

Bridge Culvert Inspection			
Bridge File Number	77520 -1 Bridge Culvert	Form Type	CUL1
Year Built	1972	Lot No.	1
Bridge or Town Name	ELKWATER	Inspector Name	Tom Carey
Located Over	2ND ORDER TRIBUTARY TO MACKAY CREEK, 28.6.2, WATERCRS-ST	Inspector Class	BR CLS A
Located On	515:02 C1 16.874	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	12-Mar-2012
Legal Land Location	SW SEC 5 TWP 10 RGE 1 W4M	Data Entry By	Erin Roberts
Longitude, Latitude	-110:06:33, 49:47:10	Data Entry Date	08-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA23	Review Date	24-Mar-2012
Clear Roadway/Skew	10.5 /	Dept. Reviewer Name	Tim Davies
AADT/Year	80 / 2011 (A)	Dept. Review Date	17-Apr-2012
Road Classification	RCU-208-110	Follow-Up By	
Detour Length (km)	22		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1830	1120	FP	32.1	68X13	3.5,3.5,3.5	ARCH
Special Features								
Special Features Comment								

**Utilities (Located at)**

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

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	Is wrong on map- 150.7km West of BF 74788. Drops to East, rises to West.
Vertical Alignment		6	6	
Roadway Width (m)	10.500			
Embankment		N	7	
Sideslope ( __:1)	3.0			
(Height of Cover(m) : 1.2)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>6</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		S		South
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		N	7	Minor rust.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	120			
Scour Protection		N	7	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>250</b> )				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>7</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1830, Rise (mm): 1120, Type: FP)</b>				
Barrel Last Accessible Date	12-Mar-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	3	Floor bulge taken out of sag calculation. Lockseam split at East half of roof at section 3 - void starting in fill.
Measured Rise (mm)	900			
Measured At Ring No.	3			
Sag (mm)	120			
Percent Sag	10			
Sidewall		N	3	Lockseam split at section 3 at East. 50mm gap at split.
Measured Span (mm)	1980			
Measured At Ring No.	3			
Deflection (mm)	150			
Percent Deflection	8			
Floor		N	4	Partially cracked at ring 3 at at middle at welded longitudinal joint.
Bulge (mm)	100			
Measured At Ring No.	3			
Abrasion (Y/N)	Yes			
Circumferential Seams		N	3	Split lock seam at section 3.
Separation (mm)	150			
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		N	4	Minor pitted rust on floor.
Corrosion By Soil (Y/N)				
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): 1830, Rise (mm): 1120, Type: FP)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		N	5	[(Flowed full in '94) 2002/05/30]
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>3</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		North
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		N	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	150			
Scour Protection		N	8	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		N	8	Scour repaired.
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>4</b>	<b>8</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		5	4	Corners in at 90 degree angle from SW. (Ran full '94 U/S.) 2002/05/30
Bank Stability		N	7	
HWM (m below Top of Culvert)	0.4			Grass at fence at South 400mm higher than roof.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>5</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							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS	2013	Consider struts at section 3.					
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Install reverse coupler at split lock seam at section 3.					
OTHER ACTION	2013	Correct location on BF map 1.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>63.5/50.7</b>	Est. Repl. Yr	2015	Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection	Legal land should be changed from in section 4 to section 5 - is West of BF 74788.		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	Tim Davies		Previous Assistant's Name				
Next Inspection Date	12-Jun-2015		Previous Inspection Date	12-Mar-2009			
Inspection Cycle (Default) (months)	39						
Comment							