

Bridge Culvert Inspection			
Bridge File Number	77196 -1 Bridge Culvert	Form Type	CUL1
Year Built	1970	Lot No.	2
Bridge or Town Name	ENTRANCE	Inspector Name	Shane Hall
Located Over	TRIBUTARY TO FOX CREEK, 8.11.118.12.1.1, WATERCRS-ST	Inspector Class	BR CLS A
Located On	40:32 C1 10.446	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	18-Oct-2012
Legal Land Location	SW SEC 5 TWP 55 RGE 2 W6M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-118:16:13, 53:43:05	Data Entry Date	26-Nov-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA05	Review Date	19-Nov-2012
Clear Roadway/Skew	8.2 / -30 deg. (LHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	1,090 / 2011 (A)	Dept. Review Date	06-Dec-2012
Road Classification	RAU-209-110	Follow-Up By	
Detour Length (km)	420		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2314	2552	SPE	50.6	152X51	3.5	ELLIPSE
Special Features	SHOTCRETE BEAM							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	BF tag @ top of West roof.		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	9	9	Sag curve to the south limiting sight distance. No passing SB.
Vertical Alignment	6	6	
Roadway Width (m)	8.200		
Embankment	N	6	
Sideslope (__:1)	3.0		
(Height of Cover(m) : 4.8)			
Guardrail (Y/N)	Yes		5 split posts East side - photo. Turn down at SW installed incorrectly. 1 split post on West side.-photo 2 sections of W-beam torn on West side.-photo
Approach Road / Embankment General Rating	6	6	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	X	X	
Collar	N	5	Wide cracks on both collars.
Wingwalls	X	X	
(Shape :)			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		N	4	Form still in place. Leading edge of cutoff wall at invert missing to 300mm depth with rebar protruding.-photo
Bevel End		6	5	Bottom plates are wearing.
Heaving (mm)	600			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		N	4	Erosion around both collars filled with rock riprap. Fill settled approx. 600mm both sides of bevel.-photo
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	4	Scour in front of cutoff wall approx. 500mm deep.
Beavers (Y/N)	No			
Upstream End General Rating		3	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2314, Rise (mm): 2552, Type: SPE)				
Barrel Last Accessible Date	18-Oct-2012			Rings 9-13 not accessible due to high water. Viewed from ring 10 and d/s bevel.
Special Features				
Special Feature		N	5	Narrow to wide vertical cracks every 0.5m, not affecting functionality.
(Type : SHOTCRETE BEAM)				
Special Feature				
(Type :)				
Roof		N	5	.
Measured Rise (mm)	2400			
Measured At Ring No.	7			
Sag (mm)	152			
Percent Sag	6			
Sidewall		N	5	Defl est. 1.3m not measured due to shotcrete beam at South sidewall. Rated accessible sections.
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	150			
Percent Deflection				
Floor		N	4	Rated visible sections.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	4	No bolts on roof of 1st circ seam. Rated what is visible.
Separation (mm)	0			
Longitudinal Seams		N	N	(9:00 has dimpled crest bolts & R11 is cracked with 125mm of steel between cracks.-08-Feb-2009) (Crest bolts are dimpled. 00/06/15) Lower seams under ice & hidden by shotcrete beam.-08-Feb-2009 Could not access ring 11 to confirm cracked ring.
Total No. of Cracked Rings	1			
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	Corrosion staining evident on shotcrete beam. Light scaling rust on lower 1/4.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2314, Rise (mm): 2552, Type: SPE)				
Camber POS/ZERO/NEG	NEG			Water squirting through bolt holes at mid-height, north side for the first 1/3 of the pipe.
Ponding (Y/N)	Yes			Due to negative camber.
Fish Passage Adequacy		3	3	Perched outlet.
Baffle (Type :)		X	X	
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Siltting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	GR carried fwd from 08-Feb-2009 inspection.
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		6	6	
Heaving (mm)	600			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 300)		3	3	Scour around bevel.-photo
Scour/Erosion		3	3	Scour hole at 1.0 deep x 3.0 wide x 3.0 long. Bevel undermined 1.5m-photo
Beavers (Y/N)	No			
Downstream End General Rating		3	3	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		4	4	Stream makes sharp turn U/S & D/S.
Bank Stability		4	4	Upstream has sloughing of banks.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Downstream.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				

Structure Usage				
		Last	Now	Explanation of Condition
Channel General Rating		4	4	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2013	Repair scour at U/S and D/S ends - approx. 30M3 of Class 1.					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Inspect barrel, dewater & perform Level II during planning for Hwy upgrade.					
OTHER ACTION	2013	Replace 6 split guardrail posts.					
OTHER ACTION	2013	Replace 2 sections of torn w-beam and repair in correct lap.					
OTHER ACTION	2013	Remove forms from cutoff wall and repair cutoff wall concrete.					
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	33.7/34.5	Est. Repl. Yr	2018	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	Shane Hall		Previous Assistant's Name				
Next Inspection Date	18-Jul-2014		Previous Inspection Date	23-Nov-2010			
Inspection Cycle (Default) (months)	21						
Comment							