					Brido	ie Culve	ert Inspe	ction					
Bridge File Nur	nber	75734 -	1 Bridge Culve				Form Ty			CULM			
Year Built		1969	U				Lot No.	•		1			
Bridge or Town	Name	CASTO	R				Inspecto	or Name		Owen Salava			
Located Over), WATER	CRS-	ST	Inspecto	or Class		BR CLS A			
Located On	Aridge or Town NameCASTOR CREEK, 5.20, WALocated Over $36:12 C1 59.491$ Nater Body CI./Year $36:12 C1 59.491$ Nater Body CI./Year $112 C1 59.491$ Legal Land LocationNW SEC 6 TWP 37 RGE 13Longitude, Latitude $-111:51:43, 52:09:04$ Road AuthorityAlberta Transportation (AIT)Contract Main. AreaCMA21Clear Roadway/Skew $11 /$ AADT/Year $1,100 / 2011 (A)$ Road ClassificationRAU-211.8-110Detour Length (km) 3 Bridge Culvert InformationSpanNumber of Culverts 3 Pipe #BarrelSpanNaIN24902MAIN231114753Special FeaturesSpecial FeaturesSpecial FeaturesSpecial FeaturesSpecial FeaturesClephoneEast r/w.Power 3 wires 20m East of c/l.Others 3 wires 20m East of c/l.ChersAnarksAdage Width (m) 10.600						nt Name						
Water Body Cl.	/Year						Assistar	nt Class					
							Inspecti	on Date		16-Jul-2012			
		NW SE	C 6 TWP 37 R	GE 13 W4	М		Data En			Marcia Chave	Z		
		-111:51	:43, 52:09:04					try Date		02-Aug-2012			
			STOR CREEK, 5.20, WATE 2 C1 59.491 SEC 6 TWP 37 RGE 13 W :51:43, 52:09:04 rta Transportation (AIT) \Lambda21 0 / 2011 (A) I-211.8-110 1 3 Span 2490 1752 2311 1475 2311 1473				Reviewer Name		John O'Brien				
				<u> </u>			Review Date		31-Jul-2012				
Clear Roadway	//Skew	11/					Dept. R	eviewer	Name	Andrew Smikles			
AADT/Year		1.100 / 2	2011 (A)				· ·	eview Da		07-Aug-2012			
	ation		· · · · ·				Follow-l						
Detour Length	(km)							-1 2					
		ation								1			
			3										
Pipe #	Barrel		Span	Rise (or I	Dia.)	Туре		Length		Corr. Profile	PI./Slab Thickness	Shape	
1	MAIN		2490	1752		RPP		23.7		152X51	3.5	PIPE ARCH	
2	MAIN		2311	1475		СРА		25.6				ARCH	
3	MAIN		2311	1473		СРА				ARCH			
Special Feature													
Special Feature	es Comi	ment											
					Ut	ilities (L	_ocated a	at)					
Utility Attachme	ents						Gas		1				
Telephone													
Power	3 wire	s 20m East of c/l.					Municip						
Others	_						Problem (Y/N) No						
Remarks													
							d / Emba		0	(!			
					Last	Now	Explana	ation of	Condi	tion			
					8	8	-						
			10,600		8	8	Mido or	ook diroo		ove SPCSP arc	h ning full wid		
Roadway widtr	n (m)		10.600				vvide cr	ack direc	city abo	ove SPCSP ard	n pipe, full wid	Ith of ACP.	
Embankment					N	8							
Sideslope (_:1)		3.0				1						
(Height of Co	,	: 1.2)					1						
Guardrail (Y/N)	. ,		No										
Approach Roa	d / Eml	bankmei	nt General Rat	ing	8	8							
						Upstre	am End						
Culvert Comp	onent				Last		Explana	ation of	Condi	tion			
(Pipe # : 1 , Sp		e: Prima	ry Span)										
Direction					W		South p	ipe. SPC	SP ar	ch. 300m South	n of CP pipes.		
End Treatment Others, None)	(Concre	ete, Stee	I, STEEL										
Headwall					Х	X							
Collar					Х	X							
Wingwalls					Х	Х							
(Shape :)						Desig	1 of 8						

				am End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary	/ Span)		1	
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Upstream End General Rating	1	N	6	
		Bri	d <u>ge Cu</u>	Ivert Barrel
Culvert Component				Explanation of Condition
(Pipe # : 1, Primary Span, Loca	tion Code: MAIN, S	Span (mm		
Barrel Last Accessible Date	27-Aug-2009			South barrel. 300m South of CP pipes. Water 0.75m deep; viewed from ends, shape OK.
Special Features				
Special Feature				
(Type:)		I		
Special Feature				
(Type:)		I		
Roof		N	N	(Roof has isolated small perforations. Roof seam flattening.
Measured Rise (mm)	1775			27Aug2009).
Measured At Ring No.	3			
Sag (mm)	26			
Percent Sag	1			(1.5%. 27Aug2009).
Sidewall		N	N	(Sidewall has large multiple perforations. Largest was 75x90 in 2003,
Measured Span (mm)	2470			now 100x 120. Most at springline height in R1 & R2 - photo. In strips
Measured At Ring No.	3			as measured from D/S crown 16-20, 28-32, 41-43, 50-53 ft, typically from sidewall seam to 3N above @ both sides of culvert.
Deflection (mm)	20			0.8%. 27Aug2009).
Percent Deflection	1			
Floor		N	N	
Bulge (mm)	0			1
Measured At Ring No.				1
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			1
Longitudinal Seams		N	N	(Invert seams not visible. 27Aug2009).
Total No. of Cracked Rings	0		-	
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				(Long. stagger only at crown. 27Aug2009).
Proper Lap (Y/N)	No			1
Longitudinal Stagger (Y/N)	No			1
Coating		N	N	(Perforations, scaling lower half. 27Aug2009).
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			1

		Brid	dae Cu	Ivert Barrel
Culvert Component		Last		Explanation of Condition
(Pipe # : 1, Primary Span, Loca	tion Code: MAIN, S	pan (mm		
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			
Fish Passage Adequacy		7	7	
Baffle		X	Х	
(Туре :)				
Waterway Adequacy		N	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	GR carried forward from 27Aug2009 based on roof, sidewall ratings.
		D	ownstr	ream End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary	v Span)			
Direction		E		South pipe. 300m South of CP pipes.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	Х	
Collar		X	X	
Wingwalls		X	Х	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		N	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Ratin	ng	N	6	
				am End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Second	ary Span)			
Direction		W		South barrel.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		Х	Х	
(Shape :)				
Cutoff Wall		X	X	

	1			eam End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Second	lary Span)			
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		N	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Upstream End General Rating		N	6	
Output On				Ivert Barrel
Culvert Component		Last		Explanation of Condition
		i, Span (i	mm): 2	311, Rise (mm): 1475, Type: CPA)
Barrel Last Accessible Date	27-Aug-2009			South barrel. 0.7m water in pipe; viewed from ends, shape OK.
Special Features				
Special Feature				
(Туре :)				_
Special Feature				
(Туре :)				
Roof		N	N	
Measured Rise (mm)	1460			
Measured At Ring No.	5			
Sag (mm)	15			
Percent Sag	1			
Sidewall		N	N	
Measured Span (mm)	2260			
Measured At Ring No.	6			
Deflection (mm)	51			(2.2%. 27Aug2009).
Percent Deflection	2			
Floor		N	N	Water covered.
Bulge (mm)	0		-1	1
Measured At Ring No.				1
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			1
Longitudinal Seams		Х	Х	
Total No. of Cracked Rings				1
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				1
Longitudinal Stagger (Y/N)				1
Coating		X	X	
Corrosion By Soil (Y/N)			~	
Corrosion By Water (Y/N)				-
Camber POS/ZERO/NEG	NEG			

		Brid	dge Cu	lvert Barrel
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Lo	cation Code: MAIN, S	Span (r	nm): 23	311, Rise (mm): 1475, Type: CPA)
Ponding (Y/N)	Yes			
Fish Passage Adequacy		7	7	Rating carried forward.
Baffle		Х	Х	
(Type:)				
Waterway Adequacy		N	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	N	GR was 6 from 27Aug2009 based on roof & sidewall ratings.
		D	ownstr	eam End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Second	ary Span)			
Direction		E		South barrel.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		Х	Х	
Collar		X	X	
Wingwalls		Х	Х	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400		1	
Scour Protection		N	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)		1	1	
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Ration	ng	N	6	
				am End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Second	ary Span)			
Direction	1	W		North CP pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		Х	Х	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	0			

				am End
Culvert Component	lony Spor	Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Second				
Invert Above/Below Stream Bed				-
Above/Below (mm)	400		0	
Scour Protection		N	6	
(Type : RIP RAP)				-
(Avg. Rock Size(mm) : 300)			-	
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Upstream End General Rating		N	6	
		Brid	dge Cu	lvert Barrel
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Lo	ocation Code: MAI	N, Span (r	nm): 2	311, Rise (mm): 1473, Type: CPA)
Barrel Last Accessible Date	27-Aug-2009			North barrel. 0.7m water in pipe; viewed from ends, shape OK.
Special Features				
Special Feature				
(Type :)		1		
Special Feature				
(Туре :)				
Roof		N	N	_
Measured Rise (mm)	1460			
Measured At Ring No.	5			
Sag (mm)	13			
Percent Sag	1			
Sidewall		N	N	
Measured Span (mm)	2260			
Measured At Ring No.	5			
Deflection (mm)	51			
Percent Deflection	2			
Floor		N	N	(Water covered. 27Aug2009).
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		Х	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		X	Х	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			

		Brid	lge Cu	Ivert Barrel
Culvert Component				Explanation of Condition
(Pipe # : 3, Secondary Span, Lo	cation Code: MAIN	N, Span (n	nm): 23	311, Rise (mm): 1473, Type: CPA)
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type:)				
Waterway Adequacy		N	N	
Icing (Y/N)	No			
Silting (Y/N)	No			-
Drift (Y/N)	No			-
Barrel General Rating		N	N	GR was 6 from 27Aug2009 based on roof & sidewalls.
Barrer General Kating				on was o nom 27/lag2000 based on roor a sidewans.
				ream End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Second	ary Span)			
Direction	1	E		North CP pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	Х	
Wingwalls		X	Х	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		N	6	
(Type : RIP RAP)				_
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Ratir	ng	N	6	
		S	tructu	re Usage
				Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	U/S channel very shallow on CPA pipes.
Bank Stability		N	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 :	NONE)			
(Fish Compensation Measure 2 :	NONE)			
Channel General Rating		7	7	

Alberta Transportation	

		Maintenance Recommendations	ecommenda	tions					
Inspector Recommendations	Year	Inspector Comments		Department Comments	nents	<u> </u>	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS									
PLACE ADDITIONAL RIP RAP									
REMOVE DRIFT ACCUMULATION									
INSTALL CONCRETE/STEEL LINING									
INSTALL STRUTS									
INSTALL CONCRETE COLLAR/CUTOFF	ш								
REPAIR SEAMS									
OTHER ACTION	2012	Bridge assessement for RPP pipe, if not already done.	if not						
OTHER ACTION									
OTHER ACTION									
OTHER ACTION									
Structural Condition Rating (Last/Now) (%)	() 33.3/33.3	3 Sufficiency Rating (Last/Now) (%)		58.6/60.5	Est. Repl. Yr	2014	Maint. Reqd. (Y/N)		Yes
Special SPCSP arch will require liner or replacement in teh next s Comments for of roof & sidewalls; monitor perforations, appears to have Next Inspection	ire liner or repl onitor perforati	acement in teh next several yrs due to corrosion ons, appears to have stabilized.	to corrosion	Department Comments					
Maintenance Reviewed By				Date		ESI	Estimated Total	0	
Proposed Long-Term Strategy 2	NH to review fo 004.05.30 Cor	DH to review for liner by HMC in 2012. RS 2004.05.30 Concrete culverts should be ok until 204	4. Steel culve	ert should be ok ur	2. RS be ok until 2044. Steel culvert should be ok until 2014. Monitor corrosion normal BIM.	rrosion no	rmal BIM.		
On 3-Year Program (Y/N)									
Proposed Action									
Previous Inspector's Name	Jason Saly		Previous A	Previous Assistant's Name					
Next Inspection Date 1	16-Apr-2014		Previous Ir	Previous Inspection Date	08-Mar-2011				
Inspection Cycle (Default) (months) 2	21								
Comment									

		Maintenance Recom	nmendations						
Inspector Recommendations	Year	Inspector Comments	Department (Comme	nts		Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS									
PLACE ADDITIONAL RIP RAP									
REMOVE DRIFT ACCUMULATION									
INSTALL CONCRETE/STEEL LINING	G								
INSTALL STRUTS									
INSTALL CONCRETE COLLAR/CUT	OFF								
REPAIR SEAMS									
OTHER ACTION	2012	Bridge assessement for RPP pipe, if not already done.	t programmed	liner			2013		
OTHER ACTION									
OTHER ACTION									
OTHER ACTION	ER ACTION								
Structural Condition Rating (Last/Now)33.3/33.3Sufficiency Rating (Last/ (%)			v) 58.6/60.5	58.6/60.5 Est. Repl. Yr 2014			Maint. Reqd. (Y/N) Yes		
Special Comments for Next Inspection	ed. Department Comments	Progra	ammed installa	ition of lir	er by HMC in 2	2013. DA			
Maintenance Reviewed By	Darron Ahlste	dt	Date	ate 27-Nov-2012 Estimate				I 0	
Proposed Long-Term Strategy	DH to review 1 2004.05.30 C	or liner by HMC in 2012. RS oncrete culverts should be ok until 2044. S	Steel culvert should b	e ok un	til 2014. Monito	or corrosi	on normal BIM	•	
On 3-Year Program (Y/N)									
Proposed Action									
Previous Inspector's Name	Jason Saly	Pre	vious Assistant's Na	me					
Next Inspection Date	16-Apr-2014	Pre	vious Inspection Dat	te	08-Mar-2011				
Inspection Cycle (Default) (months)	21								
Comment									