

Bridge Culvert Inspection			
Bridge File Number	80779 -1 Bridge Culvert	Form Type	CUL1
Year Built	1984	Lot No.	2
Bridge or Town Name	GROVEDALE	Inspector Name	Russel Vanderschaaf
Located Over	TRIBUTARY TO CUTBANK RIVER, 8.10.58.20.2, WATERCRS-ST	Inspector Class	BR CLS B
Located On	40:38 C1 49.194	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	23-Aug-2012
Legal Land Location	NW SEC 4 TWP 65 RGE 5 W6M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-118:41:53, 54:36:04	Data Entry Date	26-Sep-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA05	Review Date	24-Sep-2012
Clear Roadway/Skew	11.8 /	Dept. Reviewer Name	David Morrison
AADT/Year	1,220 / 2011 (A)	Dept. Review Date	10-Jan-2013
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	999		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2400	SP	129.2	152X51	4.0,4.0,5.0	ROUND
Special Features	SHOTCRETE BEAM							
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone		Gas	
Power	7 W o/h W r/w	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Passing both directions.
Vertical Alignment		7	7	On a crest curve.
Roadway Width (m)	11.800			3mWx10mLx1.5mD SE.
Embankment		N	4	Minor gullies 600 x 400 at SW, 3x2x10.4:1 near bottom.
Sideslope ( :1)	3.0			Gully @ NW 6m wide, 0.8m deep, 20m long.-photo
(Height of Cover(m) : <b>20.8</b> )				
Guardrail (Y/N)	Yes			8 broken posts, 7 sections bent rail SE corner. 7 leaning posts due to collision.
<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)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	7	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>7</b>	<b>7</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>2400</b> , Type: <b>SP</b> )				
Barrel Last Accessible Date	23-Aug-2012			
<b>Special Features</b>				
Special Feature		7	7	RING 6-18 SHOTCRETED @ 9:00 Minor spall ring 7 to 9, vertical cracking at rings 12 to 13.
(Type : <b>SHOTCRETE BEAM</b> )				
Special Feature				Shotcrete approx 150mm thick.
(Type : )				
Roof		4	4	
Measured Rise (mm)	2187			
Measured At Ring No.	13			
Sag (mm)	213			
Percent Sag	9			
Sidewall		4	3	
Measured Span (mm)	2533			
Measured At Ring No.	13			
Deflection (mm)	283			
Percent Deflection	12			
Floor		N	5	
Bulge (mm)	0			
Measured At Ring No.	13			
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	Water piping from R23 to R27.
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)	No			
Coating		5	5	Superficial rust, 800mm strip on floor.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
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>3</b>	
Downstream 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	
Bevel End		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		N	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>7</b>	<b>7</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		6	6	U/S & d/s ends veer north.
Bank Stability		5	5	Slough and vertical faces d/s away from structure.
HWM (m below Top of Culvert)				Hwm not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Beaver dam 50m u/s.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel General Rating</b>		5	6	

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	Repair guardrail					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>53.1/48.3</b>	Est. Repl. Yr	2030	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor barrel shape.		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	Russel Vanderschaaf		Previous Assistant's Name				
Next Inspection Date	23-May-2014		Previous Inspection Date	24-Nov-2010			
Inspection Cycle (Default) (months)	21						
Comment							