Bridge Culvert Inspection

Bridge File Number	13320 -1 Bridge Culvert	Form Type	CUL1
Year Built	1956	Lot No.	1
Bridge or Town Name	BROCKET	Inspector Name	Calvin Roberts
Located Over	CROWLODGE CREEK, 2.12.28, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	786:02 C1 2.604	Assistant Class	
Water Body Cl./Year		Inspection Date	28-Nov-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	NE SEC 19 TWP 6 RGE 28 W4M	Data Entry Date	19-Dec-2012
Longitude, Latitude	-113:44:59, 49:29:19	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	02-Dec-2012
Contract Main. Area	CMA26	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	8.8 /	Dept. Review Date	27-Dec-2012
AADT/Year	80 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2316	2560	SPE	28.8	152X51	3.5	ELLIPSE
Special Features		VERT TIMBER STRUTS						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West ROW.	Gas	Crosses 15m South.
Power	1 Line 50m North.	Municipal	
Others	Waterline 30m North.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Sharp curve 60m North. Gentle sag curve through valley.
Vertical Alignment		5	5	
Roadway Width (m)	8.800			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **2.2**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction				West end.
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	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			Drift and Debris blocking the bevel.
Above/Below (mm)	200			
Scour Protection		5	5	Vegetation growing.
(Type :)				
(Avg. Rock Size(mm) :)				
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): 2316, Rise (mm): 2560, Type: SPE**)				
Barrel Last Accessible Date	28-Nov-2012			
Special Features				
Special Feature		6	5	
(Type : **VERT TIMBER STRUTS**)				
Special Feature				
(Type :)				
Roof		3	3	Rating based in deflection.
Measured Rise (mm)	2200			
Measured At Ring No.	5			
Sag (mm)	360			
Percent Sag	14			
Sidewall		2	2	Cracks in both sidewalls.
Measured Span (mm)	2740			
Measured At Ring No.	5			
Deflection (mm)	424			
Percent Deflection	18			
Floor		N	N	Silt and water covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		5	5	
Separation (mm)	0			
Longitudinal Seams		2	2	Cracks in both sidewalls of R-3 and 5 with 27mm rem. steel at R5. Cracks in 1 sidewall of R-2,4,6 and 8 all at South sidewall.
Total No. of Cracked Rings	6			
Total No. of Rings with Two Cracked Seams	2			
Min. Remaining Steel Between Cracks (mm)	25			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	4	Extensive corrosion at sidewalls.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			Water 0.7m.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2316, Rise (mm): 2560, Type: SPE**)				
Fish Passage Adequacy		4	4	
Baffle		X	X	
(Type :)				
Waterway Adequacy		3	3	U/S end is blocked with drift and debris. Silt to 0.4m
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		**3**	**3**	The GR increased due to the struts.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction				East end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		4	4	Scoured @ sides of bevel. Appears to have scour @ stream also.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Scour hole d/s 8m x 10mx 1.0m
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	
Bank Stability		5	5	
HWM (m below Top of Culvert)				HWM not visible. At U/S bevel.
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						
REMOVE DRIFT ACCUMULATION	2013	Remove drift blockage at U/S bevel.				
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2015	Replace pipe.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**34.2/34.3**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	2 Notification sent Dec 3/12.	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-Feb-2016	Previous Inspection Date	09-Sep-2009		
Inspection Cycle (Default) (months)	39				
Comment					