Bridge Culvert Inspection

Bridge File Number	73135 -1 Bridge Culvert	Form Type	CUL1
Year Built	1959	Lot No.	2
Bridge or Town Name	SWAN HILLS	Inspector Name	Russel Vanderschaaf
Located Over	TRIBUTARY TO MORSE RIVER, 8.11.95.2.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	33:10 C1 38.268	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Feb-2013
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 32 TWP 64 RGE 8 W5M	Data Entry Date	13-Apr-2013
Longitude, Latitude	-115:10:19, 54:34:28	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	07-Apr-2013
Contract Main. Area	CMA06	Dept. Reviewer Name	
Clear Roadway/Skew	10 / 0 deg.	Dept. Review Date	
AADT/Year	850 / 2012 (A)	Follow-Up By	
Road Classification	RAU-210-110		
Detour Length (km)	99		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2905	3203	SPE	39.6	152X51	4.2	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	4 wires East r/w.	Municipal	
Others	Depth gauges both ends.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Field access @ NW.
Vertical Alignment		8	8	
Roadway Width (m)	10.000			
Embankment		8	8	
Sideslope (__:1)	5.0			
(Height of Cover(m) : **0.9**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		4	4	End of bevel damaged when removing beaverdam.
Heaving (mm)	500			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		7	N	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	N	snow covered.
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): 2905, Rise (mm): 3203, Type: SPE**)				
Barrel Last Accessible Date	11-Feb-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	N	Measurements not taken due to ice on floor.
Measured Rise (mm)				Ice 2.4m from crown.
Measured At Ring No.				
Sag (mm)	58			
Percent Sag	2			
Sidewall		6	6	
Measured Span (mm)	3003			
Measured At Ring No.	7			
Deflection (mm)	98			
Percent Deflection	3			
Floor		N	N	Under ice.
Bulge (mm)	0			
Measured At Ring No.	6			
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		6	6	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				1N stagger.
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	N	Pitting 5-7 o'clock.-24-Jul-2009 Under ice.
Corrosion By Soil (Y/N)	No			
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): 2905, Rise (mm): 3203, Type: SPE**)				
Fish Passage Adequacy		4	4	Outlet above streambed. Evident through snow.
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	D/S scour hole.
Icing (Y/N)	No			
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	Rate based on 45% visiblility.
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			Couldn't tell exactly how many mm above SB due to snow.
Above/Below (mm)	1000			
Scour Protection		3	3	Scour hole 1.2m x 15m x 20m. Bevel projecting 1.5m from fill. Evident through snow.- photo
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		3	3	Scour hole 20mx15m-evident through snow.-photo
Beavers (Y/N)	No			
Downstream End General Rating		**3**	**3**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	4	Channel makes bend 20m D/S and has eroded bank.
Bank Stability		5	5	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Beaver lodge 100m U/S.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

Maintenance Recommendations						
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2013	Place 30m3 D/S.				
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) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**43.5/43.4**	Est. Repl. Yr	2017	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	Brian Pientsch	Previous Assistant's Name	Lisbeth Medina		
Next Inspection Date	11-Nov-2014	Previous Inspection Date	06-Apr-2011		
Inspection Cycle (Default) (months)	21				
Comment					