

P2 Bridge Preservation - Replacement/Rehab Projects

2009-11 Bien Priority Array

(Sorted by 2009-11 Priority Number)

09-11 #	Bridge Number	Bridge Name	Mile post	Region	Length	Future work Description
1	097/106	SATUS CR 2ND CROSSING	45.84	South Central	133	Replace Bridge
8	241/005	MABTON-SUNNYSIDE #650	1.34	South Central	521	Replace Bridge
15	022/007	SLOUGH OF YAKIMA R	1.39	South Central	115	Replace Bridge
16	022/006	YAKIMA R	1.10	South Central	545	Replace Bridge
19	012/720	WHETSTONE CR	372.57	South Central	21	Replace Bridge
24	010/143	BRISTOL FILL	90.10	South Central	430	Replace Deck

Total Number of Bridges = 6



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Total Number of Bridges = 6



2009-11 Bien P2 Bridge Replacements/Rehab Candidates

Bridge Number: 10 / 143	Structure ID 0002222A	Bridge Name: BRISTOL FILL	Milepost: 90.10	Region: South Central
Year Built / YR Widened: 1937	Bridge Type: SB	Number of Main/Appr span 15 / 0	Sufficiency Rating: 41.39 SD	
Bridge Width (curb-curb): 24.0 ft	Bridge Length: 430 ft	Max Span: 33 ft	Bridge Deck View	
Average Daily Traffic: 1,200	Truck% 11%	Number of Lanes: 2	NHS: No	
Vertical Clearance: NA	Detour Length (miles): 34	Appr Rdway Width: 34.0 ft		
Design Load: H 15	HS: 0.97	Load Restricted Bridge? <input type="checkbox"/>		
Op Rating: 32.00	A1: 1.52	BL Load:		
Inv Rating: 19.00	A2: 1.46	CL-8 Load:		
	A3: 1.62	SA Load:		
Bridge Inspection Information			Bridge Profile View	
Date Inspected: 4/7/2005	Structr Adequacy: 4			
Superstr Code: 5	Safe Load: 5			
Substr Code: 6	Deck Geometry: 4			
Deck Code: 3	Underclearance: 9			
Scour: N	Waterway: 9			
Proposed Bridge Replacement Information				
New Bridge Width: 24 ft.	Bridge \$'s: \$2,064,000			
New Bridge Length: 430 ft.	Total \$'s: \$4,644,000			
Priority Array #: 24				
PIN Number:				
WIN Number:	Repl/Rehab Year:			
Contract Number:	Ad Date:			
<p>THIS BRIDGE IS CLASSIFIED "SD" BASED ON THE DECK CONDITION. Deck replacement is needed based on the 80% delams found when the ACP was removed during contract 6286 in May, 2002. The cement appears to be breaking down in the concrete deck allowing aggregate to debond.</p> <p>There is 8700 sq.ft. in Condition State 3 due to the chain drag survey completed in 2002, see Element 376. Map cracking and heavy leaching with stalactites in soffit dripping down on to the stringers and columns. Areas of rock pockets scattered throughout the soffit of the deck. Many areas of efflorescence and light pattern cracks near the floorbeams throughout.</p>				



2009-11 Bien P2 Bridge Replacements/Rehab Candidates

Bridge Number: 12 / 720		Structure ID 0000307A		Bridge Name: WHETSTONE CR		Milepost: 372.57		Region: South Central		
Year Built / YR Widened: 1919		Bridge Type: CS		Number of Main/Appr span 2 / 0		Sufficiency Rating: 29.63 SD				
Bridge Width (curb-curb): 25.7 ft		Bridge Length: 21 ft		Max Span: 10 ft		Bridge Deck View				
Average Daily Traffic: 3,200		Truck% 18%	Number of Lanes: 2		NHS: YES					
Vertical Clearance: NA		Detour Length (miles): 11		Appr Rdway Width: 37.0 ft						
Design Load: Unknown		HS: 0.56	Load Restricted Bridge? <input type="checkbox"/>							
Op Rating: 33.00		A1: 1.00	BL Load:				Bridge Profile View			
Inv Rating: 20.00		A2: 1.00	CL-8 Load:							
		A3: 1.00	SA Load:							
Bridge Inspection Information										
Date Inspected: 4/6/2005		Structr Adequacy: 4								
Superstr Code: 7		Safe Load: 5								
Substr Code: 4		Deck Geometry: 2								
Deck Code: 7		Underclearance: 9								
Scour: 5		Waterway: 6								
Proposed Bridge Replacement Information										
New Bridge Width: 36 ft.		Bridge \$'s: \$374,400								
New Bridge Length: 26 ft.		Total \$'s: \$936,000								
Priority Array #: 19										
PIN Number:										
WIN Number:		Repl/Rehab Year:								
Contract Number:		Ad Date:								
<p>THIS BRIDGE IS CLASSIFIED "SD" DUE TO THE SUBSTRUCTURE CODE.</p> <p>Calculations show the bridge to be scour critical. Very old bridge with 2 feet of ACP over the bridge deck. The channel is almost all silted in which makes it difficult to inspect under the bridge. The waterway opening is too restrictive and allows water over the approach roadway during high flows. The 1996 flood flow water splashed over concrete rail at upstream side.</p>										



2009-11 Bien P2 Bridge Replacements/Rehab Candidates

Bridge Number: 22 / 6	Structure ID 0001935A	Bridge Name: YAKIMA R	Milepost: 1.10	Region: South Central
Year Built / YR Widened: 1935	Bridge Type: SRB		Number of Main/Appr span 6 / 0	Sufficiency Rating: 50.00 SD
Bridge Width (curb-curb): 24.0 ft	Bridge Length: 545 ft	Max Span: 90 ft	Bridge Deck View	
Average Daily Traffic: 8,200	Truck% 9%	Number of Lanes: 2		
NHS: YES				
Vertical Clearance: NA	Detour Length (miles): 13		Appr Rdway Width: 32.0 ft	
Design Load: H 15	HS: 1.43	Load Restricted Bridge? <input checked="" type="checkbox"/>		
Op Rating: 60.00	A1: 2.04	BL Load:	20,500	
Inv Rating: 36.00	A2: 1.77	CL-8 Load:	21,500	
	A3: 1.79	SA Load:		
Bridge Inspection Information				
Date Inspected: 6/27/2006	Structr Adequacy: 5			
Superstr Code: 5	Safe Load: 5			
Substr Code: 6	Deck Geometry: 2			
Deck Code: 6	Underclearance: 9			
Scour: 2	Waterway: 8			
Proposed Bridge Replacement Information				
New Bridge Width: 36 ft.	Bridge \$'s:	\$5,500,000		
New Bridge Length: 550 ft.	Total \$'s:	\$15,000,000		
Priority Array #: 16				
PIN Number:				
WIN Number:	Repl/Rehab Year:			
Contract Number:	Ad Date:			
Bridge Profile View				
				

A Nickel funded project to widen SR 22 between I-82 and McDonald Road in Toppenish, almost totally within the Yakama Nation Reservation. Safety improvements include widening the lanes and shoulders, flattening the slope, and installing guardrail. Design on this safety improvement project will begin in late 2007. Construction is scheduled to begin in 2009, and be completed in 2011.

The Yakima River Bridge and the Slough Bridge have been excluded from this project due to the cost of replacement.



2009-11 Bien P2 Bridge Replacements/Rehab Candidates

Bridge Number: 22 / 7	Structure ID 0001942A	Bridge Name: SLOUGH OF YAKIMA R	Milepost: 1.39	Region: South Central
Year Built / YR Widened: 1935	Bridge Type: CTB	Number of Main/Appr span 3 / 0	Sufficiency Rating: 39.80 SD	
Bridge Width (curb-curb): 24.0 ft	Bridge Length: 115 ft	Max Span: 50 ft	Bridge Deck View 	
Average Daily Traffic: 8,200	Truck% 9%	Number of Lanes: 2		
Vertical Clearance: NA	Detour Length (miles): 13	Appr Rdway Width: 30.0 ft	Bridge Profile View 	
Design Load: H 15	HS: 0.90	Load Restricted Bridge? <input type="checkbox"/>		
Op Rating: 37.00	A1: 1.23	BL Load:		
Inv Rating: 22.00	A2: 1.14	CL-8 Load:		
	A3: 1.25	SA Load:		
Bridge Inspection Information				
Date Inspected: 6/11/2007	Structr Adequacy: 5			
Superstr Code: 7	Safe Load: 5			
Substr Code: 5	Deck Geometry: 2			
Deck Code: 4	Underclearance: 9			
Scour: 2	Waterway: 5			
Proposed Bridge Replacement Information				
New Bridge Width: 40 ft.	Bridge \$'s: \$1,150,000			
New Bridge Length: 120 ft.	Total \$'s: \$3,000,000			
Priority Array #: 15				
PIN Number:				
WIN Number:	Repl/Rehab Year:			
Contract Number:	Ad Date:			
<p>A Nickel funded project to widen SR 22 between I-82 and McDonald Road in Toppenish, almost totally within the Yakama Nation Reservation. Safety improvements include widening the lanes and shoulders, flattening the slope, and installing guardrail. Design on this safety improvement project will begin in late 2007. Construction is scheduled to begin in 2009, and be completed in 2011.</p> <p>The Yakima River Bridge and the Slough Bridge have been excluded from this project due to the cost of replacement.</p>				



2009-11 Bien P2 Bridge Replacements/Rehab Candidates

Bridge Number: 97 / 106	Structure ID 0002689B	Bridge Name: SATUS CR 2ND CROSSING	Milepost: 45.84	Region: South Central
Year Built / YR Widened: 1942	Bridge Type: SRB TTC	Number of Main/Appr span 1 / 4	Sufficiency Rating: 42.48 SD	
Bridge Width (curb-curb): 29.6 ft	Bridge Length: 133 ft	Max Span: 60 ft	Bridge Deck View	
Average Daily Traffic: 2,871	Truck% 29%	Number of Lanes: 2		
NHS: YES	Vertical Clearance: NA			
Detour Length (miles): 63		Appr Rdway Width: 32.0 ft		
Design Load: H 15	HS: 1.10	Load Restricted Bridge? <input checked="" type="checkbox"/>		
Op Rating: 40.00	A1: 1.35	BL Load: 20,500		
Inv Rating: 27.00	A2: 1.48	CL-8 Load: 20,500		
	A3: 1.64	SA Load: 42,000		
Bridge Inspection Information				
Date Inspected: 6/27/2006	Structr Adequacy: 5			
Superstr Code: 6	Safe Load: 5			
Substr Code: 5	Deck Geometry: 4			
Deck Code: 4	Underclearance: 9			
Scour: 2	Waterway: 3			
Proposed Bridge Replacement Information				
New Bridge Width: 36 ft.	Bridge \$'s:			
New Bridge Length: 140 ft.	Total \$'s: \$5,695,187			
Priority Array #: 1				
PIN Number: 509703L				
WIN Number: E09703L	Repl/Rehab Year: 2008			
Contract Number:	Ad Date: 11/13/2007			
Bridge Profile View				
				
<p>THE BRIDGE IS CLASSIFIED "SD" DUE TO A DECK CONDITION.</p> <p>The waterway opening under the bridge is very restricted. Region maintenance typically removes drift debris every spring. The replacement of this bridge is being coordinated with an SR97 roadway improvement project.</p> <p>The steel beams have areas of rust blooms and top flange rust. The timber sawn girders 1M, 2J and 2L have a horizontal split in the web for approx 1/2 length near mid span. Three feet of east end of pier no. 2 timber cap has a 1 inch shell (Red Tagged). Pier 5 cap under stringer "D" has center rot. Four feet of east end of pier 6 cap has center rot. A proposed new bridge will be built on a new alignment. Negotiations continue with the Yakima Indian Nation.</p>				



2009-11 Bien P2 Bridge Replacements/Rehab Candidates

Bridge Number: 241 / 5		Structure ID 08336200		Bridge Name: MABTON-SUNNYSIDE #650		Milepost: 1.34		Region: South Central		
Year Built / YR Widened: 1954		Bridge Type: CBox		Number of Main/Appr span 5 / 0		Sufficiency Rating: 10.84 SD				
Bridge Width (curb-curb): 24.0 ft		Bridge Length: 521 ft		Max Span: 114 ft		Bridge Deck View 				
Average Daily Traffic: 3,867		Truck% 5%	Number of Lanes: 2	NHS: No						
Vertical Clearance: NA		Detour Length (miles): 19		Appr Rdway Width: 32.0 ft						
Design Load: HS 20		HS: 0.43	Load Restricted Bridge? <input checked="" type="checkbox"/>	BL Load:						
Op Rating: 13.00		A1: 0.58	CL-8 Load:		SA Load:					
Inv Rating: 8.00		A2: 0.51								
A3: 0.57										
Bridge Inspection Information					Bridge Profile View 					
Date Inspected: 5/10/2006		Structr Adequacy: 2								
Superstr Code: 5		Safe Load: 0								
Substr Code: 6		Deck Geometry: 2								
Deck Code: 7		Underclearance: 9								
Scour: 5		Waterway: 8								
Proposed Bridge Replacement Information										
New Bridge Width: 36 ft.		Bridge \$'s: \$7,560,000								
New Bridge Length: 525 ft.		Total \$'s: \$21,040,000								
Priority Array #: 8										
PIN Number:										
WIN Number:		Repl/Rehab Year:								
Contract Number:		Ad Date:								

THIS BRIDGE IS CLASSIFIED "SD" DUE TO THE STRUCTURAL ADEQUACY CODE.

The capacity of the bridge to carry vehicular traffic is low because of its age and poor shear strength design. This bridge is currently load posted with the following ratings - Truck 14 tons , Truck/Semitrailer 18 tons , Truck/Trailer 22 tons. This bridge was built by Yakima County and transferred to the Department in 1992. It was designed for HS-15 loads but used design standards that resulted in very light shear reinforcement and low shear capacity. The cracking in the girder webs is evidence of this low shear capacity.

