

Bridge Culvert Inspection				
Bridge File Number	77479 -1 Bridge Culvert		Form Type	CUL1
Year Built	1973		Lot No.	1
Bridge or Town Name	NORDEGG		Inspector Name	Owen Salava
Located Over	TRIBUTARY TO SHUNDA CREEK, 6.166.1, WATERCRS-ST		Inspector Class	BR CLS A
Located On	11:06 C1 13.361		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	06-Feb-2012
Legal Land Location	NW SEC 31 TWP 40 RGE 13 W5M		Data Entry By	Marcia Chavez
Longitude, Latitude	-115:52:17, 52:29:38		Data Entry Date	02-Mar-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA18		Review Date	23-Feb-2012
Clear Roadway/Skew	13.6 / 10 deg. (RHF)		Dept. Reviewer Name	Andrew Smikles
AADT/Year	970 / 2010 (A)		Dept. Review Date	21-Mar-2012
Road Classification	RAU-213.4-120		Follow-Up By	
Detour Length (km)	80			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	2314	2552	SPE	105.5	152X51		ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	South r/w.		Gas
Power			Municipal
Others	Bench mark located NW 50m.		Problem (Y/N) No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Inbetween two curves. In sag.
Vertical Alignment		7	7	
Roadway Width (m)	13.600			
Embankment		4	4	Embankment slumping D/S East side - photo.
Sideslope (__:1)	2.5			
(Height of Cover(m) : 13.5)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		4	7	

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 :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		4	4	Flowing under bevel due to bevel heave (photo).
Heaving (mm)	500			
Invert Above/Below Stream Bed				At streambed.
Above/Below (mm)	0			
Scour Protection		4	4	Bevel edges exposed.
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Minor scour.
Beavers (Y/N)	No			
Upstream End General Rating		4	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	06-Feb-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	5	Unable to measure due to ice.
Measured Rise (mm)	2408			
Measured At Ring No.	2			
Sag (mm)	144			
Percent Sag	5			
Sidewall		N	3	Cracked sidewall seams.
Measured Span (mm)	2485			
Measured At Ring No.	2			
Deflection (mm)	171			
Percent Deflection	7			
Floor		N	N	Ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	5	Where visible; 1 ring cracked - 2nd from d/s.
Separation (mm)	0			
Longitudinal Seams		N	3	From inlet R1-6 cracked E side; R2 worst 53mm of steel left - photo. R2,3,5,28-29 remaining. R27-29 cracked.
Total No. of Cracked Rings	9			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	53			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	5	Superficial.
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): 2314, Rise (mm): 2552, Type: SPE)				
Fish Passage Adequacy		3	3	Perched outlet - photo.
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	
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	5	Superficial rust. Perched outlet - photo.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1500			
Scour Protection		3	3	Rock is not providing enough protection. Some rock, natural - photo.
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		3	3	Scour hole 1.5m x 8m x 8m.
Beavers (Y/N)	No			End cantilevered for 1.5m.
Downstream End General Rating		3	3	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		5	5	Minor sluffing of banks @ D/S.
HWM (m below Top of Culvert)	0.3			Drift above barrel on sideslope.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		5	6	

Maintenance Recommendations										
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #				
SHOTCRETE REPAIRS										
PLACE ADDITIONAL RIP RAP	2012	Class II 40m3 at d/s.								
REMOVE DRIFT ACCUMULATION										
INSTALL CONCRETE/STEEL LINING	2012	Concrete beams @ cracked seams.								
INSTALL STRUTS										
INSTALL CONCRETE COLLAR/CUTOFF										
REPAIR SEAMS										
OTHER ACTION	2012	Consider installing weeping tile @ D/S embankment.								
OTHER ACTION	2012	30m3 pit run under bevel & in scour hole @ D/S.								
OTHER ACTION	2012	Restore embankment at D/S end.								
OTHER ACTION	2012	Install U/S concrete end treatment.								
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	20.7/30.8	Est. Repl. Yr	2015	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	Owen Salava	Previous Assistant's Name								
Next Inspection Date	06-Nov-2013	Previous Inspection Date	03-May-2010							
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	2012	Class II 40m3 at d/s.	Class II after backfill is complete of U/S Bevel Programmed	2013		
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING	2012	Concrete beams @ cracked seams.	Defer			
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2012	Consider installing weeping tile @ D/S embankment.	Defer, D/S low priority for undermining/piping			
OTHER ACTION	2012	30m3 pit run under bevel & in scour hole @ D/S.	Defer, D/S low priority for undermining/piping			
OTHER ACTION	2012	Restore embankment at D/S end.	Defer, D/S low priority for undermining/piping			
OTHER ACTION	2012	Install U/S concrete end treatment.	Clay Seal & Reset Bevel Programmed	2013		
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	20.7/30.8	Est. Repl. Yr	2015	Maint. Req. (Y/N) Yes
Special Comments for Next Inspection			Department Comments	Currently programmed to be replaced in 2019.		
Maintenance Reviewed By	Andrew Smikles		Date	31-Oct-2012	Estimated Total	0
Proposed Long-Term Strategy						
On 3-Year Program (Y/N)						
Proposed Action						
Previous Inspector's Name	Owen Salava		Previous Assistant's Name			

Next Inspection Date	06-Nov-2013	Previous Inspection Date	03-May-2010
Inspection Cycle (Default) (months)	21		
Comment			