

Bridge Culvert Inspection			
Bridge File Number	01093 -1 Bridge Culvert	Form Type	CUL1
Year Built	1957	Lot No.	1
Bridge or Town Name	BLACK DIAMON	Inspector Name	Calvin Roberts
Located Over	TRIBUTARY TO SHEEP RIVER, 2.13.27.2.8, WATERCRS-ST	Inspector Class	BR CLS B
Located On	549:04 C1 9.613	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	09-Feb-2013
Legal Land Location	SE SEC 3 TWP 21 RGE 2 W5M	Data Entry By	Lauren Korte
Longitude, Latitude	-114:11:19, 50:44:48	Data Entry Date	09-Mar-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA27	Review Date	16-Feb-2013
Clear Roadway/Skew	10 /	Dept. Reviewer Name	Tim Davies
AADT/Year	1,200 / 2011 (A)	Dept. Review Date	13-Mar-2013
Road Classification	RCU-209-110	Follow-Up By	
Detour Length (km)	16		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2027	2240	SPE	46.9	152X51	3.0	ELLIPSE
Special Features	VERT TIMBER STRUTS							
Special Features Comment								

Utilities (Located at)

Utility Attachments							
Telephone	South ditch.			Gas	North ditch.		
Power	North Ditch -1 wire.			Municipal			
Others				Problem (Y/N)	No		
Remarks							

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Hills both sides.
Vertical Alignment		6	6	
Roadway Width (m)	10.000			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 4.5)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		6	6	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		North. Fenceline crosses invert.
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		5	5	
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		6	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		6	N	
Beavers (Y/N)	Yes			Old Beaver Dam 1m from bevel - channel cut through.
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): 2027, Rise (mm): 2240, Type: SPE)				
Barrel Last Accessible Date	09-Feb-2013			
Special Features				
Special Feature		5	3	One strut not seated @ threaded rod into hole plate. 2 missing struts. 3 of 4 top beams are loose and easily wiggled around.
(Type : VERT TIMBER STRUTS)				
Special Feature				
(Type :)				
Roof		3	3	Unable to measure due to ice.
Measured Rise (mm)	2000			Estimate.
Measured At Ring No.	7			
Sag (mm)	240			
Percent Sag	10			
Sidewall		4	4	(Water running through bolt holes; Rings 1 through 5/97).
Measured Span (mm)	2190			
Measured At Ring No.	7			
Deflection (mm)	163			
Percent Deflection	8			
Floor		5	N	(Superficial corrosion @ North half). Ice approx 1.0m thick.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	5	(Alkalai and superficial floor corrosion @ North half)
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): 2027, Rise (mm): 2240, Type: SPE)				
Fish Passage Adequacy		X	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	3	
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		7	N	Snow and ice covered.
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		4	N	(5m dia scour hole - rock displaced from streambed) Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		4	N	
Beavers (Y/N)	No			
Downstream End General Rating		4	4	G.R carried forward.
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.7			Grass in U/S fence. Beaver pond U/S.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(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	2013	Replace 2 missing struts and tighten all connections.					
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Push D/S rock back to bevel @ stream bed and add approx. 4 cu.m class 2 rip rap- photo					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	44.4/33.3	Sufficiency Rating (Last/Now) (%)	46.4/41.2	Est. Repl. Yr	2016	Maint. Req. (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	Jason Rusu		Previous Assistant's Name				
Next Inspection Date	09-May-2016		Previous Inspection Date	07-Nov-2009			
Inspection Cycle (Default) (months)	39						
Comment							