

Bridge Culvert Inspection				
Bridge File Number	73072 -1 Bridge Culvert		Form Type	CUL1
Year Built	1991		Lot No.	2
Bridge or Town Name	VERMILION		Inspector Name	Jason Saly
Located Over	TRIBUTARY TO VERMILION RIVER, 6.5.9, WATERCRS-ST		Inspector Class	BR CLS A
Located On	16:30 R1 11.159;16:30 L1 11.161		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	18-Jul-2012
Legal Land Location	NE SEC 29 TWP 50 RGE 5 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-110:41:36, 53:20:39		Data Entry Date	31-Jul-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA15		Review Date	28-Jul-2012
Clear Roadway/Skew	26 / -30 deg. (LHF)		Dept. Reviewer Name	Andrew Smikles
AADT/Year	7,400 / 2011 (A)		Dept. Review Date	02-Aug-2012
Road Classification	RFD-412.4-130		Follow-Up By	
Detour Length (km)	1			

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2200	MP	77	125X26	2.8	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone	North ditch	Gas		
Power	3 lines 30 m North of c/l WBL.	Municipal		
Others		Problem (Y/N)	No	
Remarks				

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Curve to East 125 m, good sight distance. Slight grade to West. Roadway superelevated across pipe.
Vertical Alignment	7	7	
Roadway Width (m)	26.000		
Embankment	7	7	Cover over D/S end.
Sideslope ( __:1) (Height of Cover(m) : 2.5)	3.5		
Guardrail (Y/N)	Yes		Offset from shoulders.
<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 (Shape : )	X	X	
Cutoff Wall	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		6	6	Bevel is heaving & twisting.
Heaving (mm)	150			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			Well vegetated.
Scour Protection (Type : <b>RIP RAP</b> )		N	6	
(Avg. Rock Size(mm) : <b>300</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): , Rise (mm): 2200, Type: MP)				
Barrel Last Accessible Date	18-Jul-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		7	7	Sag estimated. Could not measure rise due to silt on floor.
Measured Rise (mm)	2160			
Measured At Ring No.				
Sag (mm)	40			
Percent Sag	2			
Sidewall		7	7	Total 6 rings. Span at midpipe=2244=44mm=2%
Measured Span (mm)	2244			
Measured At Ring No.				
Deflection (mm)	44			
Percent Deflection	2			
Floor		N	N	Dirty water & silt on floor.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	100			
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		7	7	
Corrosion By Soil (Y/N)	No			
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): , Rise (mm): 2200, Type: MP)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			Random rock in pipe.
<b>Barrel General Rating</b>		<b>7</b>	<b>7</b>	

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		N	2	Bevel end has been buckled up and destroyed likely by mowers.
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>300</b> )		N	6	Well vegetated.
Scour/Erosion		N	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>2</b>	<b>2</b>	

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	Entry is from ditch. Channel enters ditch at 100 m West of inlet and runs parallel to hwy into pipe.
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible. (From marks inside pipe has flowed full - 93/10/19).
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Unknown.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<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							
OTHER ACTION	2012	Remove damaged outlet portion and cut a new bevel or leave as square end with an entry sculpted with well placed rock, if not done yet.					
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>77.8/77.8</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>70.1/70.0</b>	Est. Repl. Yr	2044	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Damage has not been repaired. LRA was issued 20Jul2012 to Donald Saunders.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2007.01.15 Culvert should be good until 2045. If proposed paving project includes some guardrail, include a review of the existing guardrail to confirm that it meets current standards.						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Owen Salava	Previous Assistant's Name					
Next Inspection Date	18-Apr-2014	Previous Inspection Date	17-Dec-2010				
Inspection Cycle (Default) (months)	21						
Comment							