Bridge Culvert Inspection

Bridge File Number	02324 -1 Bridge Culvert	Form Type	CUL1
Year Built	1975	Lot No.	2
Bridge or Town Name	STONY PLAIN	Inspector Name	Kris Bosters
Located Over	2ND ORDER TRIBUTARY TO NORTH SASKATCHEWAN RIVER, 6.119.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Brian Cote
Located On	627:02 C1 32.166	Assistant Class	
Water Body Cl./Year		Inspection Date	31-Oct-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 5 TWP 52 RGE 2 W5M	Data Entry Date	13-Nov-2012
Longitude, Latitude	-114:15:32, 53:27:15	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	04-Nov-2012
Contract Main. Area	CMA11	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	9.2 / -15 deg. (LHF)	Dept. Review Date	20-Nov-2012
AADT/Year	1,430 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	25		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1429	1575	SPE	83.5	152X51	2.8	ELLIPSE
Special Features		BARREL ELBOW						
Special Features Comment		V. Ellipse 1429x1575						

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	2 wire, North r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	East of BF 74085 - entrances each way. 80 KM design profile 70 km caution area. Crest curve in both directions, limited sight distance. No passing.
Vertical Alignment		5	5	
Roadway Width (m)	9.200			
Embankment		6	6	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **8.5**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**5**	**5**	

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 :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	50			
Scour Protection		5	5	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
Beavers (Y/N)	Yes			u/s of bevel 1.5m high- photo
Upstream End General Rating		**5**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1429, Rise (mm): 1575, Type: SPE**)				
Barrel Last Accessible Date	31-Oct-2012			Lat 3/4 not accessible due to depth of water. Shape looks good.
Special Features				
Special Feature		7	7	
(Type : **BARREL ELBOW**)				
Special Feature				
(Type :)				
Roof		7	7	
Measured Rise (mm)	1575			
Measured At Ring No.	15			
Sag (mm)	0			
Percent Sag	0			
Sidewall		7	7	
Measured Span (mm)	1430			
Measured At Ring No.	15			
Deflection (mm)	1			
Percent Deflection	0			
Floor		7	4	Isolated perforations(10mm) in floor R8.-photo
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)	No			
Longitudinal Stagger (Y/N)	No			
Coating		6	4	Rust at seepage at bolts holes, superficial on floor & sidewalls. Soil side isolated perforations in floor.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1429, Rise (mm): 1575, Type: SPE**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		3	3	150mm drop @ outlet. Steel inlet, long pipe.-10-July-2009
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**7**	**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		7	N	Water 300mm from crown.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	150			
Scour Protection		5	N	Rock lined channel bottom.-10-Jul-2009
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		5	N	
Beavers (Y/N)	Yes			
Downstream End General Rating		**5**	**5**	GR carried forward from 10-Jul-2009

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)				
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
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						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2012	Remove dam.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**77.8/77.8**	**Sufficiency Rating (Last/Now) (%)**	**59.3/59.3**	Est. Repl. Yr	2033	Maint. Reqd. (Y/N)	Yes

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	Arnold Assenheimer	Previous Assistant's Name	
Next Inspection Date	31-Jan-2016	Previous Inspection Date	10-Jul-2009
Inspection Cycle (Default) (months)	39		
Comment			