

Bridge Culvert Inspection				
Bridge File Number	76130 S-1 Bridge Culvert		Form Type	CULM
Year Built	1985		Lot No.	1
Bridge or Town Name	FT MCMURRAY		Inspector Name	Wade Nanninga
Located Over	TRIBUTARY TO LITTLE HORSE CK, 8.11.40.2.2, WATERCRS-ST		Inspector Class	BR CLS A
Located On	63:08 C1 46.449;63:08 L1 PROPOSED		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	14-Nov-2011
Legal Land Location	SE SEC 36 TWP 84 RGE 11 W4M		Data Entry By	Theresa Lacusta
Longitude, Latitude	-111:35:32, 56:19:18		Data Entry Date	23-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Eric Carcoux
Contract Main. Area	CMA07		Review Date	23-Nov-2011
Clear Roadway/Skew	13.5 /		Dept. Reviewer Name	Brent Herrick
AADT/Year			Dept. Review Date	15-Dec-2011
Road Classification	RAU-213.4-120		Follow-Up By	
Detour Length (km)	250			

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3000	MP	47.3	125X26	3.5	ROUND
2	MAIN	-	1800	MP	46.3	125X26	3.5	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East r/w.	Gas	
Power	3 wire East r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	8	8	Gradual grade to North with crest 150m North. No passing NB. Near km 192
Vertical Alignment	6	6	
Roadway Width (m)	13.500		
Embankment	5	4	Ditch erosion at SE, minor. Protected with cobbles. 2 voids in embankment over N pipe- E side approx 1.0m x 1.0m- photo
Sideslope (__:1) (Height of Cover(m) : 3.6)	3.0		
Guardrail (Y/N)	No		
Approach Road / Embankment General Rating	6	6	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	E		North pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	4	4	Field cast headwall cracked. Detached from pipe.
Collar	5	5	Medium cracks.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 350)				
Scour/Erosion		2	5	
Beavers (Y/N)	Yes			2 beaver dams U/S.
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): 3000, Type: MP)				
Barrel Last Accessible Date	10-Mar-2010			North pipe. Spray-on asphalt coating applied to exterior and interior surfaces of galvanized CSP except 7.0 m extension to West end. Barrel 2/3 full with ice.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	3	
Measured Rise (mm)				Flattening of roof near 2/3 point.
Measured At Ring No.				
Sag (mm)				estimated
Percent Sag	10			
Sidewall		4	4	(Measured span 3185 near 4th circ seam. 10/Dec/2004)
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				estimated
Percent Deflection	7			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	4	
Separation (mm)	100			
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3000, Type: MP)				
Coating		5	5	(Pitting in lower 1/2. 10/Dec/2004) Superficial rust at ice line.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		N	N	
(Type :)				
Waterway Adequacy		7	7	(Inlet completely iced over with outlet iced off with ice waterfall. 2003/03/12)
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	3	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		W		North pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	4	Bevel dented.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	850			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		E		South pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	N	Ice above crown.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			(To silt deposit 1.50 m. 93/10/19)
Above/Below (mm)				
Scour Protection		7	N	Grassed.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 350)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		6	N	(G.R.6 from 10/Dec/2004)

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)				
Barrel Last Accessible Date				South pipe. Located 40m south of primary span. Ice above crown.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)				
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)				
Coating		N	N	(Superficial rust. 2003/03/12)
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			(1600 mm. 2003/03/12)
Fish Passage Adequacy		N	N	
Baffle		N	N	
(Type :)				
Waterway Adequacy		3	3	(Barrel set too low to serve as secondary span. Is very susceptible to silting. 2003/03/12)
Icing (Y/N)	No			(Appears to be constantly submerged. 17/Aug/2006)
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		4	4	G.R. carried over.

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		W		South pipe. Crown submerged.
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	Submerged.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			(To silt deposit 0.95 m. 93/10/19)
Above/Below (mm)	450			
Scour Protection		7	N	Grassed.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Downstream End General Rating		6	N	G.R. '6' from Dec 2003.

Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading				u/s channel at 3000 mm
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		8	8	

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	2011	Dewater both pipes & do level II barrel inspection.					
OTHER ACTION	2011	Fill holes in embankment					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	44.4/33.3	Sufficiency Rating (Last/Now) (%)	38.0/35.0	Est. Repl. Yr	2030	Maint. Req. (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	Wade Nanninga		Previous Assistant's Name				
Next Inspection Date	14-Aug-2013		Previous Inspection Date	10-Mar-2010			
Inspection Cycle (Default) (months)	21						
Comment							