

Bridge Inspection							
Bridge File Number	75335 S-2 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	RED DEER RIVER, 3, WATERCRS-ST			Inspector Class	BR CLS A		
Located On	2:24 L1 30.696			Assistant Name			
Water Body Cl./Year				Assistant Class			
Navigabil. Cl./Year				Inspection Date	19-Mar-2013		
Legal Land Location	NE SEC 13 TWP 38 RGE 28 W4M			Data Entry By	Marcia Chavez		
Longitude, Latitude	-113:51:45, 52:16:04			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 / 10 deg. (RHF)			Dept. Reviewer Name	Chris Black		
AADT/Year	46,200 / 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 45 GIRDER	Semi	CS2 52 GIRDER	Train	CS3 62	----> 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	"No Fishing Off Bridge"							

Utilities (Located at)			
Utility Attachments	POWER UTILITIES-POWER LINE		
Telephone			Gas
Power	Along girder 3 lower flange.		Municipal
Others			Problem (Y/N) No
Remarks	Curb conduit cover plate is off.		

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	
Vertical Alignment		7	7	
Roadway Width (m)	12.000			
Approach Bump		7	7	
Guardrail (Y/N)	Yes			None @ SE. Minor damage to rail @ SW.
Guardrail		5	5	
Length (m)	99.000			
Current Standard (Y/N)	Yes			
Termination Type	Turn Down			
Drainage		4	4	(Erosion at NW under approach slab. 19Dec2011) - Not visible. NW ditch has erosion protection. Erosion at SE,SW hslps.
<b>Approach Road General Rating</b>		<b>7</b>	<b>7</b>	

Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
(Primary Span : <b>WG, 4 Spans, Lengths(m): 39.6-50-50-39.6, A-Ident Number: A0373-02</b> )						
<b>Special Features</b>						
Special Feature			X			
(Type : )						
Special Feature			X			
(Type : )						
Wearing Surface/Deck Top Detail Ratings						
	N (%)	1 (%)	2 (%)	3 (%)	Snow along shoulders.	
<b>Last</b>	0	0	0	0		
<b>Now</b>	5.0	0.0	0.0	0.0		
Wearing Surface			4	4	Chipseal on FRC overlay. Chipseal worn in travel lane, limited traction in wet/cold weather. Transverse cracks at bottom intervals.	
(Material Type : <b>CONCRETE - CONVENTIONAL CHIP SEAL COAT</b> )						
(Thickness(mm) : <b>50</b> )						
Deck Top			N	N		
Deck Rideability			7	7		
Deck Joints			3	3	Both S joint plumbing pipes leak and are eroding the headslope with erosion gullies at S abut.	
Temperature (deg. C)		-13				
(Expansion Type : <b>FINGER PLATES</b> )						
(Fixed Type : )						
Gap Size (mm)		Gap Location				
51			N. abut			
77			S. abut			
Deck Drainage			4	4	Abutment plumbing leaks erode headslope & perhaps adding rust at bearings and girder ends.	
Drains Clogged (Y/N)		No				
Curbs/Median			7	7	Curb now replaced by New Jersey Barriers. Cracks at 0.6m intervals.	
(Curb Type : <b>JERSEY/F SHAPE</b> )						
Scaling (Percent Area)		1				
Bridge Rail			7	7	Some panels have minor bent vertical, no problem.  3 posts on E side have minor dents. Grout under posts delam with void 40%. Both nuts on EP1 & EP2 posts were left high. Concrete New Jersey Barriers added along both curbs negating vertical for defects.	
(Type : <b>GALVANIZED STEEL VERTICAL BAR</b> )						
Bridge Rail Posts			7	7		
(Type : <b>GALVANIZED POST STEEL;GALVANIZED POST STEEL</b> )						
Bridge Rail/Posts Coating			5	5		
(Type : <b>GALVANIZED</b> )						
Sidewalk			X	X		
<b>Girder/Beam</b>						
Cover Plate			X	X	(Cracked floor beam in S2 is sistered. CIF repairs, fatigue cracks repaired in 2011. Corrosion damage at splice arrested in 2011. 19Dec2011).	
Flange			7	7		
Web			7	7		
Stiffeners			7	7		
Splice			5	5		
Weld			7	7		
Diaphragms/Cross Frame			7	7		

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : <b>WG, 4 Spans, Lengths(m): 39.6-50-50-39.6, A-Ident Number: A0373-02</b> )					
Paint Condition		4	4	Extensive blistering. Corrosion bloom on bottom flanges.	
(Colour Description : <b>GREEN</b> )					
(Colour Code : <b>14090</b> )					
Touchup Required (Y/N)	Yes				
Bearings		4	4	Center bearing @ N abut missing 1 anchor bolt, deteriorating bearing pad @ abuts. Over-extended bearing at A1.  Abut bearings show pitting at bearing surfaces, 20% of abut bearings. (Pier bearing pads repaired in 2011. 19Dec2011).	
Temperature (deg. C)	-13				
(Expansion Type : <b>ROCKER BEARING</b> )					
(Fixed Type : )					
Coating Adequate (Y/N)	No				
Functioning (Y/N)	Yes				
Deck Underside		7	7	Moderate efflorescence @ transverse cracks @ ext and @ efflorescence @ South span. Rebar material reflected at underside, S4.	
Stains (Percent Area)	1				
<b>Span Alignment Problems</b>					
Vertical (Y/N)	No				
Horizontal (Y/N)	No				
<b>Superstructure General Rating</b>		<b>4</b>	<b>4</b>	(bearings)	
Substructure					
Bridge Component		Last	Now	Explanation of Condition	
<b>Abutments</b>					
Bearing Seats/Caps		7	7	Debris on A1 seat due to plumbing problem.	
(Type : <b>CONCRETE</b> )					
Backwalls/Breastwalls		7	7		
Wingwalls		4	4	Minor cracking.	
Piles		N	N		
Paint/Coating		X	X		
Abutment Stability		7	7		
Scour/Erosion		3	3	Erosion gully at S abut at trough drains.	
<b>Piers/Bents</b>					
(Type : <b>PIER-SOLID</b> )				Vertical cracks with staining. 95% are sealed with epoxy. Cracks caulked.	
Bearing Seats/Caps		7	7		
(Type : <b>CONCRETE</b> )					
(Total Number of Bearing Piles : <b>0:0:0</b> )					
Pier Shaft/Piles		7	7		
Bracing/Struts/Sheathing		X	X		
Nose Plate		7	7		
Paint/Coating		4	4	Aluminum paint on nose plate 75% worn off at P1,2.	
(Colour Description : )					
(Colour Code : )					
Pier Stability		8	8		
Scour		N	N		
Debris (Y/N)	No				
<b>Substructure General Rating</b>		<b>7</b>	<b>7</b>		

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel</b>				
(U/S Direction : <b>W</b> )				
(D/S Direction : <b>E</b> )				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			
Slope Protection		7	7	Concrete slope protection on headslope. Class II on bank @ South. Concrete @ North abutment. Separated from abutment 130mm @ North abutment.
(Type : <b>CONCRETE; RIP RAP; CONCRETE</b> )				
Guidebank/Spurs		X	X	
Adequacy of Opening		8	8	
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>7</b>	<b>7</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	Seal parapets.					
PATCH DECK							
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS	2013	Repair South abutment plumbing so pipes don't leak & repair erosion on headslope.					
RESET/ PAINT BEARINGS	2013	Install anchor bolt @ center bearing N abut. Repair grout pads. Reset S bearing. Paint bearings.					
REPAINT SUPERSTRUCTURE	2013	Assess painting alternatives.					
STRAIGHTEN/REPLACE MEMBERS							
WASHING	2013	Abut drains & seats; clean & seal abuts.					
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION	2013	Erosion gullies at S abut.					
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2013	Fill void at NW approach slab, if not yet done.					
OTHER ACTION	2013	Blast & paint pier nose plates.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>61.1/61.1</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>60.3/60.3</b>	Est. Repl. Yr	2040	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	(At next Lvl 2 monitor floor beam crack in S4, monitor for out-of-plane distortion, and monitor bottom lateral gussets for fatigue. 19Dec2011).		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	Ed Kowal		Previous Assistant's Name				
Next Inspection Date	19-Dec-2014		Previous Inspection Date	19-Dec-2011			
Inspection Cycle (Default) (months)	21						

Comment	
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