Bridge Culvert Inspection

Bridge File Number	73145 -2 Bridge Culvert	Form Type	CULM
Year Built	2001	Lot No.	4
Bridge or Town Name	LETHBRIDGE	Inspector Name	Tom Carey
Located Over	SMR - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	3:10 L1 1.129;3:10 R1 1.129	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	12-Nov-2011
Legal Land Location	SE SEC 3 TWP 9 RGE 21 W4M	Data Entry By	Alyssa Boynton
Longitude, Latitude	-112:45:50, 49:42:13	Data Entry Date	07-Dec-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA25	Review Date	21-Nov-2011
Clear Roadway/Skew	24 / -5 deg. (LHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	16,540 / 2010 (A)	Dept. Review Date	15-Dec-2011
Road Classification	RFD-412.4-130	Follow-Up By	
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	3600	2400	BP	41			RECTANGLE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE; POWER UTILITIES-POWER LINE		
Telephone		Gas	
Power	3W-50m N	Municipal	
Others	3wire crosses Hwy3-100m W	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	Double layer above structure, single on turndowns.
Vertical Alignment		9	9	
Roadway Width (m)	24.000			
Embankment		7	7	
Sideslope (__:1)	5.0			
(Height of Cover(m) : **0.6**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**9**	**9**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		S end 600mm CSP ditch drain located 6m from u/s end
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		X	X	
Wingwalls		8	8	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		8	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): 1800, Rise (mm): 2400, Type: BP, Cell Sequence: 1**)				
Barrel Last Accessible Date	12-Nov-2011			West Pipe
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)	2400			
Measured At Ring No.	5			
Sag (mm)	0			
Percent Sag	0			
Sidewall		8	8	
Measured Span (mm)	1800			
Measured At Ring No.	5			
Deflection (mm)	0			
Percent Deflection	0			
Floor		8	8	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	20			
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1800, Rise (mm): 2400, Type: BP, Cell Sequence: 1**)				
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**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1800, Rise (mm): 2400, Type: BP, Cell Sequence: 2**)				
Barrel Last Accessible Date	12-Nov-2011			East pipe
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)	2400			
Measured At Ring No.	5			
Sag (mm)	0			
Percent Sag	0			
Sidewall		8	8	
Measured Span (mm)	1800			
Measured At Ring No.	5			
Deflection (mm)	0			
Percent Deflection	0			
Floor		8	8	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		8	8	
Separation (mm)	25			
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1800, Rise (mm): 2400, Type: BP, Cell Sequence: 2**)				
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**
Direction		N		North end 600mm ditch drain located 13m from d/s end
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		X	X	
Wingwalls		8	8	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**8**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	RR bridge located 15m from d/s end Bends to the west @ u/s enters culvert @ 30 deg
Bank Stability		8	8	
HWM (m below Top of Culvert)	1.1			
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
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) (%)**	**89.5/89.5**	Est. Repl. Yr	2066	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	Tom Carey	Previous Assistant's Name	
Next Inspection Date	12-Aug-2013	Previous Inspection Date	24-Jun-2010
Inspection Cycle (Default) (months)	21		
Comment			