Bridge Culvert Inspection

Bridge File Number	86227 -1 Bridge Culvert	Form Type	CUL1
Year Built	1975	Lot No.	1
Bridge or Town Name	CULVERT ON TRIBUTARY TO CADOTTE RIVER ON HIGHWAY 986 NE OF P	Inspector Name	Brian Pientsch
		Inspector Class	BR CLS A
Located Over	WATERCOURSE, WATERCRS-NI	Assistant Name	Clem Guenette
Located On	986:02 C1 39.306	Assistant Class	BR CLS B
Water Body Cl./Year		Inspection Date	12-Mar-2013
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	NW SEC 35 TWP 86 RGE 17 W5M	Data Entry Date	08-Apr-2013
Longitude, Latitude	-116:34:35, 56:30:26	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	08-Apr-2013
Contract Main. Area	CMA02	Dept. Reviewer Name	
Clear Roadway/Skew	9.9 /	Dept. Review Date	
AADT/Year	1,120 / 2012 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	135		

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	80	125X26	2.8	ROUND
Special Features		BARREL ELBOW						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	1 wire o/h along South r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curves south 500m East. Sag curve
Vertical Alignment		7	6	
Roadway Width (m)	9.900			
Embankment		3	3	(20x10m (lxw) slide over barrel d/s and 2 barrel section and invert have washed d/s. - photo 30x2x0.5m (lwd) erosion. - 01 Apr 2011) Snow covered
Sideslope (__:1)	3.0			
(Height of Cover(m) : **10**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**3**	**3**	GR carried forward

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		Unable to view or access inlet ot outlet
End Treatment (Concrete, Steel, Others, None)	STEEL			
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		3	N	(Detached from pipe (photo). 01 Apr 2011)
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1000			
Scour Protection		4	N	(Erosion around pipe 0.5m back (photo). 01 Apr 2011)
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	N	
Beavers (Y/N)	Yes			Dam at inlet (photo).
Upstream End General Rating		**3**	**3**	GR carried forward

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	01-Apr-2011			
Special Features				
Special Feature		5	N	(2 vertical elbows near centre of pipe.- 01 Apr 2011)
(Type : **BARREL ELBOW**)				
Special Feature				
(Type :)				
Roof		3	N	(Approx 8m from d/s. 2 barrel sections detached.-01 Apr 2011)
Measured Rise (mm)	1065			
Measured At Ring No.				
Sag (mm)	135			
Percent Sag	11			
Sidewall		3	N	(Approx 8m from d/s. 2 barrel sections detached.-01 Apr 2011)
Measured Span (mm)	1334			
Measured At Ring No.				
Deflection (mm)	134			
Percent Deflection	11			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		2	N	(Separated @ u/s bevel (photo). 18m d/s section completely detached from remainder of barrel (photo). -01 Apr 2011)
Separation (mm)	200			
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	(Some pitting rust over 600 mm strip on floor. -01 Apr 2011)
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	POS			
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		X	X	Likely not fish bearing stream.
Baffle		X	X	
(Type :)				
Waterway Adequacy		3	N	(Channel degrading d/s partially from excessive outlet velocities.- 01 Apr 2011)
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**2**	**2**	GR carried forward

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		2	N	(Washed d/s detached (photo). - 01 Apr 2011)
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		2	N	(Channel degrading d/s has caused slide over culvert. -01 Apr 2011)
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		2	N	(Slide over culvert -01 Apr 2011)
Beavers (Y/N)	Yes			(Cutting lodged in barrel near d/s end. - 01 Apr 2011)
Downstream End General Rating		**2**	**2**	GR carried forward

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	60 deg curve d/s.
Bank Stability		3	3	Banks d/s steep and sloughing.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			(Channel has degraded about 3m since culvert was installed.-09-Oct-2009)
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**3**	**3**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION	2013	Remove dam from u/s bevel				
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Replace as per 2009 Assessment report prepared by MPA.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/22.2**	**Sufficiency Rating (Last/Now) (%)**	**12.1/30.7**	Est. Repl. Yr	2013	Maint. Reqd. (Y/N)	Yes

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	12-Jun-2016	Previous Inspection Date	01-Apr-2011
Inspection Cycle (Default) (months)	39		
Comment			