Bridge Culvert Inspection

Bridge File Number	06523 -1 Bridge Culvert	Form Type	CULM
Year Built	1990	Lot No.	4
Bridge or Town Name	HUXLEY	Inspector Name	Owen Salava
Located Over	GHOSTPINE CREEK, 3.50, WATERCRS-ST	Inspector Class	BR CLS A
Located On	587:04 C1 37.886	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	25-Oct-2011
Legal Land Location	SW SEC 18 TWP 34 RGE 23 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-113:15:28, 51:54:40	Data Entry Date	24-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA20	Review Date	13-Nov-2011
Clear Roadway/Skew	9.8 / 23 deg. (RHF)	Dept. Reviewer Name	Andrew Smikles
AADT/Year	310 / 2010 (A)	Dept. Review Date	24-Nov-2011
Road Classification	RCU-209-110	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	-	4572	SP	39.6	152X51	3.0	ROUND
2	MAIN	-	4572	SP	39.6	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South ditch.	Gas	Crossing 250m West.
Power	5 wire North fenceline.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	
Vertical Alignment		8	8	
Roadway Width (m)	9.800			
Embankment		9	9	
Sideslope (__:1)	3.8			
(Height of Cover(m) : **2**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**8**	**8**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		N		West pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Minor hairline cracks.
Collar		7	7	
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)	1000			
Scour Protection		N	5	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4572, Type: SP**)				
Barrel Last Accessible Date	25-Oct-2011			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		9	9	Rise not measured due to silt. Minor dents in several plates.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		8	8	
Measured Span (mm)	4570			
Measured At Ring No.	12			
Deflection (mm)	2			
Percent Deflection	0			
Floor		N	N	Silted in approx. 1.7m.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
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				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Some staining by water.
Corrosion By Soil (Y/N)	No			
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): , Rise (mm): 4572, Type: SP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
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		S		West pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		7	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		8	8	Slightly bent from over compaction.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		N	6	Not well-graded; small rock away from culvert, 1m in size.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**6**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		N		East pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		7	7	
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		5	5	Mesh placed by farmer btwn lower step of bevels.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		N	5	Small rock 1m, away from culvert.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4572, Type: SP**)				
Barrel Last Accessible Date	07-Dec-2010			1.6m silt & water; viewed from ends, looks good.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	(Rise not measured - ice. 07Dec2010).
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		8	N	
Measured Span (mm)	4620			
Measured At Ring No.	13			
Deflection (mm)	48			
Percent Deflection	1			
Floor		N	N	(Silted in approx 0.7m. 27May2005). Water.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	
Separation (mm)	0			
Longitudinal Seams		8	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Some staining by water.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4572, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	Holds approx 1100mm of water at all times.
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	(Approx 0.7m. 27May2005)
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	GR was 8 from 07Dec2010.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		S		East pipe..
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	7	Small crack between collar & cutoff wall and between pipes.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		7	7	Slightly bent inward from over compaction between the 2 pipes.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		N	6	CL 1m away from culvert.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	Some erosion on bends, poor D/S channel alignment.
Bank Stability		5	5	Steep banks u/s & d/s.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
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						
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) (%)	**88.9/88.9**	**Sufficiency Rating (Last/Now) (%)**	**79.2/82.0**	Est. Repl. Yr	2043	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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	25-Jan-2015	Previous Inspection Date	07-Dec-2010		
Inspection Cycle (Default) (months)	39				
Comment					