Bridge Inspection

Bridge File Number	78808 -1 Bridge	Form Type	PSR
Year Built/Year Supstr	1978/1978	Lot No.	2
		Inspector Name	Shane Hall
Bridge or Town Name	COALSPUR	Inspector Class	BR CLS A
Located Over	CNR	Assistant Name	
Located On	47:06 C1 0.000	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Oct-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 33 TWP 48 RGE 21 W5M	Data Entry Date	19-Nov-2012
Longitude, Latitude	-117:01:11, 53:10:57	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	12-Nov-2012
Contract Main. Area	CMA13	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	14.6 / 50 deg. (RHF)	Dept. Review Date	20-Nov-2012
AADT/Year	1,020 / 2011 (A)	Follow-Up By	
Road Classification	RAU-213.4-120		
Detour Length (km)	50		

Allowable Load (t):	Single	CS1 28	Semi	CS2 49	Train	CS3 62	---> On Critical Spans --->Critical Member
Design Loading:		HS25					---> Primary Span

Posting Information

Required Vert. Clearance Posting (m)											
Posted Vertical Clearance (Y/N)				No							
Posted:	Lane	EB	On Bridge (m)		In Advance (Y/N)		Lane	WB	On Bridge (m)		In Advance (Y/N)
Remarks	Not required. Track measure = 7.12m.										

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	CS3 allowable is below legal limit.							

Hazard Marker At Bridge (Y/N)	Yes
Remarks	
Other Sign Types	Information, 25 kph curve SB, Winding Road NB.

Utilities (Located at)

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE		
Telephone	East r/w.	Gas	
Power	5 wires 30m East, 3 wires crossing 50m North.	Municipal	
Others	Geotech settlement gauges @ South bank.	Problem (Y/N)	No
Remarks			

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	90 degree corner 30m South, speed reduced to 25 kph; signage in place.
Vertical Alignment		4	6	
Roadway Width (m)	12.400			Shallow pot holes along N abut. deck joint.-photo
Approach Bump		7	5	
Guardrail (Y/N)	Yes			Not thrie beam transition. Broken post at SW corner.-photo
Guardrail		4	4	
Length (m)	24.800			
Current Standard (Y/N)	No			
Termination Type	Turned Down			
Drainage		5	5	
Approach Road General Rating		**4**	**4**	

Superstructure

Bridge Component		Last	Now	Explanation of Condition
(Primary Span : **RD, 3 Spans, Lengths(m): 22.9-24.4-21.3, A-Ident Number:**)				
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	5	Chipseal over HDC.
(Material Type : **CONCRETE - CONVENTIONAL CHIP SEAL COAT**)				
(Thickness(mm) : **50**)				
Lateral Connection Problem (Y/N)	No			
Deck Top		N	N	
Deck Rideability		7	8	
Deck Joints		4	4	South abutment fingers not seated level, up to 10mm above deck and misaligned due to rotation movement of deck due to skew forces. P1, P2, A2 - 25mm AIFB. South deck joint drain trough severely rusted.-08-Nov-2010 Small potholes along North abutment joint - photo. Leakage through fiberboard at piers is evident with water staining on caps and girder undersides.-photo
Temperature (deg. C)	4			
(Expansion Type : **FINGER PLATES**)				
(Fixed Type : **ASPHALTIC FIBRE BOARD**)				

Gap Size (mm)	Gap Location
155	South abutment-finger plate
25	Pier 1-AIFB
25	Pier 2-AIFB
25	North abutment-AIFB

Deck Drainage		4	4	Deck at peak of crest curve. Seepage at finger plates allows water onto A1 seat. Caps and girder ends stained below all joints. No deck drains.
Drains Clogged (Y/N)	No			
Curbs/Median		4	4	Curb C.J. not sealed. SW spalling @ waterstop joints, rust staining, spall at NE joint - photo. Delam at W curb over P2.-photo
(Curb Type : **Standard**)				
Scaling (Percent Area)	8			
Bridge Rail		5	4	Nuts & washers missing on a single anchor bolt at 12 locations. Along West railing - photo. Rust staining along bridge rail post base plates (100% of posts). Dirty. Splice bolts missing in numerous locations on rails.-photo
(Type : **GALVANIZED STEEL BRIDGE TUBE**)				
Bridge Rail Posts		3	3	
(Type : **GALVANIZED POST STEEL;GALVANIZED POST STEEL**)				
Bridge Rail/Posts Coating		7	7	
(Type : **GALVANIZED**)				
Sidewalk		X	X	

Girder Detail Ratings				
	N (count)	1 (count)	2 (count)	3 (count)
Last	0	0	0	1
Now				2

Girders		3	3	G1/S1, has vertical cracks on end with rust stains - photo. Narrow diag. cracks at S end G13.-photo
Cracking (Y/N)	Yes			
Spalling (Percent Area)	0			
(Number Of Girders : **39**)				

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **RD, 3 Spans, Lengths(m): 22.9-24.4-21.3, A-Ident Number:**)				
Diaphragms/Cross Frame		X	X	
Bearings		4	4	Some neoprene pads shifted & not bearing fully on plate. Bearing pads distorted due to skew.
Temperature (deg. C)	8			
(Expansion Type : **REINFORCED NEOPRENE BEARING WITH TEFLON AND STAINLESS STEEL**)				
(Fixed Type : **REINFORCED PAD BEARING**)				
Coating Adequate (Y/N)	Yes			
Functioning (Y/N)	Yes			
Deck Underside		7	4	Stains from train exhaust middle span.
Stains (Percent Area)	20			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		**3**	**3**	

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Abutments				
Bearing Seats/Caps		4	4	SW corner cracked under S1G1. SW corner spalled.-photo Medium vertical cracks with rust stains at A1 under G2,3,4,5,6,7, & A2 under G5 & 6.
(Type : **CONCRETE**)				
Backwalls/Breastwalls		5	5	
Wingwalls		5	4	Parging on SW wingwall failing.
Piles		N	N	18 H-piles (staggered/battered) per abutment.
Paint/Coating		5	5	Top of abut seats sealed.
Abutment Stability		5	5	
Scour/Erosion		4	5	
Piers/Bents				
(Type : **PIER-COLUMN**)				Rust spots, delam cracks @ East ends both piers.-photo Stains at ends and underside of P1 cap from leakage at A1 FB joint - photos. Wide horiz. cracks under G3,G11,G13@P2. Water staining at P2 from leakage through fiberboard.
Bearing Seats/Caps		4	4	
(Type : **CONCRETE**)				
(Total Number of Bearing Piles : **8:8**)				Concrete filled pipe piles.
Pier Shaft/Piles		6	7	
Bracing/Struts/Sheathing		X	X	
Nose Plate		X	X	
Paint/Coating		4	4	Staining from train exhaust, paint peeling on several columns, worst is P1-3 at pier 1, with rust @ bottom. Orange colour.
(Colour Description :)				
(Colour Code :)				
Pier Stability		7	7	
Scour		4	7	
Debris (Y/N)	No			

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Substructure General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Grade Separation				
Road Alignment		X	X	
Traffic Safety Features		X	X	
Type	NONE			
Slope Protection		4	4	Slope protection settled @ both abutments, concrete uneven. North slope down 170 and out 150. South slope down 900. Slope monitor gauges @ South embankment.
(Type : **CONCRETE; CONCRETE**)				
Bank Stability		4	4	Loss of fill under South abutment concrete. Slope protection buckling @ S. toe.
Drainage		4	4	South abutment drainage causing headslope settlement.
Grade Separation General Rating		**4**	**4**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
REPAIR/REPLACE BRIDGE RAIL	2013	Anchor bolt nuts & washers (12). Splice bolts(28)				
GALVANIZE/PAINT BRIDGE RAIL						
SEAL CURBS						
PATCH DECK						
SEAL DECK						
OVERLAY DECK						
REPAIR/REPLACE DECK JOINTS	2013	Confirm is plumbing working at A1. Repair if necessary. Repair potholes at N abut. Seal tops of deck joints at P1, P2 and A2 to prevent water infiltration.				
RESET/ PAINT BEARINGS						
WASHING						
SHOTCRETE REPAIRS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
OTHER ACTION	2013	Replace one broken gurardrail post.				
OTHER ACTION	2013	Repair delaminated/spalled curbs. Seal construction joints in curbs.				
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Structural Condition Rating (Last/Now) (%)	**38.9/38.9**	**Sufficiency Rating (Last/Now) (%)**	**36.5/36.5**	Est. Repl. Yr	2033	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor girder cracking, cracks in pier/abutments.	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	Wayne Cappellani	Previous Assistant's Name	Bryan Wai
Next Inspection Date	16-Jul-2014	Previous Inspection Date	03-Oct-2012
Inspection Cycle (Default) (months)	21		
Comment			