Bridge Culvert Inspection

Bridge File Number	08789 -1 Bridge Culvert	Form Type	CUL1
Year Built	1989	Lot No.	2
Bridge or Town Name	PINCHER CREE	Inspector Name	Calvin Roberts
Located Over	TRIBUTARY TO OLDMAN RIVER, 2.12.36, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	510:02 C1 9.773	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Nov-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	SE SEC 2 TWP 8 RGE 1 W5M	Data Entry Date	13-Dec-2012
Longitude, Latitude	-114:01:50, 49:36:41	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	14-Nov-2012
Contract Main. Area	CMA26	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	10.5 / 18 deg. (RHF)	Dept. Review Date	27-Dec-2012
AADT/Year	270 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
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	-	1830	SP	208.1	152X51		ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South ditch.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	7	West of langs. Bottom of sag.
Vertical Alignment		5	5	
Roadway Width (m)	10.000			
Embankment		4	4	Erosion in the SE Ditch down to the pipe.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **35**)				
Guardrail (Y/N)	Yes			3 Strands of cable guardrail.
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction				North.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		8	3	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		8	3	Material over bevel has sluffed down and now partially blocks U/S end.
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**3**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1830, Type: SP**)				
Barrel Last Accessible Date	11-Nov-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)	1792			
Measured At Ring No.	33			
Sag (mm)	38			
Percent Sag	2			
Sidewall		8	8	
Measured Span (mm)	1850			
Measured At Ring No.	33			
Deflection (mm)	20			
Percent Deflection	1			
Floor		7	7	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Water stains lower half of pipe.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1830, Type: SP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	5	Silting in 3 D/S rings. Material up to 400mm partially blocking U/S entrance.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**7**	**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction				South.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	5	Erosion above the pipe from the road ditch.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		4	4	East bank eroded. Rock slide above pipe-minor. Also eroded above U/S end.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			At D/S.
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	2013	Repair U/S erosion over bevel- remove dirt material and replace with 5m3 pit run E/W filter fabric. Remove material from U/S bevel.				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**77.8/77.8**	**Sufficiency Rating (Last/Now) (%)**	**75.5/65.5**	Est. Repl. Yr	2040	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor ditch erosion at South and over pipe.	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	11-Feb-2016	Previous Inspection Date	07-Sep-2009		
Inspection Cycle (Default) (months)	39				
Comment					