Bridge Culvert Inspection

Bridge File Number	75831 -1 Bridge Culvert	Form Type	CUL1
Year Built	1985	Lot No.	1
Bridge or Town Name	FISHER HOME	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO PIGEON LAKE, 5.62.4.4, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	771:06 C1 12.569	Assistant Class	
Water Body Cl./Year		Inspection Date	06-Feb-2013
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 12 TWP 47 RGE 2 W5M	Data Entry Date	07-Mar-2013
Longitude, Latitude	-114:10:21, 53:02:14	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	14-Feb-2013
Contract Main. Area	CMA17	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	12 / 40 deg. (RHF)	Dept. Review Date	28-Mar-2013
AADT/Year	690 / 2011 (A)	Follow-Up By	
Road Classification	RCU-210-110		
Detour Length (km)	13		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1600	MP	62	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	Crosses road approx 60m North.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Access 15m South. Curve to North. Hill to South & North.
Vertical Alignment		7	7	
Roadway Width (m)	12.000			
Embankment		5	5	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **5**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**5**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	4	Snow covered; probable scour at SW shoulder (photo).
Beavers (Y/N)	Yes			Possible dam u/s.
Upstream End General Rating		**6**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1600, Type: MP**)				
Barrel Last Accessible Date	06-Feb-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		2	2	Unable to confirm due to ice; rating carried forward based on appearance.
Measured Rise (mm)	1350			
Measured At Ring No.	6			
Sag (mm)	250			15.6%
Percent Sag	16			
Sidewall		3	3	
Measured Span (mm)	1838			
Measured At Ring No.	3			
Deflection (mm)	238			14.9%
Percent Deflection	15			
Floor		6	N	(Bulges along North sidewall on 2/3 of pipe. 12Feb2010) - Ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Some separation. Some have been bolted.
Separation (mm)	150			
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)				
Longitudinal Stagger (Y/N)				
Coating		4	4	Some pitting extending into sidewall.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
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): 1600, Type: MP**)				
Fish Passage Adequacy		3	3	Due to beaver dam, some scour holes and drift.
Baffle		X	X	
(Type :)				
Waterway Adequacy		3	3	Based on scour at outlet; address when pipe replaced.
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**2**	**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		5	5	Small trees growing at shoulders.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		4	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Large scour hole, 1m x 8m x 15m. Snow indicates still here.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		6	6	
HWM (m below Top of Culvert)				No HWM visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**6**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2013	Restore fill along u/s bevel & add rock riprap at both ends.				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS	2013					
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2020	Replace pipe.				
OTHER ACTION	2016	Concrete floor if invert softens or perforates.				
OTHER ACTION	2013	Remove beaver dam.				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/22.2**	**Sufficiency Rating (Last/Now) (%)**	**26.3/24.3**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	LRA emailed to Donald Saunders on 12Feb2013.	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	06-May-2016	Previous Inspection Date	12-Feb-2010		
Inspection Cycle (Default) (months)	39				
Comment					