

Bridge Culvert Inspection			
Bridge File Number	13132 -1 Bridge Culvert	Form Type	CUL1
Year Built	1965	Lot No.	2
Bridge or Town Name	ELK POINT	Inspector Name	Wade Nanninga
Located Over	TRIBUTARY TO NORTH SASKATCHEWAN RIVER, 6.13, WATERCRS-ST	Inspector Class	BR CLS A
Located On	41:22 C1 22.004	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	10-Apr-2012
Legal Land Location	SE SEC 24 TWP 56 RGE 7 W4M	Data Entry By	Lisa Fairhurst
Longitude, Latitude	-110:53:57, 53:51:05	Data Entry Date	24-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA08	Review Date	17-Apr-2012
Clear Roadway/Skew	14.5 / 28 deg. (RHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	1,790 / 2011 (A)	Dept. Review Date	04-May-2012
Road Classification	RAU-211.8-110	Follow-Up By	
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	2019	2226	SPE	173.7	152X51	3.0,2.8	ELLIPSE
Special Features	BARREL DEICING PIPE, BARREL ELBOW							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power		Municipal	
Others	Geodetic survey marker about 100m North of D/S end #90A163.	Problem (Y/N)	No
Remarks	No BF tag installed.		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Long gradual horizontal curve built into a long 5% grade up to the south from BF 70318 Climbing lane present. Roadway superelevated over culvert. Located at North end of guardrail.
Vertical Alignment	4	5	
Roadway Width (m)	14.500		
Embankment	4	4	Gully at SE (50m 0.5 x 0.5).
Sideslope (__:1)	3.0		
(Height of Cover(m) : 7)			
Guardrail (Y/N)	Yes		Guardrail on West shoulder only.
Approach Road / Embankment General Rating	4	5	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	W		
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	50			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 300)		4	4	
Scour/Erosion		4	4	Loss of fill 0.2m x 1m long. Along West side of bevel.
Beavers (Y/N)	No			
Upstream End General Rating		4	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: SPE)				
Barrel Last Accessible Date	15-Jul-2010			Only accessible up to elbow due to ice
Special Features				
Special Feature (Type : BARREL DEICING PIPE)		3	3	De-icing pipe broken 5 rings from d/s end.-photo Brackets used to attach pipe to wall rusted off.
Special Feature (Type : BARREL ELBOW)		4	4	Welded seam @ elbow is now rusting & cracked. Steam pipe from D/S end to elbow.
Roof		6	6	Near mid length.
Measured Rise (mm)	2180			
Measured At Ring No.				
Sag (mm)	46			Est. due to ice
Percent Sag	2			
Sidewall		6	6	Near mid length.
Measured Span (mm)	2060			
Measured At Ring No.				
Deflection (mm)	41			Construction damage u/s 10m from elbow
Percent Deflection	2			
Floor		6	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
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				New section only lapped properly.
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		3	3	(Superficial rust from bolt holes D/S 1/4 of pipe. Scaling/pitting rust on bottom 1/3 of old section of pipe. 100mm Ø corrosion hole at 7:00 in 7th ring from d/s end. - 15Jul10)
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: SPE)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Perched outlet.
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	(Last 10 rings approx 200mm - photo. 13/Nov/2006)
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		6	6	
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		5	5	Bevel dented
Heaving (mm)	140			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1200			
Scour Protection		4	4	Bevel section undermined for 2.4m.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 700)				
Scour/Erosion		4	4	Outfall of 1.2m onto large rock. Erosion gully on South side (50m x 0.5 x 0.5) contributing to undermining of bevel end. Outlet scouring and streambed degrading.
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	
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			

Structure Usage				
		Last	Now	Explanation of Condition
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		6	6	

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	Repair/install de-icing pipe prior to next winter.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	66.7/66.7	Sufficiency Rating (Last/Now) (%)	48.6/57.9	Est. Repl. Yr	2023	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor corrosion in older d/s section of pipe		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	Shane Hall		Previous Assistant's Name				
Next Inspection Date	10-Jan-2014		Previous Inspection Date	15-Jul-2010			
Inspection Cycle (Default) (months)	21						
Comment							