

Bridge Culvert Inspection			
Bridge File Number	00126 -1 Bridge Culvert	Form Type	CULE
Year Built	1952	Lot No.	2
Bridge or Town Name	BREMNER	Inspector Name	Shane Hall
Located Over	POINTE-AUX-PINS CREEK, 6.72, WATERCRS-ST	Inspector Class	BR CLS A
Located On	21:28 L1 19.782;21:28 R1 19.774	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	04-Jan-2013
Legal Land Location	NW SEC 31 TWP 53 RGE 22 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-113:14:45, 53:37:28	Data Entry Date	22-Jan-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA09	Review Date	10-Jan-2013
Clear Roadway/Skew	23.8 / -8 deg. (LHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	21,910 / 2011 (A)	Dept. Review Date	23-Jan-2013
Road Classification	RAD-412.4-120	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	U/S	2610	2877	SPE	81.1	152X51	4.0	ELLIPSE
1	MAIN	3800	1900	BP	71			RECTANGLE
Special Features	STORM WATER DRAIN, BARREL ELBOW							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	OH power, one line in E row.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	8	8	Intersection 150 m North. Crest curves both ways.
Vertical Alignment	7	7	
Roadway Width (m)	23.800		
Embankment	4	4	Trasverse cracks in ACP. Both lanes. Ditch erosion at NE corner 1.0m x 1.0m x 15m. Ditch erosion in SW, 20m x 5m x 2m, not affecting culvert.-17-Mar-2011
Sideslope (:1)	3.0		
(Height of Cover(m) : 8)			
Guardrail (Y/N)	Yes		
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	S		SPCSP
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	X	X	
Collar	N	N	Snow covered
Wingwalls	X	X	
(Shape :)			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	N	Rock riprap washed into bevel. Erosion from ditch going 0.3m under concrete collat. - May 2009 Snow covered
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		4	4	GR carried fwd.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): 2610, Rise (mm): 2877, Type: SPE)				
Barrel Last Accessible Date	17-Mar-2011			Only accessible to 10m South of elbow due to thin ice.
Special Features				
Special Feature		5	N	
(Type : STORM WATER DRAIN)				
Special Feature		5	N	
(Type : BARREL ELBOW)				
Roof		7	N	Ice on floor rise not measured. Shape looks good.
Measured Rise (mm)	2890			
Measured At Ring No.	9			
Sag (mm)	13			
Percent Sag	1			
Sidewall		7	N	
Measured Span (mm)	2640			
Measured At Ring No.	2			
Deflection (mm)	30			
Percent Deflection	1			
Floor		6	N	Ice covered
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	N	
Separation (mm)	0			
Longitudinal Seams		6	N	
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			
Longitudinal Stagger (Y/N)	No			
Coating		5	N	Scaling rust on welds @ manhole and superficial rust on welds on elbow.-11-Mar-2011 Superficial rust along bottom 1/4.-11-Mar-2011
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
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): 2610, Rise (mm): 2877, Type: SPE)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			Rock in barrel.
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel Extension General Rating		7	N	GR was '7' on 17-Mar-2011

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1900, Rise (mm): 1900, Type: BP, Cell Sequence: 1)				
Barrel Last Accessible Date	17-Mar-2011			Twin cell concrete box. Not accessible due to thin ice in SPCSP and blocked outlet due to icing.
Special Features				
Special Feature				Drift/debris caught in box-photo-11-Mar-2011
(Type :)				
Special Feature				
(Type :)				
Roof		7	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		7	N	
Measured Span (mm)	1823			
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		X	X	
Separation (mm)	0			
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)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		X	X	
Corrosion By Soil (Y/N)	No			
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: MAIN, Span (mm): 1900, Rise (mm): 1900, Type: BP, Cell Sequence: 1)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	Yes			Drift caught in transition.-11-Mar-2011
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		7	N	GR was '7' on 17-Mar-2011
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1900, Rise (mm): 1900, Type: BP, Cell Sequence: 2)				
Barrel Last Accessible Date	17-Mar-2011			North cell-extension
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	N	
Measured Rise (mm)	1825			
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		4	N	Wide crack North wall 10m from transition. Freeze-thaw damage @ end.-11-Mar-2011 Honeycombed concrete and spalls along base of wall at d/s end.-photo-11-Mar-2011
Measured Span (mm)	1825			
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	N	Crack at construction joints.
Separation (mm)				
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	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): 1900, Rise (mm): 1900, Type: BP, Cell Sequence: 2)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	N	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	GR caried over from 17-Mar-2011
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	4	Exposed rebar with wide cracks/spalls.
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		7	N	Snow covered
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		7	N	Snow covered
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Stream parallels toe of sideslope on U/S end. Some sharp bends D/S of culvert.
Bank Stability		4	4	Vertical banks at D/S end.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		4	4	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION	2013	Remove drift in BP near transition, if not done.					
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) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	48.2/48.0	Est. Repl. Yr	2029	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor concrete deterioration on d/s end.		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	Todd Warshawski		Previous Assistant's Name				
Next Inspection Date	04-Oct-2014		Previous Inspection Date	17-Mar-2011			
Inspection Cycle (Default) (months)	21						
Comment							