Bridge Culvert Inspection

Bridge File Number	72707 -1 Bridge Culvert	Form Type	CUL1
Year Built	1992	Lot No.	2
Bridge or Town Name	RYCROFT	Inspector Name	Brian Pientsch
Located Over	TRIBUTARY TO SPIRIT RIVER, 8.10.72.6.3, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Brian Cote
Located On	49:06 C1 3.302	Assistant Class	
Water Body Cl./Year		Inspection Date	07-Jul-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 13 TWP 78 RGE 5 W6M	Data Entry Date	16-Aug-2011
Longitude, Latitude	-118:38:49, 55:45:08	Reviewer Name	Arnold Assenheimer
Road Authority	Alberta Transportation (AIT)	Review Date	13-Jul-2011
Contract Main. Area	CMA05	Dept. Reviewer Name	Steve Pasquan
Clear Roadway/Skew	11 / -28 deg. (LHF)	Dept. Review Date	18-Nov-2011
AADT/Year	1,080 / 2010 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	5540	SP	50.6	152X51	4.0	ROUND
Special Features	BARREL ELBOW							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	N. & S. r/w	Gas	
Power	3 line, N. r/w	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Twp Rd 51, 50 m E. and accesses in the 3 corners.
Vertical Alignment		7	7	
Roadway Width (m)	11.800			
Embankment		7	7	3
Sideslope (__:1)				
(Height of Cover(m) : **1**)				
Guardrail (Y/N)	Yes			1 post broken at SE corner.
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	7	Due to severe angle of the pipe, the u/s W. side concrete slope protection has a special added retaining wall to prevent soil from entering the u/s invert.
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		6	6	Partially exposed. Rated exposed portion.
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 5540, Type: SP**)				
Barrel Last Accessible Date	18-Mar-2008			Only first 2 rings accessible - water to high.
Special Features				
Special Feature		7	7	Inspected from ends.
(Type : **BARREL ELBOW**)				
Special Feature				
(Type :)				
Roof		7	7	Upward deflection
Measured Rise (mm)	5632			Viewed from ends
Measured At Ring No.	2			
Sag (mm)	92			
Percent Sag	2			
Sidewall		7	7	(At cl, span = 5405, 2.4% deflection.- 20000111)
Measured Span (mm)	5477			
Measured At Ring No.	2			Inward deflection
Deflection (mm)	63			
Percent Deflection	1			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	N	
Separation (mm)	0			
Longitudinal Seams		7	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				1N stagger.
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	4	Pitting rust along floor, visible @ u/s end.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 5540, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		N	N	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**7**	**N**	Last rated 7 on 18-Mar-2008

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1800			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	
Bank Stability		4	4	Severe ditch erosion has formed entering main channel 25m u/s of culvert in field 4m deep x 5m wide x 50m long from runoff from south ditch. SE bank almost vertical 10m u/s due to slumping casued by toe erosion.-photo
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				

Structure Usage				
		Last	Now	Explanation of Condition
Channel General Rating		**4**	**4**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2011	Repair guardrail.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**77.8/55.6**	**Sufficiency Rating (Last/Now) (%)**	**77.4/67.4**	Est. Repl. Yr	2042	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor ditch and bank erosion	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	Shane Hall	Previous Assistant's Name			
Next Inspection Date	07-Apr-2013	Previous Inspection Date	28-Oct-2009		
Inspection Cycle (Default) (months)	21				
Comment					