

Bridge Culvert Inspection			
Bridge File Number	75608 -1 Bridge Culvert	Form Type	CUL1
Year Built	1981	Lot No.	1
Bridge or Town Name	COLD LAKE	Inspector Name	Wade Nanninga
Located Over	TRIBUTARY TO MARIE CREEK, 7.7.2, WATERCRS-ST	Inspector Class	BR CLS A
Located On	55:18 C1 29.634	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	09-Apr-2012
Legal Land Location	NE SEC 13 TWP 63 RGE 3 W4M	Data Entry By	Lisa Fairhurst
Longitude, Latitude	-110:18:59, 54:27:25	Data Entry Date	25-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA08	Review Date	25-Apr-2012
Clear Roadway/Skew	13.6 / 15 deg. (RHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	4,300 / 2011 (A)	Dept. Review Date	04-May-2012
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2400	MP	32	125X26	2.8	ROUND
Special Features	VERT STEEL STRUTS							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	Plowed in South ditch.	Gas	
Power	2 wires OH 20 m North of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks	No BF tag installed.		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Farm entrances East & West from pipe. Crest curve to west with no passing WB.
Vertical Alignment	7	7	
Roadway Width (m)	13.600		
Embankment	4	4	Gully forming @ NE (2m long, 0.4m deep, 0.3 wide). Stable & vegetated.
Sideslope (__:1)	4.0		
(Height of Cover(m) : 1.6)			
Guardrail (Y/N)	No		
Approach Road / Embankment General Rating	7	7	

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		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		N	4	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		N	4	Signs of erosion beside bevel as bevel protrudes approx 0.5m from fill
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): , Rise (mm): 2400, Type: MP)				
Barrel Last Accessible Date	09-Dec-2002			Viewed from ends.- 2/3 full of water (Measured 2717 x 2152 at first seam 99/02/20)
Special Features				
Special Feature		N	N	(75mm x 75mm steel struts with 100mm x 75mm sill top & bottom. Strutted throughout entire length of barrel. 2002/12/08)
(Type : VERT STEEL STRUTS)				
Special Feature				
(Type :)				
Roof		N	N	(Roof:10.3%. - 2002/12/08) (Struts & shape appear to have not changed as viewed from ends.-14-Aug-2008)
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	(13.2%. 2002/12/08) (Would rate "3" based on previous recorded deflection. 16/Nov/2006)
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	317			
Percent Deflection				
Floor		N	N	(3 perforations. Haunch area sounds hollow and piping occurring. 99/02/20)
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	(Measured at floor of seam 1. Inside of coupler looks good but can tell outside is corroding by thinness. 2002/12/08)
Separation (mm)	140			
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		N	N	(Found 3 perforations less than 10mm diameter though galvanizing still looks good. (2.0m from D/S crown at 5:00. 99/02/20)
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): , Rise (mm): 2400, Type: MP)				
Ponding (Y/N)	Yes			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	(This pipe frequently gets plugged by beavers with dams inside the pipe. With struts now, it could be a real problem. 2002/12/08)
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		4	4	(Previous G.R. was "4" from 09/Dec/2002, probably due to 1 pt increase due to struts.-14-Aug-2008) GR carried over.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		N	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		7	7	No evident problems.
Beavers (Y/N)	No			
Downstream End General Rating		7	7	
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)	0.4			Grass on fence d/s
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
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	2012	Dewater & perform Level II inspection & clean out barrel at same time. (If not done)					
OTHER ACTION	2012	Assessment					
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	46.2/46.1	Est. Repl. Yr	2013	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	This pipe is only 20 years old and has 13.2% deflection, perforations and beaver maintenance problem that will increase with struts - 2002/12/08 Hollow sounds and piping along haunch means barrel will get worse. Recommend replacing pipe with structure more suitable for the service environment at a convenient time - 2002/12/08 This pipe appears to be constantly underwater. Replace pipe with next overlay 2005/04/05 Monitor ditch erosion.		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	09-Jan-2014		Previous Inspection Date	14-Jul-2010			
Inspection Cycle (Default) (months)	21						
Comment							