Bridge Culvert Inspection

Bridge File Number	08017 -1 Bridge Culvert	Form Type	CUL1
Year Built	1963	Lot No.	1
Bridge or Town Name	CLUNY	Inspector Name	Jason Rusu
Located Over	TRIBUTARY TO CROWFOOT CREEK, 2.13.14.5, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	842:08 C1 9.505	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Feb-2012
Navigabil. Cl./Year		Data Entry By	Alyssa Boynton
Legal Land Location	NW SEC 10 TWP 23 RGE 21 W4M	Data Entry Date	16-Mar-2012
Longitude, Latitude	-112:51:54, 50:56:56	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	24-Feb-2012
Contract Main. Area	CMA30	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	7.7 /	Dept. Review Date	22-Mar-2012
AADT/Year	140 / 2010 (A)	Follow-Up By	
Road Classification	RLU-207G-60		
Detour Length (km)	2		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1737	1920	SPE	25	152X51	2.8	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	20m West	Gas	x-ing 100m North
Power	X-ing 250m N.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	POSTED FOR 70 KM/H ON HORIZ CURVE
Vertical Alignment		5	5	Hills N and S
Roadway Width (m)	8.000			
Embankment		N	6	
Sideslope (__:1)	1.5			
(Height of Cover(m) : **3.1**)				
Guardrail (Y/N)	Yes			West side only
Approach Road / Embankment General Rating		**4**	**4**	

Upstream 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 :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		X	X	
Bevel End		4	4	(End bent 100mm) ice at floor. (Perf in floor 50mm, 70mm) 20-Mar-2007 (Water piping through bevel end - photo 3) 20-Mar-2007 2 nuts and 2 bolts missing at 1st circ seam
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			(No evidence of piping from U/S through to D/S end) Feb 8 2010.
Above/Below (mm)	200			
Scour Protection		N	5	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	G.R. carried over.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE**)				
Barrel Last Accessible Date	16-Feb-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		3	3	RI Roof perfs - photo - isolated unable to measure. 400mm ice on floor R6 @ 11 o'clock longit seam bulging 100mm Est.
Measured Rise (mm)	1830			
Measured At Ring No.	4			
Sag (mm)	90			
Percent Sag	5			
Sidewall		3	3	R1 perfs in S. wall - photo- isolated
Measured Span (mm)	1880			
Measured At Ring No.	4			
Deflection (mm)	143			
Percent Deflection	8			
Floor		N	N	(ALKALI STAINS IN FLOOR) & (BOLT HOLES 2 NUTS MISSING ON 8TH RING) 21-Feb-2002 ice
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		4	4	3 NUTS MISSING, MANY LOOSE ON 3RD RING & 5th ring 105mm long crack at circ. seam R4
Separation (mm)	0			
Longitudinal Seams		4	4	5th & 7th ring has loose bolts also @ long seams & 4 missing
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE**)				
Coating		3	3	Ring 1 small perfs s. swall - & roof - photo Deep pitting and scalling in haunches. Staining through numerous bolt holes.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
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				East
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)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		N	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	

Structure Usage

		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	Meanders @ u/s & d/s
Bank Stability		N	5	
HWM (m below Top of Culvert)				No visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**6**	

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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**37.8/37.8**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	No

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	Tom Carey	Previous Assistant's Name			
Next Inspection Date	16-May-2015	Previous Inspection Date	08-Feb-2010		
Inspection Cycle (Default) (months)	39				
Comment					