

Bridge Culvert Inspection				
Bridge File Number	74218 -1 Bridge Culvert		Form Type	CULM
Year Built	1954		Lot No.	1
Bridge or Town Name	RIMBEY		Inspector Name	Owen Salava
Located Over	TRIBUTARY TO BLINDMAN RIVER, 3.78.10, WATERCRS-ST		Inspector Class	BR CLS A
Located On	20:04 C1 18.585		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	10-Jul-2012
Legal Land Location	NE SEC 10 TWP 42 RGE 2 W5M		Data Entry By	Marcia Chavez
Longitude, Latitude	-114:12:09, 52:36:21		Data Entry Date	01-Aug-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA18		Review Date	31-Jul-2012
Clear Roadway/Skew	12.2 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	3,830 / 2011 (A)		Dept. Review Date	02-Aug-2012
Road Classification	RAU-211.8-110		Follow-Up By	
Detour Length (km)	10			

Bridge Culvert Information								
Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1810	SP	32.9	152X51	2.8	ROUND
2	MAIN	-	1810	SP	32.9	152X51	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	In r/w to West.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	RR tracks approx 50m East.		

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	
Vertical Alignment		8	8	
Roadway Width (m)	12.200			
Embankment		7	7	4:1 then 2:1 over pipes.
Sideslope (___:1)	3.0			
(Height of Cover(m) : 2.4)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		7	7	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction	E			South pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	150			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	4	Insufficient rock at banks at bevel. Small 100mm rock in SB. Undermining @ bevel. Eroded banks.
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	4	
Beavers (Y/N)	No			
Upstream End General Rating		3	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1810, Type: SP)				
Barrel Last Accessible Date	10-Jul-2012			South pipe.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	3	Cracks @ circumferential seams @ roof; worst at R7/8 seam. Roof flattening at R8, unable to measure due to 400mm silt (photo).
Measured Rise (mm)	1750			
Measured At Ring No.	5			3.3%
Sag (mm)	60			
Percent Sag	3			
Sidewall		N	5	
Measured Span (mm)	1860			
Measured At Ring No.	8			
Deflection (mm)	50			2.8%
Percent Deflection	3			
Floor		N	N	Water/silt.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	3	130mm longit. crack at roof bolt at circumferential seam at R7/8 seam - no increase since 1997. R3/4,4/5,5/6,7/8 also cracked.
Separation (mm)	0			
Longitudinal Seams		N	N	(100mm long at R4-7 and 50mm long at R9. Lower longit. seams under ice. 21Mar2006).
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)	Yes			
Coating		4	4	Corrosion at bolts.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1810, Type: SP)					
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	No				
Fish Passage Adequacy		7	4	Outlet perched 0.3m.	
Baffle		X	X		
(Type :)					
Waterway Adequacy		5	5		
Icing (Y/N)	No				
Silting (Y/N)	Yes				
Drift (Y/N)	No			0.4m silt in d/s third.	
Barrel General Rating		4	3		
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Span Type: Primary Span)					
Direction		W		Extension to D/S end installed Oct/88. 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	Perched 0.3m.	
Heaving (mm)	0				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	200				
Scour Protection		N	4		
(Type : NATURAL)					
(Avg. Rock Size(mm) :)					
Scour/Erosion		N	4		
Beavers (Y/N)	No				
Downstream End General Rating		5	4		
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary 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		

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	5	
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Upstream End General Rating		3	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1810, Type: SP)				
Barrel Last Accessible Date	10-Jul-2012			North pipe.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	4	Cracks @ circumferential seams @ roof, 140mm long at R5/6 seam.
Measured Rise (mm)	1700			
Measured At Ring No.	6			6.1%
Sag (mm)	110			
Percent Sag	6			
Sidewall		N	5	
Measured Span (mm)	1898			
Measured At Ring No.	6			
Deflection (mm)	88			4.8%
Percent Deflection	5			
Floor		N	N	Water.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	4	140mm longit.l crack at roof bolt at circumferential seam at R5/6 seam - no increase since 1997. Cracks at R3/4,4/5,5/6,6/7,7/8.
Separation (mm)	0			
Longitudinal Seams		N	N	(100mm long at R4-7 and 50mm long at R9.Lower long. seams under ice. 21-Mar-2006).
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)	Yes			
Coating		4	4	Corrosion at bolts.
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 # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1810, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary 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		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	4	
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	4	Minor erosion at SW shoulder.
Beavers (Y/N)	No			
Downstream End General Rating		5	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Curve on West side.
Bank Stability		5	5	Steep banks u/s & d/s.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		5	5	

Maintenance Recommendations										
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #				
SHOTCRETE REPAIRS										
PLACE ADDITIONAL RIP RAP	2012	CL1, 20m3 around inlets & outlets.								
REMOVE DRIFT ACCUMULATION										
INSTALL CONCRETE/STEEL LINING										
INSTALL STRUTS										
INSTALL CONCRETE COLLAR/CUTOFF										
REPAIR SEAMS										
OTHER ACTION	2012	Drill ends of circ. seam cracks.								
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (Last/Now) (%)	44.4/33.3	Sufficiency Rating (Last/Now) (%)	42.6/31.2	Est. Repl. Yr	2019	Maint. Req. (Y/N)	Yes			
Special Comments for Next Inspection	Department Comments									
Maintenance Reviewed By	Date		Estimated Total 0							
Proposed Long-Term Strategy	2004.05.30 Monitor small roof cracks on normal bim. Culvert should be okay until 2014. Consider welding small cracks at bolt holes in roof if necessary.									
On 3-Year Program (Y/N)										
Proposed Action										
Previous Inspector's Name	Owen Salava	Previous Assistant's Name								
Next Inspection Date	10-Apr-2014	Previous Inspection Date	08-Dec-2010							
Inspection Cycle (Default) (months)	21									
Comment										

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2012	CL1, 20m3 around inlets & outlets.	Defer until replacement	2019		
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2012	Drill ends of circ. seam cracks.	Programmed	2013		
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	44.4/33.3	Sufficiency Rating (Last/Now) (%)	42.6/31.2	Est. Repl. Yr	2019	Maint. Req. (Y/N)	Yes
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Special Comments for Next Inspection		Department Comments	Replacement programmed for 2019
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Maintenance Reviewed By	Andrew Smikles	Date	30-Nov-2012	Estimated Total	0
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Proposed Long-Term Strategy	2004.05.30 Monitor small roof cracks on normal bim. Culvert should be okay until 2014. Consider welding small cracks at bolt holes in roof if necessary.
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On 3-Year Program (Y/N)	
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Proposed Action	
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Previous Inspector's Name	Owen Salava	Previous Assistant's Name	
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Next Inspection Date	10-Apr-2014	Previous Inspection Date	08-Dec-2010
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Inspection Cycle (Default) (months)	21
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Comment	
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