Bridge Culvert Inspection

Bridge File Number	77324 -1 Bridge Culvert	Form Type	CULE
Year Built	1982	Lot No.	4
Bridge or Town Name	GRANDE PRAIR	Inspector Name	Russel Vanderschaaf
Located Over	TRIBUTARY TO BIG MOUNTAIN CREEK, 8.10.58.18.3.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	40:42 C1 16.004	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 69 RGE 6 W6M	Data Entry Date	24-Sep-2012
Longitude, Latitude	-118:46:34, 54:59:10	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	12 / -33 deg. (LHF)	Dept. Review Date	07-Jan-2013
AADT/Year	2,640 / 2011 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	100		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	5500	SP	87.2	152X51	5.0	ROUND
1	D/S	4900	5678	BP	59.6			RECTANGLE

Special Features	
Special Features Comment	1.2m dia.csp approx. 40m North at BF.

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		6	6	In sag curve with limited sight distance both directions. No passing SB lane.
Vertical Alignment		6	6	
Roadway Width (m)	12.000			
Embankment		N	4	Berm of 40 m on east side SW ditch erosion 1.5m x 1.0m x 8m - grassed in.
Sideslope (__:1)	4.0			
(Height of Cover(m) : **5.3**)				
Guardrail (Y/N)	Yes			GUARDRAIL INSTALLED ON W.SIDE. Two gullies @ NE 10m long 400 deep, 500 wide.-vegetated
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	10 wide vertical cracks in headwall above barrel at mid point.
Collar		N	6	Narrow sparse cracks in shoulders.

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	6	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		N	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 5500, Type: SP**)				
Barrel Last Accessible Date	21-Aug-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	N	Couldn't measure due to silt. 3606mm off silt
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	150			
Percent Sag	3			Est.sag
Sidewall		7	7	Welded patches @ 4:00 ring 17. Perforations at ring 2,3,6,7 approx 50mm, probably from construction.
Measured Span (mm)	5809			
Measured At Ring No.	11			
Deflection (mm)	158			
Percent Deflection	3			
Floor		N	N	Silt covered.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings				
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		7	7	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 5500, Type: SP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		N	N	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**7**	**7**	.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: D/S, Span (mm): 4900, Rise (mm): 5678, Type: BP**)				
Barrel Last Accessible Date	24-Nov-2010			Couldn't access due to 1.0m deep water. Shape looked good.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	N	
Measured Rise (mm)				
Measured At Ring No.				Est.sag
Sag (mm)	150			
Percent Sag	3			
Sidewall		7	N	
Measured Span (mm)	4916			10m from 5500 sp
Measured At Ring No.				est
Deflection (mm)	16			
Percent Deflection	1			
Floor		N	N	Silt/water covered.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	7	
Separation (mm)	0			
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)	No			
Longitudinal Stagger (Y/N)	No			
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: D/S, Span (mm): 4900, Rise (mm): 5678, Type: BP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		N	N	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		**7**	**N**	GR was '7' on 24-Nov-2010

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		N	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		X	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		N	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
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		5	5	Banks slumping U/S.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Stable.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**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) (%)	**77.8/77.8**	**Sufficiency Rating (Last/Now) (%)**	**75.6/77.1**	Est. Repl. Yr	2027	Maint. Reqd. (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	Russel Vanderschaaf	Previous Assistant's Name			
Next Inspection Date	21-May-2014	Previous Inspection Date	24-Nov-2010		
Inspection Cycle (Default) (months)	21				
Comment					