

Bridge Culvert Inspection				
Bridge File Number	78688 -1 Bridge Culvert		Form Type	CUL1
Year Built	1976		Lot No.	3
Bridge or Town Name	LETHBRIDGE		Inspector Name	Garry Roberts
Located Over	SMR - IRRIGATION C, WATERCRS-IC		Inspector Class	BR CLS A
Located On	512:02 C1 7.168		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	19-Mar-2012
Legal Land Location	SW SEC 5 TWP 9 RGE 20 W4M		Data Entry By	Lauren Korte
Longitude, Latitude	-112:40:46, 49:41:53		Data Entry Date	12-Apr-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Tom Carey
Contract Main. Area	CMA25		Review Date	23-Mar-2012
Clear Roadway/Skew	8.5 / -45 deg. (LHF)		Dept. Reviewer Name	Tim Davies
AADT/Year	1,290 / 2011 (A)		Dept. Review Date	17-Apr-2012
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	3			

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	1829	1118	FP	47.3	68X13	4.2,4.2,4.2	ARCH
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone			Gas	Crosses channel 50m SW.
Power	2 lines South ditch.		Municipal	
Others			Problem (Y/N)	No
Remarks				

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	9	8	
Vertical Alignment	6	6	
Roadway Width (m)	8.500		
Embankment	7	7	
Sideslope ( _ :1)	3.0		
(Height of Cover(m) : 3.6)			
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		5	6	Drift is blocking bevel.
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		7	7	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>6</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)				
Barrel Last Accessible Date	19-Mar-2009			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		4	4	Ice. Rating based on previous measurement.
Measured Rise (mm)	1010			
Measured At Ring No.				
Sag (mm)	108			
Percent Sag	9			
Sidewall		5	5	
Measured Span (mm)	1915			
Measured At Ring No.	3			
Deflection (mm)	86			
Percent Deflection	5			
Floor		5	N	Ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		4	4	Minor dirt infiltration D/S seam only.
Separation (mm)	115			
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		4	4	Floor is rusting & slight scaling & pitting. Slight soil alkali.
Corrosion By Soil (Y/N)	Yes			
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): 1829, Rise (mm): 1118, Type: FP)				
Fish Passage Adequacy		X	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	7	
Icing (Y/N)	No			At U/S barrel.
Silting (Y/N)	No			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</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		5	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	50			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>6</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		8	7	600mm pipe 9m U/S from West. 450mm pipe 3m U/S from East. Both are road ditch drainage.
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.7			No visible HWM. Drift at U/S bevel and barrel.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>8</b>	<b>7</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION	2012	At U/S bevel and barrel.					
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>60.7/59.0</b>	Est. Repl. Yr	2020	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	Glen Mikesh		Previous Assistant's Name	Bernie Roseke			
Next Inspection Date	19-Jun-2015		Previous Inspection Date	22-Apr-2009			
Inspection Cycle (Default) (months)	39						
Comment							