

Bridge Culvert Inspection			
Bridge File Number	70699 -1 Bridge Culvert	Form Type	CUL1
Year Built	1974	Lot No.	4
Bridge or Town Name	DELIA	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO WILLOW CK, 3.30.4, WATERCRS-ST	Inspector Class	BR CLS A
Located On	576:02 C1 25.587	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	27-Jan-2011
Legal Land Location	SW SEC 17 TWP 29 RGE 17 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-112:22:21, 51:28:27	Data Entry Date	03-Mar-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA21	Review Date	03-Feb-2011
Clear Roadway/Skew	8.3 / 15 deg. (RHF)	Dept. Reviewer Name	Chris Black
AADT/Year	520 / 2009 (A)	Dept. Review Date	04-Mar-2011
Road Classification	RCU-208-110	Follow-Up By	
Detour Length (km)	20		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	2134	1549	RPP	6.7	152X51	3.0	PIPE ARCH
1	MAIN	2134	1549	RPP	14	152X51	3.0	PIPE ARCH
1	D/S	2134	1549	RPP	6.7	152X51	3.0	PIPE ARCH
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone		Gas	100 m North.
Power	Power 30m N, in S ditch 3 wire	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	T-intersection 15m to W.
Vertical Alignment		7	7	
Roadway Width (m)	8.300			
Embankment		7	7	Wide trans. crack in ACP over pipe.
Sideslope (__:1)	2.7			
(Height of Cover(m) : 2.2)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>7</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	160			
Scour Protection		7	N	(Small amount of rip-rap, natural grass functioning well. 18Feb2009). Snow covered.
(Type : )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		7	N	Snow covered.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>7</b>	<b>6</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): 2134, Rise (mm): 1549, Type: RPP)</b>				
Barrel Last Accessible Date	27-Jan-2011			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	(1410 Rise R6 + 100mm floor bulge = 1510 Rise. 18Feb2009). Unable to measure due to ice.
Measured Rise (mm)	1510			
Measured At Ring No.	6			
Sag (mm)	39			
Percent Sag	3			
Sidewall		4	4	(Lower S/W crimping in R5. 18Feb2009). Snow covered.
Measured Span (mm)	2210			
Measured At Ring No.	6			
Deflection (mm)	76			
Percent Deflection	4			
Floor		4	N	Snow/ice covered.
Bulge (mm)	100			
Measured At Ring No.	6			
Abrasion (Y/N)	Yes			
Circumferential Seams		5	5	(Perforation hole D/S - could not confirm. 14/10/04). Random bolts missing.
Separation (mm)	0			
Longitudinal Seams		4	N	(R5 West S/W has 6 cracks - No change from 2004. 18Feb2009). Snow covered seam.
Total No. of Cracked Rings	1			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	96			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Alkaline present. Mild corrosion.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): 2134, Rise (mm): 1549, Type: RPP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel Extension General Rating</b>		<b>4</b>	<b>4</b>	GR carried forward from 18Feb2009.
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		5	N	(Some damage present, minor rust present on floor & side walls. 18Feb2009). Snow covered.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		4	N	(End undermined 1.0m. Small amount of rock riprap. Natural grass adequate protection. 18Feb2009). Snow covered.
(Type : )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		4	N	(2.2 x 2.0 x 0.6 scour hole. Localized and minor. 18Feb2009). Snow covered.
Beavers (Y/N)	No			(Water could flow under bevel end. 18Feb2009).
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried forward from 18Feb2009.
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		6	6	U/S has minor curve into culvert.
Bank Stability		7	7	
HWM (m below Top of Culvert)				No visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>7</b>	<b>6</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2011	5m3 CL 1, if not yet done.					
REMOVE DRIFT ACCUMULATION							
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>57.5/56.1</b>	Est. Repl. Yr	2024	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	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	27-Apr-2014		Previous Inspection Date	18-Feb-2009			
Inspection Cycle (Default) (months)	39						
Comment							