Bridge Culvert Inspection

Bridge File Number	74106 -1 Bridge Culvert	Form Type	CULM
Year Built	1994	Lot No.	3
Bridge or Town Name	CARSELAND	Inspector Name	Tom Carey
Located Over	WID - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	24:04 C1 13.777	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	21-Feb-2013
Legal Land Location	SW SEC 22 TWP 22 RGE 26 W4M	Data Entry By	Anne Roberts
Longitude, Latitude	-113:32:12, 50:53:05	Data Entry Date	19-Mar-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA30	Review Date	03-Mar-2013
Clear Roadway/Skew	8.3 / -10 deg. (LHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	2,260 / 2011 (A)	Dept. Review Date	25-Mar-2013
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	5903	3188	RPB	29.3	152X51	4.0,4.0,4.0	ELLIPSE
2	MAIN	5903	3188	RPB	29.3	152X51	4.0,4.0,4.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West and East row	Gas	
Power	3w 20m East and NW.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	2:1 SLOPE AT CULVERT ENDS
Vertical Alignment		9	9	
Roadway Width (m)	8.300			
Embankment		3	3	(Erosion and loss of fill behind headwall of north pipe @ D/S with large void approx- 1mx0.3mx1.2m) Ice and snow covered.
Sideslope (__:1)	6.0			
(Height of Cover(m) : **1.3**)				
Guardrail (Y/N)	Yes			Double laywer w-beam Bolt missing at post at North east at end - bolt pulled through. Turndown end torn and pointed upward at South East.
Approach Road / Embankment General Rating		**9**	**9**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		W		West end, south pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	Narrow cracks
Collar		8	8	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Cutoff Wall		N	N	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		8	N	PR 8 Completely snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	N	PR 8
Beavers (Y/N)	No			
Upstream End General Rating		**8**	**8**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 5903, Rise (mm): 3188, Type: RPB**)				
Barrel Last Accessible Date	21-Feb-2013			South pipe.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)				Estimated
Measured At Ring No.				
Sag (mm)	50			
Percent Sag	1			
Sidewall		8	8	Inward
Measured Span (mm)	5830			
Measured At Ring No.	3			
Deflection (mm)	73			
Percent Deflection	1			
Floor		N	N	600 mm deep ice
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		8	8	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		5	5	Alkali at seams. Isolated rust corrosion at South
Corrosion By Soil (Y/N)	Yes			
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): 5903, Rise (mm): 3188, Type: RPB**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	9	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**8**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		E		East end, south pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	Narrow cracks
Collar		8	8	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		8	N	Completely snow covered. PR 8
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	N	PR 8
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**8**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		W		West end, north pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	Narrow cracks
Collar		8	8	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		8	N	PR 8 Completely snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Upstream End General Rating		**8**	**8**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): 5903, Rise (mm): 3188, Type: RPB**)				
Barrel Last Accessible Date	21-Feb-2013			North pipe.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)				Estimated
Measured At Ring No.				
Sag (mm)	50			
Percent Sag	1			
Sidewall		8	8	Inward
Measured Span (mm)	5860			
Measured At Ring No.	3			
Deflection (mm)	43			
Percent Deflection	1			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		8	8	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		5	5	Alkali @ seams
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): 5903, Rise (mm): 3188, Type: RPB**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	9	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**8**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		E		East end, north pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	Narrow cracks
Collar		8	8	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		8	N	PR 8 Completely snow covered
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**8**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		8	N	Snow covered
HWM (m below Top of Culvert)	2.0			Snow covered
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**8**	**8**	

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	2013	Fill void with compacted pit run (0.4m³) material @ N pipe down stream end- see photo. If not done.				
OTHER ACTION	2013	Replace South East gaurdrail. Turn down end and install one bolt at post at North east				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**88.9/88.9**	**Sufficiency Rating (Last/Now) (%)**	**91.0/91.0**	Est. Repl. Yr	2041	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	Tom Carey	Previous Assistant's Name	
Next Inspection Date	21-Nov-2014	Previous Inspection Date	20-May-2011
Inspection Cycle (Default) (months)	21		
Comment			