

Bridge Culvert Inspection			
Bridge File Number	75235 -1 Bridge Culvert	Form Type	CULM
Year Built	1960	Lot No.	1
Bridge or Town Name	NESTOW	Inspector Name	Todd Warshawski
Located Over	TAWATINAW RIVER, 8.11.68, WATERCRS-ST	Inspector Class	BR CLS B
Located On	2:38 C1 13.448	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	29-Mar-2013
Legal Land Location	SE SEC 6 TWP 61 RGE 24 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-113:34:37, 54:14:35	Data Entry Date	17-Apr-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA10	Review Date	03-Apr-2013
Clear Roadway/Skew	11 / 30 deg. (RHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	3,300 / 2012 (A)	Dept. Review Date	23-Apr-2013
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	30		

**Bridge Culvert Information**

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1800	SP	31.7	152X51	3.0	ROUND
2	MAIN	-	1800	MP	31.7	68X13	2.8	ROUND
Special Features	VERT STEEL STRUTS							
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	East r/w.	Gas	
Power	2 wires cross 50m South.	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	6	6	Built on curve with limited sight distance. Superelevated. No passing Northbound. LR intersection 60m north.
Vertical Alignment	7	7	
Roadway Width (m)	11.000		
Embankment	8	8	
Sideslope (__:1)	6.0		
(Height of Cover(m) : 0.7)			
Guardrail (Y/N)	No		
<b>Approach Road / Embankment General Rating</b>	<b>6</b>	<b>6</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Secondary Span)			
Direction	W		South pipe. Under snow/ice.
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	
Wingwalls	X	X	
(Shape : )			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Secondary Span)				
Cutoff Wall		X	X	
Bevel End		5	N	Pitting rust and heavy scaling lower 4/5. -Jun-2011
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		5	N	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	N	
Beavers (Y/N)	Yes			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	GR carried fwd from Jun, 2011.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: SP)				
Barrel Last Accessible Date	16-Nov-2000			Barrel not accessible.
<b>Special Features</b>				
Special Feature		N	N	
(Type : VERT STEEL STRUTS)				
Special Feature				
(Type : )				
Roof		N	N	Near c/l.
Measured Rise (mm)				
Measured At Ring No.				Estimate 8.7%.-(16/Nov/2000)
Sag (mm)	156			
Percent Sag	9			
Sidewall		N	N	Near c/l.
Measured Span (mm)	1956			
Measured At Ring No.				
Deflection (mm)	156			8.7%.-(16/Nov/2000)
Percent Deflection	9			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	25			
Longitudinal Seams		N	N	Riveted seams.
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		3	N	Pitted on entire pipe with heavy scaling. Viewed from the ends, looks like there are perforations starting in the sidewall - photo.-Jun, 2011
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: SP)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		5	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	G.R. carried over from 16/Nov/2000.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Secondary Span)				
Direction		E		South pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	N	Snow covered
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		4	N	Erosion on bank both sides of bevels ~ 1m x 2m x 0.25m deep.-Jun-2011
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		4	N	Snow covered
Beavers (Y/N)	Yes			
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried fwd from Jun, 2011
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Primary Span)				
Direction		W		North pipe
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Primary Span)</b>				
Bevel End		4	N	Pitting and scaling rust lower 1/2, a few dents/bends. Perforations in last 0.5m of bevel - photo.-Jun-2011
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		5	N	Beaver debris on sideslopes. Snow covered
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		5	N	Beaver debris on sideslopes.
Beavers (Y/N)	Yes			
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried forward from Jun, 2011
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)</b>				
Barrel Last Accessible Date	29-Mar-2013			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		7	7	Silt on floor, unable to measure rise.  est.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	50			
Percent Sag	3			
Sidewall		7	3	Perforations along lower seam at Rings 1 & 2.
Measured Span (mm)	1760			
Measured At Ring No.	3			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Covered with silt/water/ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	Lower 1/3 not rated.
Separation (mm)	0			
Longitudinal Seams		7	7	1N.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		3	3	Pitting, scaling rust lower 1/2. Perforations in end on U/S bevel.-Jun-2011 Perforations along lower seam in Ring 1 & 2.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>7</b>	<b>3</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Primary Span)				
Direction		E		North pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	N	Snow covered
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	N	Snow covered
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	GR carried fwd from Jun, 2011.
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		6	6	Water control wier 3.0m in front of inlet of South pipe.
Bank Stability		7	N	Shallow grass covered banks, low marshy area.-Jun, 2011
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			Drift from beavers in channel.
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel General Rating</b>		6	6	

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	2013	Program replacement.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>43.4/41.3</b>	Est. Repl. Yr	2015	Maint. Req. (Y/N)	Yes
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	Melanie Johnson		Previous Assistant's Name				
Next Inspection Date	29-Dec-2014		Previous Inspection Date	28-Jun-2011			
Inspection Cycle (Default) (months)	21						
Comment							