

Bridge Inspection									
Bridge File Number	07461 -1 Bridge				Form Type	PSR			
Year Built/Year Supstr	1960/1960				Lot No.	2			
Bridge or Town Name	DUCHESS				Inspector Name	Owen Salava			
Located Over	RED DEER RIVER, 3, WATERCRS-ST				Inspector Class	BR CLS A			
Located On	36:08 C1 32.365				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	17-Jul-2012			
Legal Land Location	NE SEC 32 TWP 22 RGE 14 W4M				Data Entry By	Marcia Chavez			
Longitude, Latitude	-111:53:52, 50:55:06				Data Entry Date	01-Aug-2012			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	John O'Brien			
Contract Main. Area	CMA23				Review Date	31-Jul-2012			
Clear Roadway/Skew	9.1 /				Dept. Reviewer Name	Andrew Smikles			
AADT/Year	1,070 / 2011 (A)				Dept. Review Date	02-Aug-2012			
Road Classification	RCU-209-110				Follow-Up By				
Detour Length (km)	40								
Allowable Load (t):	Single	CS1 73 GIRDER	Semi	CS2 81 GIRDER	Train	CS3 88 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									
Hazard Marker At Bridge (Y/N)	Yes								
Remarks									
Other Sign Types									
Utilities (Located at)									
Utility Attachments	TELEPHONE UTILITIES-PHONE LINE								
Telephone	Under North span.				Gas				
Power					Municipal				
Others	Fibre optic along East curtain wall under curb.				Problem (Y/N)	No			
Remarks									
Approach Road									
			Last	Now	Explanation of Condition				
Horizontal Alignment			5	5	Curves down to bridge at both ends with limited sight distance. No passing.				
Vertical Alignment			5	5					
Roadway Width (m)	10.300				ACP sealed @ approaches.				
Approach Bump			4	6					
Guardrail (Y/N)	Yes								
Guardrail			4	4					
Length (m)	60.000								
Current Standard (Y/N)	No				Insufficient posts, not attached to bridge. NE too low, 300mm to center.				
Termination Type	Turn Down								
Drainage			4	4	Edge spall @ NE drain. SE corner susceptible to water getting under approach slab. Void @ through drain @ SE.				
Approach Road General Rating			5	5					

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : PO, 5 Spans, Lengths(m): 44.5-44.5-45.1-45.1-45.1, A-Ident Number:)					
Special Features					
Special Feature			X		
(Type :)					
Special Feature			X		
(Type :)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
Last	0	0	0	0	
Now	0.0	0.0	0.0	0.0	
Wearing Surface			6	6	Chipseal coat on FRSF concrete o/l. 2009 L2 inspection found 20m2 debonded o/l, generally along the c/l cold jnt.
(Material Type : CONCRETE - CONVENTIONAL CHIP SEAL COAT)					
(Thickness(mm) : 50)					
Lateral Connection Problem (Y/N)		No			
Deck Top			N	N	
Deck Rideability			7	7	
Deck Joints			3	6	
Temperature (deg. C)		28			
(Expansion Type : GLAND (WABO-MAUER, TRANSFLEX, ETC))					
(Fixed Type :)					
Gap Size (mm)		Gap Location			
26		N abut			
64		P1			
54		P2			
60		P3			
56		P4			
47		S abut			
Deck Drainage			3	3	Deck drains good but backwall drains @ both abut seats rusted through causing abut seat scaling & spalling. Repair underway for P3 jnt leakage.
Drains Clogged (Y/N)		No			
Curbs/Median			4	4	Random spalls.
(Curb Type : Standard)					
Scaling (Percent Area)		5			
Bridge Rail			6	6	22 post anchors have nuts with partial bolt projection, worst have all 4 nuts with 3 threads too short. 4 posts have radial spalls starting to curb edge. Curb underside spalls @ both ends of N curtain walls affect post anchors but these posts close to pedestals. Medium scaling of parapets on 5%.
(Type : GALVANIZED STEEL BRIDGE TUBE)					
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	8	0	0	0	
Now	12	0	0	0	
Girders			5	5	Diag. cracks where end tapers to web that start 600mm below top flange & run 1200mm horiz. @ N & S abut, narrow width. Typical shoe plate cracks.
Cracking (Y/N)		Yes			
Spalling (Percent Area)		0			
(Number Of Girders : 20)					

Superstructure				
Bridge Component		Last	Now	Explanation of Condition
(Primary Span : PO, 5 Spans, Lengths(m): 44.5-44.5-45.1-45.1-45.1, A-Ident Number:)				
Diaphragms/Cross Frame		6	6	
Bearings		6	6	P2 is fixed bearing. Abutment 2 almost fully extended North - photo.
Temperature (deg. C)	28			10% paint failure.
(Expansion Type : ROCKER BEARING)				
(Fixed Type : PINNED BEARING)				
Coating Adequate (Y/N)	No			
Functioning (Y/N)	Yes			
Deck Underside		6	6	Staining next to top inside flange of outside girder. Sparse trans. cracks with staining. A few similar stains now @ outside flange @ E fascia.
Stains (Percent Area)	1			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		5	5	
Substructure				
Bridge Component		Last	Now	Explanation of Condition
Abutments				
Bearing Seats/Caps		4	5	Cracking/spalling @ drain pipes - under repair.
(Type : CONCRETE)				
Backwalls/Breastwalls		6	6	
Wingwalls		5	5	
Piles		N	N	
Paint/Coating		5	5	
Abutment Stability		7	7	
Scour/Erosion		7	7	
Piers/Bents				
(Type : PIER-SOLID)				(Delam cracks at top of E end P3 and W end P1 & E end P4. Typical vertical wide crack on all piers. Pier tops starting to scale on seats. Spalling @ N side of P1. 18/July/2008).
Bearing Seats/Caps		5	5	
(Type : CONCRETE)				
(Total Number of Bearing Piles : 0:0:0:0)				Unknown.
Pier Shaft/Piles		7	7	
Bracing/Struts/Sheathing		X	X	
Nose Plate		7	7	
Paint/Coating		4	4	Nose plates have 80% paint failure.
(Colour Description :)				
(Colour Code :)				
Pier Stability		7	7	
Scour		N	N	Turbid water.
Debris (Y/N)	No			
Substructure General Rating		4	5	

Structure Usage				
		Last	Now	Explanation of Condition
Channel				
(U/S Direction : W)				Lateral erosion causing sand bars @ S with migration to N U/S & D/S of bridge. These vertical banks intersect hwy ditch & both working behind rock on hslp.
(D/S Direction : E)				
Alignment		4	4	
Bank Stability		4	4	Steep cut banks. Bank eroding @ NW, abutment armoured with Class 3 rock.
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	Yes			
Slope Protection		6	6	North headslope.
(Type : RIP RAP)				
Guidebank/Spurs		6	6	Nose under attack, ok now.
Adequacy of Opening		7	7	
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		4	4	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2012	Patch North end spalled posts @ curb.					
GALVANIZE/PAINT BRIDGE RAIL							
SEAL CURBS	2012	Patch curb spalls.					
PATCH DECK							
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS							
RESET/ PAINT BEARINGS							
WASHING							
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2012	Repair corner drain at SE & SW, NE & NW backwall drains.					
OTHER ACTION	2012	Raise NE guardrail.					
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	50.0/55.6	Sufficiency Rating (Last/Now) (%)	59.0/61.3	Est. Repl. Yr	2034	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Repair contractor (AB Bridge Works) on site; repairs may all be completed by next inspection.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2005.01.11 Rehab deck in 2020. Bridge should be good until 2045.						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Jason Saly		Previous Assistant's Name				
Next Inspection Date	17-Apr-2014		Previous Inspection Date	31-Mar-2011			
Inspection Cycle (Default) (months)	21						
Comment							