

Bridge Culvert Inspection				
Bridge File Number	09985 -1 Bridge Culvert		Form Type	CUL1
Year Built	1982		Lot No.	2
Bridge or Town Name	BOWDEN		Inspector Name	Owen Salava
Located Over	SPRUCE CREEK, 3.46.24, WATERCRS-ST		Inspector Class	BR CLS A
Located On	587:03 C1 11.758		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	25-Oct-2011
Legal Land Location	SW SEC 25 TWP 34 RGE 28 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-113:51:17, 51:56:24		Data Entry Date	25-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA19		Review Date	13-Nov-2011
Clear Roadway/Skew	10 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	410 / 2010 (A)		Dept. Review Date	28-Nov-2011
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	7			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	-	1600	MP	41	68X13	2.8	ROUND
Special Features		VERT TIMBER STRUTS						
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	At the intersection. Bottom of long sag - both directions.
Vertical Alignment		6	6	
Roadway Width (m)	10.000			
Embankment		6	6	
Sideslope ( _ :1)	3.0			
(Height of Cover(m) : 4)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>5</b>	<b>5</b>	

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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	6	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>150</b> )				
Scour/Erosion		N	6	
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
(Pipe # : <b>1</b> , Primary Span, Location Code: <b>MAIN</b> , Span (mm): , Rise (mm): <b>1600</b> , Type: <b>MP</b> )				
Barrel Last Accessible Date	25-Oct-2011			
<b>Special Features</b>				
Special Feature		4	4	Moved to side at North end - photo.
(Type : <b>VERT TIMBER STRUTS</b> )				
Special Feature				
(Type : )				
Roof		5	5	Local sag @ the D/S end 250mm.
Measured Rise (mm)	1500			
Measured At Ring No.	6			
Sag (mm)	100			
Percent Sag	6			6.3%
Sidewall		5	5	
Measured Span (mm)	1500			
Measured At Ring No.				
Deflection (mm)	100			6.3%
Percent Deflection	6			
Floor		N	N	300mm dirt/water.
Bulge (mm)	30			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		6	6	1st from U/S end 30mm separation. 2nd from U/S end 35mm separation. 3rd from U/S end 50mm separation
Separation (mm)	50			
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)				
Coating		5	5	Superficial corrosion lower 1/3.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1600, Type: MP)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Siltng (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>5</b>	<b>5</b>	

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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed				At S.B.
Above/Below (mm)	0			
Scour Protection		N	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>6</b>	<b>6</b>	

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			Local farmer reports periodic beaver presence.
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>8</b>	<b>8</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	2012	Re-install struts at North end - 3m length.					
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>55.6/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>65.6/65.6</b>	Est. Repl. Yr	2020	Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection	The culvert was put in poorly. (Note: this culvert was strutted by local road authority Nov 1992.) Measure ring separations at u/s end, midpoint & d/s end.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2004.05.30 Culvert Strutted. Monitor normal BIM. Culvert should be ok until 2022.						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Owen Salava	Previous Assistant's Name					
Next Inspection Date	25-Jan-2015	Previous Inspection Date	07-Dec-2010				
Inspection Cycle (Default) (months)	39						
Comment							