

Bridge Culvert Inspection			
Bridge File Number	08423 -1 Bridge Culvert	Form Type	CULM
Year Built	1993	Lot No.	2
Bridge or Town Name	LE GOFF	Inspector Name	Todd Warshawski
Located Over	REITA CREEK, 7.4, WATERCRS-ST	Inspector Class	BR CLS B
Located On	LOCAL ROAD	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	03-Apr-2013
Legal Land Location	NE SEC 10 TWP 62 RGE 2 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-110:12:55, 54:21:14	Data Entry Date	24-Apr-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	UNDEFINED CMA	Review Date	21-Apr-2013
Clear Roadway/Skew	8.5 / 20 deg. (RHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	70 / 2013 (E)	Dept. Review Date	01-May-2013
Road Classification	RLU-208-100	Follow-Up By	
Detour Length (km)	999		

**Bridge Culvert Information**

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2120	SP	30.6	152X51	3.5	ROUND
2	MAIN	-	1500	SP	32.9	152X51	2.8	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	South r/w.	Gas	
Power	3 wires South.	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	4	4	Intersection to West. Curve to East, limited sight distances. Sag curve. On uphill grade to East.
Vertical Alignment	4	4	
Roadway Width (m)	8.500		
Embankment	4	3	Steep sideslopes both sides, heavy vegetation. Sloughing at base of slope/along culvert.
Sideslope ( :1)	1.0		
(Height of Cover(m) : 2.4)			
Guardrail (Y/N)	No		Required due to steep sideslopes.
<b>Approach Road / Embankment General Rating</b>	<b>4</b>	<b>3</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>			
Direction	S		East pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		N	4	Bevel end bent/torn from beaverdam removals.
Heaving (mm)	300			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		N	N	Under snow/ice
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		N	N	Under snow/ice
Beavers (Y/N)	Yes			Old beaver dam causing main flow to hit pipe at an angle.
<b>Upstream End General Rating</b>		<b>6</b>	<b>4</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2120, Type: SP)</b>				
Barrel Last Accessible Date	03-Apr-2013			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		5	6	Not measured due to ice.
Measured Rise (mm)				Sag est less than 5%
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		5	6	
Measured Span (mm)	2220			
Measured At Ring No.	6			
Deflection (mm)	100			
Percent Deflection	5			
Floor		N	N	Ice covered
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	6	Lower 1/3 not rated.
Separation (mm)				
Longitudinal Seams		N	6	Lower 1/3 not rated.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				1N
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2120, Type: SP)				
Coating		5	5	Superficial rust on floor.-Jun-2005
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		3	3	Drop off at outlet. (No place to take photo from.)-Aug-2008 Snow/ice covered
Baffle		X	X	(Type : )
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>N</b>	<b>6</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	NE bevel pushed inward
Bevel End		6	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1000			Snow/ice covered
Scour Protection (Type : RIP RAP)		4	N	
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		4	N	Drop off outlet protected with rock.-Aug-2008
Beavers (Y/N)	No			Drift partially blocks outlet flows.-Aug-2008
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried fwd from Aug-2008

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		West pipe. Not found - submerged.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		N	N	End curled up approx 150mm. West side bent inward 200mm.-Aug-2008
Heaving (mm)	400			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		N	N	Submerged due to dam backing up water.-Aug-2008
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		N	N	
Beavers (Y/N)	Yes			
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	G.R. based on bevel rating of "4" from 07/June/2005.

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: SP)</b>				
Barrel Last Accessible Date				Not accessible - submerged
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)				
Longitudinal Seams		N	N	
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: SP)				
Coating		N	N	(Superficial rust on floor. 07/June/2005)
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		3	N	Outlet dammed by beaver dam.-Aug-2008
Baffle		X	X	
(Type : )				
Waterway Adequacy		N	N	
Icing (Y/N)	No			(07/June/2005)
Silting (Y/N)	No			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>N</b>	<b>N</b>	G.R. was "7" from 07/June/2005 but barrel never accessed.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		N		Not found - submerged
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		N	N	Partially cut off. Partially submerged due to beaver dam.-Aug-2008
Heaving (mm)				
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1000			
Scour Protection		N	N	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	G.R. was "4" from 07/June/2005 as per all elements.
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		4	4	Old beaver dam deflects flow at poor angle @ entrance.
Bank Stability		5	5	
HWM (m below Top of Culvert)				Debris on upper bolts. May have been due to d/s beaverdam.
Drift (Y/N)	Yes			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	DEGRADING			Degrading d/s due to drop to river.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>4</b>	<b>4</b>	

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 dams @ both ends.					
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Install guardrail.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>55.6/66.7</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>39.2/42.4</b>	Est. Repl. Yr	2030	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor scour and undermining at outlets. Culvert extensions and sideslope improvements should be considered.		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				
Next Inspection Date	03-Jan-2018		Previous Inspection Date	13-Aug-2008			
Inspection Cycle (Default) (months)	57						
Comment							