

Bridge Inspection							
Bridge File Number	13170 -1 Bridge			Form Type	TH TT		
Year Built/Year Supstr	1931/1931			Lot No.	1		
Bridge or Town Name	BUFFALO			Inspector Name	Jason Saly		
Located Over	RED DEER RIVER, 3, WATERCRS-ST			Inspector Class	BR CLS A		
Located On	886:02 C1 4.176			Assistant Name			
Water Body Cl./Year				Assistant Class			
Navigabil. Cl./Year				Inspection Date	22-Nov-2010		
Legal Land Location	NW SEC 6 TWP 22 RGE 5 W4M			Data Entry By	Marcia Chavez		
Longitude, Latitude	-110:41:44, 50:50:50			Data Entry Date	07-Jan-2011		
Road Authority	Alberta Transportation (AIT)			Reviewer Name	John O'Brien		
Contract Main. Area	CMA22			Review Date	11-Dec-2010		
Clear Roadway/Skew	5.8 /			Dept. Reviewer Name	Chris Black		
AADT/Year	90 / 2009 (A)			Dept. Review Date	12-Jan-2011		
Road Classification	RLU-210G-90			Follow-Up By			
Detour Length (km)	100						
Allowable Load (t):	Single	CS1 21 STRINGER	Semi	CS2 38 STRINGER	Train	CS3 50 U3L4	----> On Critical Spans ---->Critical Member
Design Loading:	HS20				----> Primary Span		

Posting Information												
Required Vert. Clearance Posting (m)												
Posted Vertical Clearance (Y/N) Yes												
Posted:	Lane	NB	On Bridge (m)	4.5	In Advance (Y/N)	Yes	Lane	SB	On Bridge (m)	4.5	In Advance (Y/N)	Yes
Remarks Damaged SB VOC sign. Measured 4.71 to 4.73m.												
Required Load Posting (t)			Single	22	Semi	38	Truck Train	50				
Posted Loading (t)			Single	22.0	Semi	38.0	Truck Train	50.0				
Posted:	Lane	NB	At Junction (Y/N)	Yes	In Advance (Y/N)	Yes	At Bridge (Y/N)	Yes				
Posted:	Lane	SB	At Junction (Y/N)	Yes	In Advance (Y/N)	Yes	At Bridge (Y/N)	Yes				
Remarks												

Hazard Marker At Bridge (Y/N)	Yes											
Remarks												
Other Sign Types	ONE TRUCK, STOP FOR ONCOMING. Narrow bridge, windy & steep hill, 80Kph.											

Utilities (Located at)			
Utility Attachments			
Telephone	West side of truss.		Gas
Power			Municipal
Others			Problem (Y/N) No
Remarks			

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Curves both ends. Steep grade & curve @ S. appr.
Vertical Alignment		5	5	
Roadway Width (m)	10.100			200 dp scour hole & 25mm rut @ S. appr.
Approach Bump		4	5	(Overgrown vegetation @ SW 25mm dp ruts + 50mm potholes @ S. appr. 29Jan2010).
Guardrail (Y/N)	Yes			
Guardrail		3	5	Insuff. length.
Length (m)	15.200			NE - incorrect lap.
Current Standard (Y/N)	No			
Termination Type	TURNDOWN ENDS			
Drainage		4	N	Snow covered.
<b>Approach Road General Rating</b>		<b>4</b>	<b>5</b>	

Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
(Primary Span : TH, 6 Spans, Lengths(m): 8.5-61-61-61-61-6.1, A-Ident Number: A0150-01;A0150-02;A0150-03;A0150-04)						
<b>Special Features</b>						
Special Feature			X			
(Type : )						
Special Feature			X			
(Type : )						
Wearing Surface/Deck Top Detail Ratings						
	N (%)	1 (%)	2 (%)	3 (%)	Snow covered.	
<b>Last</b>	0			1		
<b>Now</b>	100.0	0.0	0.0	0.0		
Wearing Surface/Deck Top				3	N	(2 holes in deck & stripdeck ends rotting & loose in various locations. 14Jun2007).  (photo) - 10%.
(Material Type : <b>UNTREATED TIMBER</b> )						
(Plank Thickness(mm) : <b>75</b> )						
(Plank Width(mm) : <b>300</b> )						
Deck Rideability			5	5		
Deck Joints			X	X		
Temperature (deg. C)		-20				
(Expansion Type : )						
(Fixed Type : )						
Gap Size (mm)		Gap Location				
Curbs/Wheel Guards			4	N	(10 WG blocks split and 5 WG bolts 460 X 300 X 150 TT block damaged but functioning. 14Jun2007).	
(Curb Type : <b>Standard</b> )						
(Type : <b>TREATED TIMBER</b> )						
(Thickness(mm) : <b>100</b> )						
(Width(mm) : <b>300</b> )						
Bridge Rail			4	4	Double layer, torched holes incorrect splice lap.  70mm HSS tube blocking. 4 blocks rotated. 1 post bolt missing @ S4E. Superficial corrosion/pitting.	
(Type : <b>GALVANIZED STEEL FLEX BEAM</b> )						
Bridge Rail Posts/Blocking			4	4		
(Type : <b>TREATED TIMBER;TREATED TIMBER</b> )						
Bridge Rail/Posts Coating			5	5		
(Type : <b>GALVANIZED</b> )						
Sidewalk			X	X		

Superstructure							
Bridge Component		Last		Now		Explanation of Condition	
(Primary Span : TH, 6 Spans, Lengths(m): 8.5-61-61-61-61-6.1, A-Ident Number: A0150-01;A0150-02;A0150-03;A0150-04)							
Wide Load Damage (Y/N)	Yes					Minor nicks. All transverse bracing bowed. S3L0U1E - 19 X 120 notch 2.4m above railing. S4L0U1E- 8mm nick @ rail ht. Kinked top bracing from 60mm - 140mm from HLD. (S3U4L5E - 2mm crack under rivet near L5E. S4U9L8W - 3 X 25 gouge @ 1.0m above rail. S5M4L6W - 10 X 450 dent @ rail ht.) (S2U3L3E - 12 X 500 dent on I/S flange. S3U7L7E - 36 X 500 dent @ WG ht. S4U7L7E - 30 X 350 dent @ WG ht. bullet hole @ L7E.) (S2U9U9 - 35 X 600 dent. S3U9U9 - 25 X 600 dent. S4U1U1, U9U9 - 25 X 600 dent. S5U1U1, U9U9 - 30 X 250 dents.) S2L9L10W - 20 X 250 dent + 30 X 500mm dent. S2L8L9E - 30 X 500 dent. S5L7L8E - 35 X 500 dent.  See UT report. 9/bay x 4 spans x 10 bays/span.	
High Load Damage (Y/N)	Yes						
Top Chord		7	7				
Batter Posts		4	4				
Sway Bracings		4	4				
Diagonals		4	4				
Verticals		4	4				
Portals		4	4				
Connections		5	5				
Floor Beams		7	7				
Bottom Chord		4	4				
(No. of Stringers : 360)							
Stringer Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last							
Now							
Stringers			7	7			
(Type : STEEL)							
(Width(mm) : 130)							
(Depth(mm) : 310)							
(Spacing(mm) : 725)							
Paint Condition		4	4			Primer coat is blooming through topcoat appr. 15%. Isolated rust blisters.	
(Colour Description : )							
(Colour Code : )							
Touchup Required (Y/N)	No						
Bearings		4	N			(RN twisted @ S2P2, S5P5. Missing anchor nut @ S2P2E. 14Jun2007). Covered by snow & debris.  Truss crushing into timber stringers at N pier.	
Temperature (deg. C)	-20						
(Expansion Type : ROLLER NEST BEARING)							
(Fixed Type : SLIDING PLATE)							
Functioning (Y/N)	No						
Sub Deck/Deck Underside		6	6			Some split ends.	
(Material Type : TREATED TIMBER)							
(Plank Thickness(mm) : 100)							
(Plank Width(mm) : 300)							
Defects (Percent Area)	5						
<b>Span Alignment Problems</b>							
Vertical (Y/N)	No						
Horizontal (Y/N)	No						
<b>Superstructure General Rating</b>		<b>4</b>	<b>4</b>				
Superstructure							
Bridge Component		Last		Now		Explanation of Condition	
(Secondary Span : TT)							
<b>Special Features</b>							
Special Feature			X				
(Type : )							
Special Feature			X				
(Type : )							

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Secondary Span : TT)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	Snow covered.
Last	0	0	0	0	
Now	100.0	0.0	0.0	0.0	
Wearing Surface/Deck Top			5	N	(Worn @ ends. 14Jun2007).
(Material Type : <b>UNTREATED TIMBER</b> )					
(Plank Thickness(mm) : <b>75</b> )					
(Plank Width(mm) : <b>300</b> )					
Deck Rideability			6	6	
Wheel Guards			4	N	(3 wheelguard blocks split at Span 1 400 X 300 X 90 TT block. 14Jun2007).
(Curb Type : <b>Standard</b> )					
(Type : <b>TREATED TIMBER</b> )					
(Thickness(mm) : <b>100</b> )					
(Width(mm) : <b>300</b> )					
Bridge Rail			4	4	Double layer flexbeam. Incorrect splice lap. Flexbeam not continuous btwn span 5 & 6. Missing 1 bolt @ span 6 W to girder post.
(Type : <b>GALVANIZED STEEL FLEX BEAM</b> )					
Bridge Rail Posts			4	4	
(Type : <b>TREATED TIMBER;TREATED TIMBER</b> )					
Bridge Rail/Posts Coating			6	6	
(Type : <b>GALVANIZED</b> )					
(No. of Stringers : <b>22</b> )					
Stringer Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	5 - 500 X 200 TT interior @ S1. 6 - 520 X 200 TT exterior @ S1. 7 - 500 X 200 TT interior @ S6. 4 - 520 X 200 TT exterior @ S6. S6S6 cracked stringer sistered with 2 - 400 X 200 TT. S1S9 sistered w/2 500x200 TT. 1 stringer patched in North span. 1 stringer (3rd from SE) is twisted.
Last					
Now	0	0	0	0	
Stringers			4	5	
(Type : <b>TREATED TIMBER</b> )					
(Width(mm) : <b>200</b> )					
(Depth(mm) : <b>500</b> )					
(Spacing(mm) : <b>600</b> )					
Sub Deck/Deck Underside			6	6	Split planking @ S1.
(Material Type : <b>TREATED TIMBER</b> )					
(Plank Thickness(mm) : <b>100</b> )					
(Plank Width(mm) : <b>300</b> )					
Defects (Percent Area)		5			
<b>Span Alignment Problems</b>					
Vertical (Y/N)		No			
Horizontal (Y/N)		No			
<b>Superstructure General Rating</b>			<b>4</b>	<b>5</b>	
Substructure					
Bridge Component		Last	Now	Explanation of Condition	
<b>Abutments</b>					
(Extended Backwall Piles (Y/N) : <b>Y</b> )					
(Extended Backwall Piles Spacing(mm) : <b>1300</b> )					

Substructure					
Bridge Component		Last	Now	Explanation of Condition	
(Total Number of Caps/Corbels : 1:1)				1 - 300 X 350 TT cap/abut, 2 total.	
Bearing Seats/Caps/Corbels Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	0	0	0	0	
<b>Now</b>	0	0	0	0	
Bearing Seats/Caps/Corbels			7	7	
(Type : <b>TREATED TIMBER</b> )					
(Depth(mm) : <b>350</b> )					
(Width(mm) : <b>300</b> )					
Backwalls/Breastwalls			7	7	
Greatest Height (m)		1.40			
Wingwalls			7	7	
(Total Number of Bearing Piles : 6:6)				6 BP 300TT/abut, 12 total. 2 EXT P 300TT/abut, 4 total. 2 WW 300TT/abut, 4 total. A1P5 split at top; uneven bearings - 10 mm gap.	
Piles Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	0	0	0	0	
<b>Now</b>	0	0	0	0	
Piles			4	5	
Paint/Coating			X	X	
Abutment Stability			7	7	
Scour/Erosion			7	7	
<b>Piers/Bents</b>					
(Type : <b>PIER-SOLID</b> )					
(Total Number of Caps/Corbels : 1:1:1:1:1)				2 HP350 X 380 corbels/bearing on P1 conc shaft. 1 300TT cap @ P1. N. transv crks across pier 3 cap. 4 - 300 SQ TT stub posts @ P1 supporting S1. Stub posts cracked & banded top + btm. SW SQ TT stub at N pier is ck'd. Single band is corroded.	
Bearing Seats/Caps/Corbels Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	0	0	0	0	
<b>Now</b>	0	0	0	1	
Bearing Seats/Caps/Corbels			6	3	
(Type : <b>CONCRETE</b> )					
(Total Number of Bearing Piles : 0:0:0:0:0)				Buried.	
Piles Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	0	0	0	0	
<b>Now</b>	1	0	0	0	
Pier Shaft/Piles			5	5	
Greatest Height (m)		6.00			
Bracing/Struts/Sheathing			X	X	
Nose Plate			6	6	
Paint/Coating			4	4	
(Colour Description : )					
(Colour Code : )					
Pier Stability			8	8	
Scour			N	N	
Debris (Y/N)		No			

Substructure				
Bridge Component		Last	Now	Explanation of Condition
<b>Substructure General Rating</b>		4	3	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel</b>				
(U/S Direction : <b>W</b> )				(Continued erosion unlikely due to reduced flows due to irrigation. 02/06/25).
(D/S Direction : <b>E</b> )				
Alignment		7	7	
Bank Stability		5	5	Vertical cut North bank.
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			
Slope Protection		5	5	
(Type : <b>NATURAL; NATURAL</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>		5	5	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2011	Reset rotated blocking. Add flexbeam across appr. spans to truss railing. Add post bolt S4 E side & at S6 W side.					
RETROFIT BRIDGE RAIL							
SEAL CURBS	2011	Replace 13 WG blocking & 5 connector bolts, if not yet done.					
PATCH DECK	2011	Replace 1% deck area with new TT 300 X 75 planks, if not yet done.					
REPLACE STRIP DECK							
REPLACE SUB DECK							
RESET/ PAINT BEARINGS	2011	Refurbish or replace roller nests with teflon/neoprene. Replace 1-1 1/8" bolt @ S2P2E, if not yet done.					
REPAINT SUPERSTRUCTURE	2011						
STRAIGHTEN/REPLACE MEMBERS	2011	Heat straighten top bracing, portals & btm chords at most spans. See UT report for locations.					
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS	2011	Band split pile at A1P5 top with grouted steel top.					
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2011	Patch S approach ACP rutting. Install 300 X 75 backwall sheet @ top S. approach, if not yet done.					
OTHER ACTION	2011	Replace 300 Sq. TT sub post at N pier.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/38.9</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>32.6/38.2</b>	Est. Repl. Yr	2024	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	Randy Bredo	Previous Assistant's Name	Robert Scarth
Next Inspection Date	22-Feb-2014	Previous Inspection Date	14-Jun-2007
Inspection Cycle (Default) (months)	39		
Comment			