Bridge Culvert Inspection

Bridge File Number	13974 -1 Bridge Culvert	Form Type	CUL1
Year Built	1985	Lot No.	4
Bridge or Town Name	MORRIN	Inspector Name	Owen Salava
Located Over	2ND ORDER TRIBUTARY TO RED DEER RIVER, 3.53.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	27:10 C1 21.405	Assistant Class	
Water Body Cl./Year		Inspection Date	25-Oct-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 16 TWP 31 RGE 21 W4M	Data Entry Date	08-Nov-2012
Longitude, Latitude	-112:56:02, 51:39:07	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	30-Oct-2012
Contract Main. Area	CMA20	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	13.7 / 30 deg. (RHF)	Dept. Review Date	13-Nov-2012
AADT/Year	1,890 / 2011 (A)	Follow-Up By	
Road Classification	RAU-213.4-120		
Detour Length (km)	46		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1500	SP	36	152X51	3.0	ROUND
Special Features								
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		4	4	Winding down coulee to river. On 6% grade - climbing lane. No passing EB, 150m before "Right Curve" sign. 200m E of RR21-4.
Vertical Alignment		4	4	
Roadway Width (m)	13.700			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1.7**)				Gabion baskets in both ditches.
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**4**	**4**	

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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		N	N	Snow covered.
(Type : **RIP RAP, GABION**)				
(Avg. Rock Size(mm) : **100**)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: SP**)				
Barrel Last Accessible Date	20-May-2004			D/S 60% of pipe filled with bush and silt. Not able to access culvert barrel, shape is adequate from outside view.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)	1500			
Measured At Ring No.	6			
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	N	
Measured Span (mm)	1525			
Measured At Ring No.	6			
Deflection (mm)	25			
Percent Deflection	2			
Floor		N	N	Ice & dirt covered, average 900mm deep.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	N	(Roof plate cut at bolt c/l at first ring from D/S - 1 m proper lap. 29-May-2004).
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)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	N	(Corrosion with some pitting on floor at U/S and exterior of roof at ends. Scaling @ bottom haunches @ U/S. 14-Feb-2006).
Corrosion By Soil (Y/N)	Yes			
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): 1500, Type: SP**)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		**N**	**N**	

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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	50			
Scour Protection		N	N	(Gabion baskets in place around pipe in ditch. 22Feb2008). Snow covered.
(Type : **RIP RAP, GABION**)				
(Avg. Rock Size(mm) : **100**)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	90 degree curves at both ends.
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
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) (%)**	**42.6/42.5**	Est. Repl. Yr	2025	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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	25-Jul-2014	Previous Inspection Date	21-Dec-2010		
Inspection Cycle (Default) (months)	21				
Comment					