Bridge Inspection

Bridge File Number	07475 -1 Bridge	Form Type	SG
Year Built/Year Supstr	1957/1957	Lot No.	2
		Inspector Name	Owen Salava
Bridge or Town Name	BLUFFTON	Inspector Class	BR CLS A
Located Over	BLINDMAN RIVER, 3.78, WATERCRS-ST	Assistant Name	
Located On	20:06 C1 13.859	Assistant Class	
Water Body Cl./Year		Inspection Date	09-Jul-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 12 TWP 44 RGE 3 W5M	Data Entry Date	01-Aug-2012
Longitude, Latitude	-114:18:57, 52:46:37	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	30-Jul-2012
Contract Main. Area	CMA18	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	11 /	Dept. Review Date	02-Aug-2012
AADT/Year	2,490 / 2011 (A)	Follow-Up By	
Road Classification	RLU-208G-90		
Detour Length (km)	3		

Allowable Load (t):	Single	CS1 75 GIRDER	Semi	CS2 108 GIRDER	Train	CS3 153 GIRDER	---> On Critical Spans --->Critical Member
Design Loading:		HS20					---> Primary Span

Posting Information

Required Load Posting (t)			Single		Semi		Truck Train	
Posted Loading (t)			Single		Semi		Truck Train	
Posted:	Lane	NB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No
Posted:	Lane	SB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No
Remarks	Not required.							

Hazard Marker At Bridge (Y/N)	No
Remarks	Not required.
Other Sign Types	River ID.

Utilities (Located at)

Utility Attachments			
Telephone	In r/w to West.	Gas	
Power	On East r/w, 20 m from c/l, 1 wire.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Field approaches to the North.
Vertical Alignment		7	7	
Roadway Width (m)	11.000			Small potholes developing at A1 in SBL (photo).
Approach Bump		4	4	
Guardrail (Y/N)	Yes			Not thrie beam.
Guardrail		7	7	
Length (m)	70.000			
Current Standard (Y/N)	No			
Termination Type	TURNED DOWN			
Drainage		4	4	Bridge is at bottom of sag with approaches partly draining onto bridge.
Approach Road General Rating		**7**	**7**	

Superstructure

Bridge Component	Last	Now	Explanation of Condition
(Primary Span : **RB, 2 Spans, Lengths(m): 15.2-15.2, A-Ident Number: A0244-01;A0244-02**)			
Special Features			
Special Feature		X	
(Type :)			
Special Feature		X	
(Type :)			
Wearing Surface/Deck Top Detail Ratings			
	N (%)	1 (%)	2 (%)	3 (%)
Last	10	0	0	0
Now	0.0	0.0	0.0	0.0
Wearing Surface	6	5	Hairline 0.1 mm wide map cracking at North span. Chipsealed with some delaminated at pier in NBL.
(Material Type : **CONVENTIONAL CHIP SEAL COAT**)			
(Thickness(mm) :)			
Deck Top	N	N	
Deck Rideability	7	6	
Deck Joints	3	3	(Leaking onto abut/pier at all 6 gutter locations.) - Unable to confirm in dry conditions; all joints tarred. Concrete blockout at deck underside isdeteriorating exposing rusting rebarsat N abut, pier & S abut block out. Pier joint is jammed.
Temperature (deg. C)	29		
(Expansion Type : **BUFFER ANGLES**)			
(Fixed Type : **BUFFER ANGLES**)			
Gap Size (mm)	Gap Location		
5	N. abut		
15	C. pier		
0	S. abut		
Deck Drainage	4	4	Deck joints allow water onto piers & abuts.
Drains Clogged (Y/N)	No		
Curbs/Median	N	5	Light scaling at face and transverse cracks.
(Curb Type : **Standard**)			
Scaling (Percent Area)	5		
Bridge Rail	7	7	20% of grout pads have voids under base plate. E rail multiple nuts not tight to washers - 26 in total.
(Type : **GALVANIZED STEEL VERTICAL BAR**)			
Bridge Rail Posts	N	4	
(Type : **POST STEEL;POST STEEL**)			
Bridge Rail/Posts Coating	7	7	
(Type : **GALVANIZED**)			
Sidewalk	X	X	
Girder/Beam			
Cover Plate	7	7	
Flange	7	7	
Web	7	7	
Stiffeners	X	X	
Splice	X	X	
Weld	7	7	
Diaphragms/Cross Frame	7	7	

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **RB, 2 Spans, Lengths(m): 15.2-15.2, A-Ident Number: A0244-01;A0244-02**)				
Paint Condition		5	5	95% of girder paint is good. Some touch-up required below the joints.
(Colour Description : **BLUE**)				
(Colour Code : **502-105**)				
Touchup Required (Y/N)	No			
Bearings		4	4	Bearings are resisting movements resulting in bent AB's and twisted plates. 2 anchor bolt nuts missing & other hardware loose.
Temperature (deg. C)	29			
(Expansion Type : **SLIDING PLATE**)				
(Fixed Type : **PINNED BEARING**)				
Coating Adequate (Y/N)	No			50% superficial corrosion at abut bearings. S abutjammed against girders.
Functioning (Y/N)	No			
Deck Underside		6	6	Transverse cracks every est 1.5 m with leach stains under gutters. Joint block outs deteriorated at deck underside.
Stains (Percent Area)	2			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		**4**	**4**	

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Abutments				
Bearing Seats/Caps		5	5	Gravel and debris on abut seat due to leaky joints.
(Type : **CONCRETE**)				
Backwalls/Breastwalls		7	7	
Wingwalls		7	7	
Piles		N	N	
Paint/Coating		X	X	
Abutment Stability		5	5	
Scour/Erosion		7	6	Settlement or erosion under A2 seat.
Piers/Bents				
(Type : **PIER-SOLID**)				2 vertical medium width cracks and medium scaling. Gravel on pier seat due to leaky joint. Spall at NE corner.
Bearing Seats/Caps		4	4	
(Type : **CONCRETE**)				
(Total Number of Bearing Piles : **0**)				
Pier Shaft/Piles		6	6	
Bracing/Struts/Sheathing		X	X	
Nose Plate		6	6	
Paint/Coating		X	4	Surface rusted.
(Colour Description :)				
(Colour Code :)				
Pier Stability		6	6	
Scour		N	N	
Debris (Y/N)	Yes			Drift on pier & abut seats.
Substructure General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel				
(U/S Direction : **W**)				Steep cut banks at D/S.
(D/S Direction : **E**)				
Alignment		6	6	
Bank Stability		6	6	
HWM (m below Top of Curb)	-0.5			(Negative freeboard of approx 500. 07Feb2008). Drift on top of pier and abut seats at hslps.
Drift (Y/N)	Yes			
Slope Protection		6	6	Some rock both abuts.
(Type : **NATURAL; NATURAL**)				
Guidebank/Spurs		X	X	
Adequacy of Opening		4	4	Basin scoured out under bridge but not affecting structure embankments. Minor erosion under A2 bearing seat (photo). Not passing full flow; drift on pier.
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
REPAIR/REPLACE BRIDGE RAIL	2012	Tighten 26 nuts flush to washers.				
GALVANIZE/PAINT BRIDGE RAIL						
RETROFIT BRIDGE RAIL						
SEAL CURBS						
PATCH DECK						
SEAL DECK						
OVERLAY DECK						
REPAIR/REPLACE DECK JOINTS	2012	Recast concrete blockouts @ underside of joints.				
RESET/ PAINT BEARINGS	2012	Replace bearings. Install 2 anchor bolt nuts and tighten all loose bolts.				
REPAINT SUPERSTRUCTURE	2012	Touchup paint under joints.				
STRAIGHTEN/REPLACE MEMBERS						
WASHING						
SHOTCRETE REPAIRS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION	2012	Remove drift from superstructures and substructures.				
OTHER ACTION	2012	Clean gravel off abutment & pier seats.				
OTHER ACTION	2020	Raise bridge 600mm.				
OTHER ACTION	2012	Patch potholes at A1.				
OTHER ACTION	2012	Patch spall NE pier cap.				

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**63.9/63.6**	Est. Repl. Yr	2035	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection		Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0

Proposed Long-Term Strategy	2006.05.09 Rehab in 2020 and spot replacement in 2050.
On 3-Year Program (Y/N)	Y
Proposed Action	2006.05.09 Joint repair in 2008.

Previous Inspector's Name	Owen Salava	Previous Assistant's Name	
Next Inspection Date	09-Apr-2014	Previous Inspection Date	08-Dec-2010
Inspection Cycle (Default) (months)	21		
Comment			