

Bridge Inspection										
Bridge File Number	01122 -1 Bridge				Form Type	CON				
Year Built/Year Supstr	1954/1954				Lot No.	2				
Bridge or Town Name	BENALTO				Inspector Name	Owen Salava				
Located Over	MEDICINE RIVER, 3.88, WATERCRS-ST				Inspector Class	BR CLS A				
Located On	11:12 C1 1.152				Assistant Name					
Water Body Cl./Year					Assistant Class					
Navigabil. Cl./Year					Inspection Date	01-Feb-2012				
Legal Land Location	SE SEC 3 TWP 39 RGE 3 W5M				Data Entry By	Marcia Chavez				
Longitude, Latitude	-114:20:40, 52:19:09				Data Entry Date	01-Mar-2012				
Road Authority	Alberta Transportation (AIT)				Reviewer Name	John O'Brien				
Contract Main. Area	CMA19				Review Date	22-Feb-2012				
Clear Roadway/Skew	8.5 /				Dept. Reviewer Name	Andrew Smikles				
AADT/Year	5,740 / 2010 (A)				Dept. Review Date	09-Mar-2012				
Road Classification	RAU-211.8-110				Follow-Up By					
Detour Length (km)	6									
Allowable Load (t):	Single	CS1 30 GIRDER	Semi	CS2 49	Train	CS3 63	---> 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	EB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Posted:	Lane	WB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Remarks									
Hazard Marker At Bridge (Y/N)	No								
Remarks	Required.								
Other Sign Types	"Medicine River", Information.								

Utilities (Located at)										
Utility Attachments										
Telephone	Plowed in South ditch.				Gas	Crossing 100m East.				
Power	1 wire OH 20m North of c/l.				Municipal					
Others	Fibre optic North r/w. Water gauging station 40m North of c/l.				Problem (Y/N)	No				
Remarks										

Approach Road									
			Last	Now	Explanation of Condition				
Horizontal Alignment			6	6	Field access 40m NE. "T" intersection 100m SW. In slight sag curve, limited sight distance to West. No passing WBL.				
Vertical Alignment			6	6					
Roadway Width (m)		12.000			Pothole along E paving lip in EBL.				
Approach Bump			5	5					
Guardrail (Y/N)		Yes			Minor accident damage at NW.				
Guardrail			4	5					
Length (m)		26.600			NE - 26.6m; SE & NW - 34.2m; SW - 38.0m. Not thrie beam; length insufficient.				
Current Standard (Y/N)		No							
Termination Type		Turn Down							
Drainage			7	7					
Approach Road General Rating			6	6					

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : CT, 3 Spans, Lengths(m): 19.5-24.4-19.5, A-Ident Number:)					
Special Features					
Special Feature		7	7	Carbon fiber strapping glued to deck underside. Sika carbodur S1012 installed 2002.	
(SType : DK UNDER REINF)					
Special Feature			X		
(Type :)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
Last					
Now	0.0	0.0	0.0	0.0	
Wearing Surface		7	7	Chip coat 1.0m x 1.0m worn off at East abutment of WBL. Chip coat also not extended into gutters by 1.0m, typical both sides.	
(Material Type : CONCRETE - CONVENTIONAL CHIP SEAL COAT)					
(Thickness(mm) : 50)					
Deck Top		N	N		
Deck Rideability		6	6		
Deck Joints		7	7		
Temperature (deg. C)		-5			
(Expansion Type : ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES))					
(Fixed Type :)					
Gap Size (mm)		Gap Location			
50	East abutment				
35	West abutment				
Deck Drainage		4	4	Has catch basin type drains that collect debris & often plug. Drains drip onto exterior girders & flow to pier top.	
Drains Clogged (Y/N)		No			
Curbs/Median		3	3	Heavy scaling @ E parapet end - photo. NW corner SE ext curb fascia chipped @ corner (rust staining). S curb spalled under post - photo. Typical @ 5 locations. Curb face has numerous small delams or rebar spalls.	
(Curb Type : Standard)					
Scaling (Percent Area)		10			
Bridge Rail		7	7	HSS tube rail inside concrete posts; retrofit rail. S curb - 1st panel from W missing 1 vertical, 2nd panel - 2 bent verticals. 15 posts recast new in /02. Steel panel reinforced with tube rail. Wide vertical crack @ 9 post North rail, 3 post South. 4 concrete posts each side spalled/cracked to the point where adequate resistance from impact is suspect.	
(Type : GALVANIZED STEEL VERTICAL BAR)					
Bridge Rail Posts		4	4		
(Type : CONCRETE;CONCRETE)					
Bridge Rail/Posts Coating		7	7		
(Type : GALVANIZED)					
Sidewalk		X	X		
Girders		4	4	Narrow shear cracks in AZ, typical. S3G3 marked/dated, crack extends into deck U/S. Typical flexural cracking in all girders 350 - 400 spacing. (Span deflects under load. 31Mar2010) - not apparent this inspection.	
Diaphragms/Cross Frame		5	5	Wide crack @ c/l diaphragm over East pier. Many holes cored in most diaphragms.	
Bearings		5	5	Scaling. Rust on bottom half of rollers. Rusting on all exterior bearings.	
Temperature (deg. C)		-5			
(Expansion Type : ROLLER BEARING;ROCKER BEARING)					
(Fixed Type : PINNED BEARING)					
Coating Adequate (Y/N)		No			
Functioning (Y/N)		Yes			

Superstructure				
Bridge Component		Last	Now	Explanation of Condition
(Primary Span : CT, 3 Spans, Lengths(m): 19.5-24.4-19.5, A-Ident Number:)				
Deck Underside		7	7	Shear like cracks found near both abutments. Crack moving up to deck U/S.
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		5	5	
Backwalls/Breastwalls		7	7	
Wingwalls		5	5	
Piles		N	N	
Paint/Coating		X	X	
Abutment Stability		7	7	
Scour/Erosion		7	7	
Piers/Bents				
(Type : PIER-SOLID)				
Bearing Seats/Caps		7	7	
(Type : CONCRETE)				
Pier Shaft/Piles		7	7	
Nose Plate		7	7	
Paint/Coating		4	4	Nose plate rusting.
(Colour Description :)				
(Colour Code :)				
Pier Stability		7	7	
Scour		6	5	Erosion around P2.
Debris (Y/N)	No			
Substructure General Rating		5	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel				
(U/S Direction : N)				
(D/S Direction : S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			
Slope Protection		6	6	
(Type : NATURAL; NATURAL)				

Structure Usage				
		Last	Now	Explanation of Condition
Guidebank/Spurs		X	X	
Adequacy of Opening		7	7	
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		6	6	

Maintenance Recommendations										
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #				
REPAIR/REPLACE BRIDGE RAIL	2012	Recast crack / spalled posts (12).								
GALVANIZE/PAINT BRIDGE RAIL										
RETROFIT BRIDGE RAIL										
SEAL CURBS	2012	Patch spalled curbs. 2m3 OH-V.								
PATCH DECK										
SEAL DECK										
OVERLAY DECK										
REPAIR/REPLACE DECK JOINTS										
RESET/ PAINT BEARINGS	2012	Paint abutment bearings.								
WASHING										
SHOTCRETE REPAIRS										
REPAIR ABUTMENT SCOUR/EROSION										
PLACE ADDITIONAL RIP RAP										
REMOVE DRIFT ACCUMULATION										
OTHER ACTION	2012	Install sufficient guardrail length to meet standard. Replace 2 sections at NW.								
OTHER ACTION	2012	Patch potholes at E paving lip.								
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (Last/Now) (%)	50.0/50.0	Sufficiency Rating (Last/Now) (%)	42.3/42.3	Est. Repl. Yr	2020	Maint. Req'd. (Y/N)	Yes			
Special Comments for Next Inspection	(Monitor shear cracks in ends of girders with width measurement & distance to above/below bottom rebar in girder - Paul Carrier, S3G3 marked & dated 28Jul2007. 1995/10/03).		Department Comments							
Maintenance Reviewed By		Date				Estimated Total	0			
Proposed Long-Term Strategy	2004.05.29 Bridge refurbished in 2002 including strengthening. Bridge should be good until 2022.									
On 3-Year Program (Y/N)										
Proposed Action										
Previous Inspector's Name	Owen Salava	Previous Assistant's Name								
Next Inspection Date	01-Nov-2013	Previous Inspection Date	31-Mar-2010							
Inspection Cycle (Default) (months)	21									
Comment										

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2012	Recast crack / spalled posts (12).	Programmed (Posts which have their structural integrity compromised)	2013			
GALVANIZE/PAINT BRIDGE RAIL							
RETROFIT BRIDGE RAIL							
SEAL CURBS	2012	Patch spalled curbs. 2m3 OH-V.	Defer, to be replaced soon	2017			
PATCH DECK							
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS							
RESET/ PAINT BEARINGS	2012	Paint abutment bearings.	Defer, to be replaced soon	2017			
WASHING							
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2012	Install sufficient guardrail length to meet standard. Replace 2 sections at NW.	To operations				
OTHER ACTION	2012	Patch potholes at E paving lip.	Programmed (If not already completed by Operations)	2013			
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	50.0/50.0	Sufficiency Rating (Last/Now) (%)	42.3/42.3	Est. Repl. Yr	2020	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	(Monitor shear cracks in ends of girders with width measurement & distance to above/below bottom rebar in girder - Paul Carrier, S3G3 marked & dated 28Jul2007. 1995/10/03).		Department Comments	Currently programmed to be replaced in 2017.			
Maintenance Reviewed By	Andrew Smikles		Date	31-Oct-2012	Estimated Total	0	
Proposed Long-Term Strategy	2004.05.29 Bridge refurbished in 2002 including strengthening. Bridge should be good until 2022.						
On 3-Year Program (Y/N)							

Proposed Action			
Previous Inspector's Name	Owen Salava	Previous Assistant's Name	
Next Inspection Date	01-Nov-2013	Previous Inspection Date	31-Mar-2010
Inspection Cycle (Default) (months)	21		
Comment			