

Bridge Culvert Inspection				
Bridge File Number	71073 -1 Bridge Culvert		Form Type	CUL1
Year Built	1959		Lot No.	1
Bridge or Town Name	DOVERCOURT		Inspector Name	Owen Salava
Located Over	TRIBUTARY TO CLEARWATER RIVER, 6.159.5, WATERCRS-ST		Inspector Class	BR CLS A
Located On	22:22 C1 15.875		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	19-Oct-2012
Legal Land Location	SW SEC 6 TWP 38 RGE 6 W5M		Data Entry By	Marcia Chavez
Longitude, Latitude	-114:51:30, 52:14:11		Data Entry Date	15-Nov-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA18		Review Date	30-Oct-2012
Clear Roadway/Skew	9.9 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	2,380 / 2011 (A)		Dept. Review Date	19-Nov-2012
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	10			

Bridge Culvert Information								
Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1429	1575	SPE	54.3	152X51	2.8	ELLIPSE
Special Features	VERT TIMBER STRUTS							
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	In r/w to West.	Gas	
Power	3 wire 30m East of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 200m South. Slight sag curve, no passing. Limited sight distance.
Vertical Alignment		6	6	
Roadway Width (m)	9.900			
Embankment		7	7	Rock riprap placed on SE and NW roadway ditch.
Sideslope ( __:1)	2.5			
(Height of Cover(m) : 7.5)				
Guardrail (Y/N)	Yes			
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>6</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
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		4	4	Superficial rust and damage. Beaver protection around bevel not effective.
Heaving (mm)	300			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		N	3	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>250</b> )				
Scour/Erosion		N	3	Bevel undermined 500mm into barrel - photo.
Beavers (Y/N)	No			Piping throughout both sidewalls.
<b>Upstream End General Rating</b>		<b>3</b>	<b>3</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1429, Rise (mm): 1575, Type: SPE)				
Barrel Last Accessible Date	19-Oct-2012			Design 1429 x 1575.
<b>Special Features</b>				
Special Feature		5	5	TT struts installed 150mm x 200mm @ 1.20m from R6-R17.
(Type : <b>VERT TIMBER STRUTS</b> )				
Special Feature				
(Type : )				
Roof		N	3	R7 - 1420, R13-1360, 8 - 1365, 10 - 1360, 12 - 1365.13.7%.  13.7%
Measured Rise (mm)	1360			
Measured At Ring No.	13			
Sag (mm)	215			
Percent Sag	13			
Sidewall		N	2	R6-18: sidewall has buckled, no cracks visible. Small hole in barrel. 7 - 1602, 13 - 1666, 8 - 1642, 10 - 1645 piping throughout S wall & haunched, 12 - 1652. Sidewall cusping outwards. 16.6%
Measured Span (mm)	1666			
Measured At Ring No.	13			
Deflection (mm)	237			
Percent Deflection	16			
Floor		N	4	Construction damage. One area at R11 has large hole in floor probably caused during construction.
Bulge (mm)	150			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	4	(R9-14 are cracked at 12:00 on circ seams. 25/May/2006) - Not visible behind cap - monitor.
Separation (mm)	0			
Longitudinal Seams		N	5	
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	Superficial rusting @ bolt holes & floor.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1429, Rise (mm): 1575, Type: SPE)</b>				
Fish Passage Adequacy		3	3	(High velocities. 25/May/2006). Outlet perched.
Baffle		X	X	
(Type : )				
Waterway Adequacy		4	4	(Scour @ D/S end & has flowed with 2.0m of head. 25/May/2006).
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			Some drift caught on fence @ U/S end; drift on struts. Beaver debris at outlet.
<b>Barrel General Rating</b>		<b>3</b>	<b>3</b>	G.R. inc 1 pt due to struts.

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	600			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>300</b> )		N	4	
Scour/Erosion		N	4	Vertical bank cut @ SE corner into sandstone.
Beavers (Y/N)		No		
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		4	4	Sharp bends at both ends - monitor.
Bank Stability		4	4	Vertical banks D/S - monitor.
HWM (m below Top of Culvert)	-2.0			
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(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	2013	Class 1, 15m3 @ U/S, restore clay seal, fill d/s scour hole.								
REMOVE DRIFT ACCUMULATION										
INSTALL CONCRETE/STEEL LINING										
INSTALL STRUTS										
INSTALL CONCRETE COLLAR/CUTOFF										
REPAIR SEAMS										
OTHER ACTION	2015	Replace pipe if opportunity presents itself.								
OTHER ACTION	2013	Repair floor.								
OTHER ACTION										
OTHER ACTION										
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>26.9/26.8</b>	2015					Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection	Culvert appears to be undersized based on scour, ice level in culvert & 2.0m of head. LRA notificatin sent to Donald Saunders with AT on 01Nov2012.		Department Comments							
Maintenance Reviewed By			Date		Estimated Total	0				
Proposed Long-Term Strategy	.									
On 3-Year Program (Y/N)	Y									
Proposed Action	2007.10.10	on spot program for 2012.								
Previous Inspector's Name	Owen Salava	Previous Assistant's Name								
Next Inspection Date	19-Jul-2014	Previous Inspection Date	03-Feb-2011							
Inspection Cycle (Default) (months)	21									
Comment										

**Maintenance Recommendations**

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2013	Class 1, 15m3 @ U/S, restore clay seal, fill d/s scour hole.	To operations			
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2015	Replace pipe if opportunity presents itself.	Programmed	2014		
OTHER ACTION	2013	Repair floor.	Defer until replacement	2014		
OTHER ACTION						
OTHER ACTION						
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>26.9/26.8</b>	Est. Repl. Yr	2015	Maint. Req. (Y/N) Yes
Special Comments for Next Inspection	Culvert appears to be undersized based on scour, ice level in culvert & 2.0m of head. LRA notificatin sent to Donald Saunders with AT on 01Nov2012.		Department Comments	Culvert is programmed to be replaced in 2014		
Maintenance Reviewed By	Andrew Smikles		Date	07-Jan-2013	Estimated Total	0
Proposed Long-Term Strategy	.					
On 3-Year Program (Y/N)	Y					
Proposed Action	2007.10.10 on spot program for 2012.					
Previous Inspector's Name	Owen Salava		Previous Assistant's Name			
Next Inspection Date	19-Jul-2014		Previous Inspection Date	03-Feb-2011		
Inspection Cycle (Default) (months)	21					
Comment						