

Bridge Culvert Inspection			
Bridge File Number	78370 -1 Bridge Culvert	Form Type	CUL1
Year Built	1982	Lot No.	3
Bridge or Town Name	CAROLINE	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO RAVEN RIVER, 3.91.6, WATERCRS-ST	Inspector Class	BR CLS A
Located On	22:20 C1 32.229	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	19-Oct-2012
Legal Land Location	NW SEC 9 TWP 36 RGE 5 W5M	Data Entry By	Marcia Chavez
Longitude, Latitude	-114:40:05, 52:04:55	Data Entry Date	09-Nov-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA18	Review Date	30-Oct-2012
Clear Roadway/Skew	12.3 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,970 / 2011 (A)	Dept. Review Date	13-Nov-2012
Road Classification	RAU-211.8-110	Follow-Up By	
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	2019	2226	SP	29.9	152X51	2.8	ELLIPSE
Special Features								
Special Features Comment	5% VE							

**Utilities (Located at)**

Utility Attachments			
Telephone	In r/w West of c/l.	Gas	
Power	2 wires 25m East of c/l.	Municipal	
Others	Fibre optics East r/w.	Problem (Y/N)	Yes
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Approach 20m NE.
Vertical Alignment	8	8	
Roadway Width (m)	12.300		Bump sign at transverse ACP crack over pipe.
Embankment	7	7	
Sideslope ( __:1)	4.0		
(Height of Cover(m) : 1.3)			
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	W		
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)	200			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	6	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>6</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: SP)				
Barrel Last Accessible Date	19-Oct-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		7	7	
Measured Rise (mm)	2190			
Measured At Ring No.	3			
Sag (mm)	36			1.6% sag
Percent Sag	1			
Sidewall		7	7	
Measured Span (mm)	2090			
Measured At Ring No.	3			
Deflection (mm)	71			3.5% deflection
Percent Deflection	3			
Floor		N	6	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
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)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		6	6	
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): 2019, Rise (mm): 2226, Type: SP)				
Fish Passage Adequacy		5	5	D/S perched.
Baffle		X	X	
(Type : )				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>7</b>	<b>7</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
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	Bevel projects from fill as much as 700mm.
Heaving (mm)	150			
Invert Above/Below Stream Bed		ABOVE		
Above/Below (mm)	100			
Scour Protection		N	3	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	3	Rock washed D/S, bevel perched 400mm with 3m x 6m x 0.6m deep scour hole - photo.
Beavers (Y/N)		No		
<b>Downstream End General Rating</b>		<b>3</b>	<b>3</b>	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.5			
Drift (Y/N)		No		
Channel Bottom Degrading/Aggrading		NONE		
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>6</b>	<b>6</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2013	15m3 Class 1 @ D/S end.					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Seal transverse crack.					
OTHER ACTION	2013	Trim d/s embankment/rock along bevelled end.					
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>77.8/77.8</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>62.9/62.7</b>	Est. Repl. Yr	2039	Maint. Req. (Y/N)	Yes
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	Owen Salava		Previous Assistant's Name				
Next Inspection Date	19-Jul-2014		Previous Inspection Date	03-Feb-2011			
Inspection Cycle (Default) (months)	21						
Comment							