

Bridge Culvert Inspection				
Bridge File Number	80748 -1 Bridge Culvert		Form Type	CUL1
Year Built	1984		Lot No.	1
Bridge or Town Name	CHIPMAN		Inspector Name	Owen Salava
Located Over	WHITFORD CREEK, 6.48.4, WATERCRS-ST		Inspector Class	BR CLS A
Located On	29:02 C1 19.174		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	08-Nov-2012
Legal Land Location	SE SEC 25 TWP 55 RGE 18 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-112:32:21, 53:46:27		Data Entry Date	21-Nov-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA14		Review Date	15-Nov-2012
Clear Roadway/Skew	12.5 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,000 / 2011 (A)		Dept. Review Date	26-Nov-2012
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	5			

Bridge Culvert Information								
Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	1880	1260	FP	23	68X13	3.5	ARCH
Special Features	VERT STEEL STRUTS							
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	South ditch.	Gas	
Power	2 wires 19m North of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	
Vertical Alignment		8	8	
Roadway Width (m)	12.500			
Embankment		5	5	Wide transverse crack in roadway ACP over, and each side, of pipe, previously sealed.
Sideslope ( :1)	3.0			
(Height of Cover(m) : 1)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>8</b>	<b>8</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	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		4	N	Well vegetated. (Gap under pipe. Evidence of piping (photo). 07Dec2010).
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>250</b> )				
Scour/Erosion		4	N	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried forward from 07Dec2010.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1880, Rise (mm): 1260, Type: FP)				
Barrel Last Accessible Date	08-Nov-2012			
<b>Special Features</b>				
Special Feature		X	6	
(Type : <b>VERT STEEL STRUTS</b> )				
Special Feature				
(Type : )				
Roof		3	3	Strutted - no action.
Measured Rise (mm)	1020			
Measured At Ring No.	2			
Sag (mm)	140			
Percent Sag	11			
Sidewall		3	3	Sidewall buckled, hence strutted - photo - no action.
Measured Span (mm)	2000			
Measured At Ring No.	2			
Deflection (mm)	120			
Percent Deflection	6			
Floor		4	4	Floor appears to have bulged prior to strut being installed. Strut installed on top of floor bulge, length of pipe.
Bulge (mm)	100			
Measured At Ring No.	2			
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	30			
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		3	3	Heavy scaling, flaking (photo).
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1880, Rise (mm): 1260, Type: FP)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	1 point increase for struts.
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		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	N	Well vegetated. Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		7	N	
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		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Unknown.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>7</b>	<b>7</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	2013	Restore clay seal at inlet.								
OTHER ACTION	2015	Consider concrete floor if steel perforates or softens.								
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>53.1/53.1</b>	<b>Est. Repl. Yr</b>	<b>2021</b>	<b>Maint. Req. (Y/N)</b>	<b>No</b>			
Special Comments for Next Inspection	This culvert was poorly installed. Monitor shape, struts & floor corrosion; shape stable with struts.		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	Dave Lam	Previous Assistant's Name								
Next Inspection Date	08-Aug-2014	Previous Inspection Date	07-Dec-2010							
Inspection Cycle (Default) (months)	21									
Comment										

**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	2013	Restore clay seal at inlet.	Next time on site			
OTHER ACTION	2015	Consider concrete floor if steel perforates or softens.	Defer, replacement programmed and no perforations currently present in the floor.	2021		
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>53.1/53.1</b>	Est. Repl. Yr	2021	Maint. Req. (Y/N)	No
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Special Comments for Next Inspection	This culvert was poorly installed. Monitor shape, struts & floor corrosion; shape stable with struts.	Department Comments	Programmed for replacement in 2021.
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Maintenance Reviewed By	Andrew Smikles	Date	19-Dec-2012	Estimated Total	0
Proposed Long-Term Strategy					
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Dave Lam	Previous Assistant's Name			
Next Inspection Date	08-Aug-2014	Previous Inspection Date	07-Dec-2010		
Inspection Cycle (Default) (months)	21				
Comment					