Bridge Culvert Inspection

Bridge File Number	75721 -1 Bridge Culvert	Form Type	CUL1
Year Built	1975	Lot No.	1
Bridge or Town Name	JEAN D PRAIR	Inspector Name	Brian Pientsch
Located Over	TRIBUTARY TO PEACE RIVER, 8.10.17, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Clem Guenette
Located On	58:10 C1 52.000	Assistant Class	BR CLS B
Water Body Cl./Year		Inspection Date	13-Jun-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 28 TWP 110 RGE 8 W5M	Data Entry Date	10-Feb-2013
Longitude, Latitude	-115:16:16, 58:34:48	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	04-Nov-2012
Contract Main. Area	CMA01	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	11 /	Dept. Review Date	21-Mar-2013
AADT/Year	230 / 2011 (A)	Follow-Up By	
Road Classification	RAU-210-110		
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	MAIN	-	1500	SP	45.7	152X51	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 wire o/h along S. ditch.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	Long shallow sag curve.
Vertical Alignment		8	8	
Roadway Width (m)	11.300			
Embankment		7	7	Gully 10m long x 0.6m deep x 1m wide along NE ditch-grassed in.
Sideslope (__:1)	4.0			
(Height of Cover(m) : **5.1**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**8**	**8**	

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 :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		4	3	West side not supported. photo-06-Aug-2010 Bevel torn from equipment.
Heaving (mm)	400			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		3	N	Loss of fill at W. side 1.5m long, 1m wide (Photo). -06-Aug-2010 Lose of fill on East side. photo Not visible due to drift.-photo
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		3	N	1m x 0.5m x 1.5m long along sides of bevel.-06-Aug-2010
Beavers (Y/N)	No			
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): 1500, Type: SP**)				
Barrel Last Accessible Date	15-Aug-2003			Water over 1.0m deep after 4 ring u.s.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	(Some construction damage to one roof and one sidewall plate in d/s ring. 05/05/10)
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	(Sidewalls deflecting small ripples in seams-921209). 2001/01/10)
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	100			
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	(Circumferential seams are staggered-92/12/09).
Separation (mm)				
Longitudinal Seams		N	N	(Improper nesting, rust on some bolts- 92/12/09).
Total No. of Cracked Rings				
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	(Rust starting to surface-92/12/09).
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			Significant amount of Neg. camber - evident from ends.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: SP**)				
Ponding (Y/N)	Yes			Water over 1.0m deep.
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	D/S scour.
Icing (Y/N)	No			(2000/01/10)
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	G.R. 5 - 15-Aug-2003

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		Water 0.5m below crown.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	N	(Bevel unsupported for approx. 1.0m.05/05/10) Bevel end under water - 0.5m below crown.
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		3	3	Original rock has been displaced to far bank of scour hole.-06-Nov-2008
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		3	3	Scour hole estimated to be 1m x 7.5m x 6.0m. Erosion approx. 1.5m long x 1m wide x 1m deep along each side of bevel.
Beavers (Y/N)	No			
Downstream End General Rating		**3**	**3**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	4	Beaver dam forcing water to go around causing a 90 degree bend at u/s end.
Bank Stability		5	5	
HWM (m below Top of Culvert)	-0.6			Drift on top of culvert crown, muddy grass along banks. Drift on banks meduim sized.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			Beaver dams u/s. Cutting present.
Beavers (Y/N)	Yes			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2013	60 cu.m Class I				
REMOVE DRIFT ACCUMULATION	2013	AT u/s bevel				
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Unable to access barrel last 2 inspection cycles, recommend Level 2 inspection as per bim manual.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**43.9/43.9**	Est. Repl. Yr	2021	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Unable to access barrel last 2 inspection cycles, rcommend Level 2 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	13-Mar-2014	Previous Inspection Date	06-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					