

Bridge Inspection									
Bridge File Number	75420 W-1 Bridge				Form Type	SG			
Year Built/Year Supstr	1963/1963				Lot No.	1			
Bridge or Town Name	RED DEER				Inspector Name	Owen Salava			
Located Over	2:24 R1 33.058;2:24 L1 33.000				Inspector Class	BR CLS A			
Located On	11:12 L1 35.164				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	19-Mar-2013			
Legal Land Location	NW SEC 19 TWP 38 RGE 27 W4M				Data Entry By	Marcia Chavez			
Longitude, Latitude	-113:51:42, 52:17:14				Data Entry Date	30-Mar-2013			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	John O'Brien			
Contract Main. Area	CMA19				Review Date	24-Mar-2013			
Clear Roadway/Skew	15.3 / -20 deg. (LHF)				Dept. Reviewer Name	Chris Black			
AADT/Year	26,740 / 2011 (A)				Dept. Review Date	09-Apr-2013			
Road Classification	RAD-412.4-120				Follow-Up By				
Detour Length (km)	1								
Allowable Load (t):	Single		Semi		Train		----> On Critical Spans ---->Critical Member		
Design Loading:	HS20				----> Primary Span				

Posting Information													
Required Vert. Clearance Posting (m)		UNDER: 2 L1 5.2m, 2 R1 5.2m											
Posted Vertical Clearance (Y/N)		Yes											
Posted:	Lane	NB	On Bridge (m)	5.2	In Advance (Y/N)	Yes	Lane	SB	On Bridge (m)	5.2	In Advance (Y/N)	Yes	
Remarks		Advance High Load Warning System. Measured 5.350m Northbound.											
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)	No			
Remarks		Not required.											
Hazard Marker At Bridge (Y/N)		No											
Remarks		Not required.											
Other Sign Types		Route, Speed											

Utilities (Located at)									
Utility Attachments									
Telephone	Yes - no marker.				Gas				
Power	Street lights @ NE/NW corners.				Municipal				
Others	Light conduit under bridge.				Problem (Y/N)	No			
Remarks									

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Bridge plaque installed near bottom of both concrete slope protection.
Vertical Alignment		7	7	
Roadway Width (m)	14.000			Non-standard transition to bridgerail @ A2.
Approach Bump		6	6	
Guardrail (Y/N)	Yes			
Guardrail		7	7	
Length (m)	76.000			
Current Standard (Y/N)	No			
Termination Type	Turn Down			
Drainage		5	5	
Approach Road General Rating		7	7	

Superstructure								
Bridge Component		Last	Now	Explanation of Condition				
(Primary Span : FR, 5 Spans, Lengths(m): 13.4-24.4-7.6-24.4-13.4, A-Ident Number: A0411-01)								
Special Features								
Special Feature			X					
(Type :)								
Special Feature			X					
(Type :)								
Wearing Surface/Deck Top Detail Ratings								
	N (%)	1 (%)	2 (%)	3 (%)	Snow along curbs.			
Last	0	0	0	0				
Now	10.0	0.0	0.0	0.0				
Wearing Surface			5	5	Chip seal on HD concrete. Chipseal worn off 25%.			
(Material Type : CONCRETE - CONVENTIONAL CHIP SEAL COAT)								
(Thickness(mm) : 50)								
Deck Top			N	N				
Deck Rideability			7	7				
Deck Joints			3	3	Concrete spalling off under A1 joint - photo.			
Temperature (deg. C)		0						
(Expansion Type : ARMOURED GLAND (WABO UNDER FINGER OR SLIDING PLATES))								
(Fixed Type :)								
Gap Size (mm)		Gap Location						
75		E. abut						
81		W. abut						
Deck Drainage			7	4	No drains. Water affects slopes at concrete revetment. There is a void near SE seat under concrete slab.			
Drains Clogged (Y/N)								
Curbs/Median			4	4	10% of exterior fascia has delam cracks. Cracking/spalling @ NE, SE corners - photos.			
(Curb Type : Standard)								
Scaling (Percent Area)		0						
Bridge Rail			5	5	Minor bent vertical in N4, N5 & N21, no need to repair at this time. Bent S15 A/B and nut not engaged. Grout deteriorating.			
(Type : GALVANIZED STEEL VERTICAL BAR)								
Bridge Rail Posts			4	4				
(Type : GALVANIZED POST STEEL; GALVANIZED POST STEEL)								
Bridge Rail/Posts Coating			7	4				
(Type : GALVANIZED)								
Sidewalk			X	X				
Girder/Beam								
Cover Plate			X	X	S2G8 HLD deflects S ~150mm bending flange upwards ~20mm.			
Flange			5	5				
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 : FR, 5 Spans, Lengths(m): 13.4-24.4-7.6-24.4-13.4, A-Ident Number: A0411-01)				
Paint Condition		5	5	Minor scrapes from high loads. Caulked but still effective.
(Colour Description : BROWN)				
(Colour Code : 504-106)				
Touchup Required (Y/N)	No			
Bearings		4	4	Pin retainer is bent, typical @ W abut only, 2 bent @ E abut. Missing bolt @ A1G3. Expansion: A1, A2. Fixed: P1,P2 Large grout pads delaminating below rigid frame bents.
Temperature (deg. C)	0			
(Expansion Type : SLIDING PLATE)				
(Fixed Type : PINNED BEARING)				
Coating Adequate (Y/N)	Yes			
Functioning (Y/N)	Yes			
Deck Underside		4	4	Surface spalls & efflorescence moderate throughout @ transverse cracks. Exposed rebar North side of W & E spans. Formwork left in U/S S1G1/G2.
Stains (Percent Area)	2			
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				
Bearing Seats/Caps		7	7	
(Type : CONCRETE)				
Backwalls/Breastwalls		7	7	
Wingwalls		6	6	
Piles		N	N	
Paint/Coating		X	X	
Abutment Stability		6	6	
Scour/Erosion		X	X	
Piers/Bents				
(Type : PIER-COLUMN)				Rigid frame. Big grout pads are delaminating around steel bearing, minor.
Bearing Seats/Caps		4	4	
(Type : CONCRETE)				
(Total Number of Bearing Piles : 0:0:0:0)				
Pier Shaft/Piles		7	7	
Bracing/Struts/Sheathing		X	X	
Nose Plate		X	X	
Paint/Coating		6	4	Paint peeling with edge corrosion along legs of frame supports. Yellow.
(Colour Description :)				
(Colour Code :)				
Pier Stability		8	8	
Scour		X	X	
Debris (Y/N)	No			
Substructure General Rating		4	4	

Structure Usage				
		Last	Now	Explanation of Condition
Grade Separation				
Road Alignment		8	8	
Traffic Safety Features		5	6	High load advance warning system.
Type	Light/guardrail			
Slope Protection		3	3	Both sides buckling, separated from backwall - photos. Settled towards breastwall.
(Type : CONCRETE; CONCRETE)				
Bank Stability		7	7	
Drainage		6	6	
Grade Separation General Rating		5	6	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2018	Upgrade rail c/w std grout bearing pads.					
GALVANIZE/PAINT BRIDGE RAIL							
RETROFIT BRIDGE RAIL							
SEAL CURBS	2018	Patch spalls @ A2.					
PATCH DECK	2018	Patch deck underside spalls.					
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS	2018	Repair blockout u/s at A1.					
RESET/ PAINT BEARINGS	2018	RegROUT pier bearings.					
REPAINT SUPERSTRUCTURE	2013	Assess painting options.					
STRAIGHTEN/REPLACE MEMBERS	2013	Straighten S2G8.					
WASHING							
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2018	Repair concrete slope protection at both abut.					
OTHER ACTION	2013	Redirect water away from headslope.					
OTHER ACTION	2013	Straighten rail anchor bolt and tighten nut.					
OTHER ACTION	2013	Replace bolt at A1G3.					
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	50.6/51.8	Est. Repl. Yr	2021	Maint. Req. (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	Owen Salava		Previous Assistant's Name				
Next Inspection Date	19-Dec-2014		Previous Inspection Date	14-Sep-2011			
Inspection Cycle (Default) (months)	21						
Comment							