

Bridge Culvert Inspection				
Bridge File Number	71087 -1 Bridge Culvert		Form Type	CULM
Year Built	1960		Lot No.	4
Bridge or Town Name	HARTELL		Inspector Name	Garry Roberts
Located Over	TONGUE CREEK, 2.13.27.5, WATERCRS-ST		Inspector Class	BR CLS A
Located On	22:12 C1 6.936		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	06-Jun-2012
Legal Land Location	SW SEC 9 TWP 19 RGE 2 W5M		Data Entry By	Kelsey Roberts
Longitude, Latitude	-114:13:52, 50:35:26		Data Entry Date	05-Jul-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Tom Carey
Contract Main. Area	CMA27		Review Date	18-Jun-2012
Clear Roadway/Skew	8 /		Dept. Reviewer Name	Tim Davies
AADT/Year	2,470 / 2011 (A)		Dept. Review Date	12-Jul-2012
Road Classification	RAU-213.4-120		Follow-Up By	
Detour Length (km)	10			

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3640	2430	BP	43.9			RECTANGLE
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone	West r/w.		Gas	
Power	Loc at E end-3 wire-20m from c/l.		Municipal	
Others			Problem (Y/N)	No
Remarks				

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Limited sight distance south
Vertical Alignment		5	5	
Roadway Width (m)	13.000			
Embankment		7	7	8:1 over box
Sideslope ( __:1)	3.5			
(Height of Cover(m) : 2)				
Guardrail (Y/N)	Yes			offset 4m from road shoulder
<b>Approach Road / Embankment General Rating</b>		<b>5</b>	<b>5</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		W		West
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		5	5	Both wings pushing towards streambed. North wall is 50 mm at top and 40 mm away from barrel worst of all four corners.
(Shape : <b>FLARE</b> )				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		8	8	And concrete apron. (Apron has wide cracking and heaved 25mm @ U/S end) Apron not visible
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>500</b> )				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1820, Rise (mm): 2430, Type: BP, Cell Sequence: 1)				
Barrel Last Accessible Date	06-Oct-2010			North Box- Water too deep to enter. Viewed from all 4 corners, shape appears good.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		7	N	P.R. 7
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		7	N	(Minor vertical cracks, horizontal crack sidewall to roof N wall.) P.R. 7
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		6	N	P.R. 6
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	N	(20 mm wide construction joint @ mid-span.) P.R. 7
Separation (mm)	20			
Longitudinal Seams		X	N	
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		X	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1820, Rise (mm): 2430, Type: BP, Cell Sequence: 1)</b>				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>7</b>	<b>N</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1820, Rise (mm): 2430, Type: BP, Cell Sequence: 2)</b>				
Barrel Last Accessible Date	06-Oct-2010			South Box- Water too deep to enter.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		7	N	(Minor crack @ U/S end.) P.R. 7
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		7	N	(Minor vertical cracks.) P.R. 7
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		6	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	N	(Joint @ midspan.) P.R. 7
Separation (mm)	30			
Longitudinal Seams		X	N	
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		X	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1820, Rise (mm): 2430, Type: BP, Cell Sequence: 2)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	4	400mm silt Water pooling on either side of opening at U/S
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>7</b>	<b>N</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		East
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		5	5	South moved in towards stream 20mm and away from barrel 60 mm.
(Shape : <b>FLARE</b> )				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	150			
Scour Protection		7	7	And concrete apron- not visible
(Type : )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		7	7	Sand bags and scattered rock
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		5	5	Curved @ D/S.
Bank Stability		5	5	Steep cut @ East-North side.
HWM (m below Top of Culvert)	0.6			(08-Jan-2007) No visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
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>77.8/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>68.5/47.5</b>	Est. Repl. Yr	2031	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	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	06-Mar-2014		Previous Inspection Date	06-Oct-2010			
Inspection Cycle (Default) (months)	21						
Comment							