Bridge Culvert Inspection

Bridge File Number	01798 -1 Bridge Culvert	Form Type	CULE
Year Built	1955	Lot No.	4
Bridge or Town Name	STRATHMORE	Inspector Name	Jon Davies
Located Over	TRIBUTARY TO SERVICEBERRY CREEK, 3.33.9.13, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	1:12 R1 12.820;1:12 L1 12.820	Assistant Class	
Water Body Cl./Year		Inspection Date	23-Feb-2012
Navigabil. Cl./Year		Data Entry By	Anne Roberts
Legal Land Location	NE SEC 12 TWP 24 RGE 26 W4M	Data Entry Date	20-Mar-2012
Longitude, Latitude	-113:29:48, 51:02:15	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	01-Mar-2012
Contract Main. Area	CMA30	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	25.3 /	Dept. Review Date	22-Mar-2012
AADT/Year	14,030 / 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	U/S	5480	3553	RPP	39.6	152X51		PIPE ARCH
1	MAIN	5480	3048	AP	77.3			ARCH
Special Features		CONC FLOOR						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	NORTH R/W	Gas	CROSSING 20 m U/S, xing 200m E
Power	2 WIRE N. R/W, 4 WIRE S. R/W	Municipal	
Others	35m FROM C.L.	Problem (Y/N)	No
Remarks	Fibre optic N R/W		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	MEDIAN CROSSING & INTERSECTION - 220m E SAG CURVE.
Vertical Alignment		7	7	
Roadway Width (m)	25.300			
Embankment		5	5	EROSION S/W DITCH - ROCK IN SCOUR APPEARS STABLE-grown in
Sideslope (__:1)	3.0			
(Height of Cover(m) : **7**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	5	Wide crack in SW corner
Collar		7	7	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		N	N	Ice covered
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		7	7	
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: U/S, Span (mm): 5480, Rise (mm): 3553, Type: RPP**)				
Barrel Last Accessible Date	23-Feb-2012			SPCSP ext. - arch on concrete floor and footing.
Special Features				
Special Feature			N	(Some spalling on side slopes with 3 wide cracks in floor) 12 Aug-2010 PR 5 ice covered
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		6	6	(Rise 2890 @ inlet to concrete floor. No sag calculation. Measured with concrete floor for reference) 12-Aug-2010 Estimate
Measured Rise (mm)	2555			
Measured At Ring No.	10			
Sag (mm)	0			
Percent Sag	0			
Sidewall		6	6	Span at inlet 5040 at top of concrete wall. No deflection calculation. Concrete footing in span arch.
Measured Span (mm)	5005			
Measured At Ring No.	10			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Concrete floor
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	7	
Separation (mm)	0			
Longitudinal Seams		X	6	
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)	No			
Longitudinal Stagger (Y/N)	No			
Coating		X	6	Minor corrosion at East longitudinal seams.
Corrosion By Soil (Y/N)	Yes			
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): 5480, Rise (mm): 3553, Type: RPP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 5480, Rise (mm): 3048, Type: AP**)				
Barrel Last Accessible Date	23-Feb-2012			Main AP down stream
Special Features				
Special Feature		5	X	
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		6	6	
Measured Rise (mm)	3048			Estimate
Measured At Ring No.	5			
Sag (mm)	0			
Percent Sag	0			
Sidewall		6	N	(Construction joint spall 75 mm x 200 mm @ Sec. 1) 12-Aug-2010 PR 6 Ice covered up to mid sidewall
Measured Span (mm)	5480			
Measured At Ring No.	5			
Deflection (mm)				
Percent Deflection				
Floor		6	N	(300-400mm water and silt) 12-Aug-2010 (Pool development AP/RPP floor transition. Abrasion from water velocity) 12-Aug-2010
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	X	
Separation (mm)	0			
Longitudinal Seams		6	X	
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)				
Longitudinal Stagger (Y/N)				
Coating		6	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 5480, Rise (mm): 3048, Type: AP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	N	PR 5 (silting D/S East - 0.3 m x 3.5 m x 50 m) 12-Aug-2010
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**6**	**N**	PR 6

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		5	5	East wingwall seperated 40mm @ top Flaired
(Shape :)				
Cutoff Wall		N	N	Buried
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			Unable to confirm due to ice
Above/Below (mm)	400			
Scour Protection		6	6	Natural
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		5	5	
HWM (m below Top of Culvert)				No HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Not confirmed
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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**59.6/66.2**	Est. Repl. Yr	2026	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	23-Nov-2013	Previous Inspection Date	12-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					