Bridge Culvert Inspection

Bridge File Number	80617 -1 Bridge Culvert	Form Type	CULM
Year Built	1986	Lot No.	2
Bridge or Town Name	USONA	Inspector Name	Owen Salava
Located Over	2ND ORDER TRIBUTARY TO MASKWA CREEK, 5.47.4.1.3.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	611:02 C1 44.125	Assistant Class	
Water Body Cl./Year		Inspection Date	07-Feb-2013
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SE SEC 4 TWP 45 RGE 26 W4M	Data Entry Date	07-Mar-2013
Longitude, Latitude	-113:42:28, 52:50:36	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	14-Feb-2013
Contract Main. Area	CMA17	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	9.4 /	Dept. Review Date	14-Mar-2013
AADT/Year	600 / 2011 (A)	Follow-Up By	
Road Classification	RCU-210-110		
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1400	MP	25.4	68X13	2.8	ROUND
2	MAIN	-	1400	MP	25.4	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South ditch.	Gas	
Power	1 wire North r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 150m East.
Vertical Alignment		8	8	
Roadway Width (m)	9.400			
Embankment		6	6	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		N		East 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**
(Pipe # : **1, Span Type: Primary Span**)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		N	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		**N**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1400, Type: MP**)				
Barrel Last Accessible Date	07-Feb-2013			East pipe.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	Unable to measure due to ice.
Measured Rise (mm)	1320			
Measured At Ring No.	2			
Sag (mm)	80			(5.7%. 09Sep2003).
Percent Sag	6			
Sidewall		N	5	
Measured Span (mm)	1500			
Measured At Ring No.	2			
Deflection (mm)	100			7.1%
Percent Deflection	7			
Floor		N	N	Ice
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	Minor infiltration at u/s seam.
Separation (mm)	130			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		N	5	Floor pitting.
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): 1400, Type: MP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		N	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		S		East pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		N	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**N**	**6**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		N		West pipe.
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**
(Pipe # : **2, Span Type: Secondary Span**)				
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		N	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		**N**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1400, Type: MP**)				
Barrel Last Accessible Date	07-Feb-2013			West pipe
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	5	
Measured Rise (mm)	1320			
Measured At Ring No.	2			
Sag (mm)	80			5.7%
Percent Sag	6			
Sidewall		N	4	No action - no change of shape since 2003.
Measured Span (mm)	1515			
Measured At Ring No.	2			
Deflection (mm)	120			8.2%
Percent Deflection	8			
Floor		N	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	4	Minor material loss at both seams.
Separation (mm)	130			
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		N	5	Floor pitting.
Corrosion By Soil (Y/N)	No			
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): 1400, Type: MP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		N	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	

Downstream 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	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		N	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**N**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

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	Place expanding foam at all circumferential seams.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**64.2/56.8**	Est. Repl. Yr	2023	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor deflection.	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	07-May-2016	Previous Inspection Date	03-Mar-2010		
Inspection Cycle (Default) (months)	39				
Comment					