Bridge Inspection

Bridge File Number	73202 -1 Bridge	Form Type	PCS
Year Built/Year Supstr	1969/1969	Lot No.	2
		Inspector Name	Todd Warshawski
Bridge or Town Name	CADOMIN	Inspector Class	BR CLS B
Located Over	LUSCAR CREEK, 8.11.107.53, WATERCRS-ST	Assistant Name	
		Assistant Class	
Located On	40:28 C1 0.631	Inspection Date	30-Oct-2012
Water Body Cl./Year		Data Entry By	Theresa Lacusta
Navigabil. Cl./Year		Data Entry Date	30-Nov-2012
Legal Land Location	NE SEC 17 TWP 47 RGE 23 W5M	Reviewer Name	Eric Carcoux
Longitude, Latitude	-117:19:31, 53:03:22	Review Date	28-Nov-2012
Road Authority	Alberta Transportation (AIT)	Dept. Reviewer Name	Brent Herrick
Contract Main. Area	CMA13	Dept. Review Date	06-Dec-2012
Clear Roadway/Skew	8.2 /	Follow-Up By	
AADT/Year	210 / 2011 (A)		
Road Classification	RCU-209G-90		
Detour Length (km)	83		

Allowable Load (t):	Single	CS1 30 GIRDER	Semi	CS2 52 GIRDER	Train	CS3 75 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	Information, Missing "Luscar Creek" ID @ NW corner.

Utilities (Located at)

Utility Attachments			
Telephone	East & West r/w, West overhead.	Gas	
Power	3 wires West approx 50 m.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Cadomin intersection 400m South. Winding road to the North at bottom of steep grade (est 6%).
Vertical Alignment		4	4	
Roadway Width (m)	8.200			Potholes @ centreline at both ends of bridge.-03-Oct-2012
Approach Bump		4	5	
Guardrail (Y/N)	Yes			Insufficient length & posts, minor dents. TD end not flared, in straight line, typical all corners. SE - damaged turndown end; 3 split TT posts. NW & SW - 1 split TT post.-03-Oct-2012 Not thrie beam. Under snow.
Guardrail		4	N	
Length (m)	30.400			
Current Standard (Y/N)	No			
Termination Type	Turned Down			
Drainage		4	N	Windrow under approach rails impedes approach drainage.-03-Oct-2012
Approach Road General Rating		**4**	**4**	

Superstructure

Bridge Component				Last	Now	Explanation of Condition
(Primary Span : **HC, 1 Spans, Lengths(m): 8.5, A-Ident Number:**)						
Special Features						
Special Feature					X	
(Type :)						
Special Feature					X	
(Type :)						
Wearing Surface/Deck Top Detail Ratings						
	N (%)	1 (%)	2 (%)	3 (%)		Heavy buildup of garvel in gutters.-03-Oct-2012
Last	30	0	0	0		
Now	100.0					
Wearing Surface				X	X	(Cracks visible in connection pocket grout.-05-Feb-2009)
(Material Type :)						
(Thickness(mm) :)						
Lateral Connection Problem (Y/N)			Yes			
Deck Top				5	N	Heavily abraided/severe scaling by gravel.- Feb, 2009
Deck Rideability				7	7	
Deck Joints				4	N	Damaged buffer angles @ A2G7, A1G3 & G5.-03-Oct-2012 Snow covered.
Bump (Y/N)			No			
Deck Drainage				5	N	Heavy buildup 25 to 50mm depth of gravel in gutters.-03-Oct-2012
Drains Clogged (Y/N)			Yes			
Curbs/Median				6	N	Snow covered.
(Curb Type : **Standard**)						
Scaling (Percent Area)			0			
Bridge Rail				4	4	Single layer. Splice not at post.-photo
(Type : **FLEX BEAM;GALVANIZED STEEL FLEX BEAM**)						
Bridge Rail Posts				4	4	
(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	0		
Now						
Girders				4	4	G2 - wide cracks both legs in centre;one leg in AZ G2/G3 - spalling center section above main longitudinal rebar - photo. G8/G9/G10 - wide cracks & spalling centre section. G2 + G3 main bar has 10% section loss. (Cracks visible in connection pocket grout.-05-Feb-2009)
Last Complete Inspection Date			30-Oct-2012			
Cracking (Y/N)			Yes			
Spalling (Percent Area)			5			
Lift or Connector Pocket Grouted (Y/N)			Yes			
(Number Of Girders : **10**)						
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			
(Extended Backwall Piles (Y/N) : **Y**)			
(Extended Backwall Piles Spacing(mm) : **1600**)			
(Total Number of Caps/Corbels : **3:3**)			2 - 350 x 300 TT caps on 300 x 300 subcap, 6 total. Vertical crack through A2 subcap @ W. end.
Bearing Seats/Caps/Corbels Detail Ratings			
N (count) / 1 (count) / 2 (count) / 3 (count)			
Last 0 / 0 / 0 / 0			
Now			
Bearing Seats/Caps/Corbels	4	4	
(Type : **TREATED TIMBER**)			
(Depth(mm) : **350**)			
(Width(mm) : **300**)			
Backwalls/Breastwalls	6	6	Slight heaving @ A2P3 - no loss of material.
Greatest Height (m) 2.70			
Wingwalls	5	4	NW corner leaning slightly. Damaged tin top NW.
(Total Number of Bearing Piles : **9:9**)			Minor checks on several piles.
Piles Detail Ratings			
N (count) / 1 (count) / 2 (count) / 3 (count)			
Last 0 / 0 / 0 / 0			
Now			
Piles	5	5	
Paint/Coating	X	X	
Abutment Stability	6	6	
Scour/Erosion	7	7	
Piers/Bents			
(Type :)			
(Total Number of Caps/Corbels :)			
Bearing Seats/Caps/Corbels Detail Ratings			
N (count) / 1 (count) / 2 (count) / 3 (count)			
Last 0 / 0 / 0 / 0			
Now			
Bearing Seats/Caps/Corbels	X	X	
(Type :)			
(Depth(mm) :)			
(Width(mm) :)			
(Total Number of Bearing Piles :)			
Piles Detail Ratings			
N (count) / 1 (count) / 2 (count) / 3 (count)			
Last 0 / 0 / 0 / 0			
Now			
Pier Shaft/Piles	X	X	
Greatest Height (m)			
Bracing/Struts/Sheathing	5	5	2 - double 300 x 75 TT struts. 5 - 150 x 250 TT struts.- 1 with minor split. P4 & P6 - struts bowing 25mm.
Nose Plate	X	X	
Paint/Coating	X	X	
(Colour Description :)			
(Colour Code :)			

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Pier Stability		X	X	
Scour		X	X	
Debris (Y/N)	No			
Substructure General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel				
(U/S Direction : **W**)				Sharp turn 20m d/s.
(D/S Direction : **E**)				
Alignment		7	5	
Bank Stability		7	5	CUt/vertical bank 20m d/s.
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			
Slope Protection		6	6	
(Type : **NATURAL; NATURAL**)				
Guidebank/Spurs		X	X	
Adequacy of Opening		7	7	
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**5**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
REPAIR/REPLACE BRIDGE RAIL	2013	Replace damaged end in SE approach rail; 3 split TT posts @ SE & 1 split TT post @ NW & SW.				
SEAL CURBS						
PATCH DECK						
OVERLAY DECK						
STRAIGHTEN/REPLACE MEMBERS						
WASHING	2013	Annually wash deck surface, gutters & flush deck drains.				
SHOTCRETE REPAIRS						
CORE TIMBER CAPS/CORBELS	2013	Consider Level II timber coring on all TT caps & piles.- low priority.				
REPAIR/REPLACE TIMBER CAPS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL STRUTS						
OTHER ACTION	2013	Recommend assessment of girders to determine repair vs replacement. Consider deck o/l to extend service life after girders are repaired/replaced.-low priority.				
OTHER ACTION	2013	Removal of windrows under approach rail to improve approach road drainage.				
OTHER ACTION	2013	Consider installation of double layered flexbeam & properly lapped/spliced.				
OTHER ACTION	2013	Replace missing river ID sign @ NW.-low priority.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**51.8/49.3**	Est. Repl. Yr	2020	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	Bryan Wai	Previous Assistant's Name	Junaid Iqbal
Next Inspection Date	30-Jul-2014	Previous Inspection Date	03-Oct-2012
Inspection Cycle (Default) (months)	21		
Comment			