Bridge Culvert Inspection

Bridge File Number	73458 -1 Bridge Culvert	Form Type	CULM
Year Built	1961	Lot No.	4
Bridge or Town Name	MEANDER RIVE	Inspector Name	Brian Pientsch
Located Over	LUTOSE CREEK, 9.8, WATERCRS-ST	Inspector Class	BR CLS A
Located On	35:18 C1 49.277	Assistant Name	Clem Guenette
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	10-Jan-2012
Legal Land Location	SE SEC 12 TWP 120 RGE 20 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-117:16:50, 59:24:24	Data Entry Date	28-Feb-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA01	Review Date	26-Feb-2012
Clear Roadway/Skew	10.5 /	Dept. Reviewer Name	David Morrison
AADT/Year	370 / 2011 (A)	Dept. Review Date	30-Mar-2012
Road Classification	RAU-210-110	Follow-Up By	
Detour Length (km)	999		

Bridge Culvert Information

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3475	3841	SPE	57.9	152X51	4.2	ELLIPSE
2	MAIN	3475	3841	SPE	57.9	152X51	4.2	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others	WSC GAUGE STA. NORTH OF OUTLET	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Grade approx. 5% both ways - no passing. 5 m berm each side.
Vertical Alignment		6	6	
Roadway Width (m)	10.500			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **4**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		W		South Pipe
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Cutoff Wall		X	X	
Bevel End		X	X	Est.
Heaving (mm)	300			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		4	N	Snow covered
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		4	N	Minor SCOUR ALONG BARREL 1.5M -26-May-2010
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	GR carried over from 26-May-2010

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE**)				
Barrel Last Accessible Date	10-Jan-2012			South Shape of barrel looks good.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	No measurement due to ice on floor.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		5	5	
Measured Span (mm)	3655			
Measured At Ring No.	13			
Deflection (mm)	180			
Percent Deflection	5			
Floor		N	N	Scaling rust, approx 800mm ice.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	Few missing nuts .
Separation (mm)				
Longitudinal Seams		N	4	Several bolts loose & a few missing nuts .
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				1N stagger
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	4	Pitting.scaling rust lower 1/2 .
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	5	
Baffle		N	N	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**4**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		E		South pipe
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	N	Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	(Scour hole d/s of culverts. Minor erosion at outlet - 2003/05/17) Not visible due to snow.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	G.R. carried forward.

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		W		(North pipe)
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			Est.
Above/Below (mm)	100			
Scour Protection		4	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		4	N	Minor erosion along side of barrel 1.5m. debris on both sides of culvert. -26-May-2010 Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	GR carried fwd from 26-May-2010

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE**)				
Barrel Last Accessible Date	10-Jan-2012			(North)
Special Features				
Special Feature				Shape of barrel looks good.
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	No measurements due to ice on floor.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		5	5	
Measured Span (mm)	3615			
Measured At Ring No.				
Deflection (mm)	140			
Percent Deflection	4			
Floor		N	N	(Fairly bad rust & pitting.Couldn't really see floor due to mrky water - 951030) Approx 800mm crown to ice.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	Few missing nuts
Separation (mm)				
Longitudinal Seams		N	4	Several bolts loose & a few missing nuts.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				1N stagger
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	4	(Pitting & scaling rust lower 1/2.
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	5	
Baffle		N	N	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**4**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		E		(North pipe)
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	N	No evident problems Snow covered
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	(Minor erosion at outlet. Scour hole d/s of culverts - 2003/05/17) Snow covered
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	G.R. carried over.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM NOT VISIBLE
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				

Structure Usage				
		Last	Now	Explanation of Condition
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) (%)	**55.6/44.4**	**Sufficiency Rating (Last/Now) (%)**	**54.6/49.1**	Est. Repl. Yr	2016	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	Brian Pientsch	Previous Assistant's Name	Lisbeth Medina		
Next Inspection Date	10-Oct-2013	Previous Inspection Date	26-May-2010		
Inspection Cycle (Default) (months)	21				
Comment					