

Bridge Culvert Inspection			
Bridge File Number	79377 -1 Bridge Culvert	Form Type	CULE
Year Built	1981	Lot No.	4
Bridge or Town Name	SPRUCE GROVE	Inspector Name	Kris Bosters
Located Over	TRIBUTARY TO ATIM CREEK, 6.65.8.7, WATERCRS-ST	Inspector Class	BR CLS A
Located On	16:14 L1 16.880;16:14 R1 16.869	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	07-Oct-2010
Legal Land Location	NE SEC 7 TWP 53 RGE 27 W4M	Data Entry By	Jill Potts
Longitude, Latitude	-113:58:03, 53:34:11	Data Entry Date	26-Oct-2010
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Arnold Assenheimer
Contract Main. Area	CMA11	Review Date	18-Oct-2010
Clear Roadway/Skew	23.8 / -50 deg. (LHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	28,520 / 2009 (A)	Dept. Review Date	09-Nov-2010
Road Classification	RAD-412.4-120	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	U/S	-	2400	MP	4	152X51		ROUND
1	MAIN	2314	2552	SPE	122	152X51	3.0	ELLIPSE
Special Features	VERT STEEL STRUTS							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others	Fibre optic North r/w Total Telco.	Problem (Y/N)	No
Remarks	Tagged on U/S end.		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	8	8	
Vertical Alignment	7	7	
Roadway Width (m)	23.800		WBL 12.2, EBL 11.6.
Embankment	5	5	Few tension cracks SE of culvert. 4:1 upper half of sideslope.
Sideslope (__:1)	3.0		
(Height of Cover(m) : 2.8)			
Guardrail (Y/N)	Yes		Guardrail on north side only.
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	S		
End Treatment (Concrete, Steel, Others, None)	NONE		
Headwall	X	X	
Collar	X	X	
Wingwalls	X	X	
(Shape :)			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	750			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	750			
Scour Protection		4	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		4	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: U/S , Span (mm): , Rise (mm): 2400 , Type: MP)				
Barrel Last Accessible Date	07-Oct-2010			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	7	
Measured Rise (mm)	2330			
Measured At Ring No.	1			
Sag (mm)	70			
Percent Sag	3			
Sidewall		6	7	
Measured Span (mm)	2434			
Measured At Ring No.	1			
Deflection (mm)	34			
Percent Deflection	1			
Floor		6	N	Too much water to view.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	5	30mm gap between SPCSP & CSP.
Separation (mm)	0			
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		5	5	
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: U/S, Span (mm): , Rise (mm): 2400, Type: MP)					
Ponding (Y/N)	No				
Fish Passage Adequacy		2	4	U/S end heaved.	
Baffle		X	X		
(Type :)					
Waterway Adequacy		7	7	7-8, 100mm logs caught on struts & across inlet.	
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	Yes				
Barrel Extension General Rating		4	4		
Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2314, Rise (mm): 2552, Type: SPE)					
Barrel Last Accessible Date	07-Oct-2010			Could only access 3/4 of barrel due to water depth.	
Special Features					
Special Feature			7		
(Type : VERT STEEL STRUTS)					
Special Feature					
(Type :)					
Roof		4	6	The shape of this pipe looks very good. Barrel has been forced 'round' at U/S end to match CSP, reverts back to 5% ellipsed 4m from connection.	
Measured Rise (mm)	2564				
Measured At Ring No.	11				
Sag (mm)	12				
Percent Sag	0				
Sidewall		6	N	Barrel has been forced 'round' at U/S end to match CSP, reverts back to 5% ellipsed 4m from connection.	
Measured Span (mm)	2319				
Measured At Ring No.	11				
Deflection (mm)	3				
Percent Deflection	0				
Floor		6	N	Under water.	
Bulge (mm)	0				
Measured At Ring No.					
Abrasion (Y/N)	Yes				
Circumferential Seams		7	7		
Separation (mm)	0				
Longitudinal Seams		X	N	(Ring 8 & 9 from D/S cracked. R10 cracked both sides. 20/April/2000) Water too deep to view cracked rings. 1N.	
Total No. of Cracked Rings	2				
Total No. of Rings with Two Cracked Seams	0				
Min. Remaining Steel Between Cracks (mm)	58				
Proper Lap (Y/N)	No				
Longitudinal Stagger (Y/N)	Yes				
Coating		5	5		
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): 2314, Rise (mm): 2552, Type: SPE)				
Ponding (Y/N)	No			
Fish Passage Adequacy		2	4	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	G.R. was "3" due to cracked rings. Increased to "4" due to struts.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	Bevel is pushed to the west from fill pressure, minor. Last 3 rings heaved. Projects about 2m from fill.
Heaving (mm)	800			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	800			
Scour Protection		4	4	Loss of protection D/S around bevel.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		4	4	Outfall of 500mm with some loss of fill around bevel.
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	Meandering stream.
Bank Stability		5	5	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	NONE			
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) (%)	22.2/44.4	Sufficiency Rating (Last/Now) (%)	25.5/46.5	Est. Repl. Yr	2020	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	Monitor crack in rings 8, 9 & 10 from D/S end.		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	Jacob Oresile		Previous Assistant's Name				
Next Inspection Date	07-Jul-2012		Previous Inspection Date	25-Nov-2008			
Inspection Cycle (Default) (months)	21						
Comment							