

Bridge Culvert Inspection			
Bridge File Number	73016 -1 Bridge Culvert	Form Type	CUL1
Year Built	1910	Lot No.	1
Bridge or Town Name	ELKWATER	Inspector Name	Jason Rusu
Located Over	TRIBUTARY TO THELMA CREEK, 26.5.1, WATERCRS-ST	Inspector Class	BR CLS A
Located On	41:03 C1 25.578	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	14-Jan-2012
Legal Land Location	SW SEC 18 TWP 7 RGE 2 W4M	Data Entry By	Anne Roberts
Longitude, Latitude	-110:15:52, 49:33:32	Data Entry Date	29-Feb-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA23	Review Date	23-Jan-2012
Clear Roadway/Skew	8.2 / 40 deg. (RHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	280 / 2010 (A)	Dept. Review Date	11-Mar-2012
Road Classification	RAU-209-110	Follow-Up By	
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	-	1500	MP	19.8	68X13		ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	West Row	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	
Vertical Alignment		7	7	
Roadway Width (m)	8.200			
Embankment		6	6	1:1 OVER PIPE
Sideslope ( __:1)	3.0			
(Height of Cover(m) : 1.4)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	<b>7</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	NONE			
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		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	350			
Scour Protection		4	5	EROSION 400 mm WIDE BY 400 LONG @ SIDES OF PIPE. Grass growing in seams, ok. ROCK GOOD @ BANKS & STREAMBED
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>250</b> )				
Scour/Erosion		4	5	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : <b>1, Primary Span, Location Code: MAIN, Span (mm):</b> , <b>Rise (mm): 1500, Type: MP</b> )				
Barrel Last Accessible Date	07-Aug-2010			Snow covered - deep - inaccessible
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		3	N	(10% sag- 22mm change in sag from previous inspection (CSP section 6 from U/S) 7 Aug 2010 PR 3
Measured Rise (mm)	1355			
Measured At Ring No.	6			
Sag (mm)	145			
Percent Sag	10			
Sidewall		3	N	(11% deflection) 7 Aug 2010 PR 3
Measured Span (mm)	1665			
Measured At Ring No.	6			
Deflection (mm)	165			
Percent Deflection	11			
Floor		4	N	(Corrosion on floor) 7 Aug 2010 PR 4
Bulge (mm)	0			
Measured At Ring No.	2			
Abrasion (Y/N)	No			
Circumferential Seams		6	N	PR 6
Separation (mm)	50			
Longitudinal Seams		X	N	(RIVETTED CSP) 7 Aug 2010
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)				
Longitudinal Stagger (Y/N)				
Coating		4	N	(CORROSION WITH SOME PITTING ON FLOOR.) 7 Aug 2010
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		6	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>3</b>	<b>3</b>	GR carried forward
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)		NONE		
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		5	5	300 mm DP SCOUR OFF END HAS SOME ROCK IN SCOUR HOLE - not a problem
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	5	
Beavers (Y/N)		No		
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	
Bank Stability		5	N	
HWM (m below Top of Culvert)				HWM not visible
Drift (Y/N)		No		
Channel Bottom Degrading/Aggrading		AGGRADING		
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>5</b>	<b>5</b>	

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	2012	Assess for replacement or possible SW steel liner					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>48.3/58.6</b>	Est. Repl. Yr	2013	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor deflections. Appear stable since 2006 inspection (GR Aug 7 2010)		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	Jason Rusu		Previous Assistant's Name				
Next Inspection Date	14-Oct-2013		Previous Inspection Date	07-Aug-2010			
Inspection Cycle (Default) (months)	21						
Comment							