Bridge Culvert Inspection

Bridge File Number	72565 -2 Bridge Culvert	Form Type	CUL1
Year Built	2000	Lot No.	4
Bridge or Town Name	BONNYVILLE	Inspector Name	Todd Warshawski
Located Over	MURIEL CREEK, 7.5, WATERCRS-ST	Inspector Class	BR CLS B
Located On	659:02 C1 5.536	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	15-Dec-2011
Legal Land Location	SE SEC 14 TWP 61 RGE 5 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-110:38:28, 54:16:05	Data Entry Date	04-Jan-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA08	Review Date	30-Dec-2011
Clear Roadway/Skew	10.7 / 22 deg. (RHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	2,140 / 2010 (A)	Dept. Review Date	05-Jan-2012
Road Classification	RAU-210-110	Follow-Up By	
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	5235	3285	RPE	38.4	152X51	4.0	ELLIPSE

Special Features	CONC FLOOR
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power	3 wire North r/w.	Municipal	
Others	Fibre optics in both ditches	Problem (Y/N)	No
Remarks	BF tag on N headwall.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	
Vertical Alignment		9	9	
Roadway Width (m)	10.100			
Embankment		7	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **0.4**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**9**	**9**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		Wide flood plain.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Patches.
Collar		7	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 5235, Rise (mm): 3285, Type: RPE**)				
Barrel Last Accessible Date	15-Dec-2011			
Special Features				
Special Feature		N	N	
(Type : **CONC FLOOR**)				
Special Feature				Concrete relieving slab.
(Type :)				
Roof		9	7	
Measured Rise (mm)				Some flattening at ring 1-2, 7-8 Sag estimate as measured off ice.
Measured At Ring No.	2			
Sag (mm)	30			
Percent Sag	1			
Sidewall		9	8	
Measured Span (mm)	5275			
Measured At Ring No.	1			
Deflection (mm)	40			
Percent Deflection	1			
Floor		N	N	Under water/ice.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	8	Upper 1/2 rated.
Separation (mm)	0			
Longitudinal Seams		N	8	Upper 1/2 rated.
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)	No			
Coating		8	6	Corrosion at upper seam/bolts.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 5235, Rise (mm): 3285, Type: RPE**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	9	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Patches.
Collar		7	X	No collar on d/s.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		9	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		9	8	
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		**8**	**8**	

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) (%)	**55.6/77.8**	**Sufficiency Rating (Last/Now) (%)**	**72.2/83.1**	Est. Repl. Yr	2055	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor flattening in roof (R1-2, 7-8)	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	Dave Lam	Previous Assistant's Name			
Next Inspection Date	15-Mar-2015	Previous Inspection Date	10-Aug-2008		
Inspection Cycle (Default) (months)	39				
Comment					