Bridge Culvert Inspection

Bridge File Number	74657 -1 Bridge Culvert	Form Type	CUL1
Year Built	1956	Lot No.	4
Bridge or Town Name	KIRKCALDY	Inspector Name	Tom Carey
Located Over	LONG COULEE CREEK, 2.12.12.9, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	23:06 C1 25.053	Assistant Class	
Water Body Cl./Year		Inspection Date	18-Feb-2013
Navigabil. Cl./Year		Data Entry By	Anne Roberts
Legal Land Location	SW SEC 15 TWP 16 RGE 24 W4M	Data Entry Date	17-Mar-2013
Longitude, Latitude	-113:13:59, 50:20:22	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	03-Mar-2013
Contract Main. Area	CMA25	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	12.8 / -30 deg. (LHF)	Dept. Review Date	25-Mar-2013
AADT/Year	2,580 / 2011 (A)	Follow-Up By	
Road Classification	RAU-213-120		
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	-	1830	SP	39	152X51	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East row	Gas	
Power	4w - West row and 3w - 30m South	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Local road intersection 50 m South.
Vertical Alignment		8	8	
Roadway Width (m)	12.800			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **2.2**)				
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		5	5	(Floor corrosion pitted). Not well supported underneath. Projects from fill 300mm. - Bevel hangs above stream bed 50mm for 1m length.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			200 mm ice on bevel.
Above/Below (mm)	50			
Scour Protection		5	5	And 300mm rock
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	Minor scour
Beavers (Y/N)	No			
Upstream End General Rating		**5**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1830, Type: SP**)				
Barrel Last Accessible Date	18-Feb-2013			
Special Features				
Special Feature				200 mm of ice.
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	
Measured Rise (mm)	1770			
Measured At Ring No.	9			
Sag (mm)	60			
Percent Sag	3			
Sidewall		7	7	
Measured Span (mm)	1830			
Measured At Ring No.	9			
Deflection (mm)	0			
Percent Deflection	0			
Floor		5	5	Rust & Scale on floor with some pitting, seen at floor haunches.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Several missing bolts or loose.
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Corrosion with some pitting on floor @ U/S 1/3. Corrosion scaling
Corrosion By Soil (Y/N)	No			
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): , Rise (mm): 1830, Type: SP**)				
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		**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	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	Projects from fill 300mm and is unsupported for 1m at end.
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	5	Minor scour hole 8m D/S
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Ditch enters and exits on 60 degree skew.
Bank Stability		8	8	
HWM (m below Top of Culvert)	0.6			(Straw on roof bolts -16-Aug-2007)
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		**5**	**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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**77.8/77.8**	**Sufficiency Rating (Last/Now) (%)**	**69.9/69.8**	Est. Repl. Yr	2073	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	Tom Carey	Previous Assistant's Name			
Next Inspection Date	18-Nov-2014	Previous Inspection Date	18-May-2011		
Inspection Cycle (Default) (months)	21				
Comment					