Bridge Culvert Inspection

Bridge File Number	72653 -1 Bridge Culvert	Form Type	CUL1
Year Built	1996	Lot No.	4
Bridge or Town Name	CARSTAIRS	Inspector Name	Owen Salava
Located Over	CARSTAIRS CREEK, 3.33.21, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	2A:12 C1 7.234	Assistant Class	
Water Body Cl./Year		Inspection Date	26-Oct-2011
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	NW SEC 34 TWP 29 RGE 1 W5M	Data Entry Date	29-Nov-2011
Longitude, Latitude	-114:04:19, 51:31:47	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	14-Nov-2011
Contract Main. Area	CMA29	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	12 / -6 deg. (LHF)	Dept. Review Date	02-Dec-2011
AADT/Year	4,290 / 2010 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	11		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3990	SP	43.9	152X51		ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power		Municipal	
Others	3 wire 30m East of c/l.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 200m North. Curve 150m South.
Vertical Alignment		8	8	
Roadway Width (m)	12.000			
Embankment		5	5	0.8m x 0.8m x 15m ditch erosion @ SW, minor.
Sideslope (__:1)	4.0			
(Height of Cover(m) : **2.1**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		7	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Buried.

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	900			
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		8	8	
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): 3990, Type: SP**)				
Barrel Last Accessible Date	08-Feb-2010			(3990 span @ 1/3L. 03/11/13). 1.2m water; viewed from ends, shape looks good.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		8	N	
Measured Span (mm)	3904			
Measured At Ring No.	6			
Deflection (mm)	86			
Percent Deflection	2			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		8	N	
Separation (mm)	0			
Longitudinal Seams		8	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				1N Stagger
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		7	7	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
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): 3990, Type: SP**)				
Fish Passage Adequacy		9	9	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	GR was 8 from 08Feb2010.

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		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	900			
Scour Protection		N	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		N	8	
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**8**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Bends 90 degree @ D/S. Well armoured. Railway bridge 50m U/S with larger opening.
Bank Stability		6	6	
HWM (m below Top of Culvert)				No visible HWM.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(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						
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) (%)	**88.9/55.6**	**Sufficiency Rating (Last/Now) (%)**	**83.9/65.9**	Est. Repl. Yr	2053	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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	26-Jul-2013	Previous Inspection Date	08-Feb-2010		
Inspection Cycle (Default) (months)	21				
Comment					