Bridge Culvert Inspection

Bridge File Number	79750 -1 Bridge Culvert	Form Type	CUL1
Year Built	1982	Lot No.	4
Bridge or Town Name	GRANDE PRAIR	Inspector Name	Russel Vanderschaaf
Located Over	TRIBUTARY TO WAPITI RIVER, 8.10.58.18.4, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	40:42 C1 28.057	Assistant Class	
Water Body Cl./Year		Inspection Date	21-Aug-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 24 TWP 70 RGE 6 W6M	Data Entry Date	24-Sep-2012
Longitude, Latitude	-118:46:49, 55:04:31	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	23-Sep-2012
Contract Main. Area	CMA05	Dept. Reviewer Name	Steve Pasquan
Clear Roadway/Skew	15.2 / 17 deg. (RHF)	Dept. Review Date	07-Jan-2013
AADT/Year	2,640 / 2011 (A)	Follow-Up By	
Road Classification	RAU-213.4-120		
Detour Length (km)	18		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1524	SP	73.8	152X51	3.0	ROUND
Special Features		BARREL ELBOW						
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		7	7	Steep grade estimated at 7%. No passing SB.
Vertical Alignment		6	6	
Roadway Width (m)	15.200			
Embankment		N	4	Erosion ditch on SE corner 0.5m deep, 1m wide, 20m long.- vegetated
Sideslope (__:1)	3.0			
(Height of Cover(m) : **7.6**)				
Guardrail (Y/N)	Yes			North side only.
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
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**
Cutoff Wall		X	X	
Bevel End		N	7	Buildup of rock & debris in front of piling.
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	740			
Scour Protection		N	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1524, Type: SP**)				
Barrel Last Accessible Date	21-Aug-2012			
Special Features				
Special Feature		N	7	Elbow @ R3 & 4 rings from D/S end. May 27, 2007
(Type : **BARREL ELBOW**)				
Special Feature				
(Type :)				
Roof		N	7	
Measured Rise (mm)	1519			
Measured At Ring No.	11			
Sag (mm)	5			
Percent Sag	1			
Sidewall		N	7	
Measured Span (mm)	1502			
Measured At Ring No.	11			
Deflection (mm)	22			
Percent Deflection	1			
Floor		N	7	
Bulge (mm)	0			
Measured At Ring No.	11			
Abrasion (Y/N)	Yes			
Circumferential Seams		N	7	
Separation (mm)	0			
Longitudinal Seams		N	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	4	Superficial rust on 700mm wide strip of floor.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1524, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Too steep.
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Icing to top of crown.-01-Mar-2009
Icing (Y/N)	Yes			Build up of rock at d/s elbow-half the pipe diameter full 2-3 rings.-photo
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**N**	**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	7	
Heaving (mm)	250			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

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	DEGRADING			D/S only May 27, 2007.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

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						

Structural Condition Rating (Last/Now) (%)	**55.6/77.8**	**Sufficiency Rating (Last/Now) (%)**	**51.2/61.3**	Est. Repl. Yr	2027	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor ditch scour at SE corner.	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	Russel Vanderschaaf	Previous Assistant's Name			
Next Inspection Date	21-May-2014	Previous Inspection Date	24-Nov-2010		
Inspection Cycle (Default) (months)	21				
Comment					