Bridge Culvert Inspection

Bridge File Number	07615 -1 Bridge Culvert	Form Type	CUL1
Year Built	1973	Lot No.	4
Bridge or Town Name	AIRDRIE	Inspector Name	Garry Roberts
Located Over	CROSSFIELD CREEK, 3.33.20, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	567:06 C1 16.785	Assistant Class	
Water Body Cl./Year		Inspection Date	25-Jul-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	SE SEC 16 TWP 27 RGE 27 W4M	Data Entry Date	30-Aug-2012
Longitude, Latitude	-113:44:16, 51:17:59	Reviewer Name	Tom Carey
Road Authority	Alberta Transportation (AIT)	Review Date	07-Aug-2012
Contract Main. Area	CMA29	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	9.5 /	Dept. Review Date	06-Sep-2012
AADT/Year	1,840 / 2011 (A)	Follow-Up By	
Road Classification	RLU-209-110		
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2896	3200	SPE	58.5	152X51	3.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South ditch.	Gas	
Power	North ROW.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	In sag curve, steep gradient.
Vertical Alignment		5	5	
Roadway Width (m)	9.500			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **6.3**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		North.
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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
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): 2896, Rise (mm): 3200, Type: SPE**)				
Barrel Last Accessible Date	25-Jul-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	U/S- 3134 R6- 2969 R9- 2900 R12- 3012 D/S R15- 3187 Dimensions are not reflection of actual pipe shape which is good.
Measured Rise (mm)	2900			
Measured At Ring No.	8			
Sag (mm)	300			
Percent Sag	9			
Sidewall		5	5	U/S-R1- 2927 R6- 3146 R9- 3191 R12- 3097 D/S R15- 2940 Sidewall dimensions are not reflection of actual pipe shape which is good.
Measured Span (mm)	3205			
Measured At Ring No.	8			
Deflection (mm)	309			
Percent Deflection	10			
Floor		6	6	(MINOR)
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	6	Staggered, some alkali, several bolts missing.
Separation (mm)	0			
Longitudinal Seams		6	6	West side improperly lapped at 1 and 2 clock.
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			
Coating		5	5	Alkali & moderate water corrosion.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2896, Rise (mm): 3200, Type: SPE**)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
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**
Direction		S		South.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	150			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	Curve @ U/S. Dugout 8m D/S.
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM NOT VISIBLE.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
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) (%)**	**63.9/63.8**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Roof and sidewall dimensions are not reflections of actual pipe shape which is good. Roof, sidewall and barrel G.R rated adequate. (G.R May 14/09).	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	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	25-Oct-2015	Previous Inspection Date	14-May-2009		
Inspection Cycle (Default) (months)	39				
Comment					