

Bridge Culvert Inspection				
Bridge File Number	01709 -1 Bridge Culvert		Form Type	CULM
Year Built	1957		Lot No.	1
Bridge or Town Name			Inspector Name	Owen Salava
Located Over	TRIBUTARY TO PIPER CREEK, 3.81.1.3, WATERCRS-ST		Inspector Class	BR CLS A
Located On	42:08 C1 9.884		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	26-Nov-2012
Legal Land Location	NE SEC 36 TWP 36 RGE 27 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-113:43:41, 52:08:33		Data Entry Date	06-Dec-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA19		Review Date	03-Dec-2012
Clear Roadway/Skew	10.8 / 30 deg. (RHF)		Dept. Reviewer Name	Andrew Smikles
AADT/Year	2,020 / 2011 (A)		Dept. Review Date	10-Dec-2012
Road Classification	RAU-211.8-110		Follow-Up By	
Detour Length (km)				

Bridge Culvert Information								
Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1200	MP	28.7	68X13		ROUND
2	MAIN	-	1200	MP	28.7	68X13		ROUND
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone		Gas	
Power	2 wire o/h N r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Superelevated in a curve with limited sight distance. No passing EB. Approach 30m East of culverts.
Vertical Alignment		8	8	
Roadway Width (m)	10.800			
Embankment		7	7	
Sideslope ( :1)	2.0			
(Height of Cover(m) : 4.2)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>6</b>	

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Cutoff Wall		X	X	
Bevel End		7	6	Inlet has page wire fence around it. Minor roof bend.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		6	N	Snow covered.
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		6	N	Snow covered.
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): 1200, Type: MP)</b>				
Barrel Last Accessible Date	20-Feb-2003			West pipe. Barrel not viewable due to ice/snow. Ice 0.3m from roof.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	(11.7%.19Oct06)
Measured Rise (mm)	1060			
Measured At Ring No.				
Sag (mm)	140			
Percent Sag	11			
Sidewall		N	N	(12.5%.19Oct06)
Measured Span (mm)	1350			
Measured At Ring No.				
Deflection (mm)	150			
Percent Deflection	12			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	40			
Longitudinal Seams		N	N	Rivetted.
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		N	N	(Superficial rust. 20Feb2003).
Corrosion By Soil (Y/N)	No			
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): , Rise (mm): 1200, Type: MP)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>3</b>	<b>3</b>	General rating carried forward since 20Feb2003.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		N		600mmx6m CSP sitting in bevel end (photo).
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		N	N	(Come apart at top of crown 1st joint 0.5m from end. 18Nov2009). Snow covered.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	N	(Some small rock 150mm from c/l. 18Nov2009). Snow covered.
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried forward from 18Nov2009.
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		
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
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Bevel End		4	4	Crown has a minor dent.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			Overflow pipe.
Above/Below (mm)	1000			
Scour Protection		5	N	Snow covered.
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)</b>				
Barrel Last Accessible Date	26-Nov-2012			East pipe.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		3	3	Unable to measure due to ice.
Measured Rise (mm)	1060			At c/l.
Measured At Ring No.				
Sag (mm)	140			11.7%
Percent Sag	11			
Sidewall		3	3	
Measured Span (mm)	1340			At c/l.
Measured At Ring No.				
Deflection (mm)	140			11.7%.
Percent Deflection	11			
Floor		N	N	Silt/ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	45			
Longitudinal Seams		6	6	Rivetted
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	
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		3	5	Overflow pipe.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>3</b>	<b>3</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
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		4	N	(Small tear on top of culvert 0.3 m from end. 12Apr2011) - Snow covered.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		5	N	Snow covered.
(Type : NATURAL)				
(Avg. Rock Size(mm) : )				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried forward from 12Apr2011.
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		5	5	70 deg LH bend at U/S end.
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible. Drift in stream U/S.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<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	2013	Remove old culvert in W pipe.								
OTHER ACTION	2013	Jack out inlet dents.								
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
<b>Structural Condition Rating (Last/Now)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now)</b>	<b>34.2/40.4</b>	<b>Est. Repl. Yr</b>	<b>2020</b>	<b>Maint. Req'd. (Y/N)</b>	<b>Yes</b>			
Special Comments for Next Inspection	Monitor culvert dimensions.		Department Comments							
Maintenance Reviewed By			Date			Estimated Total	0			
Proposed Long-Term Strategy	Carry Overlay across the culverts without doing any work to them. RW 2003.03.18 Replace in 2020 or when road Widening/improvement takes place.									
On 3-Year Program (Y/N)										
Proposed Action										
Previous Inspector's Name	Owen Salava	Previous Assistant's Name								
Next Inspection Date	26-Aug-2014	Previous Inspection Date	12-Apr-2011							
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						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Remove old culvert in W pipe.	Defer until replacement	2017		
OTHER ACTION	2013	Jack out inlet dents.	Defer until replacement	2017		
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>34.2/40.4</b>	Est. Repl. Yr	2020	Maint. Req. (Y/N)	Yes
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Special Comments for Next Inspection	Monitor culvert dimensions.	Department Comments	Currently scheduled in PMA for replacement in 2017. DA
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Maintenance Reviewed By	Darron Ahlstedt	Date	04-Mar-2013	Estimated Total	0
Proposed Long-Term Strategy	Carry Overlay across the culverts without doing any work to them. RW 2003.03.18 Replace in 2020 or when road Widening/improvement takes place.				
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Owen Salava	Previous Assistant's Name			
Next Inspection Date	26-Aug-2014	Previous Inspection Date	12-Apr-2011		
Inspection Cycle (Default) (months)	21				
Comment					