

Bridge Culvert Inspection				
Bridge File Number	77491 -1 Bridge Culvert		Form Type	CUL1
Year Built	1976		Lot No.	1
Bridge or Town Name	EXSHAW		Inspector Name	Garry Roberts
Located Over	KING CREEK, 2.13.56.18, WATERCRS-ST		Inspector Class	BR CLS A
Located On	40:12 C1 0.217		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	01-Apr-2013
Legal Land Location	SE SEC 25 TWP 20 RGE 9 W5M		Data Entry By	Lauren Korte
Longitude, Latitude	-115:06:35, 50:43:05		Data Entry Date	11-Apr-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Tom Carey
Contract Main. Area	CMA28		Review Date	10-Apr-2013
Clear Roadway/Skew	10.8 /		Dept. Reviewer Name	Tim Davies
AADT/Year	1,690 / 2012 (A)		Dept. Review Date	06-May-2013
Road Classification	RAU-209-110		Follow-Up By	
Detour Length (km)	3			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	3185	3520	SPE	125	152X51		ELLIPSE
Special Features		SHOTCRETE BEAM						
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	West r/w.		Gas
Power			Municipal
Others			Problem (Y/N) No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection to park road 140 300 m South.
Vertical Alignment		7	7	
Roadway Width (m)	10.800			
Embankment		7	7	
Sideslope (___:1)	2.5			
(Height of Cover(m) : 18)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		7	7	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		East.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		6	6	6 average 3mm wide cracks.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		6	6	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		6	6	
Heaving (mm)	150			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3185, Rise (mm): 3520, Type: SPE)				
Barrel Last Accessible Date	01-Apr-2013			
Special Features				
Special Feature		6	6	Shotcrete beams in 15 rings.
(Type : SHOTCRETE BEAM)				
Special Feature				
(Type :)				
Roof		4	4	Rings numbered incorrectly.
Measured Rise (mm)	3210			Based on deflections.
Measured At Ring No.	18			Ice in R18- could not confirm.
Sag (mm)	310			
Percent Sag	8			
Sidewall		3	3	Based on longitudinal seam cracks with less than 100mm remaining steel.
Measured Span (mm)	3110			
Measured At Ring No.	18			
Deflection (mm)	225			
Percent Deflection	7			
Floor		5	5	4 D/S rings are rock covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		3	3	Ring Remaining Steel Bolts
Total No. of Cracked Rings	9			3 110mm 3 -
Total No. of Rings with Two Cracked Seams	0			4 60mm all - photo
Min. Remaining Steel Between Cracks (mm)	60			7 105mm 6
Proper Lap (Y/N)	No			10 135mm 5
Longitudinal Stagger (Y/N)	Yes			22 120mm 5
				26 105mm 18
				28 120mm 5
				31 120mm 4
				36 78mm
				No change from previous.
Coating		4	4	Corrosion with pitting.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
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): 3185, Rise (mm): 3520, Type: SPE)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	400mm rock at 4 D/S rings.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		3	3	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
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	
Heaving (mm)	0			
Invert Above/Below Stream Bed		BELOW		
Above/Below (mm)	600			
Scour Protection		7	7	Bevel projects 300mm from fill.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 500)				
Scour/Erosion		7	7	
Beavers (Y/N)		No		
Downstream End General Rating		7	7	
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)	0.5			No visible HWM. Minor drift in channel.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading		AGGRADING		At D/S.
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
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) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	54.7/54.6	Est. Repl. Yr	2025	Maint. Reqd. (Y/N)	No
Special Comments for Next Inspection	Shape appears good despite deflections. Crack growth appears to have stabilized over last several inspections. (GR April 1/13).		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	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	01-Jan-2015		Previous Inspection Date	26-May-2011			
Inspection Cycle (Default) (months)	21						
Comment							