Bridge Culvert Inspection

Bridge File Number	86234 -1 Bridge Culvert	Form Type	CUL1
Year Built	1981	Lot No.	1
Bridge or Town Name	WATERCOURSE CULVERT ON PROVINCIAL HWY 88 NEAR RED EARTH	Inspector Name	Brian Pientsch
		Inspector Class	BR CLS A
Located Over	WATERCOURSE, WATERCRS-NI	Assistant Name	Clem Guenette
Located On	88:08 C1 28.966	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Jun-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NE SEC 11 TWP 87 RGE 9 W5M	Data Entry Date	16-Oct-2012
Longitude, Latitude	-115:18:22, 56:32:11	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	08-Oct-2012
Contract Main. Area	CMA02	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	9.8 /	Dept. Review Date	18-Dec-2012
AADT/Year	1,350 / 2011 (A)	Follow-Up By	
Road Classification	RAU-210-110		
Detour Length (km)			

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1200	MP	30	68X13		ROUND
Special Features		BEAVR CTRL DEV						
Special Features Comment		Wire mesh functioning.						

Utilities (Located at)

Utility Attachments			
Telephone	E. row	Gas	
Power	E. row - 3 line OH power	Municipal	
Others	Light standards w 1 line OH power in W. row.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	
Vertical Alignment		7	7	
Roadway Width (m)	9.800			
Embankment		3	3	Vertical near inlet at u.s end - 8m from road shoulder. photo 1:1 at d.s end.-6m from road shoulder. Erosion hole 0.3m above crown in embankment. 0.4mX0.3mX0.5m deep @ d/s end.(photo) 2.5m u.s end, 2.6m d.s end
Sideslope (__:1)	3.5			
(Height of Cover(m) : **2.6**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**3**	**3**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		N	X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		3	3	No scour protection.(photo)
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Scour hole 3mX2mX0.3m deep at inlet.
Beavers (Y/N)	Yes			Significant issue.
Upstream End General Rating		**3**	**3**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Barrel Last Accessible Date	11-Jun-2012			
Special Features				
Special Feature		X	X	taken out
(Type : **BEAVR CTRL DEV**)				
Special Feature				
(Type :)				
Roof		5	5	at c.l
Measured Rise (mm)	1120			
Measured At Ring No.				
Sag (mm)	80			
Percent Sag	7			
Sidewall		5	4	at c.l
Measured Span (mm)	1320			
Measured At Ring No.				
Deflection (mm)	120			
Percent Deflection	10			
Floor		2	2	Due to corrosion, perforations throughout.(photo)
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		2	2	Circumferential seam at d.s Completely rusted out at lowert 50%
Separation (mm)	120			
Longitudinal Seams		N	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		2	2	Coating scarficed on bottom 50%. Holes throughout floor.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			Slight negative camber.
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): 1200, Type: MP**)				
Fish Passage Adequacy		4	4	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**2**	**2**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		3	3	Perforations in floor, end torn.(photo)
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	50			
Scour Protection		3	3	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		3	3	Scour hole 10mX6mX0.6m deep(photo) Erosion around bevel found.(photo)
Beavers (Y/N)	Yes			
Downstream End General Rating		**3**	**3**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	
Bank Stability		4	4	Bank erosion upstream and downstream.
HWM (m below Top of Culvert)	0.3			Drift and debris on banks. Likely caused by blockage due to beaver dams.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)				
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**4**	

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	2013	replace culvert.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/22.2**	**Sufficiency Rating (Last/Now) (%)**	**14.4/13.5**	Est. Repl. Yr	2012	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Requires replacement due to corrosion & perforations. Notified Shahid Gill & David Morrison on June 20, 2012 regarding "2" Rating on floor. Reduce inspection cycle to 12 months until replaced.	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	Shane Hall	Previous Assistant's Name			
Next Inspection Date	11-Mar-2014	Previous Inspection Date	11-Nov-2008		
Inspection Cycle (Default) (months)	21				
Comment					