Bridge Culvert Inspection

Bridge File Number	13751 -1 Bridge Culvert	Form Type	CULM
Year Built/Lined	1965/2010	Lot No.	4
Bridge or Town Name	DONATVILLE	Inspector Name	Eric Carcoux
Located Over	TRIBUTARY TO PINE CREEK, 8.11.55.5.6, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	63:01 C1 43.167	Assistant Class	
Water Body Cl./Year		Inspection Date	13-Jan-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 3 TWP 67 RGE 19 W4M	Data Entry Date	17-Jan-2012
Longitude, Latitude	-112:48:10, 54:45:54	Reviewer Name	Arnold Assenheimer
Road Authority	Alberta Transportation (AIT)	Review Date	16-Jan-2012
Contract Main. Area	CMA07	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	11 /	Dept. Review Date	18-Jan-2012
AADT/Year	4,610 / 2010 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
2	MAIN FULL LINER	-	2200	MP	37	125X26	3.5	ROUND
3	MAIN	-	1829	SSP	42			ROUND
4	MAIN	-	1829	SSP	42			ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	30 m north.
Power	1 wire East r/w.	Municipal	
Others	Fibre optic East r/w.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	In middle of a S curve. Gradual rise to the north. Slight bump over patched ACP over pipe. .
Vertical Alignment		7	7	
Roadway Width (m)	11.000			
Embankment		6	6	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **1.2**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Primary Span**)				
Direction		E		Old concrete end treatment still in place, not at end of pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		7	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Primary Span**)				
Collar		7	X	
Wingwalls		7	X	
(Shape :)				
Cutoff Wall		N	X	
Bevel End		7	7	
Heaving (mm)	300			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		9	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	8	
Beavers (Y/N)	Yes			30m u/s.
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2200, Type: MP**)				
Barrel Last Accessible Date	13-Jan-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)	2150			(@ cl - 40 at 2010) ice on floor, - sag est.
Measured At Ring No.				
Sag (mm)	50			
Percent Sag	2			
Sidewall		8	8	
Measured Span (mm)	2230			@ cl
Measured At Ring No.				
Deflection (mm)	30			
Percent Deflection	1			
Floor		9	N	Ice covered.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	5	Internal couplers covering seams.
Separation (mm)				
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 # : **2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2200, Type: MP**)				
Coating		9	8	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	Heaving/inlet above S.B.
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**8**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Primary Span**)				
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		9	8	
Heaving (mm)	100			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		9	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	8	
Beavers (Y/N)	No			
Downstream End General Rating		**9**	**8**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Span Type: Secondary Span**)				
Direction		E		
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		9	N	Ice covered
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		9	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	N	
Beavers (Y/N)	Yes			30m u/s
Upstream End General Rating		**9**	**9**	GR carried fwd from 04-Oct-2010

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1829, Type: SSP**)				
Barrel Last Accessible Date	04-Oct-2010			Ice to crown 400mm Shape looks good from ends.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	cl
Measured Rise (mm)	1800			
Measured At Ring No.				
Sag (mm)	29			
Percent Sag	2			
Sidewall		9	N	cl
Measured Span (mm)	1820			
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		9	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	
Separation (mm)				
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): 1829, Type: SSP**)				
Coating		7	N	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	N	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	GR was 8 on 04-Oct-2010

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Span Type: Secondary Span**)				
Direction		W		Ice over
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		9	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		9	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	N	
Beavers (Y/N)	No			
Downstream End General Rating		**9**	**9**	GR carried over from 04-Oct-2010

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Span Type: Secondary Span**)				
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Span Type: Secondary Span**)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		9	N	Ice over
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		9	N	Ice over
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	N	
Beavers (Y/N)	Yes			30m u/s.
Upstream End General Rating		**9**	**9**	GR carried over from 04-Oct-2010

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1829, Type: SSP**)				
Barrel Last Accessible Date	04-Oct-2010			Ice to crown 400mm Shape looks good from ends.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	cl
Measured Rise (mm)	1800			
Measured At Ring No.				
Sag (mm)	29			
Percent Sag	2			
Sidewall		9	N	
Measured Span (mm)	1820			cl
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		9	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	
Separation (mm)				
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 # : **4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1829, Type: SSP**)				
Coating		7	N	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	N	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	GR was 8 on 04-Oct-2010

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Span Type: Secondary Span**)				
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		9	N	Ice over
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		9	N	Ice over
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	N	Iced over
Beavers (Y/N)	No			
Downstream End General Rating		**9**	**9**	GR carried over from 04-Oct-2010

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	Meanders both directions.
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel Bottom Degrading/Aggrading				Dams u/s & d/s.
Beavers (Y/N)	Yes			
(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) (%)	**88.9/88.9**	**Sufficiency Rating (Last/Now) (%)**	**78.3/77.1**	Est. Repl. Yr	2060	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	Wade Nanninga	Previous Assistant's Name			
Next Inspection Date	13-Oct-2013	Previous Inspection Date	18-Oct-2010		
Inspection Cycle (Default) (months)	21				
Comment					