Bridge Culvert Inspection

Bridge File Number	02090 -1 Bridge Culvert	Form Type	CUL1
Year Built	1986	Lot No.	4
Bridge or Town Name	ONOWAY	Inspector Name	Melanie Johnson
Located Over	TRIBUTARY TO TOAD CREEK, 6.65.18.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	642:02 C1 1.476	Assistant Class	
Water Body Cl./Year		Inspection Date	28-Jun-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 1 TWP 56 RGE 2 W5M	Data Entry Date	06-Jul-2011
Longitude, Latitude	-114:09:11, 53:48:11	Reviewer Name	Arnold Assenheimer
Road Authority	Alberta Transportation (AIT)	Review Date	29-Jun-2011
Contract Main. Area	CMA09	Dept. Reviewer Name	Brian Adams
Clear Roadway/Skew	10.1 / -45 deg. (LHF)	Dept. Review Date	20-Nov-2012
AADT/Year	390 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
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	3645	2215	RPE	47.6	152X51	3.0,3.0,3.0	ELLIPSE
Special Features		VERT STEEL STRUTS						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power	4 lines OH North r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks	BF tag installed on top of North bevel roof.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Farm entrance to NW & SE.
Vertical Alignment		7	7	
Roadway Width (m)	9.500			
Embankment		4	4	Farm entrance to NW & SE.
Sideslope (__:1)	4.0			
(Height of Cover(m) : **1.5**)				Roadway ACP cracks at both shoulders & across roadway on skew over pipe - sealed. (Gully in SE ditch (0.6 x 0.25 x 20m long). Does not impact embankment.
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**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 :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			Snow covered.
Above/Below (mm)	300			
Scour Protection		N	5	Up to 300mm of settlement along sides of bevel.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
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): 3645, Rise (mm): 2215, Type: RPE**)				
Barrel Last Accessible Date	10-Mar-2008			(Ring 4 - 3737 x 1875. Aug.21/03) (Ring 7 - 3701 x 1960. Aug. 21/03) Viewed from ends, appears to be no change in shape. Water 1.0m deep.
Special Features				
Special Feature		7	N	
(Type : **VERT STEEL STRUTS**)				
Special Feature				
(Type :)				
Roof		2	N	(Ring 4, 15.4%. Aug/21/03) Can't confirm due to ice on floor.-10-Mar-2008
Measured Rise (mm)	1875			
Measured At Ring No.	7			
Sag (mm)	340			
Percent Sag	15			
Sidewall		5	N	(Ring 4, 2.5%. Aug/21/03) No change.-10-Mar-2008
Measured Span (mm)	3737			
Measured At Ring No.	4			
Deflection (mm)	92			
Percent Deflection	3			
Floor		N	N	Iced over.-10-Mar-2008
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		6	N	
Separation (mm)	0			
Longitudinal Seams		5	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		6	6	Bottom half minor superficial rust.
Corrosion By Soil (Y/N)				
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): 3645, Rise (mm): 2215, Type: RPE**)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	Adequacy reduced due to presence of struts.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**2**	**3**	GR increased 1 point for struts

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		N	6	
Heaving (mm)	150			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	5	Settlement of fill & riprap along sides of bevel up to 300mm. Riprap grassed over with slough grass.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	7	
Bank Stability		8	7	
HWM (m below Top of Culvert)				
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**8**	**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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/33.3**	**Sufficiency Rating (Last/Now) (%)**	**46.6/50.1**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor deflections.	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	Dave Lam	Previous Assistant's Name	Bryce Clayton		
Next Inspection Date	28-Sep-2014	Previous Inspection Date	10-Mar-2008		
Inspection Cycle (Default) (months)	39				
Comment					