Bridge Culvert Inspection

Bridge File Number	75621 -1 Bridge Culvert	Form Type	CUL1
Year Built	1964	Lot No.	4
Bridge or Town Name	MENAIK	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO MASKWA CREEK, 5.47.4.1.4, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	2:28 R1 10.676;2:28 L1 10.677	Assistant Class	
Water Body Cl./Year		Inspection Date	22-Feb-2013
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SE SEC 12 TWP 44 RGE 26 W4M	Data Entry Date	11-Mar-2013
Longitude, Latitude	-113:38:37, 52:46:17	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	27-Feb-2013
Contract Main. Area	CMA17	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	22.8 / -15 deg. (LHF)	Dept. Review Date	14-Mar-2013
AADT/Year	24,500 / 2011 (A)	Follow-Up By	
Road Classification	RAD-412.4-120		
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	2019	2226	SPE	128.2	152X51	3.5,3.5,3.5	ELLIPSE
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		8	8	In sag of vertical curve.
Vertical Alignment		6	6	
Roadway Width (m)	22.800			
Embankment		6	6	SW embankment erosion due to channel misalignment.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **12**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**6**	

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		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	N	Bevel projects 800mm from fill. Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	Snow covered.
Beavers (Y/N)	No			
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): 2019, Rise (mm): 2226, Type: SPE**)				
Barrel Last Accessible Date	22-Feb-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	Unable to measure due to ice.
Measured Rise (mm)	2160			
Measured At Ring No.	20			
Sag (mm)	66			(from unknown date)
Percent Sag	3			
Sidewall		6	6	Span @ R2 = 1992, 27mm. R10 = 2004, 15mm. R30 = 2031, 12mm. R40 = 2023, 4mm. R50 = 1993, 26mm.
Measured Span (mm)	2087			
Measured At Ring No.	20			
Deflection (mm)	68			
Percent Deflection	3			3.4%
Floor		6	N	Ice
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	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)	Yes			
Coating		5	5	Superficial corrosion @ longitudinal seams & waterline. Minor leakage through some bolt holes.
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): 2019, Rise (mm): 2226, Type: SPE**)				
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**6**	**6**	

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	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		4	N	Snow covered; previous rating 4 on 13Jul2011.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	15 x 6m scour hole 1m deep not creating a problem.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	4	(U/S end does not line up with channel causing erosion @ SW embankment, minor. 13Jul2011) - Snow covered; looks OK, rating carried forward.
Bank Stability		5	5	
HWM (m below Top of Culvert)				No HWM visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

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) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**62.6/62.6**	Est. Repl. Yr	2033	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	No action for d/s scour at this time. Confirm alignment without snow.	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	22-Nov-2014	Previous Inspection Date	13-Jul-2011		
Inspection Cycle (Default) (months)	21				
Comment					