Bridge Culvert Inspection

Bridge File Number	08616 -1 Bridge Culvert	Form Type	CULM
Year Built	1952	Lot No.	4
Bridge or Town Name	CONDOR	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO LASTHILL CREEK, 3.88.12.5, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	11:10 C1 37.946	Assistant Class	
Water Body Cl./Year		Inspection Date	01-Feb-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SE SEC 6 TWP 39 RGE 4 W5M	Data Entry Date	06-Mar-2012
Longitude, Latitude	-114:33:29, 52:19:09	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	22-Feb-2012
Contract Main. Area	CMA18	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	9.9 / 25 deg. (RHF)	Dept. Review Date	09-Mar-2012
AADT/Year	4,510 / 2010 (A)	Follow-Up By	
Road Classification	RAU-210-110		
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts		3						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1955	1422	RP	21.9	152X51	2.8	PIPE ARCH
2	MAIN	-	1200	MP	28.6	68X13	2.8	ROUND
3	MAIN	-	1200	MP	22.5	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	North & South r/w.	Gas	
Power	3 wires South r/w. 1 wire crosses road @ culvert.	Municipal	
Others	Fibre optic in South r/w.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Farm entrance 20m East. 1955 & 1200mm pipe to the East are at different skews, other 1200mm 30m West of stream 0 degree.
Vertical Alignment		8	8	
Roadway Width (m)	9.900			
Embankment		5	6	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1.3**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**8**	**8**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		S		Middle pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	Rows of rebar placed horizontally across opening. Drift accumulation on grate.
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	N	Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Upstream End General Rating		**5**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1955, Rise (mm): 1422, Type: RP**)				
Barrel Last Accessible Date	01-Feb-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	5	Not meausred due to ice.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	90			(5.9%. 08/June/2000)
Percent Sag				
Sidewall		N	5	Not measured; max. span below ice level.
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	70			(3.2%. 08/June/2000)
Percent Deflection				
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	5	
Separation (mm)	0			
Longitudinal Seams		N	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)	No			

Bridge Culvert Barrel

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1955, Rise (mm): 1422, Type: RP**)				
Coating		N	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			Drift caught on inlet bars.
Barrel General Rating		**N**	**5**	

Downstream End

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : **1, Span Type: Primary Span**)				
Direction		N		Centre pipe.
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	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	N	(Minimal rocks. 31Mar2010) - Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		S		East pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	4	Mower damage to crown of bevel.
Heaving (mm)	350			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		5	N	Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Barrel Last Accessible Date	31-Mar-2010			0.5m to ice; viewed from ends, shape OK>
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	N	
Measured Rise (mm)	1175			
Measured At Ring No.	2			
Sag (mm)	25			
Percent Sag	2			
Sidewall		6	N	
Measured Span (mm)	1250			
Measured At Ring No.	2			
Deflection (mm)	50			
Percent Deflection	4			
Floor		6	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		5	N	At R2.
Separation (mm)	150			
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)	No			
Longitudinal Stagger (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Coating		5	N	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**6**	**N**	GR was 6 from 31Mar2010.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		N		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		5	5	Minor mower dmage to crown.
Heaving (mm)	150			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	N	Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Span Type: Secondary Span**)				
Direction		S		West pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Span Type: Secondary Span**)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	4	Mower damage to top, sides.
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			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Barrel Last Accessible Date	01-Feb-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	
Measured Rise (mm)	1130			
Measured At Ring No.	2			
Sag (mm)	70			5.8%
Percent Sag	6			
Sidewall		5	5	
Measured Span (mm)	1260			
Measured At Ring No.	2			
Deflection (mm)	60			
Percent Deflection	5			
Floor		5	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	
Separation (mm)	30			
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		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, 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	
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	N	Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		6	6	
HWM (m below Top of Culvert)	0.2			
Drift (Y/N)	Yes			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**6**	

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						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**50.2/50.1**	Est. Repl. Yr	2020	Maint. Reqd. (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	01-Nov-2013	Previous Inspection Date	31-Mar-2010		
Inspection Cycle (Default) (months)	21				
Comment					