

Bridge Culvert Inspection			
Bridge File Number	02054 -1 Bridge Culvert	Form Type	CULM
Year Built	1960	Lot No.	4
Bridge or Town Name	BRUDERHEIM	Inspector Name	Jason Saly
Located Over	TRIBUTARY TO NORTH SASKATCHEWAN RIVER, 6.59, WATERCRS-ST	Inspector Class	BR CLS A
Located On	45:04 C1 18.724	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	24-Jan-2013
Legal Land Location	SE SEC 1 TWP 57 RGE 20 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-112:50:11, 53:53:27	Data Entry Date	07-Mar-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA14	Review Date	13-Feb-2013
Clear Roadway/Skew	12.8 /	Dept. Reviewer Name	Chris Black
AADT/Year	1,900 / 2011 (A)	Dept. Review Date	14-Mar-2013
Road Classification		Follow-Up By	
Detour Length (km)	3		

**Bridge Culvert Information**

Number of Culverts	4							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	900	MP	32.9			ROUND
2	MAIN	-	900	MP	32.9			ROUND
3	MAIN	-	900	MP	32.9			ROUND
4	MAIN	-	1800	MP	32.9			ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	Plowed in W ditch.	Gas	
Power	2 o/h line ~20m N.	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment		8	
Vertical Alignment		7	
Roadway Width (m)	11.100		
Embankment		N	Snow covered; could not determine slope or height of cover.
Sideslope (__:1)			
(Height of Cover(m) : )			
Guardrail (Y/N)	No		
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	N		None determined, none viewed.
End Treatment (Concrete, Steel, Others, None)			
Headwall		X	
Collar		X	

Upstream End				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Wingwalls (Shape : )		X		
Cutoff Wall		X		
Bevel End		N		
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection (Type : ) (Avg. Rock Size(mm) : )		N		
Scour/Erosion		N		
Beavers (Y/N)				
<b>Upstream End General Rating</b>		<b>N</b>		

Bridge Culvert Barrel				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: MP)</b>				
Barrel Last Accessible Date			Pipe completely covered by snow drifts.	
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		N		
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N		
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N		
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N		
Separation (mm)				
Longitudinal Seams		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
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: MP)</b>				
Coating			N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG				
Ponding (Y/N)				
Fish Passage Adequacy			X	
Baffle			N	
<b>(Type : )</b>				
Waterway Adequacy			N	
Icing (Y/N)				
Siltting (Y/N)				
Drift (Y/N)				
<b>Barrel General Rating</b>			<b>N</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Direction		S		
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	
Wingwalls			X	
<b>(Shape : )</b>				
Cutoff Wall			X	
Bevel End			N	Snow covered.
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			N	Snow covered.
<b>(Type : )</b>				
<b>(Avg. Rock Size(mm) : )</b>				
Scour/Erosion			N	Snow covered.
Beavers (Y/N)				
<b>Downstream End General Rating</b>			<b>N</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Direction		N		None viewed.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	

Upstream End				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Wingwalls (Shape : )		X		
Cutoff Wall		X		
Bevel End		N	Snow covered.	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection (Type : ) (Avg. Rock Size(mm) : )		N	Snow covered.	
Scour/Erosion		N	Snow covered.	
Beavers (Y/N)				
<b>Upstream End General Rating</b>		<b>N</b>		

Bridge Culvert Barrel				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: MP)</b>				
Barrel Last Accessible Date			Pipe completely covered by snow drifts.	
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		N		
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N		
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N		
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N		
Separation (mm)				
Longitudinal Seams		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): , Rise (mm): 900, Type: MP)				
Coating			N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG				
Ponding (Y/N)				
Fish Passage Adequacy			X	
Baffle			N	
(Type : )				
Waterway Adequacy			N	
Icing (Y/N)				
Siltting (Y/N)				
Drift (Y/N)				
<b>Barrel General Rating</b>			<b>N</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		None viewed.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	
Wingwalls			X	
(Shape : )				
Cutoff Wall			X	
Bevel End			N	Snow covered.
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			N	Snow covered.
(Type : )				
(Avg. Rock Size(mm) : )				
Scour/Erosion			N	Snow covered.
Beavers (Y/N)				
<b>Downstream End General Rating</b>			<b>N</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Direction		N		None viewed.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	

Upstream End				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 3, Span Type: Secondary Span)</b>				
Wingwalls (Shape : )		X		
Cutoff Wall		X		
Bevel End		N	Snow covered.	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection (Type : ) (Avg. Rock Size(mm) : )		N	Snow covered.	
Scour/Erosion		N	Snow covered.	
Beavers (Y/N)				
<b>Upstream End General Rating</b>		<b>N</b>		

Bridge Culvert Barrel				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: MP)</b>				
Barrel Last Accessible Date			Pipe completely covered by snow drifts.	
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		N		
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N		
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N		
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N		
Separation (mm)				
Longitudinal Seams		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
<b>(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: MP)</b>				
Coating			N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG				
Ponding (Y/N)				
Fish Passage Adequacy			X	
Baffle			X	
<b>(Type : )</b>				
Waterway Adequacy			N	
Icing (Y/N)				
Siltting (Y/N)				
Drift (Y/N)				
<b>Barrel General Rating</b>			<b>N</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Span Type: Secondary Span)</b>				
Direction		S		None viewed.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	
Wingwalls			X	
<b>(Shape : )</b>				
Cutoff Wall			X	
Bevel End			N	Snow covered.
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			N	Snow covered.
<b>(Type : )</b>				
<b>(Avg. Rock Size(mm) : )</b>				
Scour/Erosion			N	Snow covered.
Beavers (Y/N)				
<b>Downstream End General Rating</b>			<b>N</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 4, Span Type: Secondary Span)</b>				
Direction		N		None viewed.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	

Upstream End				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 4, Span Type: Secondary Span)</b>				
Wingwalls (Shape : )		X		
Cutoff Wall		X		
Bevel End		N	Snow covered.	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection (Type : ) (Avg. Rock Size(mm) : )		N	Snow covered.	
Scour/Erosion		N	Snow covered.	
Beavers (Y/N)				
<b>Upstream End General Rating</b>		<b>N</b>		

Bridge Culvert Barrel				
Culvert Component	Last	Now	Explanation of Condition	
<b>(Pipe # : 4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)</b>				
Barrel Last Accessible Date			Pipe completely covered by snow drifts.	
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		N		
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N		
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N		
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N		
Separation (mm)				
Longitudinal Seams		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 # : 4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)				
Coating			N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG				
Ponding (Y/N)				
Fish Passage Adequacy			X	
Baffle			N	
(Type : )				
Waterway Adequacy			N	
Icing (Y/N)				
Siltting (Y/N)				
Drift (Y/N)				
<b>Barrel General Rating</b>			<b>N</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 4, Span Type: Secondary Span)				
Direction		S		None viewed.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	
Wingwalls			X	
(Shape : )				
Cutoff Wall			X	
Bevel End			N	Snow covered.
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			N	Snow covered.
(Type : )				
(Avg. Rock Size(mm) : )				
Scour/Erosion			N	Snow covered.
Beavers (Y/N)				
<b>Downstream End General Rating</b>			<b>N</b>	

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment			N	Not sure due to snow drifts.
Bank Stability			N	Snow covered.
HWM (m below Top of Culvert)				Unknown
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading				Unknown
Beavers (Y/N)				
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>			<b>5</b>	

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							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>/66.5</b>	Est. Repl. Yr	2016	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	Confirm directions, end treatment & replacement year at next inspection. Estimated replacement year was guessed.		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			Previous Assistant's Name				
Next Inspection Date	24-Oct-2014		Previous Inspection Date				
Inspection Cycle (Default) (months)	21						
Comment							