Bridge Culvert Inspection

Bridge File Number	77535 -1 Bridge Culvert	Form Type	CUL1
Year Built	1983	Lot No.	3
Bridge or Town Name	COLEMAN	Inspector Name	Garry Roberts
Located Over	BLAIRMORE CREEK, 2.12.37.13, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	3:02 C1 18.745	Assistant Class	
Water Body Cl./Year		Inspection Date	28-Nov-2011
Navigabil. Cl./Year		Data Entry By	Erin Roberts
Legal Land Location	SE SEC 3 TWP 8 RGE 4 W5M	Data Entry Date	05-Jan-2012
Longitude, Latitude	-114:27:27, 49:37:02	Reviewer Name	Tom Carey
Road Authority	Alberta Transportation (AIT)	Review Date	08-Dec-2011
Contract Main. Area	CMA26	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	13.1 / 30 deg. (RHF)	Dept. Review Date	10-Jan-2012
AADT/Year	8,210 / 2010 (A)	Follow-Up By	
Road Classification	RAU-213-120		
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	8600	4500	RPA	36	152X51	5.0,5.0,5.0	ARCH
Special Features		INSTRUMENT DEV						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3W crosses Hwy 3-100m West	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	100 m East of golf club entrance.
Vertical Alignment		6	7	
Roadway Width (m)	13.100			
Embankment		7	3	4:1 over culvert @ South. Eroded at NW approach and undermining post.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1.5**)				
Guardrail (Y/N)	Yes			2 damaged posts at NW.
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		North end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	7	
Wingwalls		7	7	
(Shape :)				
Cutoff Wall		N	N	Buried

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		8	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1700			
Scour Protection		8	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		8	6	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 8600, Rise (mm): 4500, Type: RPA**)				
Barrel Last Accessible Date	28-Nov-2011			
Special Features				
Special Feature		7	7	Riser at u/s headwall for strain gauge
(Type : **INSTRUMENT DEV**)				
Special Feature				
(Type :)				
Roof		7	7	Shape appears good
Measured Rise (mm)	4450			
Measured At Ring No.	5			
Sag (mm)	50			
Percent Sag	1			
Sidewall		7	7	
Measured Span (mm)	8507			
Measured At Ring No.	5			
Deflection (mm)	93			
Percent Deflection	1			
Floor		N	N	Covered in 1200mm of rock and ice
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		6	6	8 mm gap at both upper sidewall seams at u/s half.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				1N stagger at lower sidewall - 4N at roof.
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Alkali staining along roof seams in various locations
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 8600, Rise (mm): 4500, Type: RPA**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**6**	**6**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		South end. Handrail attached to headwall.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		8	8	
Wingwalls		8	8	
(Shape :)				
Cutoff Wall		N	N	Buried
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	700			
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**8**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Takes a curve downstream just off outlet.
Bank Stability		7	7	Guide bank, 70 m long along West bank d/s.
HWM (m below Top of Culvert)				No visible Hwm.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**5**	

Maintenance Recommendations						
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2012	Repair erosion at NW- 5m3 pit run				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2012	Replace 5 T.T. guardrail posts.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**68.1/67.0**	Est. Repl. Yr	2037	Maint. Reqd. (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	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	28-Aug-2013	Previous Inspection Date	16-May-2010		
Inspection Cycle (Default) (months)	21				
Comment					