Bridge Culvert Inspection

Bridge File Number	70870 -1 Bridge Culvert	Form Type	CUL1
Year Built	1959	Lot No.	1
Bridge or Town Name	GADSBY	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO BIGKNIFE CREEK, 5.29.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	852:02 C1 12.572	Assistant Class	
Water Body Cl./Year		Inspection Date	15-Aug-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	NW SEC 35 TWP 39 RGE 17 W4M	Data Entry Date	17-Sep-2012
Longitude, Latitude	-112:21:22, 52:24:01	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	04-Sep-2012
Contract Main. Area	CMA20	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	9 /	Dept. Review Date	22-Oct-2012
AADT/Year	90 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209G-90		
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	-	1524	MP	46.3	68X13	3.5	ROUND

Special Features	VERT TIMBER STRUTS
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	2 wires 20m East of centerline.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Rise 100m South.
Vertical Alignment		6	6	
Roadway Width (m)	9.100			
Embankment		3	5	
Sideslope (__:1)	2.5			
(Height of Cover(m) : **2.9**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**3**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
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		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		3	3	Scour around end. 1.5m under end - photo.
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		3	3	
Beavers (Y/N)	No			
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): 1524, Type: MP**)				
Barrel Last Accessible Date	15-Aug-2012			
Special Features				
Special Feature		6	6	Single steel strut at inlet.
(Type : **VERT TIMBER STRUTS**)				
Special Feature				
(Type :)				
Roof		2	2	Ext perforations through R2/9/10. Low point at first timber strut.
Measured Rise (mm)	1280			
Measured At Ring No.	3			
Sag (mm)	244			
Percent Sag	16			
Sidewall		2	2	Ext perforations through R2/9/10.
Measured Span (mm)	1775			
Measured At Ring No.	3			
Deflection (mm)	251			
Percent Deflection	17			16.5%
Floor		4	4	Deep pitting on floor & haunches.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	4	Minor loss of fill @ section 2 in sidewall - photo. Not within coupler, West end section.
Separation (mm)	120			
Longitudinal Seams		6	6	Riveted center section.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		2	2	Corrosion with some pitting @ soil line @ ends. Ext dime to loonie size perforations through R2/9/10.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1524, Type: MP**)				
Fish Passage Adequacy		3	3	Dam U/S of inlet blocks passage.
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	5	
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		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		4	4	
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Minor scour around bevel.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

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			
Channel Bottom Degrading/Aggrading				Unknown. Beaver dam @ U/S channel.
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	2012	5m3 CL1 at inlet.				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS	2012	Extend 5m West & 7m East.				
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2015	Schedule replacement.				
OTHER ACTION	2012	Repair scour on bevel ends.				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/22.2**	**Sufficiency Rating (Last/Now) (%)**	**18.3/32.7**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	(Discussed with AT 27Mar2006; scheduled for replacement 2010 to 2015 schedule). LRA emailed to Donald Saunders on 16Aug2012.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy	2003.08.19 Replace culvert in 2015 or prior to paving. Maintain dam and water storage upstream of crossing.				
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Owen Salava	Previous Assistant's Name			
Next Inspection Date	15-Nov-2015	Previous Inspection Date	01-Sep-2009		
Inspection Cycle (Default) (months)	39				
Comment					

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2012	5m3 CL1 at inlet.	Defer			
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS	2012	Extend 5m West & 7m East.	Defer			
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2015	Schedule replacement.	Programmed	2022		
OTHER ACTION	2012	Repair scour on bevel ends.	Defer			
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/22.2**	**Sufficiency Rating (Last/Now) (%)**	**18.3/32.7**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	(Discussed with AT 27Mar2006; scheduled for replacement 2010 to 2015 schedule). LRA emailed to Donald Saunders on 16Aug2012.	Department Comments	Currently programmed for replacement in 2022.

Maintenance Reviewed By	Andrew Smikles	Date	19-Nov-2012	Estimated Total	0
Proposed Long-Term Strategy	2003.08.19 Replace culvert in 2015 or prior to paving. Maintain dam and water storage upstream of crossing.				
On 3-Year Program (Y/N)					
Proposed Action					

Previous Inspector's Name	Owen Salava	Previous Assistant's Name	
Next Inspection Date	15-Nov-2015	Previous Inspection Date	01-Sep-2009
Inspection Cycle (Default) (months)	39		
Comment			