Bridge Culvert Inspection

Bridge File Number	76664 -1 Bridge Culvert	Form Type	CUL1
Year Built	1970	Lot No.	1
Bridge or Town Name	BLUEBERRY MT	Inspector Name	Russel Vanderschaaf
Located Over	JOSEPHINE CREEK, 8.10.83.3, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	725:02 C1 19.066	Assistant Class	
Water Body Cl./Year		Inspection Date	06-Mar-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NE SEC 8 TWP 81 RGE 8 W6M	Data Entry Date	27-Mar-2012
Longitude, Latitude	-119:12:43, 56:00:29	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	22-Mar-2012
Contract Main. Area	CMA05	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	9.2 /	Dept. Review Date	03-Jul-2012
AADT/Year	390 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	4300	SP	121.9	152X51	5.0	ROUND
Special Features		SHOTCRETE BEAM						
Special Features Comment								

Utilities (Located at)

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

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	CURVE TO SOUTH SAG CURVE - NO PASSING
Vertical Alignment		5	5	
Roadway Width (m)	9.200			
Embankment		N	3	DITCH ERODING ON WEST EMBANKMENT NORTH SIDE OF PIPE. 2 x 3 x 10m-2002-06-20-photo
Sideslope (__:1)	3.0			
(Height of Cover(m) : **10**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**3**	**5**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		N	4	Cracks, some pieces seperated from bevel - 2002-06-20
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	
Heaving (mm)	200			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	Snow covered
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	N	Snow covered
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4300, Type: SP**)				
Barrel Last Accessible Date	06-Mar-2012			
Special Features				
Special Feature		7	7	
(Type : **SHOTCRETE BEAM**)				
Special Feature				
(Type :)				
Roof		4	2	Cracked seams in roof @ R1 + 24.
Measured Rise (mm)	4267			estimated due to ice.
Measured At Ring No.	10			Reverse curvature @ R33 + R25 @ 12:00 -photo
Sag (mm)	33			
Percent Sag	1			
Sidewall		7	7	
Measured Span (mm)	4333			
Measured At Ring No.	10			
Deflection (mm)	33			
Percent Deflection	1			
Floor		N	N	Gravel/ice covered.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		4	4	Cracked @ 12 o'clock ring 1 & ring 24.
Total No. of Cracked Rings	2			Unable to reach roof to measure remaining steel between cracks.
Total No. of Rings with Two Cracked Seams				Missing 2 bolts 4:00 R7 and 3 nuts @ 7:00.
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	4	Superficial rust on floor.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
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): , Rise (mm): 4300, Type: SP**)				
Fish Passage Adequacy		7	7	
Baffle		8	8	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**2**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	NORTH SIDE OF BEVEL PUSHED IN.
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		N	6	
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**7**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS	2012	Roof at rings 25 & 33.				
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2012	REPAIR DITCH EROSION ON EMBANKMENTS				
OTHER ACTION	2012	60 m3/class 1				
OTHER ACTION	2012	Engineering assessment to evaluate repair vs replacement.				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/22.2**	**Sufficiency Rating (Last/Now) (%)**	**46.1/48.2**	Est. Repl. Yr	2017	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor longitudinal cracking.	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	Brian Pientsch	Previous Assistant's Name	Tim Miskiman		
Next Inspection Date	06-Jun-2015	Previous Inspection Date	09-Jan-2009		
Inspection Cycle (Default) (months)	39				
Comment					