Bridge Culvert Inspection

Bridge File Number	75330 -1 Bridge Culvert	Form Type	CUL1
Year Built	1971	Lot No.	4
Bridge or Town Name	BALZAC	Inspector Name	Garry Roberts
Located Over	SERVICE ROADS;CPR	Inspector Class	BR CLS A
Located On	2:15 R1 49.766;2:15 L1 49.870	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	09-Nov-2011
Legal Land Location	SW SEC 4 TWP 26 RGE 29 W4M	Data Entry By	Erin Roberts
Longitude, Latitude	-114:00:05, 51:11:04	Data Entry Date	19-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Joel Wozney
Contract Main. Area	CMA29	Review Date	10-Nov-2011
Clear Roadway/Skew	47 /	Dept. Reviewer Name	Tim Davies
AADT/Year	66,090 / 2010 (A)	Dept. Review Date	21-Nov-2011
Road Classification	RFD-616.6-130	Follow-Up By	
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	7300	8830	RPP	142.4	152X51	5.0	PIPE ARCH
Special Features								
Special Features Comment								

Posting Information

Required Vert. Clearance Posting (m)											
Posted Vertical Clearance (Y/N)		No									
Posted:	Lane	EB	On Bridge (m)		In Advance (Y/N)	No	Lane	WB	On Bridge (m)		In Advance (Y/N)	No
Remarks	Not Req.										

Utilities (Located at)

Utility Attachments			
Telephone	In East ditch and South.	Gas	Crosses road South of pipe.
Power	Crosses road South and East end	Municipal	
Others	Water line South of pipe.	Problem (Y/N)	No
Remarks	FIBRE OPTICS @ E-2 W POWER @ East		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	8.4 m East service road. 8.7 m West service road.
Vertical Alignment		8	8	Intersection South On service roads East and West.
Roadway Width (m)	47.000			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1.4**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		West end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Collar		6	6	Wide cracks @ SW
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		6	6	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	6	Minor erosion @ SW @ toe
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 7300, Rise (mm): 8830, Type: RPP**)				
Barrel Last Accessible Date	09-Nov-2011			Level 2 inspection completed Jan 28/10 See file for details
Special Features				
Special Feature				(REPAIR SECTIONS RAISED 75mm in center and tie top and bottom -grouted after to form beams)
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	Barrel extended at both ends. Original pipe is Rings 10-36 (from west)
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	210			Est
Percent Sag	3			
Sidewall		5	5	Span measured at 3 rings- R16-7227, R20-7143, R26-7090 Lower sidewall plates replaced & grouted on East & West end. Inward cusping at both sidewall seams (3rd seam from ballast) approx. 100mm
Measured Span (mm)	7090			
Measured At Ring No.	26			
Deflection (mm)	210			Diagonal reference measurement taken at lower South sidewall to upper North sidewall R33=6983
Percent Deflection	3			
Floor		N	N	Floor covered in ballast
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		6	6	Some seams welded at extensions
Separation (mm)	0			
Longitudinal Seams		5	5	Some seams welded at extensions
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			1N stagger at roof plates
Longitudinal Stagger (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 7300, Rise (mm): 8830, Type: RPP**)				
Coating		6	6	Isolated corrosion stains at upper seams
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		X	X	
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		E		East end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Narrow cracks
Collar		7	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		5	5	Natural with some rock
(Type : **NATURAL, RIP RAP**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	200mm deep undermining @ NE under collar @ toe
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Grade Separation				
Road Alignment		X	X	Track bends inside barrel.
Roadway Surface		7	7	
(Type :)				
Icing (Y/N)	No			
Traffic Safety Features		X	X	
Type				

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Lighting		X	X	
Barrel Leakage (Y/N)	Yes			Some active staining on roof.
Drainage		6	6	
Structure In Use (Y/N)	Yes			
Grade Separation General Rating		**7**	**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) (%)**	**66.6/65.9**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	No obvious changes from 2010 Level 2 inspection to present level inspection. G.Roberts Nov 9, 2011	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	Rex Davidson		
Next Inspection Date	09-Aug-2013	Previous Inspection Date	28-Jan-2010		
Inspection Cycle (Default) (months)	21				
Comment					