Bridge Culvert Inspection

Bridge File Number	08242 -1 Bridge Culvert	Form Type	CUL1
Year Built	1990	Lot No.	1
Bridge or Town Name	GADSBY	Inspector Name	Dave Lam
Located Over	PAINTEARTH CREEK, 5.23, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	601:04 C1 21.438	Assistant Class	
Water Body Cl./Year		Inspection Date	12-Jul-2011
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 16 TWP 40 RGE 16 W4M	Data Entry Date	16-Aug-2011
Longitude, Latitude	-112:15:24, 52:26:02	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	27-Jul-2011
Contract Main. Area	UNDEFINED CMA	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	12 / 45 deg. (RHF)	Dept. Review Date	30-Aug-2011
AADT/Year	100 / 2010 (A)	Follow-Up By	
Road Classification	RCU-209G-90		
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3670	SP	61	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	In r/w to North.	Gas	
Power	3 wires 15m North of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Pipe through int R.R. 16-4.
Vertical Alignment		9	9	
Roadway Width (m)	12.000			
Embankment		7	3	1.0m deep crevices at various spots on roadway shoulder around both bevel ends (photo).
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**3**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		Northwest.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		8	8	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Submerged.

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			(08Oct2009). Under water.
Above/Below (mm)	600			
Scour Protection		4	3	Riprap sloughed up to 300mm around collar.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		4	3	Erosion from road drainage creating deep crevices, but not as a result of insufficient riprap.
Beavers (Y/N)	No			
Upstream End General Rating		**8**	**3**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3670, Type: SP**)				
Barrel Last Accessible Date	22-Mar-2006			Water 0.9m deep, viewed from ends. No problems visible.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)				
Measured At Ring No.				(Est. sag 60mm. 22Mar2006).
Sag (mm)	60			
Percent Sag	2			
Sidewall		8	N	(22Mar2006)
Measured Span (mm)	3730			
Measured At Ring No.	9			
Deflection (mm)	60			1.6%
Percent Deflection	2			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	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		7	7	
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 # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3670, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			(22Mar2006). Under water.
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	G.R. was "8" from 22/Mar/2006.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		Southeast.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	(08Oct2009). Under water.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		5	3	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		5	3	Surface erosion off road causing deep voids & undermining (photo).
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**3**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		5	5	Vertical banks U/S & D/S.
HWM (m below Top of Culvert)	1.7			(22Mar2006). Grass in fence.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			(22Mar2006). Under water.
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	2011	Add all aroun both bevels.				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2011	Repair crevices/voids in embankment at both ends.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**70.7/52.9**	Est. Repl. Yr	2052	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Observe inlet slope protection for possible undermining.	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	12-Oct-2014	Previous Inspection Date	08-Oct-2009		
Inspection Cycle (Default) (months)	39				
Comment					