Bridge Culvert Inspection

Bridge File Number	71091 -1 Bridge Culvert	Form Type	CUL1
Year Built	1989	Lot No.	2
Bridge or Town Name	LINCOLN	Inspector Name	Eric Carcoux
Located Over	2ND ORDER TRIBUTARY TO MUSKEG CREEK, 8.11.69.2.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	812:02 C1 6.100	Assistant Class	
Water Body Cl./Year		Inspection Date	29-Mar-2010
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 24 TWP 65 RGE 24 W4M	Data Entry Date	19-Apr-2010
Longitude, Latitude	-113:30:36, 54:38:31	Reviewer Name	Arnold Assenheimer
Road Authority	Alberta Transportation (AIT)	Review Date	15-Apr-2010
Contract Main. Area	CMA10	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	9.5 / 5 deg. (RHF)	Dept. Review Date	27-Apr-2010
AADT/Year	240 / 2009 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1810	SP	52.2	152X51	3.0	ROUND

Special Features	CONC FLOOR
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	2 OH lines East side @ 25 m.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Residential to North. Field accesses N & S.
Vertical Alignment		7	7	
Roadway Width (m)	9.500			
Embankment		N	4	(Erosion gully NW side of pipe, 1.5m deep, 2m wide & 25m long.)-photo
Sideslope (__:1)	3.0			
(Height of Cover(m) : **4**)				Erosion gully @ SW 10m long, 1m deep. 2m wide.-photo
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
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		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		N	7	Concrete apron @ inlet.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
Upstream End General Rating		**N**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1810, Type: SP**)				
Barrel Last Accessible Date	20-Mar-2010			
Special Features				
Special Feature		N	5	Transverse wide cracking @ 600mm spacing.
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		7	7	Floor to roof 1.68m, sag est.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	20			
Percent Sag				
Sidewall		7	7	
Measured Span (mm)	1832			
Measured At Ring No.	6			
Deflection (mm)	32			
Percent Deflection	2			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		8	8	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		7	7	1N stagger.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	POS			
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): 1810, Type: SP**)				
Fish Passage Adequacy		7	4	Shallow water weith high velocity due to concrete floor.
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**7**	**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	5	Concrete slab on S. side only.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	5	D/S apron has cracked up, 3.5m away from bevel end.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Downstream End General Rating		**N**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	7	
Bank Stability		N	5	Trees falling in 20m d/s.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**5**	

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	2010	Repair gullies along W. ditch.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**77.8/77.8**	**Sufficiency Rating (Last/Now) (%)**	**76.9/68.1**	Est. Repl. Yr	2040	Maint. Reqd. (Y/N)	Yes

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	Jason Saly	Previous Assistant's Name	
Next Inspection Date	29-Jun-2013	Previous Inspection Date	27-Nov-2006
Inspection Cycle (Default) (months)	39		
Comment			