

Bridge Culvert Inspection				
Bridge File Number	73936 -1 Bridge Culvert		Form Type	CULM
Year Built	1970		Lot No.	4
Bridge or Town Name	CALGARY		Inspector Name	Jon Davies
Located Over	WID - IRRIGATION C, WATERCRS-IC		Inspector Class	BR CLS B
Located On	1:10 L1 8.599;1:10 R1 8.576		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	27-Feb-2012
Legal Land Location	NW SEC 23 TWP 24 RGE 28 W4M		Data Entry By	Anne Roberts
Longitude, Latitude	-113:48:53, 51:03:46		Data Entry Date	21-Mar-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA30		Review Date	01-Mar-2012
Clear Roadway/Skew	24.5 / 10 deg. (RHF)		Dept. Reviewer Name	Tim Davies
AADT/Year	20,890 / 2010 (A)		Dept. Review Date	22-Mar-2012
Road Classification	RAD-412.4-120		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	2134	2150	MPE	87.2	75X25		ELLIPSE
2	MAIN	2134	2150	MPE	87.2	75X25		ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	S R/W	Gas	
Power	South ROW	Municipal	Street lighting North and South ROW
Others	Fibre optics @ N R/W	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	On long curve. SAG CURVE
Vertical Alignment		7	7	
Roadway Width (m)	24.500			
Embankment		7	6	
Sideslope (__:1)	3.5			
(Height of Cover(m) : 2.5)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		6	6	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		S		East pipe - south end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		7	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 350)				
Scour/Erosion		7	6	
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): 2134, Rise (mm): 2150, Type: MPE)				
Barrel Last Accessible Date	27-Feb-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	
Measured Rise (mm)				Estimate
Measured At Ring No.				
Sag (mm)	44			
Percent Sag	2			
Sidewall		N	6	
Measured Span (mm)	2178			
Measured At Ring No.	1			
Deflection (mm)	44			
Percent Deflection	2			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	5	(Reverse coupler installed @ last seam) At R1 Possibly U/S buoyancy of bevel
Separation (mm)	130			
Longitudinal Seams		X	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		N	4	PITTING WITH HEAVY SCALING CORROSION EXTENSIVE THROUGHOUT EAST CULVERT
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2134, Rise (mm): 2150, Type: MPE)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	(Runs with u/s end 800 free board with high outlet velocity due to low tail water elevation @ d/s end)22 Jan 2003
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	5	Sidewall stains indicate pipe runs at greater than 3/4 full
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	6	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		N		East pipe - north end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	6	Spans both D/S end inverts
Bevel End		5	5	
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		8	8	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		5	5	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		West pipe - south end.
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
(Pipe # : 2, Span Type: Secondary Span)				
Bevel End		5	5	
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		7	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 350)				
Scour/Erosion		7	6	
Beavers (Y/N)	No			
Upstream End General Rating		7	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 2134, Rise (mm): 2150, Type: MPE)				
Barrel Last Accessible Date	27-Feb-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		X	6	(Est roof @ 2070mm @ d/s (3.7% defl)) 22 Jan 2003
Measured Rise (mm)				Estimate
Measured At Ring No.				
Sag (mm)	80			
Percent Sag	3			
Sidewall		N	6	
Measured Span (mm)	2206			
Measured At Ring No.	2			
Deflection (mm)	72			
Percent Deflection	3			
Floor		N	N	Ice covered
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	5	Reverse coupler @ d/s seam
Separation (mm)	150			At R1
Longitudinal Seams		X	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		N	4	Pitting with heavy scaling
Corrosion By Soil (Y/N)	No			Corrosion extensive throughout
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 2134, Rise (mm): 2150, Type: MPE)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	(Runs 0.8m freeboard with high outlet velocity due to low tailwater elevation @ d/s end) 22 Jan 2003
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	5	Sidewall stains indicating pipe runs at greater than 3/4 full
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	6	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		N		West pipe - north end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	6	Spans both D/S end inverts
Bevel End		6	5	
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		7	8	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		7	8	
Beavers (Y/N)	No			
Downstream End General Rating		6	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		8	8	Control gate 150m S
Bank Stability		8	8	
HWM (m below Top of Culvert)				NO HWM visible Vertical concrete post at U/S between inverts, potential snag
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		8	8	

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) (%)	55.6/66.7	Sufficiency Rating (Last/Now) (%)	61.1/59.7	Est. Repl. Yr	2025	Maint. Req. (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	27-Nov-2013		Previous Inspection Date	23-Jun-2010			
Inspection Cycle (Default) (months)	21						
Comment							