Bridge Culvert Inspection

Bridge File Number	71090 -1 Bridge Culvert	Form Type	CUL1
Year Built	1965	Lot No.	3
Bridge or Town Name	NEVIS	Inspector Name	Owen Salava
Located Over	TAIL CREEK, 3.65, WATERCRS-ST	Inspector Class	BR CLS A
Located On	12:12 C1 20.764	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	30-Aug-2012
Legal Land Location	SW SEC 23 TWP 39 RGE 22 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-113:04:03, 52:21:57	Data Entry Date	17-Sep-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA20	Review Date	06-Sep-2012
Clear Roadway/Skew	13.4 / 0 deg.	Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,350 / 2011 (A)	Dept. Review Date	18-Sep-2012
Road Classification	RAU-213.4-110	Follow-Up By	
Detour Length (km)	2		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1800	SP	54.9	152X51		ROUND
Special Features								
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	In curve with super elevation. Field access @ NE/SE. Hill to the West. No passing WB. On superelevation.
Vertical Alignment		5	5	
Roadway Width (m)	13.400			
Embankment		5	5	North end measured.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **6**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**5**	**5**	

Upstream 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	Cage at end with beaver dam.
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	5	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
Beavers (Y/N)	Yes			
Upstream End General Rating		**5**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: SP**)				
Barrel Last Accessible Date	27-Feb-2009			Viewed from outlet, water 0.7m deep, shape OK.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	(Numerous local spot corrosion with small perforations, < than 20mm dia. 27Feb2009).
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	60			(Est. 3% - same as roof. 27Feb2009).
Percent Sag	3			
Sidewall		N	N	(Lower sidewall seam under water - not visible. Numerous local spot corrosion with perforations < than 25mm dia - photo. Worst at D/S end. 27Feb2009).
Measured Span (mm)	1860			
Measured At Ring No.	9			
Deflection (mm)	60			
Percent Deflection	3			
Floor		N	N	Water
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	(Lower seam under ice. Longitudinal seams rusting where visible. 27Feb2009).
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			(All visible seams properly lapped. 27Feb2009).
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	N	(Corrosion on roof & sidewall with small perforations. Alkali staining at upper seams. 27Feb2009).
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): 1800, Type: SP**)				
Fish Passage Adequacy		5	4	Blocked by beaver dam.
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	Rating based on previous silting condition. (Silt at U/S to 0.4m. 27Feb2009).
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	GR based on element ratings from 27Feb2009.

Downstream 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 :)				
Cutoff Wall		X	X	
Bevel End		5	5	50% of bevel under water/mud.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	5	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		5	5	Eroding 5m East but not affecting bevel. Also ditch erosion 4m to W.
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Pond 15 m wide by 50 m long at inlet.
Bank Stability		5	5	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Dam at U/S.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**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	2012	Remove dam @ inlet & realign North channel to opening.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**46.7/40.4**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes

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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	30-May-2014	Previous Inspection Date	26-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					