

Bridge Inspection											
Bridge File Number	75332 N-1 Bridge					Form Type	SG				
Year Built/Year Supstr	1962/1962					Lot No.	2				
Bridge or Town Name	RED DEER					Inspector Name	Owen Salava				
Located Over	2A:16 R1 24.395;2A:16 L1 24.395					Inspector Class	BR CLS A				
Located On	2:24 R1 25.996					Assistant Name					
Water Body Cl./Year						Assistant Class					
Navigabil. Cl./Year						Inspection Date	18-Mar-2013				
Legal Land Location	SE SEC 5 TWP 38 RGE 27 W4M					Data Entry By	Marcia Chavez				
Longitude, Latitude	-113:49:20, 52:13:58					Data Entry Date	28-Mar-2013				
Road Authority	Alberta Transportation (AIT)					Reviewer Name	John O'Brien				
Contract Main. Area	CMA19					Review Date	23-Mar-2013				
Clear Roadway/Skew	12.2 / 20 deg. (RHF)					Dept. Reviewer Name	Chris Black				
AADT/Year	24,270 / 2011 (A)					Dept. Review Date	09-Apr-2013				
Road Classification	RFD-412.4-130					Follow-Up By					
Detour Length (km)	1										
Allowable Load (t):	Single	CS1 71 GIRDER			Semi	CS2 106 GIRDER		Train	CS3 150 GIRDER		----> On Critical Spans ---->Critical Member
Design Loading:	HS20					----> Primary Span					

Posting Information												
Required Vert. Clearance Posting (m)			UNDER: 2A L1 6.2m, 2A R1 6.2m									
Posted Vertical Clearance (Y/N)			Yes									
Posted:	Lane	NB	On Bridge (m)	6.2	In Advance (Y/N)	Yes	Lane	SB	On Bridge (m)	6.2	In Advance (Y/N)	Yes
Remarks												
Required Load Posting (t)			Single		Semi			Truck Train				
Posted Loading (t)			Single		Semi			Truck Train				
Posted:	Lane	EB	At Junction (Y/N)		In Advance (Y/N)			At Bridge (Y/N)				
Posted:	Lane	WB	At Junction (Y/N)		No	In Advance (Y/N)		No	At Bridge (Y/N)			
Remarks			Not required.									

Hazard Marker At Bridge (Y/N)	No											
Remarks												
Other Sign Types			Route									

Utilities (Located at)												
Utility Attachments												
Telephone						Gas						
Power						Municipal						
Others	Light standards all 4 corners. Fibre optic cable under South span.					Problem (Y/N)	No					
Remarks												

Approach Road					
		Last	Now	Explanation of Condition	
Horizontal Alignment		6	6	Curve @ West. On crest curve.	
Vertical Alignment		6	6		
Roadway Width (m)	12.000			Minor pothole at E paving lip.	
Approach Bump		7	7		
Guardrail (Y/N)	Yes				
Guardrail		7	7		
Length (m)	99.000				
Current Standard (Y/N)	Yes				
Termination Type	Turn Down				
Drainage		6	4	Erosion along SE wingwall.	
<b>Approach Road General Rating</b>		<b>6</b>	<b>6</b>		

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : <b>RB, 4 Spans, Lengths(m): 14-14.2-14.2-14, A-Ident Number: A0381-01;A0381-02;A0381-03;A0381-04</b> )					
<b>Special Features</b>					
Special Feature			X		
(Type : )					
Special Feature			X		
(Type : )					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
<b>Last</b>	0	0	0	0	
<b>Now</b>	15.0	0.0	0.0	0.0	
Wearing Surface		6	6	Numerous narrow longitudinal cracks in overlay & appears to be over girder lines.	
(Material Type : <b>CONCRETE</b> )					
(Thickness(mm) : <b>50</b> )					
Deck Top		N	N		
Deck Rideability		7	7		
Deck Joints		6	6	Missing plow defectors, 12 total. 4 E abut, 2 E pier, 2 W pier, 3 W abut & 1 centre pier. Not needed for skew. Paving lip deteriorating on road side of E abut.	
Temperature (deg. C)		-10			
(Expansion Type : <b>GLAND (WABO-MAUER, TRANSFLEX, ETC)</b> )					
(Fixed Type : <b>GLAND (WABO-MAUER, TRANSFLEX, ETC)</b> )					
Gap Size (mm)		Gap Location			
74		E abut			
72		E pier			
76		C pier			
74		W pier			
71		W abut			
Deck Drainage		4	5	No drains. Rust at ends of girders. No signs of active leakage.	
Drains Clogged (Y/N)					
Curbs/Median		4	N	(Scaling with corrosion staining at P2. 13Sep2011) - Snow covered. Heavy scale at SE corner.	
(Curb Type : <b>Standard</b> )					
Scaling (Percent Area)		1			
Bridge Rail		5	5	Retrofit rail installed.  Some bolts 2 threads less than full into nuts, 20% of original rail.	
(Type : <b>GALVANIZED STEEL VERTICAL BAR</b> )					
Bridge Rail Posts		6	6		
(Type : <b>GALVANIZED POST STEEL;GALVANIZED POST STEEL</b> )					
Bridge Rail/Posts Coating		6	6		
(Type : <b>GALVANIZED</b> )					
Sidewalk		X	X		
<b>Girder/Beam</b>					
Cover Plate		7	7	Minor sag in bottom flange of S2-3.	
Flange		6	6		
Web		7	7		
Stiffeners		7	7		
Splice		7	7		
Weld		7	7		
Diaphragms/Cross Frame		7	7		

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : <b>RB, 4 Spans, Lengths(m): 14-14.2-14.2-14, A-Ident Number: A0381-01;A0381-02;A0381-03;A0381-04</b> )					
Paint Condition		4	4	Corrosion pitting @ girder ends, 20% of end area all girders & superficial corrosion on bottom flanges, 5% of all girders. Orange.	
(Colour Description : )					
(Colour Code : )					
Touchup Required (Y/N)	Yes				
Bearings		5	5	Corrosion pitting, 20% of all bearings.  A1.	
Temperature (deg. C)	-10				
(Expansion Type : <b>STEEL SLIDING PLATES WITH BRONZE PLATE IN BETWEEN</b> )					
(Fixed Type : <b>REINFORCED NEOPRENE BEARING WITH TEFLON AND STAINLESS STEEL</b> )					
Coating Adequate (Y/N)	No				
Functioning (Y/N)	Yes				
Deck Underside		5	5	Some staining.	
Stains (Percent Area)	1				
<b>Span Alignment Problems</b>					
Vertical (Y/N)	No				
Horizontal (Y/N)	No				
<b>Superstructure General Rating</b>		<b>5</b>	<b>5</b>		
Substructure					
Bridge Component		Last	Now	Explanation of Condition	
<b>Abutments</b>					
Bearing Seats/Caps		6	6		
(Type : <b>CONCRETE</b> )					
Backwalls/Breastwalls		6	6		
Wingwalls		5	5		
Piles		N	N		
Paint/Coating		X	6	Some staining.	
Abutment Stability		7	7		
Scour/Erosion		4	4	Minor erosion N hslp & along SE wingwall; bottom of seat exposed.	
<b>Piers/Bents</b>					
(Type : <b>PIER-COLUMN</b> )				Spot rust staining underside of W, E & centre pier.	
Bearing Seats/Caps		6	6		
(Type : <b>CONCRETE</b> )					
(Total Number of Bearing Piles : <b>2:2:2</b> )					
Pier Shaft/Piles		7	7		
Bracing/Struts/Sheathing		X	X		
Nose Plate		X	X		
Paint/Coating		4	4	Minor peeling at pier columns.	
(Colour Description : )					
(Colour Code : )					
Pier Stability		7	7		
Scour		X	X		
Debris (Y/N)	No				

<b>Substructure</b>				
<b>Bridge Component</b>		<b>Last</b>	<b>Now</b>	<b>Explanation of Condition</b>
<b>Substructure General Rating</b>		<b>6</b>	<b>6</b>	
<b>Structure Usage</b>				
		<b>Last</b>	<b>Now</b>	<b>Explanation of Condition</b>
<b>Grade Separation</b>				
Road Alignment		6	6	6mm vertical crack on W side parapet, OK.
Traffic Safety Features		6	6	
Type	Concrete parapet			
Slope Protection		4	4	Slope protection on E hslp only. Minor erosion at W hslp.
(Type : <b>NONE; CONCRETE</b> )				
Bank Stability		7	4	Bottom of A2 seat exposed.
Drainage		5	5	Slope protection undermined at SE wingwall.
<b>Grade Separation General Rating</b>		<b>5</b>	<b>4</b>	

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	2013	Remove scale, patch and seal.					
PATCH DECK							
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS	2013	Patch paving lip, replace plow guards.					
RESET/ PAINT BEARINGS	2015	Recast bearings.					
REPAINT SUPERSTRUCTURE	2015	Touch up girder ends & bottom flange where rusting/peeling.					
STRAIGHTEN/REPLACE MEMBERS							
WASHING							
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION	2013	SW & SE wing erosion 1m3 pitrun.					
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2013	Add fill under and against A2 breastwall.					
OTHER ACTION	2013	Modify wing drainage; direct to troughs.					
OTHER ACTION	2013	Scrape loose sealant off and recoat piers as required.					
OTHER ACTION	2013	Patch approach pothole at W jnt.					
OTHER ACTION	2013	Fill gap at top of concrete slope.					
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>61.1/61.1</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>64.6/62.9</b>	Est. Repl. Yr	2030	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection			Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2014-Rehab						
On 3-Year Program (Y/N)	Y						
Proposed Action	2009.12.14 Seal Cracks and Decks in 2010. RS						
Previous Inspector's Name	Owen Salava		Previous Assistant's Name				
Next Inspection Date	18-Dec-2014		Previous Inspection Date	13-Sep-2011			
Inspection Cycle (Default) (months)	21						

Comment	
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