

Bridge Culvert Inspection			
Bridge File Number	76170 -1 Bridge Culvert	Form Type	CULM
Year Built	1965	Lot No.	4
Bridge or Town Name	NORDEGG	Inspector Name	Owen Salava
Located Over	TWO O'CLOCK CREEK, 6.184, WATERCRS-ST	Inspector Class	BR CLS A
Located On	11:02 C1 22.808	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	08-Feb-2012
Legal Land Location	NE SEC 6 TWP 36 RGE 17 W5M	Data Entry By	Marcia Chavez
Longitude, Latitude	-116:25:00, 52:03:55	Data Entry Date	02-Mar-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA18	Review Date	22-Feb-2012
Clear Roadway/Skew	12.4 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	360 / 2010 (A)	Dept. Review Date	09-Mar-2012
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	300		

**Bridge Culvert Information**

Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1800	MP	37	65X13	3.5	ROUND
2	MAIN	-	1800	MP	37	65X13	3.5	ROUND
3	MAIN	-	1200	MP	37	65X13	2.8	ROUND
Special Features	CONC FLOOR							
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	East r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Campground entrance 30m SW. Access 30m southeast. No passing southbound.
Vertical Alignment	7	7	
Roadway Width (m)	12.400		
Embankment	7	7	
Sideslope (__:1)	3.0		
(Height of Cover(m) : 2.6)			
Guardrail (Y/N)	No		
<b>Approach Road / Embankment General Rating</b>	<b>7</b>	<b>7</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>			
Direction	W		North pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		6	6	Minor damage.
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		7	N	Natural with some scattered rock. Snow covered.
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>6</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)</b>				
Barrel Last Accessible Date	05-May-2010			Ice over 1/2 full; viewed from ends, shape looks OK.
<b>Special Features</b>				
Special Feature		N	N	Ice covered.
(Type : <b>CONC FLOOR</b> )				
Special Feature				
(Type : )				
Roof		4	N	Est. 5.7% roof sag. Flattening.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	153			Estimate.
Percent Sag	8			
Sidewall		4	N	Unable to measure due to ice depth.
Measured Span (mm)	1953			
Measured At Ring No.	3			
Deflection (mm)	153			
Percent Deflection	8			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	N	
Separation (mm)	40			
Longitudinal Seams		6	N	Riveted.
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)				

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)					
Coating		6	N	Superficial rust.	
Corrosion By Soil (Y/N)	No				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	ZERO				
Ponding (Y/N)	No				
Fish Passage Adequacy		4	4	Steep channel with blocked pipe.	
Baffle		X	X		
(Type : )					
Waterway Adequacy		7	7		
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	No				
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	GR carried forward from 05May2010.	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Span Type: Primary Span)					
Direction		E		North barrel.	
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	Minor damage.	
Heaving (mm)	100				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	200				
Scour Protection		6	N	Snow covered.	
(Type : NATURAL)					
(Avg. Rock Size(mm) : )					
Scour/Erosion		6	N		
Beavers (Y/N)	No				
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>		
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		W		South barrel.	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		6	6	Minor superficial rust & minor damage to bevel.
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		6	N	(Natural with some scattered rock. 05May2010) - Snow covered.
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		6	N	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>6</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)</b>				
Barrel Last Accessible Date	05-May-2010			Ice over 1/2 depth; viewed from ends, shape looks OK>
<b>Special Features</b>				
Special Feature		N	N	Ice covered.
(Type : <b>CONC FLOOR</b> )				
Special Feature				
(Type : )				
Roof		5	N	Unable to measure due to ice.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	105			Estimate.
Percent Sag	5			
Sidewall		5	N	
Measured Span (mm)	1905			
Measured At Ring No.	4			
Deflection (mm)	105			
Percent Deflection	5			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	N	(At R1. 05May2010).
Separation (mm)	60			
Longitudinal Seams		6	N	Riveted.
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)</b>				
Coating		6	N	Superficial rust.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Steep.
Baffle		X	X	
<b>(Type : )</b>				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>5</b>	<b>N</b>	GR was 5 from 05May2010.

Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
<b>(Pipe # : 2, Span Type: Secondary Span)</b>					
Direction		E		South barrel.	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
<b>(Shape : )</b>					
Cutoff Wall		X	X		
Bevel End		4	4	Top of bevel damaged - photo.	
Heaving (mm)	150				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	50				
Scour Protection		6	N	Snow covered.	
<b>(Type : NATURAL)</b>					
<b>(Avg. Rock Size(mm) : )</b>					
Scour/Erosion		6	N		
Beavers (Y/N)	No				
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>		

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Span Type: Secondary Span)</b>				
Direction		W		Center pipe. Not visible due to ice covering.
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		N	N	(Torn & damaged from removal of rock - photo. Heavily pitted - photo. 29/May/2007)
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	N	
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	G.R. carried over from 29/May/2007.

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)</b>				
Barrel Last Accessible Date	07-Sep-2005			Inlet not visible; unable to enter due to ice.
<b>Special Features</b>				
Special Feature		X	X	
(Type : <b>CONC FLOOR</b> )				
Special Feature				
(Type : )				
Roof		N	N	(Est.) (Est. 5.7% roof sag. Flattening. 07/Sep/2005)
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	105			
Percent Sag				
Sidewall		N	N	(Midspan. 07/Sep/2005)  (5.7% sidewall deflection. 07/Sep/2005)
Measured Span (mm)	1905			
Measured At Ring No.				
Deflection (mm)	105			
Percent Deflection	6			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	N	
Separation (mm)	40			
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Coating		N	N	(Pitting & scaling. 07/Sep/2005)
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		N	N	(Pipe has been cleaned out. 07/Sep/2005)
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>N</b>	<b>N</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Direction		E		Center pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			(Almost completely buried in gravel approx 100mm above gravel - photo. 05May2010). Not visible; under ice.
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	N	(Some damage from cleanup. 05May2010) - Snow covered.
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1100			
Scour Protection		7	N	
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>N</b>	GR was 5 from 05May2010.
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	AGGRADING			
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>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							
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>46.3/46.3</b>	Est. Repl. Yr	2020	Maint. Req. (Y/N)	No
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	08-Nov-2013		Previous Inspection Date	05-May-2010			
Inspection Cycle (Default) (months)	21						
Comment							