

Bridge Culvert Inspection				
Bridge File Number	76675 -2 Bridge Culvert		Form Type	CULE
Year Built	2008		Lot No.	4
Bridge or Town Name	BREMNER		Inspector Name	Todd Warshawski
Located Over	OLDMAN CREEK, 6.74, WATERCRS-ST		Inspector Class	BR CLS B
Located On	21:28 R1 13.499;21:28 L1 13.509		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	07-Jan-2013
Legal Land Location	NE SEC 12 TWP 53 RGE 23 W4M		Data Entry By	Lisa Fairhurst
Longitude, Latitude	-113:14:47, 53:34:05		Data Entry Date	22-Jan-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Eric Carcoux
Contract Main. Area	CMA09		Review Date	17-Jan-2013
Clear Roadway/Skew			Dept. Reviewer Name	Brent Herrick
AADT/Year	10,770 / 2011 (A)		Dept. Review Date	23-Jan-2013
Road Classification	RFD-412.4-130		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	-	3990	SP	49.9	152X51		ROUND
1	MAIN	-	3950	SSP	85.5		4.0	ROUND
1	D/S	-	3990	SP	38.3	152X51		ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone	E and W r/w		Gas	
Power	E r/w		Municipal	
Others	Lights & sign structure		Problem (Y/N)	No
Remarks				

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Hwy 16 overpass 100m N., access roads 20m S. Sag curve 150m S.
Vertical Alignment		7	7	
Roadway Width (m)	28.000			
Embankment		7	7	
Sideslope (___:1)	3.0			
(Height of Cover(m) : 4)				
Guardrail (Y/N)	Yes			
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	<b>7</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		9	9	Narrow flex cracks
Collar		9	N	Snow covered
Wingwalls		X	X	
(Shape : )				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		N	N	
Bevel End		9	9	Lower half not rated
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		9	9	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>400</b> )				
Scour/Erosion		9	9	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>9</b>	<b>9</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 3990, Type: SP)				
Barrel Last Accessible Date	07-Jan-2013			u/s and d/s sections
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		8	8	Rise not measured due to ice Sag est at less than 5%
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		8	8	
Measured Span (mm)	4015			
Measured At Ring No.	10			
Deflection (mm)	25			
Percent Deflection	0			
Floor		N	N	Ice covered
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		8	8	upper 2/3 viewed.
Separation (mm)	0			
Longitudinal Seams		8	8	upper 2/3 viewed.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		9	8	upper 2/3 viewed.
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): , Rise (mm): 3990, Type: SP)				
Ponding (Y/N)				
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	(400mm silt-May,2009)
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel Extension General Rating</b>		<b>8</b>	<b>8</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3950, Type: SSP)				
Barrel Last Accessible Date	07-Jan-2013			Liner plate
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		7	7	Noticable sag in last 8m d/s, looks to be from grouting. Rise not measured due to ice
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		8	7	10m from d/s section
Measured Span (mm)	4047			
Measured At Ring No.				
Deflection (mm)	97			
Percent Deflection	2			
Floor		N	N	Ice covered
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		8	8	upper 2/3 inspected.
Separation (mm)				
Longitudinal Seams		8	8	upper 2/3 inspected.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		7	7	Stains from grout leakage at seams
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: MAIN, Span (mm): , Rise (mm): 3950, Type: SSP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	(400mm silt-May 2009)
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>7</b>	<b>7</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		9	9	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		9	9	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		9	9	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>9</b>	<b>9</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		8	8	
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible. (Ice 1.6m from obvert.-mar/11)
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>8</b>	<b>8</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>77.8/77.8</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>83.5/83.5</b>	Est. Repl. Yr	2060	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	Todd Warshawski		Previous Assistant's Name				
Next Inspection Date	07-Oct-2014		Previous Inspection Date	17-Mar-2011			
Inspection Cycle (Default) (months)	21						
Comment							