Bridge Culvert Inspection

Bridge File Number	76530 -1 Bridge Culvert	Form Type	CUL1
Year Built	1968	Lot No.	2
Bridge or Town Name	GRANDE CACHE	Inspector Name	Russel Vanderschaaf
Located Over	STERNE CREEK, 8.10.58.31.2.2, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	40:34 C1 19.966	Assistant Class	
Water Body Cl./Year		Inspection Date	22-Aug-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NE SEC 16 TWP 57 RGE 7 W6M	Data Entry Date	25-Sep-2012
Longitude, Latitude	-118:58:01, 53:55:37	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	24-Sep-2012
Contract Main. Area	CMA05	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	8.2 /	Dept. Review Date	18-Dec-2012
AADT/Year	1,590 / 2011 (A)	Follow-Up By	
Road Classification	RAU-209-110		
Detour Length (km)	425		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	4300	SP	48.8	152X51	4.2,4.8	ROUND
Special Features	SHOTCRETE BEAM							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	S r/w	Gas	
Power	4w o/h N r/w	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curves at both ends, good sight distance. Passing both directions. Approach 125m SW.
Vertical Alignment		7	7	
Roadway Width (m)	8.200			
Embankment		7	7	8 broken posts N side & 6 damaged sections of rail.-photo
Sideslope (__:1)	3.0			
(Height of Cover(m) : **3.5**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		N	4	E. shoulder settling away from collar near the top.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		N	4	Missing 7 bolts.
Heaving (mm)	300			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		N	4	Concrete broken for 4m at the bottom.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	7	.
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4300, Type: SP**)				
Barrel Last Accessible Date	22-Aug-2012			
Special Features				
Special Feature		N	7	Shotcret beam E. wall of pipe from ring 4-9.
(Type : **SHOTCRETE BEAM**)				
Special Feature				
(Type :)				
Roof		7	7	
Measured Rise (mm)	4161			
Measured At Ring No.	10			
Sag (mm)	139			
Percent Sag	3			
Sidewall		7	7	
Measured Span (mm)	4327			
Measured At Ring No.	10			
Deflection (mm)	27			
Percent Deflection	1			
Floor		N	4	Nuts wearing, pointed crests.
Bulge (mm)	0			Ice covered
Measured At Ring No.	9			
Abrasion (Y/N)	Yes			
Circumferential Seams		N	7	
Separation (mm)	0			
Longitudinal Seams		N	4	
Total No. of Cracked Rings	0			Ring 2 missing 3 nuts @ 7:00.
Total No. of Rings with Two Cracked Seams				1N Stagger.
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	5	
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): 4300, Type: SP**)				
Fish Passage Adequacy		4	4	Water too fast.
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**7**	

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		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		6	6	
HWM (m below Top of Culvert)				Hwm not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Stable.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**7**	

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						

Structural Condition Rating (Last/Now) (%)	**55.6/77.8**	**Sufficiency Rating (Last/Now) (%)**	**53.3/64.9**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Consider abrasion plates or concrete floor. Scheduled for extension with hwy 40 upgrading.	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			