

Bridge Culvert Inspection				
Bridge File Number	07334 -1 Bridge Culvert		Form Type	CULM
Year Built	1953		Lot No.	4
Bridge or Town Name	TWIN BUTTE		Inspector Name	Jon Davies
Located Over	COTTONWOOD CREEK, 2.12.22.5.17, WATERCRS-ST		Inspector Class	BR CLS B
Located On	6:04 C1 1.268		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	30-Oct-2011
Legal Land Location	NW SEC 20 TWP 2 RGE 29 W4M		Data Entry By	Alyssa Boynton
Longitude, Latitude	-113:51:04, 49:08:36		Data Entry Date	28-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA26		Review Date	10-Nov-2011
Clear Roadway/Skew	10 /		Dept. Reviewer Name	Tim Davies
AADT/Year	1,010 / 2010 (A)		Dept. Review Date	01-Dec-2011
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	30			

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3980	2470	BP	23.2			RECTANGLE
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments							
Telephone	West ditch.			Gas			
Power				Municipal			
Others				Problem (Y/N)	No		
Remarks							

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curve 70 m to South. Rises to North.
Vertical Alignment		6	6	
Roadway Width (m)	10.000			
Embankment		5	5	
Sideslope ( __:1)	3.0			
(Height of Cover(m) : 1.9)				
Guardrail (Y/N)	Yes			
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>6</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		W		West end, North cell.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		6	6	
Wingwalls		6	6	Narrow vertical cracks.
(Shape : <b>FLARE</b> )				
Cutoff Wall		X	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		6	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				A.T
Above/Below (mm)	0			
Scour Protection		7	7	
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		7	7	
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): 1990, Rise (mm): 2470, Type: BP, Cell Sequence: 1)</b>				
Barrel Last Accessible Date	30-Oct-2011			North cell.
Special Features				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	
Measured Rise (mm)	2470			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		6	6	Typical settlement cracks up to 2mm wide. Some leaching.
Measured Span (mm)	1990			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		5	5	
Bulge (mm)	0			
Measured At Ring No.				Up to 50mm deep throughout.
Abrasion (Y/N)	Yes			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	POS			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1990, Rise (mm): 2470, Type: BP, Cell Sequence: 1)				
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			
Barrel General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1990, Rise (mm): 2470, Type: BP, Cell Sequence: 2)				
Barrel Last Accessible Date	30-Oct-2011			South cell.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	Typical settlement/contraction cracks up sidewalls and across roof. Cracks allow some leaching 1 @ 4mm width.
Measured Rise (mm)	2470			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		5	5	Cracks at side walls up to 30mm in width. Previously filled with plywood in section 2.
Measured Span (mm)	1990			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		5	5	Minor up to 25mm deep throughout.
Bulge (mm)	0			
Measured At Ring No.	1			
Abrasion (Y/N)	Yes			
Circumferential Seams		6	6	
Separation (mm)	5			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	POS			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1990, Rise (mm): 2470, Type: BP, Cell Sequence: 2)				
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>6</b>	<b>5</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		East end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		6	4	Wide cracks with toe of NE broken.
Wingwalls		6	6	Typical diagonal cracks with stains. Some patched.
(Shape : <b>FLARE</b> )				
Cutoff Wall		X	N	
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		6	6	Rock lined 15m dia scour hole 2m off apron
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>500</b> )				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>6</b>	<b>4</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		5	5	90 deg turn @ D/S
Bank Stability		5	5	
HWM (m below Top of Culvert)				No HWM visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
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>66.7/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>65.7/58.1</b>	Est. Repl. Yr	2033	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	Jason Rusu		Previous Assistant's Name				
Next Inspection Date	30-Jul-2013		Previous Inspection Date	29-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							