single Column Pier Status:</b> N		<b>Multi Column Pier Status:</b> R		<b>Estimated Total Bridge Item Cost:</b>  <b>Estimated Total Retrofit Project Cost:</b>
C=Complete P=Partially Complet						
R=Required N=Not Required						
D=Differed X=Excluded I=In Progress						

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0007326B		<b>Bridge Name:</b> SR7&CW RR OC (CMSTP&P)		<b>Route:</b> 5	<b>Milepost:</b> 133.71	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/445W						<b>County:</b> Pierce
<b>Location:</b> 1.5 N JCT SR 16	<b>Detour Length:</b> 1 miles	<b>Longitude:</b> 122° 25' 54"	<b>Latitude:</b> 47° 14' 0"	<b>Structure Length:</b> 817 ft.		<b>Out to Out Width:</b> 58.5 ft.
<b>Feature Intersected:</b> SR 7 & CMSTP&P RY		<b>PGA (500 yr):</b> 30.98 %g	<b>PGA (1000 yr):</b> 40.5% %g	<b>Span Type:</b> CBox	<b>Main Spans:</b> 10 <b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1964	<b>ADT:</b> 94120	<b>11-13 Rank:</b> 15	<b>Skew Angle:</b> 0	<b>Pier Type:</b> Double Column Pier	<b>Footing Type:</b> Spread footing	
<b>Year Rebuilt:</b> 1989	<b>Truck Pct:</b> 15 %					



**Bridge Notes:**

Defer retrofit. Piers 2-N thru 8-N , each has a 3'-0"x 15'-0" column (built in 1964) and a 4'-0" diameter column (built in 1989).

**Retrofit Program Notes:**

Engineering analysis needed to determine bridge elements requiring retrofit. Cost estimate based on an assumption to retrofit columns with steel jackets.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Retrofit columns at Piers 2 thru 8. (1 ea. 7 total, 15'-0" x 3'-0")

<b>Overall Retrofit Status:</b>	P
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0006979B		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/455		EAST T ST SEWER OC		5	135.17	<b>County:</b> Pierce
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
0.2 N JCT SR 167	1 miles	122 24 17.2	47 14 21.9	150 ft.		124.5 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 3	
EAST T ST SEWER		30.94 %g	40.5% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1963	<b>ADT:</b> 199429	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1970	<b>Truck Pct:</b> 15 %	16	99	Pier with more than two columns	Cased concrete pile	



**Bridge Notes:**

Piers 2 and 3, each has ten 3'-0" diameter columns. #3 hoops @ 12" or #4 @ 12". longitudinal bars with lap splices. Footing without top mat.

**Retrofit Program Notes:**

Engineering analysis needed to determine bridge elements requiring retrofit. Cost estimate based on an assumption to retrofit columns with steel jackets.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Retrofit columns at Piers 2 and 3. (10 ea. 18 total, 3' dia.)

<b>Overall Retrofit Status:</b>	R
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005455A		<b>Bridge Name:</b> PACIFIC AVE OC		<b>Route:</b> 5	<b>Milepost:</b> 107.45	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/332						<b>County:</b> Thurston
<b>Location:</b> 3.2 N JCT US 101	<b>Detour Length:</b> 0 miles	<b>Longitude:</b> 122° 51' 6.7"	<b>Latitude:</b> 47° 2' 28.1"	<b>Structure Length:</b> 351 ft.		<b>Out to Out Width:</b> 138 ft.
<b>Feature Intersected:</b> PACIFIC AVE		<b>PGA (500 yr):</b> 29.75 %g	<b>PGA (1000 yr):</b> 39.1% %g	<b>Span Type:</b> CBox PTCBox		<b>Main Spans:</b> 3 <b>Appr. Spans:</b> 0
<b>Year Built:</b> 1957	<b>ADT:</b> 121768	<b>11-13 Rank:</b> 48	<b>Skew Angle:</b> 0	<b>Pier Type:</b> Pier with more than two columns		<b>Footing Type:</b> Concrete Pile
<b>Year Rebuilt:</b> 1987	<b>Truck Pct:</b> 10 %					



**Bridge Notes:**

Piers 2 and 3, each has four 6'-0" diameter columns. Retrofit two center columns per pier (built in 1957) only. These columns have #4 hoops @12", longitudinal #14 bars have splices at top of pedestal. Splice lengths are 2'-10". Footings have no top mat. Longitudinal expansion joints between bridges built in 1957 and widening portion built in 1987.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

<b>Overall Retrofit Status:</b>	R
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0006443A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/463		I-5 OC, PORTER WAY		5	139.06	<b>County:</b> Pierce
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
1.6 N JCT SR 99	2 miles	122° 20' 0"	47° 15' 4.4"	615 ft.		34 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 13	
I-5 - HYLEBOS CR		30.73 %g	40.2% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1960	<b>ADT:</b> 890	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 1 %	66	12	Pier with more than two columns	Concrete Pile	



**Bridge Notes:**

Piers 2, 3 and 4, each has three 3'-0" diameter columns. #3 hoops @ 12". #10 bars with 3'-8" splices. Footing without top mat. Piers 5 thru 13 are 13" diameter concrete pile bents (5 spaces @ 5'-6 1/4" normal). Max. span length= 39'-9". No retrofit recommended for pile bents. Pier 9 has double bents. Expansion joints at piers 4 and 9.

**Retrofit Program Notes:**

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Retrofit columns at Piers 2, 3 and 4. (3 ea. 9 total, 3' dia.)

**Overall Retrofit Status:** P  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005582A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/418		I-5 OC, BRIDGEPORT WAY		5	125.86	<b>County:</b> Pierce
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
11.1 N THURSTON	2 miles	122° 30' 12" W	47° 8' 48" N	294 ft.		63 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 4	
I-5		30.51 %g	40.0% %g	CBox	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1958	<b>ADT:</b> 26890	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 2 %	120	39	Pier with more than two columns	Spread footing	



**Bridge Notes:**

Piers 2, 3 and 4, each has four 3'-0" diameter columns. #4 hoops @ 12". #11 bars with 2'-4" splices. Footing without top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

<b>Overall Retrofit Status:</b>	R
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0004495A		<b>Bridge Name:</b> FT LEWIS RD OC		<b>Route:</b> 5	<b>Milepost:</b> 120.87	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/411W						<b>County:</b> Pierce
<b>Location:</b> 6.1 N THURSTON	<b>Detour Length:</b> 1 miles	<b>Longitude:</b> 122 35 19.5	<b>Latitude:</b> 47 6 15.7	<b>Structure Length:</b> 157 ft.		<b>Out to Out Width:</b> 54 ft.
<b>Feature Intersected:</b> FT LEWIS RD		<b>PGA (500 yr):</b> 30.27 %g	<b>PGA (1000 yr):</b> 39.8% %g	<b>Span Type:</b> CTB	<b>Main Spans:</b> 3 <b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1954	<b>ADT:</b> 45830	<b>11-13 Rank:</b> 121	<b>Skew Angle:</b> 0	<b>Pier Type:</b> Pier with more than two columns	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1969	<b>Truck Pct:</b> 15 %					



**Bridge Notes:**

Piers 2 and 3, each has six 25"x30" columns. 4 columns each pier near centerline of roadway (built in 1954) have #3 hoops @ 12", #9 bars with 2'-0" splices. Footings have #6 top mat. 2 columns built in 1969 have #4 ties @ 12", #9 bars with 3'-4" splices.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

<b>Overall Retrofit Status:</b>	R
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0004495B		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/411SCD		SBCD FT LEWIS RD OC		5	120.87	<b>County:</b> Pierce
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
6.1 N THURSTON	0 miles	122° 35' 19.6"	47° 6' 15.6"	157 ft.		36.6 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 3	
SBCD FT LEWIS RD		30.27 %g	39.8% %g	CTB	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1954	<b>ADT:</b> 12417	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 2 %	122	0	Pier with more than two columns		



**Bridge Notes:**

Piers 2 and 3, each has four 25"x30" columns. #3 hoops @ 12", #9 bars with 2'-0" splices. Footings have #6 top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008580B		<b>Bridge Name:</b> NBCD FT LEWIS RD OC		<b>Route:</b> 5	<b>Milepost:</b> 120.87	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/411NCD						<b>County:</b> Pierce
<b>Location:</b> 6.1 N THURSTON	<b>Detour Length:</b> 0 miles	<b>Longitude:</b> 122° 35' 18"	<b>Latitude:</b> 47° 6' 16"	<b>Structure Length:</b> 172 ft.		<b>Out to Out Width:</b> 40.6 ft.
<b>Feature Intersected:</b> NBCD FT LEWIS RD		<b>PGA (500 yr):</b> 30.26 %g	<b>PGA (1000 yr):</b> 39.8% %g	<b>Span Type:</b> PCG	<b>Main Spans:</b> 3 <b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1969	<b>ADT:</b> 12417	<b>11-13 Rank:</b> 123	<b>Skew Angle:</b> 0	<b>Pier Type:</b> Pier with more than two columns	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 2 %					



**Bridge Notes:**

Piers 2 and 3, each has three 30"x30" square columns, #4 hoops @ 12", #9 bars with 3'-4" splices. Footings have no top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008580A		<b>Bridge Name:</b> FT LEWIS RD OC		<b>Route:</b> 5	<b>Milepost:</b> 120.87	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/411E						<b>County:</b> Pierce
<b>Location:</b> 6.1 N THURSTON	<b>Detour Length:</b> 1 miles	<b>Longitude:</b> 122° 35' 18"	<b>Latitude:</b> 47° 6' 17"	<b>Structure Length:</b> 165 ft.		<b>Out to Out Width:</b> 54.6 ft.
<b>Feature Intersected:</b> FT LEWIS RD		<b>PGA (500 yr):</b> 30.27 %g	<b>PGA (1000 yr):</b> 39.8% %g	<b>Span Type:</b> PCG		<b>Main Spans:</b> 3 <b>Appr. Spans:</b> 0
<b>Year Built:</b> 1969	<b>ADT:</b> 45830	<b>11-13 Rank:</b> 124	<b>Skew Angle:</b> 0	<b>Pier Type:</b> Pier with more than two columns		<b>Footing Type:</b> Spread footing
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 15 %					



**Bridge Notes:**

Piers 2 and 3, each has four 30"x30" square columns. #4 hoops @ 12", #9 bars with 3'-4" splices. Footings have no top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008134D		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/406		I-5 OC, OLD NISQUALLY RD		5	116.7	<b>County:</b> Pierce
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
2.0 N THURSTON	6 miles	122° 40' 12.5"	47° 4' 58.1"	138 ft.		40 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 2	
I-5		30.17 %g	39.6% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1967	<b>ADT:</b> 1870	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 2 %	125	0	Double Column Pier	Timber pile	



**Bridge Notes:**

Pier 2 has two 3'-0" diameter columns. #3 hoops @ 12". #9 bars with 3'-4" splices. Footing without top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008116A		<b>Bridge Name:</b> NISQUALLY R		<b>Route:</b> 5	<b>Milepost:</b> 114.86	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/345W						<b>County:</b> Thurston
<b>Location:</b> 0.1 N THURSTON	<b>Detour Length:</b> 1 miles	<b>Longitude:</b> 122° 42' 12" W	<b>Latitude:</b> 47° 4' 18" N	<b>Structure Length:</b> 430 ft.		<b>Out to Out Width:</b> 51.4 ft.
<b>Feature Intersected:</b> NISQUALLY R		<b>PGA (500 yr):</b> 30.1 %g	<b>PGA (1000 yr):</b> 39.5% %g	<b>Span Type:</b> STrus PCG	<b>Main Spans:</b> 1 <b>Appr. Spans:</b> 2	
<b>Year Built:</b> 1967	<b>ADT:</b> 45830	<b>11-13 Rank:</b> 126	<b>Skew Angle:</b> 0	<b>Pier Type:</b> Double Column Pier	<b>Footing Type:</b> Timber pile	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 15 %					



**Bridge Notes:**

Piers 2, and 3, each has two 6'-0" diameter columns. #4 hoops @ 12". Weld splices for longitudinal bars (#11 at pier 2, #14 at pier 3). Footing without top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

<b>Overall Retrofit Status:</b>	P
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008100F		<b>Bridge Name:</b> MCALLISTER CR		<b>Route:</b> 5	<b>Milepost:</b> 114.09	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/342W						<b>County:</b> Thurston
<b>Location:</b> 2.2 N JCT SR 510	<b>Detour Length:</b> 1 miles	<b>Longitude:</b> 122° 43' 12"	<b>Latitude:</b> 47° 4' 6.4"	<b>Structure Length:</b> 272 ft.		<b>Out to Out Width:</b> 51.4 ft.
<b>Feature Intersected:</b> MCALLISTER CR		<b>PGA (500 yr):</b> 28.89 %g	<b>PGA (1000 yr):</b> 39.5% %g	<b>Span Type:</b> PCG	<b>Main Spans:</b> 3 <b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1968	<b>ADT:</b> 60884	<b>11-13 Rank:</b> 127	<b>Skew Angle:</b> 12	<b>Pier Type:</b> Pier with more than two columns	<b>Footing Type:</b> Timber pile	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 10 %					



**Bridge Notes:**

Piers 2 and 3, each has three 3'-0" diameter columns. #3 hoops @ 12". #9 bars with 3'-4" splices. Footing without top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** P  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008100E		<b>Bridge Name:</b> MCALLISTER CR		<b>Route:</b> 5	<b>Milepost:</b> 114.09	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/342E						<b>County:</b> Thurston
<b>Location:</b> 2.2 N JCT SR 510	<b>Detour Length:</b> 1 miles	<b>Longitude:</b> 122° 43' 12.3"	<b>Latitude:</b> 47° 4' 4.5"	<b>Structure Length:</b> 272 ft.		<b>Out to Out Width:</b> 51.4 ft.
<b>Feature Intersected:</b> MCALLISTER CR		<b>PGA (500 yr):</b> 30.06 %g	<b>PGA (1000 yr):</b> 39.5% %g	<b>Span Type:</b> PCG		<b>Main Spans:</b> 3 <b>Appr. Spans:</b> 0
<b>Year Built:</b> 1968	<b>ADT:</b> 60884	<b>11-13 Rank:</b> 128	<b>Skew Angle:</b> 12	<b>Pier Type:</b> Pier with more than two columns		<b>Footing Type:</b> Timber pile
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 10 %					



**Bridge Notes:**

Piers 2 and 3, each has three 3'-0" diameter columns. #3 hoops @ 12". #9 bars with 3'-4" splices. Footing without top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** P  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008100D		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/341		I-5 OC, MERIDIAN RD		5	113.08	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
1.2 N JCT SR 510	5 miles	122° 44' 24" W	47° 4' 0" N	280 ft.		30.6 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 4	
I-5		30.05 %g	39.5% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1968	<b>ADT:</b> 2714	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 1 %	129	12	Double Column Pier		



**Bridge Notes:**

Piers 2, 3 and 4, each has two 3'-0" diameter columns. #3 hoops @ 12". #9 bars with 3'-4" splices. Footing without top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008100C		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/339		I-5 OC, CARPENTER RD		5	110.4	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
6.2 N JCT US 101	3 miles	122° 47' 48"	47° 3' 30"	356 ft.		34 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 4	
I-5		29.97 %g	39.4% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1967	<b>ADT:</b> 6450	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 2 %	130	4	Double Column Pier		
				<h2 style="font-size: 2em; color: black; text-decoration: underline;">No Photo Available</h2>		
<b>Bridge Notes:</b>			<b>Retrofit Program Notes:</b>			
Piers 2, 3 and 4, each has two 3'-0" diameter columns. #3 hoops @ 12". #9 bars with 3'-4" splices. Footing without top mat.			The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.			
<b>Completed Retrofit Notes:</b>			<b>Remaining Retrofit Notes:</b>			
			A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.			
<b>Overall Retrofit Status:</b> P		<h3 style="font-size: 1.2em;">Estimated Total Bridge Item Cost:</h3> <h3 style="font-size: 1.2em;">Estimated Total Retrofit Project Cost:</h3>				
<b>Single Column Pier Status:</b> N						
<b>Multi Column Pier Status:</b> R						
C=Complete P=Partially Complet R=Required N=Not Required D=Differed X=Excluded I=In Progress						

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008100A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/337W		MARTIN WAY OC		5	109.14	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
5.0 N JCT US 101	0 miles	122° 49' 6"	47° 3' 0"	276 ft.		55 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 3	
MARTIN WAY		29.88 %g	39.2% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1967	<b>ADT:</b> 60884	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1988	<b>Truck Pct:</b> 10 %	131	50	Pier with more than two columns		



**Bridge Notes:**

Piers 2 and 3, each has five 3'-0" diameter columns. Retrofit four south columns per pier (built in 1967) only. These columns have #4 hoops @12", longitudinal #11 bars have splices at top of footings. Splice lengths are 4'-2". Footings have no top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

<b>Overall Retrofit Status:</b>	P
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008100B		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/337E		MARTIN WAY OC		5	109.14	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
5.0 N JCT US 101	0 miles	122° 49' 6"	47° 3' 0"	282 ft.		55 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 3	
MARTIN WAY		29.88 %g	39.2% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1967	<b>ADT:</b> 60884	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1988	<b>Truck Pct:</b> 10 %	132	50	Pier with more than two columns		



**Bridge Notes:**

Piers 2 and 3, each has five 3'-0" diameter columns. Retrofit three center columns per pier (built in 1967) only. These columns have #4 hoops @12", longitudinal #11 bars have splices at top of footings. Splice lengths are 4'-2". Footings have no top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

<b>Overall Retrofit Status:</b>	P
<b>Single Column Pier Status:</b>	N
<b>Multi Column Pier Status:</b>	R
C=Complete P=Partially Complet	
R=Required N=Not Required	
D=Differed X=Excluded I=In Progress	

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005295D		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/325S-W		HENDERSON BLVD,UPRR OC		5	105.46	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
1.4 N JCT US 101	2 miles	122° 53' 30"	47° 2' 6"	228 ft.		43 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 4	
HENDERSON BLVD,UPRR OC		29.65 %g	38.9% %g	CTB	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1957	<b>ADT:</b> 3234	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1990	<b>Truck Pct:</b> 5 %	134	0	Double Column Pier	Concrete Pile	



**Bridge Notes:**

Piers 2, 3 and 4, each has two 5'-0" diameter columns. Retrofit south columns (built in 1957) only. These columns have #3 hoops @12", longitudinal #10 bars have splices at top of footing and mid-height. Splice lengths are 2'-2". Footings have no top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005295C		<b>Bridge Name:</b> N-14TH RAMP, OWR&N RR OC		<b>Route:</b> 5	<b>Milepost:</b> 105.45	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/325A						<b>County:</b> Thurston
<b>Location:</b> 1.4 N JCT US 101	<b>Detour Length:</b> 2 miles	<b>Longitude:</b> 122° 53' 30"	<b>Latitude:</b> 47° 2' 6"	<b>Structure Length:</b> 275 ft.		<b>Out to Out Width:</b> 49.2 ft.
<b>Feature Intersected:</b> PLUM ST, UPRR		<b>PGA (500 yr):</b> 29.65 %g	<b>PGA (1000 yr):</b> 38.9% %g	<b>Span Type:</b> CBox	<b>Main Spans:</b> 4 <b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1957	<b>ADT:</b> 8590	<b>11-13 Rank:</b> 135	<b>Skew Angle:</b> 24	<b>Pier Type:</b> Pier with more than two columns	<b>Footing Type:</b> Concrete Pile	
<b>Year Rebuilt:</b> 1986	<b>Truck Pct:</b> 2 %					



**Bridge Notes:**

Piers 2, 3 and 4, each has four 24"x24" square columns, #3 hoops @ 12", #11 longitudinal bars spliced at top of footing and mid-height with 2'-4" splices. Footings have no top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0005090A		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/321		CAPITOL LAKE		5	104.52	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
0.5 N JCT US 101	8 miles	122° 54' 6"	47° 1' 24"	392 ft.		210 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 4	
CAPITOL LAKE		29.51 %g	38.7% %g	CBox	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1956	<b>ADT:</b> 45733	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 1986	<b>Truck Pct:</b> 12 %	136	0	Pier with more than two columns	Concrete Pile	



**Bridge Notes:**

Retrofit 4 center columns at piers 2, 3 and 4 (built in 1956). These columns are 4'-0"x4'-0" square columns with #3 hoops @12". Longitudinal bars are #11 bars spliced at more than 2 locations, splice length is 2'-4". Footings are combined footings with top mat.

**Retrofit Program Notes:**

The 2005 Transportation Partnership Account (TPA) included funding to perform seismic retrofit work on this bridge.

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

A seismic analysis will be done to determine what work is required. Typical retrofit measures and costs are: Cross-Beam Bolsters = \$1,500/LF of Cross Beam, Girder Stops = \$1,500/Each, Column Jackets (Dry) = \$50,000/Col. (Wet) = \$125,000/Col.

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008271C		<b>Bridge Name:</b>		<b>Route:</b>	<b>Milepost:</b>	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/309		I-5 OC, 113TH AVE SW		5	97.22	<b>County:</b> Thurston
<b>Location:</b>	<b>Detour Length:</b>	<b>Longitude:</b>	<b>Latitude:</b>	<b>Structure Length:</b>		<b>Out to Out Width:</b>
2.0 N JCT SR 121	9 miles	122° 56' 42" W	46° 55' 24" N	204 ft.		31.9 ft.
<b>Feature Intersected:</b>		<b>PGA (500 yr):</b>	<b>PGA (1000 yr):</b>	<b>Span Type:</b>	<b>Main Spans:</b> 4	
I-5		28.26 %g	37.0% %g	PCG	<b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1968	<b>ADT:</b> 673	<b>11-13 Rank:</b>	<b>Skew Angle:</b>	<b>Pier Type:</b>	<b>Footing Type:</b>	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 1 %	137	11	Double Column Pier	Spread footing	



**Bridge Notes:**

Piers 2, 3 and 4, each has two 3'-0" diameter columns. #3 hoops @ 12". #9 bars with 3'-4" splices. Footing without top mat.

**Retrofit Program Notes:**

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Retrofit columns at Piers 2, 3 and 4. (2 ea. 6 total, 3' dia.)

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

# Washington State Department of Transportation Bridge Seismic Retrofit Information

<b>Structure ID:</b> 0008271B		<b>Bridge Name:</b> I-5 OC, 183RD AVE SW		<b>Route:</b> 5	<b>Milepost:</b> 89.84	<b>Region:</b> Olympic
<b>Bridge Number:</b> 5/304						<b>County:</b> Thurston
<b>Location:</b> 1.5 N JCT US 12	<b>Detour Length:</b> 5 miles	<b>Longitude:</b> 122° 59' 36"	<b>Latitude:</b> 46° 49' 24"	<b>Structure Length:</b> 402 ft.		<b>Out to Out Width:</b> 31.9 ft.
<b>Feature Intersected:</b> I-5		<b>PGA (500 yr):</b> 26.71 %g	<b>PGA (1000 yr):</b> 35.1% %g	<b>Span Type:</b> PCG	<b>Main Spans:</b> 7 <b>Appr. Spans:</b> 0	
<b>Year Built:</b> 1968	<b>ADT:</b> 1786	<b>11-13 Rank:</b> 138	<b>Skew Angle:</b> 21	<b>Pier Type:</b> Double Column Pier	<b>Footing Type:</b> Spread footing	
<b>Year Rebuilt:</b> 0	<b>Truck Pct:</b> 1 %					



**Bridge Notes:**

Piers 2, 3, 4, 5, 6 and 7, each has two 3'-0" diameter columns. #3 hoops @ 12". #9 bars with 3'-4" splices. Footing without top mat. Railroad track between piers 2 and 3.

**Retrofit Program Notes:**

**Completed Retrofit Notes:**

**Remaining Retrofit Notes:**

Retrofit columns at Piers 2, 3, 4, 5, 6 and 7. (2 ea. 12 total, 3' dia.)

**Overall Retrofit Status:** R  
**Single Column Pier Status:** N  
**Multi Column Pier Status:** R  
 C=Complete P=Partially Complet  
 R=Required N=Not Required  
 D=Differed X=Excluded I=In Progress

**Estimated Total Bridge Item Cost:**  
**Estimated Total Retrofit Project Cost:**

## WSDOT Scour Projects - 2011-13 Bien

(Sorted by Bridge Number)



Bridge Number	Bridge Name	Length	Mile post	Region	PIN #	Year Planned	11-13 #	Project Total\$'s
003/015	SHERWOOD CR	147	20.36	Olympic	300379A	2012	5	\$996,488
101/251	SNOW CREEK	71	282.62	Olympic	310170S	2012	9	\$824,000
101/302	RUSSELL H. BARKER M	370	185.6	Olympic	310186F	2012	7	\$846,000
108/004	WILDCAT CR	26	0.5	Olympic	310808A	2012	6	\$627,000
Total Number of Bridges = 4						Total Bien\$'s =		\$3,293,488

## WSDOT Scour Projects - 2011-13 Bien

(Sorted by Priority Number)



Bridge Number	Bridge Name	Length	Mile post	Region	PIN #	Year Planned	11-13 #	Project Total\$'s
003/015	SHERWOOD CR	147	20.36	Olympic	300379A	2012	5	\$996,488
108/004	WILDCAT CR	26	0.5	Olympic	310808A	2012	6	\$627,000
101/302	RUSSELL H. BARKER M	370	185.6	Olympic	310186F	2012	7	\$846,000
101/251	SNOW CREEK	71	282.62	Olympic	310170S	2012	9	\$824,000
Total Number of Bridges = 4						Total Bien\$'s =		\$3,293,488

# WSDOT Bridge over Water

# Scour Form

Bridge ID: <b>0004133A</b>	Bridge Number: <b>3/15</b>	Bridge Name: <b>SHERWOOD CR</b>	State Route: <b>3</b> Mile Post: <b>20.36</b>	<b>Olympic</b> Cnty: <b>Mason</b>	
Year Built: <b>1952</b> Rebuilt:	Span Type: <b>CTB</b>	ADT: <b>8920</b> ADT Truck Pct: <b>5 %</b>	Structure Length: <b>147 ft.</b> Width: <b>26 ft.</b>	main span <b>3</b> aprch: <b>0</b>	Detour Length: <b>22 miles</b>
Substructure Stability: Code: <b>2</b> Spread footing, continuous spans.		Streambed Material: <b>3</b> Gravel	Scour History: Code: <b>C</b> Current scour problems.	Last Scour repair Project Yr: C#:	
Scour Code: <b>3</b>	Scour Rating Description: Bridge is scour critical; bridge foundations determined unstable for calculated scour depths: 1) Within limits of footings or piles (Figure WB 76-80B) 2) Below footing base or pile tips (Figure WB 76-80C).		Substr Code: <b>5</b>	sufficiency_rating: <b>52.21 FO</b>	



Deficiencies:  Bridge has spread footings. Riprap near piers 2 and 3 is no longer in place. Riprap placed just upstream that protect NW embankment is now in the middle of stream. The embankment is being undermined. P2 and P3 have 2ft footings on 6ft seals. P2 seal bottom is 12ft below channel, P3 is 8ft.	First Noted: <b>11/20/2000</b>
	BPO Repair List Priority: <b>1</b>
Recommended Action:  BPO - The rip rap has settled into the stream and the bank is beginning to erode. Place riprap against the eroded upstream banks at both abutments. Bridge Management Unit - The scour repair is scheduled to be completed in 2012.	Funding - P2 or M: <b>P2</b>
	BPO Repair Num: <b>10000</b>
	11-13 Priority Rank: <b>5</b>
	WIN: PIN: <b>300379A</b>
	Total Cost Estimate: <b>\$996,488</b>

# WSDOT Bridge over Water

# Scour Form

Bridge ID: 0013073B	Bridge Number: 101/251	Bridge Name: SNOW CREEK	State Route: 101 Mile Post: 282.62	Olympic Cnty: Jefferson
Year Built: 1986 Rebuilt:	Span Type: PCS	ADT: 6839 ADT Truck Pct: 10 %	Structure Length: 71 ft. Width: 56.9 ft.	main span 1 aprch: 0 Detour Length: 3 miles
Substructure Stability: Code: 3 Pile foundation, simple spans.	Streambed Material: 3 Gravel	Scour History: Code: C Current scour problems.	Last Scour repair Project Yr: C#:	
Scour Code: 8	Scour Rating Description: Bridge foundations determined stable for calculated/evaluated scour conditions. Calculated/evaluated scour is above top of footing. (Figure WB76-80, A).	Substr Code: 7	sufficiency_rating: 95.3	

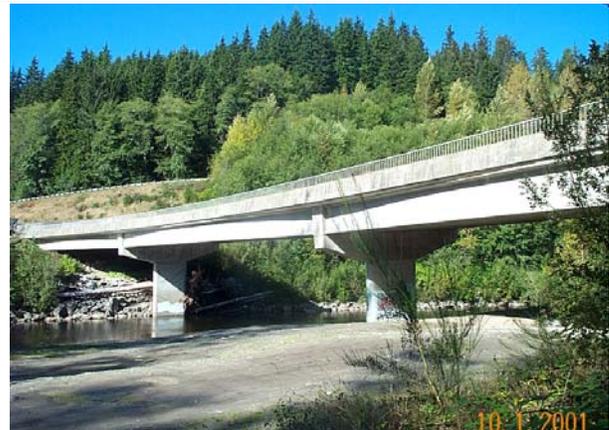


Deficiencies:  Pier 1 is south (west geographically) towards Port Angeles. Bridge Foundations are on steel piles that have approx 50 ft embedment. Creek bears on north abutment. North abutment pile cap is exposed full width up to 36" deep at the west end. South abutment pile cap has been exposed and undermined near centerline.	First Noted: 12/12/2006
	BPO Repair List Priority: 1
	Funding - P2 or M: P2
	BPO Repair Num: 10000
	11-13 Priority Rank: 9
Recommended Action:  BPO - Place riprap, armor the piers and protect the approach fills. Bridge Management Unit - Scour repair is scheduled to be completed by contract in 2012 or 2013.	WIN: PIN: 310170S
	Total Cost Estimate: \$824,000

# WSDOT Bridge over Water

# Scour Form

Bridge ID: 0012600A	Bridge Number: 101/302	Bridge Name: RUSSELL H. BARKER MEM.	State Route: 101 Mile Post: 185.60	Olympic Cnty: Clallam
Year Built: 1985 Rebuilt:	Span Type: PCG	ADT: 1694 ADT Truck Pct: 20 %	Structure Length: 370 ft. Width: 36 ft.	main span 3 aprch: 0 Detour Length: 99 miles
Substructure Stability: shafts	Code: 9	Streambed Material: 3 Gravel	Scour History: Code: C Current scour problems:	Last Scour repair Project Yr: C#:
Scour Code: 4	Scour Rating Description:	Bridge foundations determined stable for calculated scour condition: field review indicates action is required to protect exposed foundations from effects of additional erosion.	Substr Code: 5	sufficiency_rating: 61.48



Deficiencies:  Local scour problem at pier 3, where shaft cap is exposed. Debris piled up behind pier 3. Majority of river water bears against pier 3. High water erosion has caused undermining of heavy riprap bank protection on north bank. Drilled shaft foundations for piers 2 and 3. BPO Priority changed from "4" to "1" in 2005.	First Noted: 6/22/2005
	BPO Repair List Priority: 1
Recommended Action:  BPO - Cover the Pier 3 Cap with special heavy loose riprap at a 2:1 slope and blend into existing groundline and bank. Bridge Management Unit - Scour Repair is scheduled to be completed in 2012 or 2013.	Funding - P2 or M: P2
	BPO Repair Num: 14934
	11-13 Priority Rank: 7
	WIN: PIN: 310186F
	Total Cost Estimate: \$846,000

# WSDOT Bridge over Water

# Scour Form

Bridge ID: 0002214A	Bridge Number: 108/4	Bridge Name: WILDCAT CR	State Route: 108 Mile Post: 0.50	Olympic Cnty: Grays Harbor
Year Built: 1936 Rebuilt:	Span Type: CEFA	ADT: 4765 ADT Truck Pct: 15 %	Structure Length: 26 ft. Width: 29.5 ft.	main span 1 aprch: 0 Detour Length: 3 miles
Substructure Stability: Code: 1 Spread footing, simple spans.	Streambed Material: 3 Gravel	Scour History: Code: C Current scour problems.	Last Scour repair Project Yr: C#:	
Scour Code: 3	Scour Rating Description: Bridge is scour critical; bridge foundations determined unstable for calculated scour depths: 1) Within limits of footings or piles (Figure WB 76-80B) 2) Below footing base or pile tips (Figure WB 76-80C).	Substr Code: 5	sufficiency_rating: 67.15 FO	



Deficiencies:  P1 apron is undermined approx. 2' at the NW corner. P2 is undermined up to 4' at the NE corner and it has many holes scattered throughout. The stream appears to have shifted to the East but bends back to the bridge opening. 10" dia. riprap scattered in waterway under and downstream of bridge.	First Noted: 7/22/2001
	BPO Repair List Priority: 1
	Funding - P2 or M: P2
	BPO Repair Num: 10000
	11-13 Priority Rank: 6
Recommended Action:  BPO - Repair undermining of apron at NE corner of Pier 2 and all of Pier 1. Bridge Management Unit - Scour repair is scheduled to be completed in 2012.	WIN: PIN: 310808A
	Total Cost Estimate: \$627,000