Bridge Culvert Inspection

Bridge File Number	70281 -1 Bridge Culvert	Form Type	CULE
Year Built	1971	Lot No.	2
Bridge or Town Name	EDMONTON	Inspector Name	Kris Bosters
Located Over	MILL CREEK, 6.90, WATERCRS-ST	Inspector Class	BR CLS A
Located On	14:04 R1 6.195;14:04 L1 5.621	Assistant Name	Brian Cote
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	09-Jan-2013
Legal Land Location	NE SEC 35 TWP 51 RGE 23 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-113:16:16, 53:26:48	Data Entry Date	16-Jan-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA09	Review Date	09-Jan-2013
Clear Roadway/Skew	26 / -28 deg. (LHF)	Dept. Reviewer Name	Paul Catt
AADT/Year	12,940 / 2011 (A)	Dept. Review Date	18-Jan-2013
Road Classification	RAD-412.4-120	Follow-Up By	
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	-	2400	SP	4.5	125X26	2.8	ROUND
1	MAIN	-	1829	CP	75			ROUND
1	D/S	-	2400	SP	4.5	125X26	2.8	ROUND
Special Features								
Special Features Comment		BF tag not locaterd due to snow/ice.						

Utilities (Located at)

Utility Attachments			
Telephone	South & north r/w.	Gas	S-row
Power	2 lines N/S.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Under RR 231 intersection. Crest curve to west. 4 lanes.
Vertical Alignment		7	7	
Roadway Width (m)	26.000			Total EB & WB
Embankment		7	7	
Sideslope (__:1)	5.0			
(Height of Cover(m) : **1.5**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
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**
Cutoff Wall		X	X	
Bevel End		8	N	Snow covered
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		N	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	GR carried forward.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 2400, Type: SP**)				
Barrel Last Accessible Date	08-Jan-2013			Ice to springline.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)	2440			Upward.
Measured At Ring No.	1			
Sag (mm)	40			
Percent Sag	0			
Sidewall		8	8	
Measured Span (mm)	2350			Inward.
Measured At Ring No.	1			
Deflection (mm)	50			
Percent Deflection	0			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	Rated poured joint to concrete pipe.
Separation (mm)	0			
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		8	8	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 2400, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		**8**	**8**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1829, Type: CP**)				
Barrel Last Accessible Date	09-Feb-2011			Ice to springline Could not access centre due to unstable undercut ice. Viewed form grater lenth access point at both ends. Shape looks good.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	Lifting pockets not grouted-photo.
Measured Rise (mm)				
Measured At Ring No.	1			
Sag (mm)				
Percent Sag	0			
Sidewall		8	8	
Measured Span (mm)	1824			
Measured At Ring No.	1			
Deflection (mm)				
Percent Deflection	0			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.	1			
Abrasion (Y/N)	No			
Circumferential Seams		5	4	Void less than 100mm-R39/40.-09-Feb-2011
Separation (mm)	100			Gaps up to 100mm and exposed steel. Cracked grout between R1 & R2 of the CP.-photo
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		7	7	
Corrosion By Soil (Y/N)	No			Exposed steel at joints.
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): 1829, Type: CP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
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**
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		8	N	Snow covered
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		N	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	GR carried fwd.

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	Grout lift pockets and gaps.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**88.9/88.9**	**Sufficiency Rating (Last/Now) (%)**	**81.4/81.4**	Est. Repl. Yr	2047	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor connection between R39/40.	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	Todd Warshawski	Previous Assistant's Name			
Next Inspection Date	09-Oct-2014	Previous Inspection Date	09-Feb-2011		
Inspection Cycle (Default) (months)	21				
Comment					