Bridge Culvert Inspection

Bridge File Number	76964 -1 Bridge Culvert	Form Type	CUL1
Year Built	1970	Lot No.	1
Bridge or Town Name	COALDALE	Inspector Name	Garry Roberts
Located Over	SMR - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	512:02 C1 19.323	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	20-Mar-2012
Legal Land Location	SE SEC 4 TWP 9 RGE 19 W4M	Data Entry By	Lauren Korte
Longitude, Latitude	-112:30:40, 49:41:55	Data Entry Date	12-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Tom Carey
Contract Main. Area	CMA24	Review Date	23-Mar-2012
Clear Roadway/Skew	10.4 / 45 deg. (RHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	470 / 2011 (A)	Dept. Review Date	17-Apr-2012
Road Classification	RCU-209-110	Follow-Up By	
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	2490	1750	RPP	25.2	152X51	3.5,3.5,3.5	PIPE ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West side & pedestal to South.	Gas	Crosses road 25m West.
Power	2 lines North & East side.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Under intersection, farm entrance West & East 40m.
Vertical Alignment		8	8	
Roadway Width (m)	9.500			
Embankment		6	4	Edge of road is within 1.5 m of barrel.
Sideslope (__:1)	1.5			
(Height of Cover(m) : **0.5**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**5**	**5**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		5	5	Some corrosion with pitting.
Heaving (mm)	70			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	5	Scattered rock.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
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): 2490, Rise (mm): 1750, Type: RPP**)				
Barrel Last Accessible Date	21-Mar-2009			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	4	Roof - gap along longitudinal plate ring 4 of 20mm.
Measured Rise (mm)	1607			
Measured At Ring No.	5			
Sag (mm)	143			
Percent Sag	8			
Sidewall		3	3	Beginning of reverse curvature @ 10:00 position- R4 West seam.
Measured Span (mm)	2614			
Measured At Ring No.	5			
Deflection (mm)	124			
Percent Deflection	5			
Floor		5	N	Ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Staggered.
Separation (mm)	0			
Longitudinal Seams		3	3	Ring 2,3,4,5,7,8 cracks North sidewall. Some crimping by seam South #4,5,6. Some bolts heads being pulled inward at East sidewall. Ring 2 - 60mm left, ring 5 - 70mm left. 1N stagger at roof only.
Total No. of Cracked Rings	6			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	60			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		4	4	Heavy corrosion with pitting at floor to mid sidewall.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2490, Rise (mm): 1750, Type: RPP**)				
Fish Passage Adequacy		X	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**3**	

Downstream 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	
Bevel End		5	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		5	5	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		5	5	Minor loss of fill along outside of bevel.
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	Turnouts 5 m D/S (North), & 30 m D/S (East).
Bank Stability		5	5	
HWM (m below Top of Culvert)	1.1			No visible HWM.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
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	2012	Assess for replacement.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**52.6/52.6**	Est. Repl. Yr	2014	Maint. Reqd. (Y/N)	Yes

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	Glen Mikesh	Previous Assistant's Name	Bernie Roseke
Next Inspection Date	20-Jun-2015	Previous Inspection Date	22-Apr-2009
Inspection Cycle (Default) (months)	39		
Comment			