Bridge Culvert Inspection

Bridge File Number	77452 -1 Bridge Culvert	Form Type	CUL1
Year Built	1974	Lot No.	4
Bridge or Town Name	FT VERMILION	Inspector Name	Brian Pientsch
Located Over	PEACE RIVER, 8.10, WATERCRS-ST	Inspector Class	BR CLS A
Located On	88:18 C1 28.825	Assistant Name	Clem Guenette
Water Body Cl./Year		Assistant Class	BR CLS B
Navigabil. Cl./Year		Inspection Date	14-Jun-2012
Legal Land Location	NE SEC 20 TWP 108 RGE 13 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-116:07:51, 58:23:46	Data Entry Date	06-Nov-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA01	Review Date	04-Nov-2012
Clear Roadway/Skew	9 / 10 deg. (RHF)	Dept. Reviewer Name	David Morrison
AADT/Year	830 / 2011 (A)	Dept. Review Date	15-Jan-2013
Road Classification	RAU-209-110	Follow-Up By	
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	1724	1901	SPE	91.4	152X51	3.5	ELLIPSE

Special Features	
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	30m in East r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curve to the south. Slight depression in roadway above pipe.
Vertical Alignment		7	7	
Roadway Width (m)	9.000			
Embankment		6	6	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **5**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		Looks like equalizer pipe could flow either way.-06-Aug-2010
End Treatment (Concrete, Steel, Others, None)	STEEL			Water level to high -above pipe, -see photo
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		4	N	Bevel is unsupported for 2.5m, bevel bounces.photo-06-Aug-2010
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		4	N	Scour under bevel.-06-Aug-2010
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	N	Scour under bevel ~ 0.7m Photo.-06-Aug-2010
Beavers (Y/N)	Yes			
Upstream End General Rating		**4**	**4**	General Rating carried forward.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: SPE**)				
Barrel Last Accessible Date	06-Aug-2010			Water level above pipe - can't locate.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	N	
Measured Rise (mm)	1911			
Measured At Ring No.				
Sag (mm)	10			
Percent Sag	1			
Sidewall		7	N	
Measured Span (mm)	1727			
Measured At Ring No.	10			
Deflection (mm)	3			
Percent Deflection	1			
Floor		N	N	Water cover.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	N	
Separation (mm)	0			
Longitudinal Seams		6	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		4	N	Pitting rust lower 1/3.-06-Aug-2010
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: SPE**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		3	3	u/s and d/s bevels unsupported.-06-Aug-2010
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	N	Equilization Cannel.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**7**	**N**	

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		4	N	Bevel end appears to have been cut onsite from regular plate, unsupported for 900mm.-06-Aug-2010
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		4	N	Erosion under bevel. (Photo)-06-Aug-2010
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	N	Vertical banks on either side of bevel, back 900mm (Photo)
Beavers (Y/N)	Yes			
Downstream End General Rating		**4**	**4**	GR carried fwd.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	NONE			Evidence of cuttings.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

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) (%)	**77.8/55.6**	**Sufficiency Rating (Last/Now) (%)**	**54.2/56.9**	Est. Repl. Yr	2019	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Culvert is located on an old portion(Oxbow) of the river Peace RIver. Monitor erosion at both u/s and d/s end.06-Aug-2010	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	14-Mar-2014	Previous Inspection Date	06-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					