

Bridge Culvert Inspection								
Bridge File Number	08720 -1 Bridge Culvert				Form Type	CULM		
Year Built	1954				Lot No.	2		
Bridge or Town Name	BOWDEN				Inspector Name	Owen Salava		
Located Over	TRIBUTARY TO BOWDEN CREEK, 3.89.1.2, WATERCRS-ST				Inspector Class	BR CLS A		
Located On	2:22 R1 12.749;2:22 L1 12.749				Assistant Name			
Water Body Cl./Year					Assistant Class			
Navigabil. Cl./Year					Inspection Date	12-Mar-2013		
Legal Land Location	NE SEC 11 TWP 34 RGE 1 W5M				Data Entry By	Marcia Chavez		
Longitude, Latitude	-114:01:32, 51:54:33				Data Entry Date	26-Mar-2013		
Road Authority	Alberta Transportation (AIT)				Reviewer Name	John O'Brien		
Contract Main. Area	CMA19				Review Date	16-Mar-2013		
Clear Roadway/Skew	30.2 / -30 deg. (LHF)				Dept. Reviewer Name	Chris Black		
AADT/Year	27,020 / 2011 (A)				Dept. Review Date	28-Mar-2013		
Road Classification	RFD-412.4-130				Follow-Up By			
Detour Length (km)	5							
Bridge Culvert Information								
Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	6604	1651	BP	54.7			RECTANGLE
Special Features								
Special Features Comment								
Utilities (Located at)								
Utility Attachments								
Telephone	West r/w.				Gas			
Power	3 wire East r/w 40m from c/l, Hwy 2.				Municipal			
Others					Problem (Y/N)	No		
Remarks								
Approach Road / Embankment								
		Last	Now	Explanation of Condition				
Horizontal Alignment		7	7	Turnout lane s/b. 4 lane divided. Hwy 2A intersection at West end of pipe.				
Vertical Alignment		7	7					
Roadway Width (m)	26.000							
Embankment		6	6	Clay & gravel. Minimal vegetation both sides. 2:1 @ West, 4:1 @ East.				
Sideslope (____:1)	2.0							
(Height of Cover(m) : 1.8)								
Guardrail (Y/N)	Yes			Minor accident damage E rail - 6 leaning posts, 3 bent rails.				
Approach Road / Embankment General Rating		7	7					
Upstream End								
Culvert Component		Last	Now	Explanation of Condition				
Direction		E						
End Treatment (Concrete, Steel, Others, None)	CONCRETE							
Headwall		8	8					
Collar		X	X					
Wingwalls		8	8	8m extension & wings.				
(Shape : FLARE)								
Cutoff Wall		N	N					

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		8	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		8	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		8	8	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3302, Rise (mm): 1651, Type: BP, Cell Sequence: 1)				
Barrel Last Accessible Date	11-Aug-2011			South box. Inlet 0.9m, outlet 0.6m ice to roof; viewed from ends, shape OK.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	
Measured Rise (mm)	1651			
Measured At Ring No.	1			
Sag (mm)	0			(11Aug2011)
Percent Sag	0			
Sidewall		8	N	
Measured Span (mm)	1651			
Measured At Ring No.	1			
Deflection (mm)	0			(11Aug2011)
Percent Deflection	0			
Floor		N	N	Covered by ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	(25mm gap @ 2/3 L, center wall. 11Aug2011).
Separation (mm)	25			
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	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3302, Rise (mm): 1651, Type: BP, Cell Sequence: 1)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	(Upto 300mm deep but will flush in flood. 11Aug2011).
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		8	N	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3302, Rise (mm): 1651, Type: BP, Cell Sequence: 2)				
Barrel Last Accessible Date	11-Aug-2011			North box. Inlet 0.9m, outlet 0.6m ice to roof; viewed from ends, shape OK.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	(11Aug2011)
Measured Rise (mm)	1651			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		8	N	(11Aug2011)
Measured Span (mm)	1651			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Covered by ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	(25mm gap @ 2/3 L. Crack ~1.0m from East, North & middle wall. 11Aug2011).
Separation (mm)	25			
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)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3302, Rise (mm): 1651, Type: BP, Cell Sequence: 2)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	(300mm deep will flush in flood. 11Aug2011).
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		8	N	GR was 8 from 11Aug2011.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	5	Corrosion staining from low cover rebar.
Collar		X	X	
Wingwalls		5	5	NW wide crack; corrosion staining.
(Shape : FLARE)				
Cutoff Wall		N	N	
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	250			
Scour Protection		7	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		5	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Unknown.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		7	7	

Page 5 of 5

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	Patch cracked NW wingwall.	when next on site	2014			
OTHER ACTION	2013	Reset E guardrail.	for operations	2013			
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	88.9/55.6	Sufficiency Rating (Last/Now) (%)	83.1/65.1	Est. Repl. Yr	2033	Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection			Department Comments	Scheduled for replacement in PMA 2042			
Maintenance Reviewed By	John Umlah		Date	30-Apr-2013	Estimated Total	0	
Proposed Long-Term Strategy							
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Owen Salava		Previous Assistant's Name				
Next Inspection Date	12-Dec-2014		Previous Inspection Date	11-Aug-2011			
Inspection Cycle (Default) (months)	21						
Comment							