

Bridge Culvert Inspection			
Bridge File Number	00720 -1 Bridge Culvert	Form Type	CUL1
Year Built	1957	Lot No.	3
Bridge or Town Name	CARSTAIRS	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO SHEEP COULEE, 3.33.22.1, WATERCRS-ST	Inspector Class	BR CLS A
Located On	581:02 C1 2.345	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	26-Oct-2011
Legal Land Location	SW SEC 15 TWP 30 RGE 1 W5M	Data Entry By	Marcia Chavez
Longitude, Latitude	-114:03:41, 51:33:43	Data Entry Date	21-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA29	Review Date	10-Nov-2011
Clear Roadway/Skew	9.2 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,890 / 2010 (A)	Dept. Review Date	22-Nov-2011
Road Classification	RCU-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	-	1829	SP	42.7	152X51	2.8	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	SOUTH R/W	Gas	
Power	4 WIRE NORTH R/W	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)	9.200			
Embankment		8	8	
Sideslope ( __:1)	3.0			
(Height of Cover(m) : 3.6)				
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		S		
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		5	5	Missing 1 row of bolts @ E long seam. Extra holes drilled W seam.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			(WATER ENTERING AT LOWER BOLTS. 20Jan2006).
Above/Below (mm)	50			
Scour Protection		N	5	Well-grown over.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>150</b> )				
Scour/Erosion		N	5	Scour under bevel 500mm long - minor.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : <b>1</b> , Primary Span, Location Code: <b>MAIN</b> , Span (mm): , Rise (mm): <b>1829</b> , Type: <b>SP</b> )				
Barrel Last Accessible Date	26-Oct-2011			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	
Measured Rise (mm)	1838			
Measured At Ring No.	6			
Sag (mm)	0			
Percent Sag	0			
Sidewall		5	5	
Measured Span (mm)	1749			
Measured At Ring No.	6			
Deflection (mm)	80			
Percent Deflection	4			
Floor		5	5	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		4	4	Top row of bolts missing from E bevel at pipe inlet.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Corrosion with some pitting @ haunches and floor.
Corrosion By Soil (Y/N)	No			
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): , Rise (mm): 1829, Type: SP)				
Fish Passage Adequacy		X	X	
Baffle (Type : )		X	X	
Waterway Adequacy		9	9	
Icing (Y/N)		No		
Siltting (Y/N)		No		
Drift (Y/N)		No		
<b>Barrel General Rating</b>		<b>5</b>	<b>5</b>	Bolts missing in inlet bevel do not degrade culvert ring strength.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)		STEEL		
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		5	5	Bevel projects from fill 300mm.
Heaving (mm)		100		
Invert Above/Below Stream Bed		ABOVE		
Above/Below (mm)		150		
Scour Protection (Type : <b>NONE</b> ) (Avg. Rock Size(mm) : )		N	4	Scour 2.5m under bevel. 5m dia scour hole off bevel. Scour along both shoulders.
Scour/Erosion		N	4	
Beavers (Y/N)		No		
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		4	4	WATER ENTERS FROM SW DITCH AT 90 DEG.
Bank Stability		8	8	
HWM (m below Top of Culvert)		0.9		(24Aug2000).
Drift (Y/N)		No		
Channel Bottom Degrading/Aggrading		DEGRADING		D/S end.
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>4</b>	<b>4</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2012	10m3 CLI rk&clay - fill scour d/s end & under both bevels.					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>55.6/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>65.0/65.0</b>	Est. Repl. Yr	2020	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	26-Jan-2015		Previous Inspection Date	06-Dec-2010			
Inspection Cycle (Default) (months)	39						
Comment							