

Bridge Culvert Inspection				
Bridge File Number	75557 -1 Bridge Culvert		Form Type	CULM
Year Built	1962		Lot No.	1
Bridge or Town Name	NEERLANDIA		Inspector Name	Wade Nanninga
Located Over	2ND ORDER TRIBUTARY TO SHOAL CK, 8.11.84.12.8.1, WATERCRS-ST		Inspector Class	BR CLS B
Located On	769:02 C1 23.347		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	19-Aug-2011
Legal Land Location	SW SEC 15 TWP 62 RGE 3 W5M		Data Entry By	Theresa Lacusta
Longitude, Latitude	-114:22:37, 54:21:37		Data Entry Date	04-Oct-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Eric Carcoux
Contract Main. Area	CMA10		Review Date	21-Sep-2011
Clear Roadway/Skew	7.9 /		Dept. Reviewer Name	Brent Herrick
AADT/Year	270 / 2010 (A)		Dept. Review Date	05-Oct-2011
Road Classification	RCU-208-110		Follow-Up By	
Detour Length (km)	3			

**Bridge Culvert Information**

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1829	1118	FP	24.4	68X13		ARCH
2	MAIN	1829	1118	FP	24.4	68X13		ARCH
Special Features		VERT STEEL STRUTS						
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone	West r/w.		Gas	(Central Pipeline) 50 m north.
Power	3 lines east r/w. 1 line power crossing road 50 m South.		Municipal	
Others			Problem (Y/N)	No
Remarks	BF tag installed on top of West roof, South pipe.			

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	SH 661 intersection 60 m South.
Vertical Alignment		8	8	
Roadway Width (m)	7.900			
Embankment		8	8	
Sideslope ( _:1)	3.0			
(Height of Cover(m) : 1.2)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	<b>7</b>	

**Upstream End**

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		6	6	Well vegetated.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>6</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)</b>				
Barrel Last Accessible Date	06-May-2008			Only accessible 5m from u/s due to water.
<b>Special Features</b>				
Special Feature		7	7	75 x 100 steel tubing.
(Type : <b>VERT STEEL STRUTS</b> )				
Special Feature				
(Type : )				
Roof		2	2	6-May-2008
Measured Rise (mm)	938			
Measured At Ring No.				estimated
Sag (mm)	180			
Percent Sag	16			
Sidewall		6	6	06-May-2008
Measured Span (mm)	1840			
Measured At Ring No.				est
Deflection (mm)				
Percent Deflection	2			
Floor		4	4	Random.
Bulge (mm)	100			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	
Separation (mm)	90			
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
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)</b>				
Coating		4	4	Floor pitting rust.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
<b>(Type : )</b>				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	G.R. increased by 2 pts due to struts. GR carried fwd.

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	150			Well vegetated.
Scour Protection (Type : <b>RIP RAP</b> )		6	6	
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>6</b>	<b>6</b>	

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	5	Edge angle torn off bottom edge on South.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		6	6	Well vegetated.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)</b>				
Barrel Last Accessible Date	19-Aug-2011			
<b>Special Features</b>				
Special Feature		7	7	75 x 100 steel tubing.
(Type : <b>VERT STEEL STRUTS</b> )				
Special Feature				
(Type : )				
Roof		3	2	Near c/l.
Measured Rise (mm)	760			
Measured At Ring No.				
Sag (mm)	258			
Percent Sag	23			
Sidewall		6	6	
Measured Span (mm)	1840			
Measured At Ring No.				
Deflection (mm)	10			
Percent Deflection	1			
Floor		4	4	near cl
Bulge (mm)	100			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	
Separation (mm)	90			
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
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)</b>				
Coating		4	4	Floor pitting rust.
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
<b>(Type : )</b>				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	G.R. increased by 2 pts due to struts.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			Well vegetated.
Scour Protection (Type : <b>RIP RAP</b> )		6	6	
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>6</b>	<b>6</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		5	5	90 degree bends on upstream end. Drains ditch.
Bank Stability		9	8	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>5</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>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>56.1/55.2</b>	Est. Repl. Yr	2016	Maint. Reqd. (Y/N)	No
Special Comments for Next Inspection	Inspect after each high water event, no need to shorten cycle until condition worsens.		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	Dave Lam		Previous Assistant's Name				
Next Inspection Date	19-Nov-2014		Previous Inspection Date	06-May-2008			
Inspection Cycle (Default) (months)	39						
Comment							