Bridge Inspection

Bridge File Number	00992 -1 Bridge	Form Type	SG
Year Built/Year Supstr	1955/1955	Lot No.	1
		Inspector Name	Randy Bredo
Bridge or Town Name	FORT MACLEOD	Inspector Class	BR CLS A
Located Over	WILLOW CREEK, 2.12.25, WATERCRS-ST	Assistant Name	Bryce Clayton
Located On	811:02 C1 4.003	Assistant Class	
Water Body Cl./Year		Inspection Date	20-Jan-2010
Navigabil. Cl./Year		Data Entry By	Jill Potts
Legal Land Location	NW SEC 24 TWP 9 RGE 26 W4M	Data Entry Date	12-May-2011
Longitude, Latitude	-113:24:26, 49:45:14	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	25-Mar-2010
Contract Main. Area	CMA26	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	7.3 /	Dept. Review Date	20-May-2011
AADT/Year	1,240 / 2010 (A)	Follow-Up By	
Road Classification	RLU-207G-60		
Detour Length (km)	10		

Allowable Load (t):	Single	CS1 39 GIRDER	Semi	CS2 51 GIRDER	Train	CS3 63 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)	Yes
Remarks	{400mm too low. May 10, 2009 CP inspection}
Other Sign Types	Curve signs, 85 km/hr.

Utilities (Located at)

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE; TELEPHONE UTILITIES-Bell Canada Fibre Optic on outside fascia Aug 2005		
Telephone	West r/w and under West curb.	Gas	
Power	1 wire crosses 100m North of bridge.	Municipal	
Others	Water pump @ NW. Telus cable or cablevision, overhead 10m East.	Problem (Y/N)	No
Remarks			

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Curve at both ends of bridge limiting sight distance. Rise to South.
Vertical Alignment		5	5	
Roadway Width (m)	7.300			
Approach Bump		6	6	
Guardrail (Y/N)	Yes			Not thrie beam.
Guardrail		6	5	
Length (m)	99.000			
Current Standard (Y/N)	No			
Termination Type	Turn Down			
Drainage		3	6	Undermined at SW and SE corners.
Approach Road General Rating		**5**	**5**	

Superstructure			
Bridge Component	**Last**	**Now**	**Explanation of Condition**
(Primary Span : **RB, 3 Spans, Lengths(m): 21.9-27.4-21.9, A-Ident Number: A0237-01**)			
Special Features			
Special Feature		X	
(Type :)			
Special Feature		X	
(Type :)			
Wearing Surface/Deck Top Detail Ratings			
	N (%) / 1 (%) / 2 (%) / 3 (%)		
Last	0 / 0 / 0 / 0		
Now			
Wearing Surface	6	6	Chip coat on concrete & polymer overlay.
(Material Type : **CONCRETE - CONVENTIONAL CHIP SEAL COAT**)			
(Thickness(mm) : **50**)			
Deck Top	N	N	
Deck Rideability	7	7	
Deck Joints	5	3	{Top of glands split, slight leakage on North abutment between G1 & G2. May 10, 2009 CP inspection} NW curb cover plate sits up 15mm
Temperature (deg. C) 17			
(Expansion Type : **GLAND (WABO-MAUER, TRANSFLEX, ETC)**)			
(Fixed Type :)			
Gap Size (mm) / Gap Location			
65 / North - A2			
70 / South - A1			
Deck Drainage	8	6	
Drains Clogged (Y/N) No			
Curbs/Median	5	5	
(Curb Type : **Standard**)			
Scaling (Percent Area) 5			
Bridge Rail	6	5	Posts re-habed.
(Type : **STEEL BRIDGE TUBE**)			
Bridge Rail Posts	6	5	
(Type : **CONCRETE;CONCRETE**)			30% paint failure.
Bridge Rail/Posts Coating	3	4	
(Type : **PAINT**)			
Sidewalk	X	X	
Girder/Beam			
Cover Plate	7	3	{1 small cracked weld at end of coverplate span 2 girder 3. May 10, 2009 CP inspection} Over pier bearings only.
Flange	7	7	
Web	7	7	
Stiffeners	7	7	{1 small cracked weld. May 10, 2009 CP inspection}
Splice	7	7	
Weld	7	3	
Diaphragms/Cross Frame	7	7	Concrete diaphragms at abuts

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **RB, 3 Spans, Lengths(m): 21.9-27.4-21.9, A-Ident Number: A0237-01**)				
Paint Condition		4	4	{Ends of girders re-painted @ abutment. 2% corrosion @ bottom flanges. May 10, 2009 CP inspection} Green
(Colour Description : **GREEN**)				
(Colour Code : **14090**)				
Touchup Required (Y/N)	No			
Bearings		6	3	{Bearings repainted @ abutments. Pier rocker bearings are attempting to walk off masonry plates with enough force to distort the anchor bolt. Baclwall chipped out 30mm to allow expansion of girders. Abut brgs have been reset & pier 1 has 1 missing shoulder bolt & 2 backed off shoulder bolts. May 10, 2009 CP inspection} Sole plates modified to allow movement.
Temperature (deg. C)	17			
(Expansion Type : **SLIDING PLATE**)				
(Fixed Type : **ROCKER BEARING**)				
Coating Adequate (Y/N)	Yes			
Functioning (Y/N)	Yes			
Deck Underside		5	5	Narrow transverse cracks at approx 400mm o.c. in bending areas and approx 1500mm in neutral areas. All cracks have leaching stains.
Stains (Percent Area)	10			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		**5**	**3**	{P1G1 rocker exp 55mm with only 30mm of room left. AB's badly bent P1. May 10, 2009 CP inspection}

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Abutments				
Bearing Seats/Caps		6	6	
(Type : **CONCRETE**)				
Backwalls/Breastwalls		6	6	South backwall chipped to allow expansion
Wingwalls		6	X	Curtain walls
Piles		N	N	
Paint/Coating		X	X	
Abutment Stability		6	6	
Scour/Erosion		6	7	
Piers/Bents				
(Type : **PIER-SOLID**)				
Bearing Seats/Caps		7	7	
(Type : **CONCRETE**)				
(Total Number of Bearing Piles : **0:0**)				
Pier Shaft/Piles		7	7	
Bracing/Struts/Sheathing		X	X	
Nose Plate		7	7	
Paint/Coating		4	4	{60% corrosion on nose plates. May 10, 2009 CP inspection} 50% SURFACE CORROSION @ NOSEPLATE
(Colour Description :)				
(Colour Code :)				
Pier Stability		6	5	{South hill slowly sliding towards river, may cause problems later. May 10, 2009 CP inspection}
Scour		6	6	

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Debris (Y/N)	Yes			{Large log caught on pier. Other large drift in channel. May 10, 2009 CP inspection}
Substructure General Rating		**6**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel				
(U/S Direction : **W**)				Access trail under Span 1 {Steep cut @ South abutment but face of cut is 10m from abutment. May 10, 2009 CP inspection}
(D/S Direction : **E**)				
Alignment		6	7	
Bank Stability		6	5	{SW bank active eroding and moving towards channel, OK for now. May 10, 2009 CP inspection} Banks steep cut
HWM (m below Top of Curb)				No visible HWM {Large drift in channel. May 10, 2009 CP inspection}
Drift (Y/N)	Yes			
Slope Protection		6	6	Rip rap at South toe of slope
(Type : **RIP RAP; RIP RAP**)				
Guidebank/Spurs		X	X	
Adequacy of Opening		7	8	
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**6**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
REPAIR/REPLACE BRIDGE RAIL						
GALVANIZE/PAINT BRIDGE RAIL						
RETROFIT BRIDGE RAIL						
SEAL CURBS						
PATCH DECK						
SEAL DECK						
OVERLAY DECK						
REPAIR/REPLACE DECK JOINTS	2011	{Repair leaking joint. May 10, 2009 CP inspection}				
RESET/ PAINT BEARINGS	2011	{Reset P1 bearings & install new anchor bolts & weld keepers so rocker does not walk off the masonry plate. Replace with neoprene pads another option. May 10, 2009 CP inspection}				
REPAINT SUPERSTRUCTURE						
STRAIGHTEN/REPLACE MEMBERS						
WASHING						
SHOTCRETE REPAIRS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION	2011	{Remove drift from pier. May 10, 2009 CP inspection}				
OTHER ACTION	2011	Repair undermining at SW and SE approx 1m3 grout				
OTHER ACTION	2011	{Reset hazard markers to standard height. May 10, 2009 CP inspection}				
OTHER ACTION	2011	{Repair 1 cracked coverplate weld. May 10, 2009 CP inspection}				
OTHER ACTION	2011	{Reduce inspection cycle to coincide with closest hwy inspection cycle so this bridge can be inspected every 21 months until bearings are repaired. May 10, 2009 CP inspection}				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**61.1/44.4**	**Sufficiency Rating (Last/Now) (%)**	**63.5/55.7**	Est. Repl. Yr	2028	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection		Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy					
On 3-Year Program (Y/N)					

Proposed Action			
Previous Inspector's Name	Garry Roberts	Previous Assistant's Name	
Next Inspection Date	20-Apr-2013	Previous Inspection Date	19-Jan-2010
Inspection Cycle (Default) (months)	39		
Comment			