Bridge Culvert Inspection

Bridge File Number	77369 -1 Bridge Culvert	Form Type	CULM
Year Built	1995	Lot No.	4
Bridge or Town Name	RED EARTH CR	Inspector Name	Brian Pientsch
Located Over	TRIBUTARY TO LOON RIVER, 8.10.18.12.7, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Clem Guenette
Located On	88:10 C1 21.513	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Jun-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NE SEC 36 TWP 89 RGE 9 W5M	Data Entry Date	14-Oct-2012
Longitude, Latitude	-115:17:08, 56:46:11	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	08-Oct-2012
Contract Main. Area	CMA02	Dept. Reviewer Name	Steve Pasquan
Clear Roadway/Skew	11.4 / -15 deg. (LHF)	Dept. Review Date	07-Jan-2013
AADT/Year	370 / 2011 (A)	Follow-Up By	
Road Classification	RAU-210-110		
Detour Length (km)	300		

Bridge Culvert Information

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	4143	SP	37.2	152X51	3.0	ROUND
2	MAIN	-	4143	SP	37.2	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	Gas line 25m East.
Power	3 wire oh - 30m East of road cl	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	
Vertical Alignment		7	8	
Roadway Width (m)	12.000			
Embankment		7	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **1.7**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**8**	**8**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		W		South pipe
End Treatment (Concrete, Steel, Others, None)	CONCRETE			Tagged d/s @ crown
Headwall		7	7	
Collar		7	6	Narrow cracks visible.
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	800			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		7	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): , Rise (mm): 4143, Type: SP**)				
Barrel Last Accessible Date	15-Jan-2007			(South barrel) Water & silt. Viewed from end, shape appears adequate.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	Floor ice covered no rise measured.Jan 15, 2007
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		8	N	2007-01-15
Measured Span (mm)	4090			
Measured At Ring No.	5			
Deflection (mm)	53			
Percent Deflection	1			
Floor		N	N	Water/silt covered.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				2N stagger
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		7	6	Pitting rust.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4143, Type: SP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	Yes			Approx 2m ponding.
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	GR 8 - 15-Jan-2007

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		E		South pipe
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	Top of bevels being pushed inwards 50 mm on both sides.
Heaving (mm)	75			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	800			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		W		North pipe
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	6	Narrow cracking
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	800			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4143, Type: SP**)				
Barrel Last Accessible Date	15-Jan-2007			(North barrel) Water & silt over 2.0m deep. Viewed from ends, shape appears adequate.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		8	N	
Measured Span (mm)	4090			2007-01-15
Measured At Ring No.	5			
Deflection (mm)	53			
Percent Deflection	1			
Floor		N	N	Water/silt covered.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				2N stagger
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		7	6	Pitting rust bottom 1/3.
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 # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4143, Type: SP**)				
Ponding (Y/N)	Yes			Approx 2m ponding/silting.
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	GR 8 - 15-Jan-2007

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		E		North pipe
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	Top of bevel both sides are deflected inwards 50 mm.
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	800			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Culvert)	2.3			Grass on collar
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			Stable Beaverdma 30m d/s.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**8**	**8**	

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) (%)**	**67.3/66.3**	Est. Repl. Yr	2043	Maint. Reqd. (Y/N)	No

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	Brian Pientsch	Previous Assistant's Name	Lisbeth Medina		
Next Inspection Date	11-Mar-2014	Previous Inspection Date	04-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					