

Bridge Culvert Inspection				
Bridge File Number	79085 -1 Bridge Culvert		Form Type	CULM
Year Built	1980		Lot No.	1
Bridge or Town Name	LEDUC		Inspector Name	Todd Warshawski
Located Over	2ND ORDER TRIBUTARY TO WHITEMUD CREEK, 6.95.3.3, WATERCRS-ST		Inspector Class	BR CLS B
Located On	2:32 R1 1.447;2:32 L1 1.459		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	19-Apr-2013
Legal Land Location	NW SEC 35 TWP 49 RGE 25 W4M		Data Entry By	Theresa Lacusta
Longitude, Latitude	-113:33:16, 53:16:35		Data Entry Date	01-May-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Eric Carcoux
Contract Main. Area	CMA11		Review Date	29-Apr-2013
Clear Roadway/Skew	17.2 /		Dept. Reviewer Name	
AADT/Year	47,040 / 2012 (A)		Dept. Review Date	
Road Classification	RAD-616.6-130		Follow-Up By	
Detour Length (km)	1			

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1800	CP	124.4			ROUND
2	MAIN	-	1430	CP	124.4			ROUND
Special Features								
Special Features Comment	Culvert connects to Leduc storm system, no d/s sections.							

Utilities (Located at)

Utility Attachments			
Telephone		Gas	30m North
Power	O/H power crosses pipe @ E. end.	Municipal	
Others		Problem (Y/N)	
Remarks	BF tag on West inlet.		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Gradual curve to the north.
Vertical Alignment	8	8	
Roadway Width (m)	43.000		Rest/parking area on West shoulder.
Embankment	7	7	
Sideslope (__:1)	5.0		
(Height of Cover(m) : 0.9)			
Guardrail (Y/N)	No		
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	X	X	
Collar	X	X	
Wingwalls	X	X	
(Shape :)			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Cutoff Wall		X	X	
Bevel End		X	X	End piece has spalled in a few places on the lip of culvert.
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	7	Very little rock, well vegetated.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		7	7	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: CP)				
Barrel Last Accessible Date	06-Jan-2003			Water/silt over hip waders. This barrel has a slight curve to it. CIP transition east r/w concrete pipe to concrete box culverts. No beaver control device present.
Special Features				
Special Feature				This barrel has a slight curve to it. CIP transition east r/w concrete pipe to concrete box culverts.
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	Viewed from U/S only, no evident problems.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		N	N	Viewed from U/S end. No evident problems. Shape appears good.
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	Silted over, 400mm silt.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	(One joint has minor spall near center line joint seperated 125 mm. Concrete placed on outside to stop infiltration at joint where pipe extended. 2003/01/06)
Separation (mm)	100			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: CP)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	N	
Icing (Y/N)	No			
Siltting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		N	N	(G.R. was 7 from 06/Jan/2003)
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		E		North culvert.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			(The D/S end is a transition box that joins with the City of Leduc. From the transition box going D/S is a 2 box cell culvert 1.3 m high & 1.8 m side. 90/11/09) Transition box not visible.
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		X	X	
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		X	X	
Beavers (Y/N)	No			
Downstream End General Rating		N	N	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	Concrete bevel end. Attached to pipe by 22mm dia bar.
Heaving (mm)	25			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		7	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	6	
Beavers (Y/N)	No			
Upstream End General Rating		6	6	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1430, Type: CP)				
Barrel Last Accessible Date	06-Jan-2003			South barrel. Ice to within 150mm of crown.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	Silted over. -Jan-2003
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	(One joint has minor spall near center line joint seperated 125 mm. Concrete placed on outside to stop infiltration at joint where pipe extended. 2003/01/06)
Separation (mm)	100			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1430, Type: CP)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	
Baffle		N	N	
(Type :)				
Waterway Adequacy		5	N	
Icing (Y/N)	No			
Siltting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		N	N	(G.R. was 7 from 06/Jan/2003 but old comments may refer to other culvert.)
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		E		See D/S end primary span.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		X	X	
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		X	X	
Beavers (Y/N)	No			
Downstream End General Rating		N	N	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		8	8	
HWM (m below Top of Culvert)	0.6			Water/ice-Apr-2013
Drift (Y/N)	No			South pipe flows full.

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	AGGRADING			
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							
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2014	Dewater for full inspection.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	55.6/55.6	Sufficiency Rating (Last/Now) (%)	46.5/61.1	Est. Repl. Yr	2032	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Culverts appear ok from u/s end. No settlement issues on Hwy 2. Complete file review to update structure d/s details.		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	19-Jan-2015		Previous Inspection Date	15-Jul-2011			
Inspection Cycle (Default) (months)	21						
Comment							