Bridge Culvert Inspection

Bridge File Number	72605 -1 Bridge Culvert	Form Type	CUL1
Year Built	1954	Lot No.	4
Bridge or Town Name	STONY PLAIN	Inspector Name	Wade Nanninga
Located Over	TRIBUTARY TO KILINI CREEK, 6.65.19.3, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	16:12 L1 49.493;16:12 R1 49.474	Assistant Class	
Water Body Cl./Year		Inspection Date	07-Aug-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 17 TWP 53 RGE 2 W5M	Data Entry Date	26-Aug-2012
Longitude, Latitude	-114:15:09, 53:34:13	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	21-Aug-2012
Contract Main. Area	CMA11	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	22.8 /	Dept. Review Date	30-Aug-2012
AADT/Year	13,120 / 2011 (A)	Follow-Up By	
Road Classification	RAD-412.4-120		
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1520	MP	59.7	68X13	2.8	ROUND
Special Features		VERT TIMBER STRUTS						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power	7 wires North r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Approach NE of culvert.
Vertical Alignment		7	7	
Roadway Width (m)	22.800			EBL 10.9m, WBL 11.9m.
Embankment		7	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **3.9**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

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	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		7	7	
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): 1520, Type: MP**)				
Barrel Last Accessible Date	07-Aug-2012			
Special Features				
Special Feature		7	7	6" x 6" & 4" x 6" average 1.5m spacing.
(Type : **VERT TIMBER STRUTS**)				
Special Feature				
(Type :)				
Roof		5	5	
Measured Rise (mm)	1410			@ CL
Measured At Ring No.				
Sag (mm)	110			
Percent Sag	7			
Sidewall		5	5	
Measured Span (mm)	1580			@ CL
Measured At Ring No.				
Deflection (mm)	60			
Percent Deflection	4			
Floor		5	5	Minor superficial rust. Some scaling & pitting.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		3	5	80mm separation on roof between coupler and 2nd last barrel section. Steel plate installed.
Separation (mm)	130			
Longitudinal Seams		7	7	Riveted connections. Heavy corrosion on some riveted connections.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	4	500mm strip along floor has scaling rust with pitting.
Corrosion By Soil (Y/N)	No			
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): 1520, Type: MP**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	Few sticks @ U/S end of struts.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**5**	**5**	

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		5	5	Protruding from fill 300mm. Settlement SE.
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		4	4	D/S scour hole. Bevel unsupported for 200mm.
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Scour hole at downstream end .6 m x 4 m x 6 m.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Stream makes sharp bend West D/S from D/S bevel.
Bank Stability		5	5	Vertical banks.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
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) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**60.6/60.6**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor scour and circum. seams.	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	Kris Bosters	Previous Assistant's Name			
Next Inspection Date	07-May-2014	Previous Inspection Date	07-Oct-2010		
Inspection Cycle (Default) (months)	21				
Comment					