Bridge Culvert Inspection

Bridge File Number	81178 -1 Bridge Culvert	Form Type	CUL1
Year Built	1987	Lot No.	4
Bridge or Town Name	WETASKIWIN	Inspector Name	Jason Saly
Located Over	DITCH, WATERCRS-NI	Inspector Class	BR CLS A
Located On	2A:26 C1 1.170	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	24-Nov-2011
Legal Land Location	SW SEC 26 TWP 46 RGE 24 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-113:23:25, 52:59:26	Data Entry Date	21-Dec-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA17	Review Date	15-Dec-2011
Clear Roadway/Skew	14 / 30 deg. (RHF)	Dept. Reviewer Name	Andrew Smikles
AADT/Year	6,970 / 2010 (A)	Dept. Review Date	09-Jan-2012
Road Classification	RAU-213.4-110	Follow-Up By	
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3670	SP	58.3	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	East of R.R. tracks.	Municipal	Lights 50m South.
Others	Fibre optic East r/w.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	In middle of curve to North & South. No passing in both directions.
Vertical Alignment		7	7	At middle of curve.
Roadway Width (m)	14.000			
Embankment		6	6	To top of superelevation on East side.
Sideslope (__:1)	4.0			
(Height of Cover(m) : **1.7**)				
Guardrail (Y/N)	Yes			East side only.
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Narrow vertical cracks.
Collar		7	N	(Minor cracking. 02Mar2010). Snow covered.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Ice covered.

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		N	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	N	
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): 3670, Type: SP**)				
Barrel Last Accessible Date	24-Nov-2011			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	4	Unable to measure rise due to ice. Localized roof bulge in R5, measured at 75mm. Bulge is 17m from U/S end and 13m from edge of Hwy 2A in shallow cover area 0.3m. Likely caused by compaction equipment when backfilling.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	50			
Percent Sag				
Sidewall		6	6	Span at R3=3810=140mm Span at R9=3830=160mm=4.4% Span at R15=3795=125mm
Measured Span (mm)	3830			
Measured At Ring No.	9			
Deflection (mm)	160			4.4%
Percent Deflection	4			
Floor		N	N	Ice 1.0m deep.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		4	4	15mm separation at R5 roof seam. All other seams rate "7".
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)	Yes			1N stagger.
Coating		6	6	At upper sidewall seams north end. Lower sidewall.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
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): 3670, Type: SP**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	(1000 silt at upstream side. 23/June/2005).
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	

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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	800			
Scour Protection		N	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Curves both ends. RR is 20m D/S.
Bank Stability		7	7	
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		**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) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**51.5/51.5**	Est. Repl. Yr	2035	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor bulge in 5th ring from u/s in roof & sidewall area. (Measured 75mm from ice 13Feb2009) - unchanged 24Nov2011.	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	24-Aug-2013	Previous Inspection Date	01-Mar-2010		
Inspection Cycle (Default) (months)	21				
Comment					