Bridge Culvert Inspection

Bridge File Number	73603 -1 Bridge Culvert	Form Type	CUL1
Year Built	1972	Lot No.	1
Bridge or Town Name	PINCHER CREE	Inspector Name	Calvin Roberts
Located Over	TRIBUTARY TO GLADSTONE CREEK, 2.12.35.4.3.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	775:02 C1 1.344	Assistant Class	
Water Body Cl./Year		Inspection Date	09-Nov-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	SE SEC 31 TWP 5 RGE 1 W5M	Data Entry Date	19-Dec-2012
Longitude, Latitude	-114:06:52, 49:25:41	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	9 / -40 deg. (LHF)	Dept. Review Date	27-Dec-2012
AADT/Year	310 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	999		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1740	1920	SPE	101.2	152X51	3.5,3.5,3.5	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	50m North.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Located on long curve. Road rises to the South.
Vertical Alignment		6	6	
Roadway Width (m)	9.000			
Embankment		5	5	Recent erosion control work at SW but still erosion at SW of pipe.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **7.6**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

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

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	6	Rotated slightly. Logs over crown.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	5	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1740, Rise (mm): 1920, Type: SPE**)				
Barrel Last Accessible Date	09-Nov-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	
Measured Rise (mm)	1835			
Measured At Ring No.	14			
Sag (mm)	85			
Percent Sag	4			
Sidewall		3	3	Cracked sidewall otherwise shape is good.
Measured Span (mm)	1780			
Measured At Ring No.	47			
Deflection (mm)	70			
Percent Deflection	2			
Floor		6	4	Isolated perforations in North haunch of R27.
Bulge (mm)	0			
Measured At Ring No.	14			
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		3	3	R11-19 Cracked- 53mm remain. R12-all cracked- 50mm remain. R13-22 cracked- 65mm remain. R22-21 cracked-50mm remain. R21-2 cracked-125mm remain. No change since 2003. All cracks at North sidewall.
Total No. of Cracked Rings	5			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	50			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	4	Stains through upper seams U/S 8 Rings. Minor superficial rust on the floor. Isolated perforations R27.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	POS			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1740, Rise (mm): 1920, Type: SPE**)				
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		**3**	**3**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction				West.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	Unsupported for 2m.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			Bed rock base 900mm below beveled end.
Above/Below (mm)	900			
Scour Protection		3	3	Water drops onto bed rock.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		3	3	Scoured under pipe and SW of pipe. Scour hole 11mx6mx9m.
Beavers (Y/N)	No			
Downstream End General Rating		**3**	**3**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Curve u/s & d/s.
Bank Stability		6	6	
HWM (m below Top of Culvert)	0.3			Logs over crown.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			At D/S.
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	2013	50m³ Cl 2 at D/S.				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING	2013	Liner.				
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Remove drift at U/S.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**47.0/46.8**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	(Talked with Lorenz Bohnert and the pipe is listed for a liner in 2007).	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	09-Feb-2016	Previous Inspection Date	12-Sep-2009
Inspection Cycle (Default) (months)	39		
Comment			