					Brida	e Culve	ert Insped	ction					
Bridge File Nu	mber	07331 -	1 Bridge Culve	rt	Dilag	e curve	Form Ty			CULM			
Year Built		1967	ago				Lot No.	<u> </u>		1			
Bridge or Town	n Name		_ION				Inspecto	r Name		Jason Saly			
Located Over			Y BEAR CREE	EK, 5.11, \	WATE	RCRS-	Inspecto			BR CLS A			
		ST					Assistan						
Located On		41:18 C	1 48.062		Assistant Class								
Water Body Cl	./Year						Inspection			28-Nov-2012			
Navigabil. Cl./	Year						Data En			Marcia Chavez			
Legal Land Lo	cation	NW SE	C 30 TWP 49 F	RGE 6 W4	IM.		Data En			15-Jan-2013			
Longitude, Lat	itude	-110:52	:18, 53:15:37				Reviewe			John O'Brien			
Road Authority	/	Alberta	Transportation	(AIT)			Review			15-Dec-2012			
Contract Main.	Area	CMA15					Dept. Re	eviewer N	Name	Andrew Smikl	es		
Clear Roadwa	y/Skew	10.5 / 2	0 deg. (RHF)				Dept. Re			17-Jan-2013			
AADT/Year		1,630 /	2011 (A)				Follow-L						
Road Classific	ation	RAU-21	0-110	)-110					5 op 5,				
Detour Length	(km)	38											
Bridge Culver													
Number of Cul	verts		2										
Pipe #	Barrel	·		Rise (or	Dia.) Type		l	Length		Corr. Profile	PI./Slab Thickness	Shape	
1	MAIN		2489	1753		RPP	(	38.4		152X51	3.5	PIPE ARCH	
2	MAIN		2489	1753			:	38.4		152X51	3.5	PIPE ARCH	
Special Features VERT STEEL STRUTS									·				
Special Featur													
•													
					Uti	ilities (L	Located a	it)					
Utility Attachments													
Telephone	West	West r/w.					Gas						
Power						Municipal Problem (Y/N) No							
Others					Problem (Y/N) No								
Remarks								-					
				A		oach Road / Embankment st Now Explanation of Condition							
					Last	Now	<u> </u>				O 1 104		
Horizontal Alignment				7	7	Land access 10m NW; approach entrance @ NW. +5% grades in both directions to crest curves.							
Vertical Alignm			7	7	Long sweeping horiz. curve through river valley passing over culverts. Roadway is superelevated over culverts. Good sight distance in both directions.								
Roadway Widt	:h (m)		10.500										
Embankment					N	N	Snow co	Snow covered.					
Sideslope (_	_:1)		3.0										
(Height of Co	over(m)	: 3)											
Guardrail (Y/N	)		No										
Approach Ro	ad / Eml	bankmeı	nt General Rat	ting	7	7							
						Upstre	am End						
Culvert Comp	onent				Last		Explana	tion of C	Condi	tion			
(Pipe # : <b>1, S</b> p		e: Prima	ry Span)				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Direction	710				W		South cu	ılvert.					
End Treatment Others, None)	t (Concr	ete, Stee	I, STEEL		.,		23411 00						
Headwall					Х	Х							
Collar					Х	X							

07331 -1 Bridge Culvert

			Unctro	nam End
Culvert Component				eam End Explanation of Condition
<u> </u>	( Snon)	Last	NOW	Explanation of Condition
(Pipe # : 1, Span Type: Primary	<i>i</i> Span)			
Wingwalls		X	X	-
(Shape: )			1 1/	
Cutoff Wall		X	X	
Bevel End		N	5	(Minor superficial rust on base. 16Aug2009).
Heaving (mm)	100	- 14		Bevel projects 300mm.
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection	200	N	N	(Minor erosion SW corner caused by poor entrance angle.
		IN	IN	16Aug2009) - Snow covered.
(Type: RIP RAP)				
(Avg. Rock Size(mm) : <b>300</b> )		NI NI	T NI	Coourage
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		N	5	
		_ Bri	dae Cu	llvert Barrel
Culvert Component			Now	
(Pipe # : 1, Primary Span, Locat	tion Code: MAIN Sn			· ·
Barrel Last Accessible Date	28-Nov-2012	<u> </u>	.,. = .00	( i i i i i i i i i i i i i i i i i i i
Darrer East /1000331bit Date	20 1407 2012			
Special Features				
Special Feature		N	7	
(Type: VERT STEEL STRUTS)				
Special Feature				
(Type:)				
Roof		N	4	Could not take measurements due to ice.
Measured Rise (mm)	1603			
Measured At Ring No.	8			(0.00) 101 0000
Sag (mm)	150			(8.6%. 16Aug2009).
Percent Sag	8			
Sidewall		2	2	(Crack longitudinal seam S side. 16Aug2009).
Measured Span (mm)	2575			Rating retained but seam not viewed since 16Aug2009. Covered by ice.
Measured At Ring No.	8			(3.5%. 16Aug2009).
Deflection (mm)	86			
Percent Deflection	4			
Floor		N	N	(Rocks throughout barrel. 16Aug2009) - Ice.
Bulge (mm)	0			- \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Measured At Ring No.	-			1
Abrasion (Y/N)	No			1
Circumferential Seams		N	N	(Circumferential seams are staggered at lower sidewall seams. Not
Separation (mm)	0	1 1	14	visible, under water. 16Aug2009).
Longitudinal Seams	<u> </u>	2	2	(Total of 16 rings. 16Aug2009).
Total No. of Cracked Rings	11			Rating retained but not viewed since 16Aug2009.
Total No. of Rings with Two Cracked Seams	0			R7/R8.
Min. Remaining Steel Between Cracks (mm)	30			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			Continuous at change in radius
Longitudinal Stagger (1/N)	1 53			Continuous at change in radius.

		Brid	lge Cul	lvert Barrel
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Locat	tion Code: MAIN, Spa	n (mm	): 2489	, Rise (mm): 1753, Type: RPP)
Coating		N	5	Superficial rust from bolt holes and lower 1/3; worst corrosion at
Corrosion By Soil (Y/N)	Yes			sidewall to corner plate seam. Scaling under normal waterline.
Corrosion By Water (Y/N)	Yes			County and normal watering.
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		Х	Х	
(Type:)				
Waterway Adequacy		N	5	(Some rocks throughout barrel. 16Aug2009).
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		2	2	
		D	ownstr	eam End
Culvert Component		Last	Now	Explanation of Condition
(Pipe #: 1, Span Type: Primary	Span)			
Direction		E		South culvert.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		Х	Х	
Collar		Х	Х	
Wingwalls		Х	X	
(Shape: )				
Cutoff Wall		Х	Х	
Bevel End		N	6	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	N	Snow covered.
(Type: RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	N	Snow/ice covered.
Beavers (Y/N)	No		'	
Downstream End General Ratin	ng	N	6	
			Up <u>stre</u>	am End
Culvert Component		Last		Explanation of Condition
(Pipe #: 2, Span Type: Second	ary Span)			
Direction		W		North culvert.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		Х	Х	
Collar		Х	Х	

07331 -1 Bridge Culvert

			Llmotro	eam End
Culvert Component				Explanation of Condition
(Pipe # : 2, Span Type: Second	Hary Span)	Lasi	INOW	Explanation of Condition
	Jary Spari)		l v	
Wingwalls		X	X	
(Shape: ) Cutoff Wall		X	X	
Cuton wan		^	_ ^	
Bevel End		N	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	N	Snow covered.
(Type : RIP RAP)			_	
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		N	5	
		Brid	dae Cu	llvert Barrel
Culvert Component				Explanation of Condition
•	ocation Code: MAIN.			489, Rise (mm): 1753, Type: RPP)
Barrel Last Accessible Date	28-Nov-2012			
Barror Eact / toocoolbio Bato	20 1107 2012			
Special Features				
Special Feature		N	7	
(Type: VERT STEEL STRUTS)				
Special Feature				
(Type:)				
Roof	_	N	4	Could not take measurements due to ice.
Measured Rise (mm)	1600			
Measured At Ring No.	8			(0.70/_4040000)
Sag (mm)	153			(8.7%. 16Aug2009).
Percent Sag	9			
Sidewall		2	2	(Crack in long. seam in S side. 16Aug2009).
Measured Span (mm)	2560			Rating retained but not viewed since 16Aug2009. Could not get accurate mesurements due to ice levels.
Measured At Ring No.	8			(2.8%. 16Aug2009).
Deflection (mm)	71			
Percent Deflection	3			
Floor		N	N	(Rocks in barrel floor. 16Aug2009) - Ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	(Circumferential seams are staggered at lower sidewall seams. Not
Separation (mm)	0			visible, under water. 16Aug2009).
Longitudinal Seams		2	2	(Total of 16 rings. 16Aug2009).
Total No. of Cracked Rings	11			Rating retained but not viewed; seam below ice level.
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	40			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			Continuous at change in radius.

		Brid	dge Cu	Ivert Barrel
Culvert Component				Explanation of Condition
(Pipe # : 2, Secondary Span, Lo	ocation Code: MAIN, S	Span (r	nm): 24	489, Rise (mm): 1753, Type: RPP)
Coating		N	5	Superficial rust from bolt holes and lower 1/3; worst visible corrosion
Corrosion By Soil (Y/N)	Yes			at sidewall to corner plate seam. (Scaling below springline. 16Aug2009).
Corrosion By Water (Y/N)	Yes			(Coaming colon opiniginio. For lag2000).
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		Х	Х	
(Type:)				
Waterway Adequacy		N	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		2	2	
		D	ownstr	ream End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Second	lary Span)			
Direction		Е		North culvert.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		Х	Х	
Collar		Х	Х	
Wingwalls		Х	Х	
(Shape: )				
Cutoff Wall		Х	Х	
Bevel End		N	6	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Ratio	ng	N	6	
			Structu	re Usage
			Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		N	N	(Low water entrance to S pipe marginal causing erosion on SW corner. Low banks. Channel leading to N channel not well defined. Main channel leading to S culvert. Drains into dugout @ E. 16Aug2009). Snow covered.
Bank Stability		N	N	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			

		e Usage							
		Last	Now	Explanation of Condition					
Channel Bottom Degrading/Aggrading				Unknown.					
Beavers (Y/N) No									
(Fish Compensation Measure 1 :	NONE)								
(Fish Compensation Measure 2 :	NONE)								
<b>Channel General Rating</b>		5	5	GR carried forward from 16Aug2009 based on alignment.					

07331 -1 Bridge Culvert

Alberta Transportation

		Maintenance R	Maintenance Recommendations				
Inspector Recommendations	Year	Inspector Comments	Department Comments	Somments	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	2013	Dewater, complete Lvl 2 culvert inspection.	pection.				
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	1) 22.2/22.2	2 Sufficiency Rating (Last/Now) (%)	Now) 48.1/36.1	Est. Repl. Yr 2020	Maint. Reqd. (Y/N)		Yes
Special Inspect at 12mth cycle or after high water event. Comments for LRA issued 06Dec2012.  Next Inspection	e or after high 12.	water event.	Department Comments				
Maintenance Reviewed By			Date		Estimated Total	0 1	
Proposed Long-Term Strategy	004.05.29 Sou	2004.05.29 South Culvert has 11 cracked ringd, north culvert has 12 cracked rings. Both culverts are strutted. Should be good until 2017.	h culvert has 12 cracked r	ings. Both culverts are strutted	. Should be good	d until 2017.	
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Jason Saly		Previous Assistant's Name	ne			
Next Inspection Date	28-Aug-2014		Previous Inspection Date	e 07-Mar-2011			
Inspection Cycle (Default) (months)	21						
Comment							

					Mainte	nance Rec	ommend	lations						
Inspector Recomm	endations		Year	Inspecto	or Comments			Department C	Comme	ents		Target Year	Est. Cost	Cat #
SHOTCRETE REP	PAIRS													
PLACE ADDITION	AL RIP RAP													
REMOVE DRIFT A	CCUMULATION													
INSTALL CONCRE	TE/STEEL LINING	G												
INSTALL STRUTS														
INSTALL CONCRE	TE COLLAR/CUT	OFF												
REPAIR SEAMS														
OTHER ACTION			2013	Dewater	r, complete Lvl 2 c	ulvert inspe	ection.	Defer. Struts I	Funcit	ioning Well.				
OTHER ACTION														
OTHER ACTION														
OTHER ACTION														
OTHER ACTION														
Structural Condition Rating (Last/Now)			22.2/22	.2	Sufficiency Rati	ing (Last/N	low)	48.1/36.1	E	st. Repl. Yr	2020	Maint. Re	eqd. (Y/N)	Yes
Special Comments for Next Inspection  Inspect at 12mth cycle or a LRA issued 06Dec2012.			after high	n water ev	ent.			Department Comments	Low Curre	Risk due to stru ently scheduled	ts & high in PMA t	i fill. Inspect on to be replaced	regular BIM in 2018.	1 cycle.
Maintenance Reviewed By Chris			Black			Date	29-A	pr-2013		Estimated Tota	al O			
				uth Culve	rt has 11 cracked	ringd, north	n culvert	has 12 cracked		•				017.
On 3-Year Program	On 3-Year Program (Y/N)													
Proposed Action														
Previous Inspector	's Name	Jason	Saly			ı	Previous	Assistant's Nar	ne					
Next Inspection Da	ate	28-Aug	g-2014				Previous	us Inspection Date 07-Mar-2011						
Inspection Cycle (I	Default) (months)	21												
Comment	, i													