Bridge Culvert Inspection

Bridge File Number	78866 -1 Bridge Culvert	Form Type	CUL1
Year Built	1978	Lot No.	4
Bridge or Town Name	YOUNGSTOWN	Inspector Name	Jason Saly
Located Over	TRIBUTARY TO BLOOD INDIAN CREEK, 3.9.3, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	884:06 C1 17.284	Assistant Class	
Water Body Cl./Year		Inspection Date	22-Nov-2010
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 27 TWP 24 RGE 9 W4M	Data Entry Date	07-Jan-2011
Longitude, Latitude	-111:11:28, 51:04:17	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	12-Dec-2010
Contract Main. Area	CMA21	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	9.1 / 10 deg. (RHF)	Dept. Review Date	11-Jan-2011
AADT/Year	300 / 2009 (A)	Follow-Up By	
Road Classification	RCU-210-110		
Detour Length (km)	100		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2314	2552	SPE	37.2	152X51	2.8	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West ditch	Gas	
Power	East property line	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	8	Sag curve.
Vertical Alignment		7	7	
Roadway Width (m)	9.100			
Embankment		7	N	Snow covered.
Sideslope (__:1)	2.5			
(Height of Cover(m) : **3.4**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		6	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**6**	Based on scour from 30Jan2009.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2314, Rise (mm): 2552, Type: SPE**)				
Barrel Last Accessible Date	22-Nov-2010			6N top, 6N bottom and 2 - 5N per side
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	5	Could not measure rise due to dirt & ice along the floor.
Measured Rise (mm)	2491			
Measured At Ring No.	4			
Sag (mm)	61			(30Jan2009).
Percent Sag	2			
Sidewall		5	4	Span measured at R2=2429 - 115mm; R5=2490 - 176mm=8.2%; R8=2427 - 113mm.
Measured Span (mm)	2490			
Measured At Ring No.	5			
Deflection (mm)	176			
Percent Deflection	8			
Floor		N	N	Silt - 120mm. Ice.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	4	Cracks in top bolt at rings 3-4-5-6 - 15mm
Separation (mm)	0			
Longitudinal Seams		6	6	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		6	5	Superficial corrosion and alkali
Corrosion By Soil (Y/N)	Yes			
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): 2314, Rise (mm): 2552, Type: SPE**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	120mm dirt floor for cattle
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	Sloped section 3.05 m long. Floor silted.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	Based on scour from 30Jan2009.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	29 m from D/S bevel channel is approximately 3 ft. higher than ground level @ inlet. Bends @ outlet.
Bank Stability		7	N	Snow covered.
HWM (m below Top of Culvert)				HWM not visible.
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		**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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**56.1/55.1**	Est. Repl. Yr	2024	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor marked crack at R3-6 top circumferential seam bolts.	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	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	22-Feb-2014	Previous Inspection Date	30-Jan-2009		
Inspection Cycle (Default) (months)	39				
Comment					