

Bridge Culvert Inspection				
Bridge File Number	71705 -1 Bridge Culvert		Form Type	CULM
Year Built	1969		Lot No.	4
Bridge or Town Name	BALZAC		Inspector Name	Garry Roberts
Located Over	NOSE CREEK, 2.13.32, WATERCRS-ST		Inspector Class	BR CLS A
Located On	2:15 R1 51.607;2:15 L1 51.711		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	20-Dec-2011
Legal Land Location	SW SEC 9 TWP 26 RGE 29 W4M		Data Entry By	Anne Roberts
Longitude, Latitude	-114:00:06, 51:12:04		Data Entry Date	29-Jan-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Joel Wozney
Contract Main. Area	CMA29		Review Date	23-Dec-2011
Clear Roadway/Skew	34.2 /		Dept. Reviewer Name	Tim Davies
AADT/Year	66,090 / 2010 (A)		Dept. Review Date	06-Feb-2012
Road Classification	RFD-616.6-130		Follow-Up By	
Detour Length (km)	1			

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	5700	3700	RPP	181.6	152X51	4.0	PIPE ARCH
2	MAIN	5700	3700	RPP	181.6	152X51	4.0	PIPE ARCH
Special Features	CONC FLOOR, VERT STEEL STRUTS							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East ditch	Gas	
Power	East and West row	Municipal	
Others	FIBRE OPTICS @ W OF E SERV RD	Problem (Y/N)	No
Remarks	Cathodic protection service @ SE		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	7	N & S lanes of Hwy 2 and E & W service road.
Vertical Alignment		8	8	2:1 @ E
Roadway Width (m)	50.000			
Embankment		7	7	
Sideslope (_ :1)	3.0			
(Height of Cover(m) : 3.1)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		8	7	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction				East end. South barrel. At Bass Pro Shop - Cross Iron Mall
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		6	6	Slab adjacent to collar has settled -75 mm.
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Cutoff Wall		N	N	Silt and ice covered.
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	6	Some rock to 500 mm
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	6	
Beavers (Y/N)	No			
Upstream End General Rating		5	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 5700, Rise (mm): 3700, Type: RPP)				
Barrel Last Accessible Date	20-Dec-2011			South barrel - presently taking all of flow. Cathodic wires attached to pipes & along longitudinal seams
Special Features				
Special Feature		7	7	Concrete floor and sidewalls to mid height
(Type : CONC FLOOR)				
Special Feature				
(Type :)				
Roof		N	6	
Measured Rise (mm)				
Measured At Ring No.				Est.
Sag (mm)	50			
Percent Sag				
Sidewall		N	5	
Measured Span (mm)	5700			
Measured At Ring No.				Est.
Deflection (mm)	50			
Percent Deflection				
Floor		N	N	Concrete floor
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	6	
Separation (mm)	0			
Longitudinal Seams		N	5	Heavy corrosion at seams - worst at sidewalls.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				4N Stagger
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	4	Heavy corrosion with pitting and active leakage.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 5700, Rise (mm): 3700, Type: RPP)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction				South pipe, west end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		N	N	Submerged
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 150)		6	7	
Scour/Erosion		6	7	
Beavers (Y/N)	No			
Downstream End General Rating		6	6	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction				North pipe, east end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	N	
Collar		6	6	EXTENDED COLLAR SETTLED- 75m
Wingwalls (Shape :)		X	X	
Cutoff Wall		N	N	Ice covered

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	600			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 5700, Rise (mm): 3700, Type: RPP)				
Barrel Last Accessible Date	20-Dec-2011			North pipe - cattle pass
Special Features				
Special Feature		7	7	Concrete floor and sidewalls to mid height. 9 steel struts at north sidewall East end.
(Type : CONC FLOOR)				
Special Feature		7	7	
(Type : VERT STEEL STRUTS)				
Roof		5	5	
Measured Rise (mm)	3700			
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		5	5	Sidewall deflection in rings 2, 3, 4, 5, 6, 7 with reverse curvature at isolated areas which are currently strutted.
Measured Span (mm)	5700			
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	Textured concrete floor
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	
Separation (mm)	0			
Longitudinal Seams		5	5	Only upper sidewall and roof seams visible. 4N stagger
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)	Yes			
Coating		5	4	Corrosion @ sidewall Alkali staining @ 50% of longit seams Active barrel leakage - worst at median and East 1/2
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 5700, Rise (mm): 3700, Type: RPP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
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
(Pipe # : 2, Span Type: Secondary Span)				
Direction				North pipe, west end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Ice covered
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		6	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 150)				
Scour/Erosion		6	7	
Beavers (Y/N)	No			
Downstream End General Rating		6	6	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		4	5	CURVE UPSTREAM
Bank Stability		4	5	
HWM (m below Top of Culvert)				HWM Not visible
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				

Structure Usage				
		Last	Now	Explanation of Condition
Channel General Rating		4	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	2017	Full liner in North pipe - 1/2 liner in South or schedule replacement.					
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) (%)	57.1/58.8	Est. Repl. Yr	2020	Maint. Req. (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	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	20-Sep-2013		Previous Inspection Date	01-Mar-2010			
Inspection Cycle (Default) (months)	21						
Comment							