

Bridge Culvert Inspection			
Bridge File Number	08814 -1 Bridge Culvert	Form Type	CULM
Year Built	1962	Lot No.	1
Bridge or Town Name	EDSON	Inspector Name	Eric Carcoux
Located Over	SUNDANCE CREEK, 8.11.107.30, WATERCRS-ST	Inspector Class	BR CLS A
Located On	47:06 C1 56.719	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	09-Nov-2010
Legal Land Location	NE SEC 4 TWP 53 RGE 18 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-116:35:21, 53:33:17	Data Entry Date	17-Nov-2010
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Arnold Assenheimer
Contract Main. Area	CMA13	Review Date	15-Nov-2010
Clear Roadway/Skew	9.3 /	Dept. Reviewer Name	Brent Herrick
AADT/Year	850 / 2009 (A)	Dept. Review Date	22-Nov-2010
Road Classification	RAU-209-110	Follow-Up By	
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3670	SP	63.4	152X51	5.0	ROUND
2	MAIN	-	3670	SP	63.4	152X51	5.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	100m east / 60m north.
Power	100m west, 60m North.	Municipal	
Others	Water gauge @ U/ S & D/S.	Problem (Y/N)	No
Remarks	File tag in place.		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Pipes at bottom of sag curve, good sight distances. No passing NB/SB.
Vertical Alignment	6	6	
Roadway Width (m)	9.300		
Embankment	N	5	
Sideslope (__:1)	3.0		
(Height of Cover(m) : 10)			
Guardrail (Y/N)	Yes		
Approach Road / Embankment General Rating	6	6	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	W		North pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	X	X	
Collar	N	3	Not a standard collar but concrete slab on sideslope. Broken concrete, 1.0m voids underneath.

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		N	5	(Bevels have heaved leaving a void underneath. 16/Apr/2007) Iced over.
Heaving (mm)	1000			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	3	(Broken concrete slab away from collar, up to 1.0m void underneath.)
(Type : CONCRETE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	3	Snow covered/iced over.
Beavers (Y/N)	Yes			
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): 3670, Type: SP)				
Barrel Last Accessible Date	02-Feb-2009			North pipe. Water too fast and deep to enter.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	N	Ice cover, no measurement.-02-Feb-2009 5.5% estimate only.-02-Feb-2009
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	200			
Percent Sag	6			
Sidewall		2	N	See longitudinal seam comment.-02-Feb-2009 7.5%
Measured Span (mm)	3945			
Measured At Ring No.	16			
Deflection (mm)	275			
Percent Deflection	8			
Floor		N	N	Iced over.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	N	
Separation (mm)	0			
Longitudinal Seams		2	N	(Perforation due to abrasion in R5, 40mm of steel left on R14. Only upper seams are visible due to ice. R3, 5, 9 cracked on South side. 34mm metal between cracks R17. 2002/04/06) Iced over. Bottom seam at 8:00 cracked (looking D/S) in plates 5,6,8,10,12,13,14,16,17,18,19 & 20 - North side. 14th plate 40mm of steel left. R16N, R18N, R20N, cracked both sides. No change from last inspection.-02-Feb-2009
Total No. of Cracked Rings	15			
Total No. of Rings with Two Cracked Seams	3			
Min. Remaining Steel Between Cracks (mm)	40			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3670, Type: SP)					
Coating		4	N	(Bottom of pipe beginning to rust, superficial. 28/Sept/2005) (Floor perforation @ R5. 28/Sept/2005) Some pitting @ R16.-02-Feb-2009	
Corrosion By Soil (Y/N)	No				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	ZERO				
Ponding (Y/N)	No				
Fish Passage Adequacy		3	3	Steep inlet, high velocity.	
Baffle		X	X		
(Type :)					
Waterway Adequacy		7	7	(16/Apr/2007) Iced over.-16-Apr-2007	
Icing (Y/N)	Yes				
Silting (Y/N)	No				
Drift (Y/N)	No				
Barrel General Rating		2	2	LRA issued to AT Feb 02, 2009.-02-Feb-2009 GR carried fwd.	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Span Type: Primary Span)					
Direction		E		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		5	5		
Heaving (mm)	0				
Invert Above/Below Stream Bed	ABOVE			Fill settled 500mm	
Above/Below (mm)	250				
Scour Protection		N	5	Loosely placed concrete @ toe.	
(Type : CONCRETE)					
(Avg. Rock Size(mm) :)					
Scour/Erosion		N	5		
Beavers (Y/N)	No				
Downstream End General Rating		4	5		
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		W		South pipe.	
End Treatment (Concrete, Steel, Others, None)	CONCRETE				
Headwall		X	X		
Collar		N	3	Broken concrete, 1.0m voids underneath.	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		4	5	
Heaving (mm)	1000			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	3	Concrete protection broken up with up to 1.0m void.
(Type : CONCRETE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	(Water ponding outside bevel. 16/Apr/2007) Covered by beaver dam and water.
Beavers (Y/N)	Yes			1m high dam on inlet.
Upstream End General Rating		3	3	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3670, Type: SP)				
Barrel Last Accessible Date	09-Nov-2010			South pipe
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	
Measured Rise (mm)	3420			
Measured At Ring No.	16			
Sag (mm)	200			
Percent Sag	5			
Sidewall		2	2	See longitudinal seam comment.
Measured Span (mm)	3910			
Measured At Ring No.	16			
Deflection (mm)	240			
Percent Deflection	7			
Floor		N	5	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		2	2	Not all seams visible @ 8 o'clock. R22N, R21N, R20N, R19N, R17N, R15N, R12N, R10N, R8N, R6N (45mm), R4N & R3N. R55,R45,R25, R35, R4, 3 cracked in two seams.
Total No. of Cracked Rings	13			
Total No. of Rings with Two Cracked Seams	2			
Min. Remaining Steel Between Cracks (mm)	45			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3670, Type: SP)				
Coating		4	5	Superficial rust 5-7 o'clock.
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		3	4	Steep inlet, high velocity.
Baffle		X	X	(Type :)
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		2	2	
Downstream 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	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	(Material required around sides of the bevel. 16/Apr/2007) Bevel projects from fill 500mm.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			Fill settled 500mm.
Above/Below (mm)	250			
Scour Protection		N	5	Loosely placed concrete @ toe.
(Type : CONCRETE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Downstream End General Rating		4	5	
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)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	DEGRADING			Deg d/s. Dam @ inlet of S pipe.
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	Replace culverts.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	22.2/22.2	Sufficiency Rating (Last/Now) (%)	36.7/37.9	Est. Repl. Yr	2012	Maint. Reqd. (Y/N)	Yes
Special Comments for Next Inspection	Inspect annually until replaced. Next inspection 02-Feb-10. Low rating advisory issued 02-Feb-2009. Called AT from site. Brent Herrick advised replacement programmed for 2010.-02-Feb-2010 Low rating advisory sent to Michael Botros-12-Nov-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	Dave Lam		Previous Assistant's Name				
Next Inspection Date	09-Aug-2012		Previous Inspection Date	02-Feb-2009			
Inspection Cycle (Default) (months)	21						
Comment							