

Bridge Culvert Inspection			
Bridge File Number	07991 -1 Bridge Culvert	Form Type	CULM
Year Built	1980	Lot No.	2
Bridge or Town Name	CALMAR	Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO WILLOW CREEK (3), 6.87.2, WATERCRS-ST	Inspector Class	BR CLS B
Located On	39:10 C1 5.481	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	07-Jan-2013
Legal Land Location	NW SEC 29 TWP 49 RGE 27 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-113:55:11, 53:15:54	Data Entry Date	22-Jan-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA11	Review Date	16-Jan-2013
Clear Roadway/Skew	13.5 /	Dept. Reviewer Name	Brent Herrick
AADT/Year	4,570 / 2011 (A)	Dept. Review Date	23-Jan-2013
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1651	1016	FP	30	68X13	2.8	ARCH
2	MAIN	1651	1016	FP	30	68X13	2.8	ARCH
3	MAIN	-	600	MP	26	68X13	2.0	ROUND
Special Features								
Special Features Comment	No BF tag found.							

Utilities (Located at)

Utility Attachments			
Telephone	South & North r/w.	Gas	
Power	2 wires North r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	9	9	
Vertical Alignment	8	8	
Roadway Width (m)	13.500		
Embankment	8	8	
Sideslope (__:1)	6.0		
(Height of Cover(m) : 1.1)			
Guardrail (Y/N)	No		
Approach Road / Embankment General Rating	8	8	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	S		West pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		5	5	Mower damage, 150 x 150mm tear. Floor not rated.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 250)		7	N	Snow cover
Scour/Erosion		7	N	
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): 1651, Rise (mm): 1016, Type: FP)				
Barrel Last Accessible Date	07-Jan-2013			West barrel.
Special Features				
Special Feature (Type :)				
Special Feature (Type :)				
Roof		N	5	
Measured Rise (mm)	980			Rise not measured due to ice.
Measured At Ring No.				Sag est @ less than 5%.
Sag (mm)	36			
Percent Sag	4			
Sidewall		N	4	Pitting rust on lower portions.
Measured Span (mm)	1720			
Measured At Ring No.				
Deflection (mm)	69			
Percent Deflection	4			
Floor		N	N	Covered with ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	5	Ring 1
Separation (mm)	120			
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)				

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1651, Rise (mm): 1016, Type: FP)					
Coating		N	4	Pitting rust on floor and lower sidewall.	
Corrosion By Soil (Y/N)	No				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	Yes			Due to debris at outlet.	
Fish Passage Adequacy		5	4	Outlet blocked with debris.	
Baffle		X	X		
(Type :)					
Waterway Adequacy		5	4		
Icing (Y/N)	No				
Silting (Y/N)	Yes				
Drift (Y/N)	No				
Barrel General Rating		4	4		
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Span Type: Primary Span)					
Direction		N		West pipe.	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape :)					
Cutoff Wall		X	X		
Bevel End		N	N	Covered with silt/snow.	
Heaving (mm)	0				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	500				
Scour Protection		N	N	Snow covered	
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 250)					
Scour/Erosion		N	N		
Beavers (Y/N)	No				
Downstream End General Rating		7	7	GR carried fwd.	
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		S		Centre pipe.	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		7	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		6	5	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1651, Rise (mm): 1016, Type: FP)				
Barrel Last Accessible Date	07-Jan-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	75mm floor bulge
Measured Rise (mm)	900			
Measured At Ring No.	2			
Sag (mm)	40			
Percent Sag	4			
Sidewall		N	4	Pitting rust on lower sidewall.
Measured Span (mm)	1760			
Measured At Ring No.	3			
Deflection (mm)	109			
Percent Deflection	7			
Floor		N	4	
Bulge (mm)	75			
Measured At Ring No.	2			
Abrasion (Y/N)	No			
Circumferential Seams		N	4	Minor infiltration
Separation (mm)	150			
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1651, Rise (mm): 1016, Type: FP)				
Coating		N	4	Pitting rust on floor and lower sidewall.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			
Fish Passage Adequacy		5	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	Silt and weed blocking waterway.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		3	4	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		N		Center pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		N	5	Floor not rated
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 250)		N	N	Snow covered.
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Downstream End General Rating		7	5	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Direction		S		East barrel.
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		N	N	Snow covered
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		7	7	GR carried fwd.

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 600, Type: MP)				
Barrel Last Accessible Date				East barrel. Not accessible. Buried in snow.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 600, Type: MP)				
Coating		N	N	Pitting & scaling (1-11 o'clock) evident from end of pipe.-June-2009
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		N	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	N	

Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 3, Span Type: Secondary Span)					
Direction		N		East pipe.	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape :)					
Cutoff Wall		X	X		
Bevel End		X	X		
Heaving (mm)	0				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	200				
Scour Protection		N	N	Snow covered	
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 250)					
Scour/Erosion		N	N		
Beavers (Y/N)	No				
Downstream End General Rating		7	7	GR carried fwd.	

Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	No defined channel. Appears to be a drain ditch. Enters at 90 deg.
Bank Stability		7	N	Snow covered
HWM (m below Top of Culvert)	0.0			Water to abut.-Jan-200-
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		5	5	

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 silt from outlets.					
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) (%)	33.3/44.4	Sufficiency Rating (Last/Now) (%)	40.8/37.5	Est. Repl. Yr	2020	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor barrel deflections and corrosion.		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	07-Oct-2014		Previous Inspection Date	13-Apr-2011			
Inspection Cycle (Default) (months)	21						
Comment							