

Bridge Culvert Inspection			
Bridge File Number	73537 -1 Bridge Culvert	Form Type	CULM
Year Built	1975	Lot No.	4
Bridge or Town Name	SPRING COULE	Inspector Name	Jason Rusu
Located Over	PINEPOUND CREEK, 2.12.20.4, WATERCRS-ST	Inspector Class	BR CLS A
Located On	5:04 C1 21.787	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	16-Oct-2011
Legal Land Location	SE SEC 29 TWP 4 RGE 23 W4M	Data Entry By	Alyssa Boynton
Longitude, Latitude	-113:03:51, 49:19:32	Data Entry Date	21-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA25	Review Date	09-Nov-2011
Clear Roadway/Skew	13.5 /	Dept. Reviewer Name	Tim Davies
AADT/Year	2,090 / 2010 (A)	Dept. Review Date	25-Nov-2011
Road Classification	RAU-213-130	Follow-Up By	
Detour Length (km)	3		

**Bridge Culvert Information**

Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3475	3841	SPE	71.9	152X51	4.2,4.2,4.2	ELLIPSE
2	MAIN	3475	3841	SPE	71.9	152X51		ELLIPSE
3	MAIN	3475	3841	SPE	71.9	152X51		ELLIPSE
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	SOUTH DITCH	Gas	
Power	4 WIRE S, 3 WIRE N	Municipal	
Others		Problem (Y/N)	No
Remarks	Fibre optics @ S R/W		

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curves within 1.0 km both ends. In sag curve. No passing WB.
Vertical Alignment		6	6	
Roadway Width (m)	13.500			
Embankment		4	5	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 5.7)				
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
(Pipe # : 1, Span Type: Primary Span)				
Direction		S		MIDDLE CULVERT - SOUTH END. EROSION 10m DIA x 2m DP @ SW.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Collar		N	5	
Wingwalls (Shape : )		X	X	
Cutoff Wall		N	N	
Bevel End		5	5	2m long aprons cast in front of bevel.
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	700			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>300</b> )		7	7	
Scour/Erosion		7	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE)</b>				
Barrel Last Accessible Date	16-Oct-2011			Middle culvert.
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		5	5	
Measured Rise (mm)	3658			
Measured At Ring No.	8			
Sag (mm)	183			estimated sag
Percent Sag	5			
Sidewall		5	5	
Measured Span (mm)	3652			
Measured At Ring No.	11			
Deflection (mm)	177			
Percent Deflection	5			
Floor		5	5	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		5	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)	Yes			

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE)</b>					
Coating		5	4	Some pitting Soil and Water. Isolated ports at U/S end and upper west sidewall at R8	
Corrosion By Soil (Y/N)	Yes				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	No				
Fish Passage Adequacy		4	4	300mm waterfall @ d/s end	
Baffle		X	X		
(Type : )					
Waterway Adequacy		7	7	Class 2 rock in barrel.	
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	No				
<b>Barrel General Rating</b>		<b>5</b>	<b>5</b>		
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
<b>(Pipe # : 1, Span Type: Primary Span)</b>					
Direction		N		Middle culvert - north end.	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape : )					
Cutoff Wall		X	X		
Bevel End		6	6		
Heaving (mm)	300				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	600				
Scour Protection		6	4	Some loss of rock under pipe.	
(Type : <b>RIP RAP</b> )					
(Avg. Rock Size(mm) : <b>300</b> )					
Scour/Erosion		6	4	5 x 4 x 0.8m deep scour hole.	
Beavers (Y/N)	No				
<b>Downstream End General Rating</b>		<b>6</b>	<b>4</b>		
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
<b>(Pipe # : 2, Span Type: Secondary Span)</b>					
Direction		S		East Culvert, N	
End Treatment (Concrete, Steel, Others, None)	CONCRETE				
Headwall		X	X		
Collar		6	6		

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		N	N	
Bevel End		5	5	
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		7	7	STREAMBED IN FRONT OF BEVEL IS CONCRETED.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE)</b>				
Barrel Last Accessible Date	16-Oct-2011			East Culvert
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		5	5	Estimated Roof sag
Measured Rise (mm)	3658			
Measured At Ring No.	8			
Sag (mm)	183			
Percent Sag	5			
Sidewall		4	4	No change since last inspection.
Measured Span (mm)	3638			
Measured At Ring No.	8			
Deflection (mm)	203			
Percent Deflection	5			
Floor		5	5	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		4	4	Ring 9 cracked Less than 100min remaining stool but not growing.
Total No. of Cracked Rings	1			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	95			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE)</b>				
Coating		4	4	Some pitting Soil and Water.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	5	
Baffle		X	X	
<b>(Type : )</b>				
Waterway Adequacy		7	7	Class I rock in barrel.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Direction		N		EAST CULVERT, NORTH END.
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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	700			
Scour Protection		4	4	BEVEL HAS 1.2 m VOID IN LOWER HAUNCH AREA. West side of bevel.
<b>(Type : RIP RAP)</b>				
<b>(Avg. Rock Size(mm) : 300)</b>				
Scour/Erosion		4	4	SCOUR HOLE 5x10x1m - most stream bed rock washed out
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		S		West Barrel, south end
End Treatment (Concrete, Steel, Others, None)	STEEL			
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		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		4	6	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		4	6	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>5</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE)</b>				
Barrel Last Accessible Date	16-Oct-2011			West culvert
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		5	5	
Measured Rise (mm)	3658			
Measured At Ring No.	8			
Sag (mm)	183			
Percent Sag	5			Estimated sag.
Sidewall		5	5	No change since last inspection.
Measured Span (mm)	3646			
Measured At Ring No.	12			
Deflection (mm)	195			
Percent Deflection	5			
Floor		5	5	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		5	5	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
<b>(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE)</b>					
Coating		4	4	Some pitting Soil and Water.	
Corrosion By Soil (Y/N)	Yes				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	No				
Fish Passage Adequacy		4	4	500mm waterfall @ d/s end	
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>5</b>	<b>5</b>		
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
<b>(Pipe # : 3, Span Type: Secondary Span)</b>					
Direction		N			
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape : )					
Cutoff Wall		X	X		
Bevel End		6	6	Inlet perched by 400mm	
Heaving (mm)	150				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	600				
Scour Protection		4	4	Loss of rip rap under bevel.	
(Type : <b>RIP RAP</b> )					
(Avg. Rock Size(mm) : <b>300</b> )					
Scour/Erosion		4	4	15 x 8 x 1.5m deep scour hole.	
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		5	5	W pipe takes most flow.	
Bank Stability		5	5		
HWM (m below Top of Culvert)				None visible	
Drift (Y/N)	No				

Structure Usage				
		Last	Now	Explanation of Condition
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>5</b>	<b>5</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>47.0/47.9</b>	Est. Repl. Yr	2021	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	Jason Rusu		Previous Assistant's Name				
Next Inspection Date	16-Jul-2013		Previous Inspection Date	28-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							