Bridge Inspection

Bridge File Number	13473 -1 Bridge	Form Type	SG
Year Built/Year Supstr	1987/1987	Lot No.	2
		Inspector Name	Arnold Assenheimer
Bridge or Town Name	LUNNFORD	Inspector Class	BR CLS A
Located Over	PEMBINA RIVER, 8.11.84, WATERCRS-ST	Assistant Name	Wade Nanninga
Located On	654:04 C1 5.188	Assistant Class	BR CLS B
Water Body Cl./Year		Inspection Date	19-Aug-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 1 TWP 59 RGE 3 W5M	Data Entry Date	27-Sep-2011
Longitude, Latitude	-114:19:15, 54:03:54	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	21-Sep-2011
Contract Main. Area	CMA10	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	9 / 20 deg. (RHF)	Dept. Review Date	28-Sep-2011
AADT/Year	470 / 2010 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	13		

Allowable Load (t):	Single	CS1 28	Semi	CS2 49	Train	CS3 62	---> On Critical Spans --->Critical Member
Design Loading:		MS300					---> Primary Span

Posting Information

Required Load Posting (t)			Single		Semi		Truck Train	
Posted Loading (t)			Single		Semi		Truck Train	
Posted:	Lane	EB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No
Posted:	Lane	WB	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	Not at correct location on approach rail posts. At varying heights.
Other Sign Types	

Utilities (Located at)

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE		
Telephone	South r/w.	Gas	
Power	1 wire South r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Between 2 curves. Farm approach immediately at SW corner.
Vertical Alignment		8	8	
Roadway Width (m)	9.200			
Approach Bump		7	7	
Guardrail (Y/N)	Yes			Not to proper height (too low), insufficient length - photo. Typical at all corners. Missing splice bolts @ SE & NW (end cap) - photos. SW twisted.
Guardrail		4	4	
Length (m)	10.000			
Current Standard (Y/N)	No			
Termination Type	Turned Down			
Drainage		3	3	Erosion hole @ SW & SE beside curbs - photos.
Approach Road General Rating		**3**	**5**	

Superstructure

Bridge Component	Last	Now	Explanation of Condition
(Primary Span : **WG, 3 Spans, Lengths(m): 30-38-30, A-Ident Number: A1081-01**)			
Special Features			
Special Feature		X	
(Type :)			
Special Feature		X	
(Type :)			
Wearing Surface/Deck Top Detail Ratings			

	N (%)	1 (%)	2 (%)	3 (%)
Last				5
Now	0.0	0.0	0.0	5.0

Wearing Surface	3	3	Narrow/medium longitudinal & transverse cracking, some sealed, some not. Local unravelling/potholes at various locations in both lanes, holding water - photo.
(Material Type : **ACP**)			
(Thickness(mm) : **50**)			
Deck Top	N	N	
Deck Rideability	6	6	
Deck Joints	3	3	2 bolts missing broken East abutment. (EBL is incorrectly installed. 2001/08/14)
Temperature (deg. C) 20			
(Expansion Type : **ARMOURED GLAND (WABO UNDER FINGER OR SLIDING PLATES)**)			
(Fixed Type :)			

Gap Size (mm)	Gap Location
25	East
60	West

Deck Drainage	8	8	
Drains Clogged (Y/N) No			
Curbs/Median	7	7	Transverse cracks 500-1200 typical. Outside of curbs are cracked, rust stains and efflorescence.
(Curb Type : **Standard**)			
Scaling (Percent Area) 0			
Bridge Rail	9	9	Bridgerail post grout pad delaminating approx 2% of posts - photo.
(Type : **BRIDGE TUBE;GALVANIZED STEEL BRIDGE TUBE**)			
Bridge Rail Posts	5	4	
(Type : **GALVANIZED POST STEEL**)			
Bridge Rail/Posts Coating	8	8	
(Type : **GALVANIZED**)			
Sidewalk	X	X	
Girder/Beam			
Cover Plate	X	X	
Flange	9	9	
Web	9	9	
Stiffeners	9	9	
Splice	9	9	
Weld	9	9	
Diaphragms/Cross Frame	9	9	

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **WG, 3 Spans, Lengths(m): 30-38-30, A-Ident Number: A1081-01**)				
Paint Condition		9	9	Weathering steel.
(Colour Description :)				
(Colour Code :)				
Touchup Required (Y/N)	No			
Bearings		4	4	A1G1& G3 neoprene pad with horizontal narrow crack. - photo. Bearings on piers viewed with binoculars.
Temperature (deg. C)	20			
(Expansion Type : **POT BEARING**)				
(Fixed Type : **REINFORCED NEOPRENE BEARING WITH TEFLON AND STAINLESS STEEL**)				
Coating Adequate (Y/N)	Yes			
Functioning (Y/N)	Yes			
Deck Underside		7	6	Few narrow cracking.
Stains (Percent Area)	0			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		**8**	**4**	

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Abutments				
Bearing Seats/Caps		8	8	
(Type : **CONCRETE**)				
Backwalls/Breastwalls		8	8	
Wingwalls		7	7	
Piles		N	N	
Paint/Coating		4	6	
Abutment Stability		9	9	
Scour/Erosion		8	8	
Piers/Bents				
(Type : **PIER-SOLID**)				Couple pop outs east pier west face, (could have been from gun shots).
Bearing Seats/Caps		8	8	
(Type : **CONCRETE**)				
(Total Number of Bearing Piles : **0:0**)				Medium vertical crack both piers & random narrow cracking.
Pier Shaft/Piles		7	7	
Bracing/Struts/Sheathing		X	X	
Nose Plate		6	6	Slight scaling or abrasion from ice just below nose plate.
Paint/Coating		6	6	
(Colour Description :)				
(Colour Code :)				
Pier Stability		9	9	
Scour		N	N	
Debris (Y/N)	No			

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Substructure General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel				
(U/S Direction : **S**)				
(D/S Direction : **N**)				
Alignment		7	6	
Bank Stability		5	5	
HWM (m below Top of Curb)				Vertical cut bank @ SW bank . Not affecting bridge.
Drift (Y/N)	Yes			HWM not visible.
Slope Protection		8	7	Riprap in top portion of West headslope only. Most of east headslope natural.
(Type : **RIP RAP; NATURAL**)				
Guidebank/Spurs		X	X	
Adequacy of Opening		9	9	
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**5**	

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	2011	Patch deck ACP delam/potholes, seal cracks.				
SEAL DECK						
OVERLAY DECK						
REPAIR/REPLACE DECK JOINTS	2011	Replace missing/broken cover plate bolts and tighten loose bolts.				
RESET/ PAINT BEARINGS	2011	Replace A1G1/G3 neoprene pad at major rehab.				
REPAINT SUPERSTRUCTURE						
STRAIGHTEN/REPLACE MEMBERS						
WASHING						
SHOTCRETE REPAIRS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
OTHER ACTION	2011	Upgrade approach guardrail to meet standard, install splice bolt where missing.				
OTHER ACTION	2011	Plug erosion holes @ SW & SE corners.				
OTHER ACTION	2011	Reinstall hazard markers to meet standard.				
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**83.3/61.1**	**Sufficiency Rating (Last/Now) (%)**	**63.2/62.2**	Est. Repl. Yr	2055	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor bridgerail post grout pad delam.	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	Dave Lam	Previous Assistant's Name	
Next Inspection Date	19-Nov-2014	Previous Inspection Date	07-May-2008
Inspection Cycle (Default) (months)	39		
Comment			