Bridge Culvert Inspection

Bridge File Number	77580 -1 Bridge Culvert	Form Type	CUL1
Year Built	1965	Lot No.	4
Bridge or Town Name	CAROLINE	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO SEVEN MILE CREEK, 6.159.17.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	734:14 C1 40.069	Assistant Class	
Water Body Cl./Year		Inspection Date	30-Nov-2010
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	NE SEC 30 TWP 35 RGE 10 W5M	Data Entry Date	03-Jan-2011
Longitude, Latitude	-115:24:41, 52:02:25	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	16-Dec-2010
Contract Main. Area	CMA18	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	7.3 / 12 deg. (RHF)	Dept. Review Date	05-Jan-2011
AADT/Year	90 / 2009 (A)	Follow-Up By	
Road Classification	RCU-208G-90		
Detour Length (km)	150		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2400	SP	24.4	152X51		ROUND

Special Features	
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	Curve 200m South. Cannot travel @ 80 kph design speed. Hill 200m North, limited sight distance.
Vertical Alignment		4	4	
Roadway Width (m)	7.000			
Embankment		4	4	Steep slopes on U/S & D/S sides.
Sideslope (__:1)	1.0			
(Height of Cover(m) : **2**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**4**	**4**	

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		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	Corrosion at waterline.
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		7	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **350**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: SP**)				
Barrel Last Accessible Date	30-Nov-2010			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	Not meaured due to ice.
Measured Rise (mm)				
Measured At Ring No.	4			
Sag (mm)	80			Estimated.
Percent Sag	3			(3.3% 23Nov2005).
Sidewall		7	7	1st ring from D/S end - span is 2460mm.
Measured Span (mm)	2460			
Measured At Ring No.	4			
Deflection (mm)	60			2.5%
Percent Deflection	3			
Floor		N	N	Ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
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		6	6	Corrosion at waterline.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
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): 2400, Type: SP**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**6**	**7**	

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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		5	N	(Rock washed downstream. 23Nov2005). Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **350**)				
Scour/Erosion		5	N	(Scour hole filled with rock - photo. 23Nov2005).
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**5**	Based on scour from 23Nov2005.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	4	West end of pipe should have been 3.5m South to line up better with D/S channel - should have been +21 degree skew.
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**66.7/77.8**	**Sufficiency Rating (Last/Now) (%)**	**56.5/59.6**	Est. Repl. Yr	2025	Maint. Reqd. (Y/N)	No

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	Dave Lam	Previous Assistant's Name			
Next Inspection Date	28-Feb-2014	Previous Inspection Date	23-Nov-2005		
Inspection Cycle (Default) (months)	39				
Comment					