Bridge Culvert Inspection

Bridge File Number	78172 -1 Bridge Culvert	Form Type	CULE
Year Built	1978	Lot No.	4
Bridge or Town Name	RAINBOW LAKE	Inspector Name	Brian Pientsch
Located Over	2ND ORDER TRIBUTARY TO SOUSA CREEK, 9.21.1.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Clem Guenette
Located On	58:04 C1 24.789	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Jan-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 22 TWP 110 RGE 7 W6M	Data Entry Date	27-Feb-2012
Longitude, Latitude	-119:04:07, 58:33:39	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	26-Feb-2012
Contract Main. Area	CMA01	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	14.6 / 30 deg. (RHF)	Dept. Review Date	30-Mar-2012
AADT/Year	740 / 2011 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
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	U/S	-	2400	MP	5	125X26	2.8	ROUND
1	MAIN	2019	2226	MPE	51.8	68X13	4.2	ELLIPSE
1	D/S	-	2400	MP	12.8	125X26	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	Fibre optic north r/w, N. r/w	Gas	
Power	3 wire o/h, North r/w	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Approach approx. 75m West, grade rising to West.
Vertical Alignment		7	7	
Roadway Width (m)	14.600			
Embankment		6	6	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **3.8**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream 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 :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		X	X	
Bevel End		9	N	Covered in ice.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		9	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		**9**	**9**	GR carried fwd from 28-May-2010

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 2400, Type: MP**)				
Barrel Last Accessible Date	28-May-2010			Unable to access - 880mm ice to crown.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	@cl Upward - 28-May-2010
Measured Rise (mm)	2428			
Measured At Ring No.				upward - 28-May-2010
Sag (mm)	28			
Percent Sag	2			
Sidewall		8	N	@ cl Inward - 28-May-2010
Measured Span (mm)	2341			
Measured At Ring No.				Inward - 28-May-2010
Deflection (mm)	59			
Percent Deflection	3			
Floor		N	N	Under ice
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		9	N	
Separation (mm)				
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		8	N	
Corrosion By Soil (Y/N)	No			
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: U/S, Span (mm): , Rise (mm): 2400, Type: MP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		**8**	**N**	GR 8 - May 28-2010

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: MPE**)				
Barrel Last Accessible Date	28-May-2010			Unable to access 0.673m ice to crown.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	N	Measured near CL.
Measured Rise (mm)	2284			
Measured At Ring No.				Upward- appears over compacted - 28-May-2010
Sag (mm)	58			
Percent Sag	3			
Sidewall		6	N	Measured near CL.
Measured Span (mm)	1977			
Measured At Ring No.				Inward-appears over compacted. - 28-May-2010
Deflection (mm)	42			
Percent Deflection	2			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	N	
Separation (mm)	220			
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		4	N	Pitting & scaling rust on lower 1/3. Rusting @ seams - 28-May-2010
Corrosion By Soil (Y/N)	No			
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): 2019, Rise (mm): 2226, Type: MPE**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**N**	GR '5' may 28, 2010.

Downstream 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	
Bevel End		9	N	Covered in ice.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	600			
Scour Protection		9	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**9**	**9**	GR carried fwd from 28-May-2010.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Channel enters culvert at 45 deg. angle.
Bank Stability		7	7	Banks sloughing at d/s.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**5**	

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						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**70.1/70.2**	Est. Repl. Yr	2028	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	As per Steve Pasquan if there is 1 pipe and 2 extensions, both extensions are included on one 'Bridge Culvert Barrel' part of the Inspection form. As before there was a 'Bridge culvert Barrel' section for the main pipe and one for each extension.- 28-May-2010	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	Brian Pientsch	Previous Assistant's Name	Lisbeth Medina		
Next Inspection Date	11-Oct-2013	Previous Inspection Date	28-May-2010		
Inspection Cycle (Default) (months)	21				
Comment					