Bridge Culvert Inspection

Bridge File Number	07497 -1 Bridge Culvert	Form Type	CUL1
Year Built	1960	Lot No.	2
Bridge or Town Name	WARBURG	Inspector Name	Todd Warshawski
Located Over	LITTLE STRAWBERRY CREEK, 6.112.16, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	39:08 C1 3.971	Assistant Class	
Water Body Cl./Year		Inspection Date	10-Jan-2013
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	SW SEC 5 TWP 49 RGE 3 W5M	Data Entry Date	22-Jan-2013
Longitude, Latitude	-114:24:22, 53:11:33	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	16-Jan-2013
Contract Main. Area	CMA11	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	11.1 / 0 deg.	Dept. Review Date	23-Jan-2013
AADT/Year	2,850 / 2011 (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	5944	3277	AP	55.8			ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	North & south r/w.	Gas	
Power	3 wires from c/l North r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	On a curve. Limited sight distance to west. Sag vertical curve.
Vertical Alignment		7	7	
Roadway Width (m)	11.100			
Embankment		N	N	(Sideslope changes from 2.5:1 to 4:1 after 3.7m from ACP. Gully @ SE 30m long, 2m wide, 700mm deep - photo.-27-May-2009)
Sideslope (__:1)	2.5			
(Height of Cover(m) : **3.1**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	6	
Collar		X	X	
Wingwalls		5	5	Wide vertical crack on SE wingwall.
(Shape : **FLARE**)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	
Beavers (Y/N)	Yes			Beaver dam in inlet-photo
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): 5944, Rise (mm): 3277, Type: AP**)				
Barrel Last Accessible Date	10-Jan-2013			Ice 2m to crown.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	Roof appears to be in adequate condition.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		5	5	Crack with efflorescence on S sidewall.
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	(Floor is breaking up in at least one spot where the bevel joins the barrel U/S end. 1991/09/25)
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		5	5	
Separation (mm)	15			
Longitudinal Seams		5	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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
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): 5944, Rise (mm): 3277, Type: AP**)				
Fish Passage Adequacy		7	7	
Baffle		N	N	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	6	
Collar		X	X	
Wingwalls		4	5	Wide vertical crack on NE wingwall.
(Shape : **FLARE**)				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	(Scour hole silted in, D/S pool approx 18m x 6m x 0.4m.-27-May-2009) Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	GR carried forward.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Makes sharp bend off D/S end to the West.
Bank Stability		4	4	Sloughing/vertical banks d/s.
HWM (m below Top of Culvert)				
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(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						
REMOVE DRIFT ACCUMULATION	2013	Remove beaver dam from inlet				
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) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**56.7/56.5**	Est. Repl. Yr	2027	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	Wade Nanninga	Previous Assistant's Name			
Next Inspection Date	10-Oct-2014	Previous Inspection Date	25-Jan-2011		
Inspection Cycle (Default) (months)	21				
Comment					