Bridge Culvert Inspection

Bridge File Number	73676 -1 Bridge Culvert	Form Type	CUL1
Year Built	1949	Lot No.	2
Bridge or Town Name	HADDOCK	Inspector Name	Eric Carcoux
Located Over	TRIBUTARY TO MCLEOD RIVER, 8.11.107.9, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	32:10 C1 8.383	Assistant Class	
Water Body Cl./Year		Inspection Date	14-Oct-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 32 TWP 57 RGE 13 W5M	Data Entry Date	06-Jan-2013
Longitude, Latitude	-115:54:24, 53:57:54	Reviewer Name	Stew Hagan
Road Authority	Alberta Transportation (AIT)	Review Date	12-Dec-2012
Contract Main. Area	CMA12	Dept. Reviewer Name	Paul Catt
Clear Roadway/Skew	8.3 / -6 deg. (LHF)	Dept. Review Date	18-Jan-2013
AADT/Year	1,950 / 2011 (A)	Follow-Up By	
Road Classification	RAU-209-110		
Detour Length (km)	20		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2019	2226	SPE	109.7	152X51	3.0	ELLIPSE
Special Features		BARREL ELBOW						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Field entrance NE. Limited sight distance from sag curve. No passing SBL. Crest curve North & South.
Vertical Alignment		6	6	
Roadway Width (m)	8.300			
Embankment		N	3	Sideslope is slumping SE & NE of outlet. Erosion NE side between transition of cut & fill.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **11**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		N	5	Loose bolts
Heaving (mm)	300			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		N	4	Bevel projecting 1.5m from fill, South side. Erosion on SW. Erection of bevel end eccentric.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		N	4	(Piping suspected SW corner. 20/July/2007)
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: SPE**)				
Barrel Last Accessible Date	15-Dec-2010			Water 800mm deep.
Special Features				
Special Feature		7	N	
(Type : **BARREL ELBOW**)				
Special Feature				
(Type :)				
Roof		4	N	(U/S 2227, ring 18 2218, D/S 2150. 20/July/2007) (Could not measure rise due to ice. Est. similar to deflection. Cusping at 12 o'clock R15.-15-Dec-2010)
Measured Rise (mm)	2064			
Measured At Ring No.	15			
Sag (mm)	162			
Percent Sag	7			
Sidewall		7	N	(U/S 2036, ring 18 2076, D/S 2050. 20/July/2007)
Measured Span (mm)	2089			
Measured At Ring No.	15			
Deflection (mm)	70			
Percent Deflection	4			(3.5%. 20/July/2007)
Floor		N	N	(Poor nesting at plate 11 on floor seams. 20/July/2007)
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		5	N	Loose circumferential bolt.-15-Dec-2010
Separation (mm)	0			
Longitudinal Seams		4	N	(Cusping at roof seam @ R15, (22mm) - photos -15-Dec-2010) Missing 3 bolts, 2o'clock R17.-15-Dec-2010
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	N	Pitting on floor.-15-Dec-2010
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: SPE**)				
Fish Passage Adequacy		4	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Drift U/S. Flow spreads over NW corner of bevel end U/S.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**4**	**4**	GR carried forward from 15-Dec-2010

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	5	Installed rotated 45degrees
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		N	4	
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	4	Scour hole 6m x 6m
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	4	Sharp entrance at U/S end.
Bank Stability		N	4	Banks sliding, D/S area 10.5 m x 13.5m North side.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(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						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Repair slides at d/s end.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**37.3/42.5**	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	Kris Bosters	Previous Assistant's Name	
Next Inspection Date	14-Jul-2014	Previous Inspection Date	15-Dec-2010
Inspection Cycle (Default) (months)	21		
Comment			