Bridge Culvert Inspection

Bridge File Number	02036 -1 Bridge Culvert	Form Type	CUL1
Year Built	1967	Lot No.	4
Bridge or Town Name	EDMONTON	Inspector Name	Wade Nanninga
Located Over	GOLD BAR CREEK, 6.80, WATERCRS-ST	Inspector Class	BR CLS B
Located On	SHERWOOD PARK FREEWAY:02 R1 1.521;SHERWOOD PARK FREEWAY:02 L1 1.527	Assistant Name	
		Assistant Class	
Water Body Cl./Year		Inspection Date	07-Mar-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 30 TWP 52 RGE 23 W4M	Data Entry Date	23-Mar-2011
Longitude, Latitude	-113:22:16, 53:31:02	Reviewer Name	Arnold Assenheimer
Road Authority	Alberta Transportation (AIT)	Review Date	16-Mar-2011
Contract Main. Area	CMA09	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	9.5 /	Dept. Review Date	15-Apr-2011
AADT/Year	32,780 / 2009 (A)	Follow-Up By	
Road Classification	RCU-209G-90		
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1724	1901	SPE	87.2	152X51	3.0	ELLIPSE
Special Features		CONC FLOOR						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 lines to east/street lights.	Municipal	
Others	Traffic light to north.	Problem (Y/N)	Yes
Remarks	Exposed underground cable & suspended water gauge device @ inlet.-23-Jun-2009		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	South of BF 76092 interchange on 17th street. Crest curve. Typical grade separation.
Vertical Alignment		7	7	
Roadway Width (m)	9.500			9.5m roadway plus ramp @ structure, approach road 9.5.
Embankment		7	7	
Sideslope (__:1)	2.0			
(Height of Cover(m) : **5**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		5	N	Covered with snow/ice.
Heaving (mm)	250			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	75			
Scour Protection		7	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **450**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		**5**	**5**	GR carried fwd.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: SPE**)				
Barrel Last Accessible Date	23-Jun-2009			Ice 0.5m from crown-viewed from ends-shape appears ok.
Special Features				
Special Feature		7	N	
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		6	6	Dented roof R23. R23 damaged @ 10 o'clock. Thickness of concrete floor unknown. Sag unknown.-23-Jun-2009
Measured Rise (mm)	1555			
Measured At Ring No.	2			
Sag (mm)				
Percent Sag				
Sidewall		6	N	1698 @ ring 1.
Measured Span (mm)	1652			
Measured At Ring No.	23			
Deflection (mm)	72			
Percent Deflection	4			
Floor		6	N	Concrete floor installed Feb 16/08-23-Jun-2009
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	N	
Separation (mm)	0			
Longitudinal Seams		5	N	Cusping @ 2:00 position in numerous rings - photo. -23-Jun-2009
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			1N stagger. Rings 1-13 are staggered, the rest are not.--23-Jun-2009
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	N	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: SPE**)				
Fish Passage Adequacy		3	3	D/S bevel 0.75m above streambed.
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	GR carried fwd.

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		5	5	Minor dents.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	750			
Scour Protection		4	4	Gabion North side only, South side none. Loss of backfill around bevel. Bevel protrudes from fill 2.0m.
(Type : **GABION, NONE**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		4	4	Large scour hole 15m x 10m x 1m deep @ D/S end.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Meanders d/s.
Bank Stability		4	4	Vertical banks @ D/S end due to scour.
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		**4**	**4**	

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) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**39.6/39.6**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor cusping of longitudinal seams. Monitor d/s scour.	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	Shane Hall	Previous Assistant's Name			
Next Inspection Date	07-Dec-2015	Previous Inspection Date	23-Jun-2009		
Inspection Cycle (Default) (months)	57				
Comment					