Bridge Culvert Inspection

Bridge File Number	76998 -1 Bridge Culvert	Form Type	CUL1
Year Built	1997	Lot No.	2
Bridge or Town Name	GRANDE CACHE	Inspector Name	Russel Vanderschaaf
Located Over	HELLS CREEK, 8.10.58.34, WATERCRS-ST	Inspector Class	BR CLS B
Located On	40:36 C1 7.323	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	22-Aug-2012
Legal Land Location	SW SEC 29 TWP 57 RGE 8 W6M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-119:09:21, 53:57:04	Data Entry Date	25-Sep-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA05	Review Date	24-Sep-2012
Clear Roadway/Skew	12.4 / 10 deg. (RHF)	Dept. Reviewer Name	David Morrison
AADT/Year	1,220 / 2011 (A)	Dept. Review Date	18-Dec-2012
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	60		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	4665	5608	RPE	55.5	152X51	4.0,4.0,4.0	ELLIPSE

Special Features	CONC FLOOR
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	On curve with limited sight distances NO PASSING
Vertical Alignment		7	7	
Roadway Width (m)	12.000			
Embankment		8	8	
Sideslope (__:1)	5.0			
(Height of Cover(m) : **1**)				
Guardrail (Y/N)	Yes			U/S end one post twisted and not connected to wires, wire disconnected 6 locations.. STEEL POSTS & 3 WIRE ROPE
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		N	7	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		N	N	
Bevel End		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		N	7	
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 4665, Rise (mm): 5608, Type: RPE**)				
Barrel Last Accessible Date	22-Aug-2012			
Special Features				
Special Feature		N	7	Gravel covered and ice covered.
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)				Estimated due to mud/silt/ice build up.
Measured At Ring No.	6			
Sag (mm)	20			
Percent Sag	1			
Sidewall		8	8	
Measured Span (mm)	4685			
Measured At Ring No.	6			
Deflection (mm)	20			
Percent Deflection	1			
Floor		N	N	(CONCRETE covered.)
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	Barrel sidewall is caked with mud 3m high only rating seams on roof.
Separation (mm)	0			
Longitudinal Seams		7	7	Only rating seams @ 11:00 to 1:00 due to mud.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				Continuous seams along roof at 11:00 and 1:00.
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		7	7	Sides covered with mud.
Corrosion By Soil (Y/N)	No			Roof rated only.
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 4665, Rise (mm): 5608, Type: RPE**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Gravel on floor acting as barrier, scour at end pipe.May 25, 2007 1.4m drop at outlet.-25-Feb-2009
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	D/S end 2.5m deep.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**8**	**8**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		N	N	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		N	7	.
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		N	3	2.1m drop at the end of the concrete apron.-photo
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	3	2.1m drop at end of the concrete apron
Beavers (Y/N)	No			
Downstream End General Rating		**3**	**3**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	Deg D/S.
Bank Stability		3	3	Banks sloughing d/s, 2.1m vertical bank-25-Feb-2009
HWM (m below Top of Culvert)				NO HWM VISIBLE
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Deg D/S.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**3**	**3**	GR carried over-25-Feb-2009

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	Install rock gabion drop structure at end of concrete apron.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**88.9/88.9**	**Sufficiency Rating (Last/Now) (%)**	**63.5/63.4**	Est. Repl. Yr	2043	Maint. Reqd. (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	Russel Vanderschaaf	Previous Assistant's Name	
Next Inspection Date	22-May-2014	Previous Inspection Date	18-Nov-2010
Inspection Cycle (Default) (months)	21		
Comment			