

Bridge Culvert Inspection				
Bridge File Number	01800 -1 Bridge Culvert		Form Type	CUL1
Year Built	1957		Lot No.	1
Bridge or Town Name	CAMROSE		Inspector Name	Owen Salava
Located Over	TRIBUTARY TO DRIEDMEAT CREEK, 5.40.3, WATERCRS-ST		Inspector Class	BR CLS A
Located On	26:10 C1 13.896		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	06-Nov-2012
Legal Land Location	SE SEC 4 TWP 47 RGE 18 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-112:33:60, 53:01:05		Data Entry Date	19-Nov-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA16		Review Date	14-Nov-2012
Clear Roadway/Skew	8.6 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,900 / 2011 (A)		Dept. Review Date	26-Nov-2012
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	6			

Bridge Culvert Information								
Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	2489	1752	RPP	28	152X51	2.8	PIPE ARCH
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	South crossing road.	Gas	
Power	2 wire 25m North of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Located between correction line intersections. Crest curve to the East with limited sight distance. No passing EB. A 1100mm CSP X approx 30m invert length at 20m West of the culvert.
Vertical Alignment		6	6	
Roadway Width (m)	8.600			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 1.8)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		6	6	

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 (Shape :)		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		7	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		7	7	Well vegetated.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		7	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2489, Rise (mm): 1752, Type: RPP)				
Barrel Last Accessible Date	06-Nov-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		2	2	Rise worst 1467 at R3 bulge location. R3 seam with cusping/poor nesting.
Measured Rise (mm)	1500			
Measured At Ring No.	3			
Sag (mm)	252			14.4%
Percent Sag	14			
Sidewall		2	2	Seams cracked with 40mm steel remaining.
Measured Span (mm)	2645			
Measured At Ring No.	4			
Deflection (mm)	156			6.3%
Percent Deflection	6			
Floor		N	3	Heavy scaling & loss of section. R3, 4 & 5 floor bulging - photo.
Bulge (mm)	100			
Measured At Ring No.	3			
Abrasion (Y/N)	No			
Circumferential Seams		5	5	
Separation (mm)	0			
Longitudinal Seams		2	2	R4 has 40mm steel between cracks. R2-7 cracked East wall.
Total No. of Cracked Rings	6			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	40			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		3	3	Scaling rust on bottom plates & 500mm up on side plates. Heavy scaling & alkaline stains.
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): 2489, Rise (mm): 1752, Type: RPP)					
Ponding (Y/N)	No				
Fish Passage Adequacy		4	5		
Baffle		X	X		
(Type :)					
Waterway Adequacy		5	6	Scour @ outlet. High outlet velocities. (50mm. 10Aug2009). Iced over.	
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	
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		7	6		
Heaving (mm)	0				
Invert Above/Below Stream Bed					
Above/Below (mm)	0				
Scour Protection		4	5	Rock placed along side East bank of scour hole.	
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 300)					
Scour/Erosion		4	5	Sidebank pushed in to fill scour hole.	
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		6	6		
HWM (m below Top of Culvert)				HWM not visible.	
Drift (Y/N)	Yes				
Channel Bottom Degrading/Aggrading				Unknown.	
Beavers (Y/N)	No				
(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 #	Structural Condition Rating (Last/Now) (%)	Sufficiency Rating (Last/Now) (%)	34.1/43.4	Est. Repl. Yr	2015	Maint. Req. (Y/N)	Yes
SHOTCRETE REPAIRS													
PLACE ADDITIONAL RIP RAP													
REMOVE DRIFT ACCUMULATION													
INSTALL CONCRETE/STEEL LINING													
INSTALL STRUTS													
INSTALL CONCRETE COLLAR/CUTOFF													
REPAIR SEAMS													
OTHER ACTION	2015	Replace pipe.											
OTHER ACTION													
OTHER ACTION													
OTHER ACTION													
Special Comments for Next Inspection		Replace pipe when hwy widened; no maintenance recommended at this time. If replacement is not an option consider strutting. Monitor barrel deflections; liner is not an option as already signs existing pipe too small due to scour hole at d/s channel. Continue to inspect site at regular cycle as per AT comments from 22Oct2009. LRA emailed to Donald Saunders 13Nov2012.	Department Comments										
Maintenance Reviewed By												Estimated Total	0
Proposed Long-Term Strategy		Road strategy-No work necessary. RS											
On 3-Year Program (Y/N)													
Proposed Action													
Previous Inspector's Name		Dave Lam	Previous Assistant's Name										
Next Inspection Date		06-Aug-2014	Previous Inspection Date									10-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							
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2015	Replace pipe.	Programmed	2016			
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	22.2/22.2	Sufficiency Rating (Last/Now) (%)	34.1/43.4	Est. Repl. Yr	2015	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Replace pipe when hwy widened; no maintenance recommended at thsi time. If replacement is not an option consider strutting. Monitor barrel deflections; liner is not an option as already signs existing pipe too small due to scour hole at d/s channel. Continue to inspect site at regular cycle as per AT comments from 22Oct2009. LRA emailed to Donald Saunders 13Nov2012.		Department Comments	Replacement programmed for 2016.			
Maintenance Reviewed By	Andrew Smikles		Date	19-Dec-2012	Estimated Total	0	
Proposed Long-Term Strategy	Road strategy-No work necessary. RS						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Dave Lam		Previous Assistant's Name				
Next Inspection Date	06-Aug-2014		Previous Inspection Date	10-Dec-2010			
Inspection Cycle (Default) (months)	21						
Comment							