Bridge Culvert Inspection

Bridge File Number	02154 -1 Bridge Culvert	Form Type	CUL1
Year Built	1953	Lot No.	4
Bridge or Town Name	STRATHMORE	Inspector Name	Jon Davies
Located Over	TRIBUTARY TO CROWFOOT CREEK, 2.13.13.9, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	1:14 R1 3.733;1:14 L1 3.733	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Feb-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	NW SEC 7 TWP 24 RGE 23 W4M	Data Entry Date	18-Mar-2012
Longitude, Latitude	-113:12:28, 51:02:15	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	27-Feb-2012
Contract Main. Area	CMA30	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	24 /	Dept. Review Date	22-Mar-2012
AADT/Year	7,520 / 2010 (A)	Follow-Up By	
Road Classification	RAD-412.4-120		
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	MAIN	2027	2241	SPE	79.5	152X51	3.0	ELLIPSE
Special Features		CONC FLOOR						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South ditch.	Gas	80m North of CL.
Power	30m South OF CL-7W, & 50m TO NW-2W.	Municipal	
Others	Fibre optics North RW.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 150 m West. Hill to West & East.
Vertical Alignment		7	6	
Roadway Width (m)	24.000			
Embankment		7	7	@ North end. 4:1 at road side slopes.
Sideslope (__:1)	2.0			
(Height of Cover(m) :)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		South End.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		4	4	Wide cracking & spalling @ SE.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Submerged.

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)	400			
Scour Protection		6	6	400mm Rock in U/S bevel.
(Type : **RIP RAP**)				Heavily vegetated.
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2027, Rise (mm): 2241, Type: SPE**)				
Barrel Last Accessible Date	16-Feb-2012			Pipe @ W/B Lanes 2240 Span X 2027 Rise.
Special Features				
Special Feature		X	N	Pipe diameter change at R10. New floor starts at end of R10.
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		7	7	Roof measured rise with new concrete.
Measured Rise (mm)	2220			
Measured At Ring No.	10			Estimate.
Sag (mm)	21			
Percent Sag	1			
Sidewall		7	7	R17 @ East 50mm dia hole from const.
Measured Span (mm)	2265			
Measured At Ring No.	20			
Deflection (mm)	25			
Percent Deflection	1			
Floor		N	N	New concrete floor R10 to D/S end.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
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	Superficial corrosion in floor rings 1 to 10 and U/S bevel. Stains at boltholes at Roof.
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): 2027, Rise (mm): 2241, Type: SPE**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
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		N		North End.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		7	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		7	N	P.R 7. Ice covered.
Bevel End		7	6	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		7	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		7	6	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	2-800mm dia mp pipes & channel 90 deg to SW in addition to main channel for South highway ditch drainage.
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Trees in D/S channel @ bevel end.
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) (%)**	**68.4/67.4**	Est. Repl. Yr	2015	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	Garry Roberts	Previous Assistant's Name	
Next Inspection Date	16-Nov-2013	Previous Inspection Date	17-Aug-2010
Inspection Cycle (Default) (months)	21		
Comment			