Bridge Culvert Inspection

Bridge File Number	79220 -1 Bridge Culvert	Form Type	CUL1
Year Built	1979	Lot No.	1
Bridge or Town Name	VILLENEUVE	Inspector Name	Melanie Johnson
Located Over	TRIBUTARY TO STURGEON RIVER, 6.65.13, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	37:02 C1 30.794	Assistant Class	
Water Body Cl./Year		Inspection Date	08-Nov-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 4 TWP 55 RGE 26 W4M	Data Entry Date	19-Nov-2011
Longitude, Latitude	-113:48:41, 53:42:59	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	13-Nov-2011
Contract Main. Area	CMA09	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	12 /	Dept. Review Date	15-Dec-2011
AADT/Year	5,060 / 2010 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1800	MP	26	125X26		ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South row	Gas	
Power	1 wire OH North row	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Farm entrance to east, Hwy 44 to west.
Vertical Alignment		8	8	
Roadway Width (m)	12.000			
Embankment		7	7	
Sideslope (__:1)	3.5			
(Height of Cover(m) : **2**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**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 :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP**)				
Barrel Last Accessible Date	23-Mar-2010			Water/thin ice with 1m deep pipe, viewed from ends shape appears adequate.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	Visible sag on barrel roof.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	50			Est 3% sag
Percent Sag	3			
Sidewall		6	6	
Measured Span (mm)	1850			
Measured At Ring No.				
Deflection (mm)	50			
Percent Deflection	3			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		3	N	One seam has failed at 4/5 L. -photo Gaps between rings are filled with concrete.- 23-Mar-2010
Separation (mm)	45			
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	4	Lower 50% of bevel has severed scaling rust. No perforation visible. (Perforations & failed seam under water. 00/06/23)
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP**)				
Ponding (Y/N)	No			Stagnant water in barrel is largely due to the lowering of barrel elevation below streambed elevation. Possibly coupled with negative camber.
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**3**	GR carried fwd.

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		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	750			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

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)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

Structure Usage				
		Last	Now	Explanation of Condition

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	Dewater for detailed inspection to confirm noted perforations and other failed seam.				
OTHER ACTION	2012	(Repair failed seam - install internal coupler.- 23-Mar-2010) if not done				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**41.3/41.2**	Est. Repl. Yr	2013	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	Shane Hall	Previous Assistant's Name			
Next Inspection Date	08-Aug-2013	Previous Inspection Date	23-Mar-2010		
Inspection Cycle (Default) (months)	21				
Comment					