Bridge Culvert Inspection

Bridge File Number	72173 -1 Bridge Culvert	Form Type	CUL1
Year Built	1967	Lot No.	4
Bridge or Town Name	CANMORE	Inspector Name	Garry Roberts
Located Over	TRIBUTARY TO BOW RIVER, 2.13.70, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	1:02 R1 2.761;1:02 L1 2.703	Assistant Class	
Water Body Cl./Year		Inspection Date	06-Feb-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	SE SEC 7 TWP 25 RGE 10 W5M	Data Entry Date	14-Mar-2012
Longitude, Latitude	-115:22:40, 51:07:03	Reviewer Name	Tom Carey
Road Authority	Alberta Transportation (AIT)	Review Date	22-Feb-2012
Contract Main. Area	CMA28	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	45.7 / -20 deg. (LHF)	Dept. Review Date	22-Mar-2012
AADT/Year	17,720 / 2010 (A)	Follow-Up By	
Road Classification	RAD-616.6-130		
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2490	1752	RPP	140	152X51	3.5	PIPE ARCH

Special Features	SHOTCRETE BEAM
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	South R/W.	Gas	15 m from South end.
Power	3 W over road 100 m East and North ROW.	Municipal	
Others		Problem (Y/N)	No
Remarks	In ditch between Hwy 1 & service road-		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Road width WBL - 19.0 m. EBL 17.2. Service road 9.5 m.
Vertical Alignment		7	7	
Roadway Width (m)	45.700			
Embankment		8	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **1.3**)				
Guardrail (Y/N)	Yes			@ service road only. on North side-WBL.
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction				North end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	CSP extension and bevel.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	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): 2490, Rise (mm): 1752, Type: RPP**)				
Barrel Last Accessible Date	06-Feb-2012			
Special Features				
Special Feature		7	7	End of shotcrete. 4th to 18th ring from D/S.
(Type : **SHOTCRETE BEAM**)				
Special Feature				
(Type :)				
Roof		5	5	2 holes at seam between 7th and 8th Ring from U/S (AGT installation). in roof Rise not taken due to rock on floor.
Measured Rise (mm)	1620			
Measured At Ring No.	2			
Sag (mm)	132			
Percent Sag	7			
Sidewall		7	7	
Measured Span (mm)	2490			
Measured At Ring No.	23			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Floor bulge not seen-rock covered.
Bulge (mm)	25			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	6	2 seams short on bolts CSP extension at North.
Separation (mm)	0			
Longitudinal Seams		5	5	Lower longitudinal seams only visible at 6 D/S rings.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				Only roof plates staggered.
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
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): 2490, Rise (mm): 1752, Type: RPP**)				
Fish Passage Adequacy		5	5	Seasonal watercourse.
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Rock ranging from 0.4 at U/S to 0.3 at D/S.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction				South end.
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	Fence runs across bevel.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1000			
Scour Protection		5	5	Rock placed to provide transition down to streambed.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **600**)				
Scour/Erosion		5	5	
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	Railway 30m from d/s end. 2-1800mm CSP under railway crossing.
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.9			No visible HWM. Minor drift.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	AGGRADING			Agg. @ U/S.
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) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**56.0/56.0**	Est. Repl. Yr	2025	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	Garry Roberts	Previous Assistant's Name	
Next Inspection Date	06-Nov-2013	Previous Inspection Date	24-Sep-2010
Inspection Cycle (Default) (months)	21		
Comment			