

Bridge Culvert Inspection			
Bridge File Number	09535 W-1 Bridge Culvert	Form Type	CULM
Year Built	1961	Lot No.	1
Bridge or Town Name	EDSON	Inspector Name	Todd Warshawski
Located Over	LITTLE SUNDANCE CREEK, 8.11.107.30.1, WATERCRS-ST	Inspector Class	BR CLS B
Located On	16:04 L1 46.006	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	09-Aug-2012
Legal Land Location	NW SEC 8 TWP 53 RGE 18 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-116:37:11, 53:34:12	Data Entry Date	21-Aug-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA13	Review Date	21-Aug-2012
Clear Roadway/Skew	13.7 /	Dept. Reviewer Name	Brent Herrick
AADT/Year	6,080 / 2011 (A)	Dept. Review Date	22-Aug-2012
Road Classification	RAD-412.4-120	Follow-Up By	
Detour Length (km)	1		

**Bridge Culvert Information**

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2740	SP	44.5	152X51	3.0	ROUND
2	MAIN	-	2740	SP	44.5	152X51	3.0	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	North r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	File tag on East pipe (North).		

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	In small gradual sag curve with gradual curve to the east.
Vertical Alignment		7	7	
Roadway Width (m)	13.700			
Embankment		6	6	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 4.2)				
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
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Direction		N		East pipe.
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
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Cutoff Wall		X	X	
Bevel End		6	4	
Heaving (mm)	700			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		4	4	Loss of fill around bevel & barrel. Rock and natural not providing protection between the two pipes. Grassing and scanty rocks inadequate to protect loss of fill around bevel end.
(Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		4	4	Bevel & barrel projecting 4m.
Beavers (Y/N)	Yes			Small beaver dam accross inlet.
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2740, Type: SP)</b>				
Barrel Last Accessible Date	05-Dec-2001			East pipe. Water level prevents access.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	(Measured 2650 x 2850 @ 1/3 L. 2001/12/05)  (.9% - 2001/12/05)
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	27			
Percent Sag				
Sidewall		N	N	(1.5% - 2001/12/05)
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	40			
Percent Deflection				
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	1N stagger.
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		N	N	Superficial rust below waterline. Rust stains through seams on lower half. Water approx 1.2m deep.-17-Nov-2008
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2740, Type: SP)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	(Hydraulic jump in 2nd ring from U/S end. Rock wiers at entrances. 20/July/2005) (300 mm dia rock is piled up inside barrel. 2003/10/15)
Baffle		X	X	
(Type : )				
Waterway Adequacy		6	5	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>N</b>	<b>N</b>	(G.R. was "7" from 20July/2005 but no access to barrel since 2001.)

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		S		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		5	5	
Heaving (mm)	400			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 150)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary 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	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Bevel End		6	4	Bevel projects from fill.
Heaving (mm)	700			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		4	4	Loss of fill around bevel & barrel projecting 5m. Inadequate scour protection.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		4	4	
Beavers (Y/N)	Yes			Beaver dam across bevel 0.3 m high.
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2740, Type: SP)</b>				
Barrel Last Accessible Date	05-Dec-2001			West pipe. Water level prevents access. (Measured 2690 x 2830 at 1/3L. 2001/12/05)
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	(Measured 2690 x 2830 at 1/3L. 2001/12/05)
Measured Rise (mm)				
Measured At Ring No.				(0.2%)
Sag (mm)	47			
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				(0.8%)
Deflection (mm)	80			
Percent Deflection				
Floor		N	N	Under water.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	(Longitudinal seam visible along roof only. 08/Mar/2007)
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				1N stagger.
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	N	(Superficial rust below waterline. 2001/12/05)
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, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2740, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	(Hydraulic jump in 2nd ring from U/S end. Rock wiers at entrances. 20/July/2005) (300mm dia rock is piled up inside barrel. 2003/10/15)
Baffle		X	X	
(Type : )				
Waterway Adequacy		6	5	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>N</b>	<b>N</b>	(G.R. was "7" from 20/July/2005, roof & sidewall govern.)
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		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		5	5	
Heaving (mm)	300			
Invert Above/Below Stream Bed	BELOW			Under ice.
Above/Below (mm)	100			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 150)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	
Bank Stability		6	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	NONE			Small beaver dam at inlets.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>6</b>	<b>7</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	2012	Dewater, level 2 inspection/assess.					
OTHER ACTION	2012	Remove beaver dam at inlets.					
OTHER ACTION	2013	Excavate and reinstall inlet bevels with concrete end treatments.					
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>55.6/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>55.7/53.1</b>	Est. Repl. Yr	2028	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Dewater to complete level 2 inspection/assessment before completing any repairs.		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	09-May-2014		Previous Inspection Date	27-Sep-2010			
Inspection Cycle (Default) (months)	21						
Comment							