					Billag	e Cuive	rt Inspe	ection					
Bridge File Nun	nber	78015	-1 Bridge Culver	t			Form Type		CULM				
Year Built		1993					Lot No.		4				
Bridge or Town	Name	HAY LA	AKES				Inspec	or Name	Owen Salava	Owen Salava			
Located Over		TRIBU [*] WATER	TARY TO BITTE RCRS-ST	RN LAK	E, 20.1	,	Inspector Class Assistant Name		BR CLS A	BR CLS A			
Located On		616:10	C1 22.392										
Water Body Cl.	/Year	ear						nt Class	20 Feb 2012				
Navigabil. Cl./Y	'ear						Data E	ion Date	20-Feb-2013 Marcia Chave				
Legal Land Loc	ation	SW SEC 16 TWP 48 RGE 22 V											
Longitude, Latit	tude	-113:09	9:36, 53:08:04					ntry Date ver Name	John O'Brien				
Road Authority		Alberta	Transportation	(AIT)			Review		28-Feb-2013				
Contract Main.	Area	CMA16	·						e Chris Black				
Clear Roadway	/Skew	11.3 / 1	7 deg. (RHF)					Reviewer Nam	14-Mar-2013				
AADT/Year		200 / 20					Follow-		14-Wai-2013				
Road Classifica	ation	RCU-2	09-110				LOHOW-	ор Бу					
Detour Length	(km)	6											
Bridge Culvert	Inform	ation											
Number of Culverts 3													
Pipe #	Barrel		Span	Rise (or	Dia.)	Туре		Length	Corr. Profile	PI./Slab Thickness	Shape		
1	MAIN		2100	1400		FP		43	68X13	2.8	ARCH		
2	MAIN		2100	1400		FP		43	68X13	2.8	ARCH		
3	MAIN 2100 1400			1400		FP		43	68X13	2.8	ARCH		
Special Feature	es		VERT STEEL S	STRUTS									
Special Feature	es Comr	ment											
					Uti	lities (L	ocated.	at)					
Utility Attachments													
Otility Attacrime	#IIIS						1						
Telephone	ents						Gas						
							Munici						
Telephone Power Others	ents												
Telephone Power	ents						Municip Proble	m (Y/N) No					
Telephone Power Others	ents			A			Municip Probles	m (Y/N) No					
Telephone Power Others Remarks				A	Last	Now	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	lition				
Telephone Power Others Remarks Horizontal Align	nment			A	Last 7	Now 7	Municip Problem / Emba	m (Y/N) No	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm	nment		44 200	A	Last	Now	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	lition				
Telephone Power Others Remarks Horizontal Align	nment		11.300	A	Last 7	Now 7	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment	nment ent n (m)			A	Last 7	Now 7	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (nment ent n (m)		11.300	A	7 8	7 8	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope ((Height of Co	nment ent n (m)	2.5)	3.0	A	7 8	7 8	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (nment ent n (m)	2.5)		A	7 8	7 8	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (nment ent n (m)	,	3.0		7 8	7 8	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (nment ent n (m)	,	3.0 No		8 8	Now 7 8 8 8 7	Municip Problem / Emba	n (Y/N) No ankment ation of Cond	dition				
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (nment ent n (m) _:1) ver(m) :	,	3.0 No		8 8	Now 7 8 8	Municip Probled / Emba Explan Field e	n (Y/N) No ankment ation of Cond					
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (ent ent (m) :1) ver(m) :	oankme	3.0 No nt General Rati		8 8	Now 7 8 8	Municip Probled / Emba Explan Field e	ankment ation of Condentrance to NE					
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (ent ent (m) :1) ver(m) :	oankme	3.0 No nt General Rati		8 8	Now 7 8 8	Municip Probled / Emba Explan Field e	ankment ation of Cone ntrance to NE					
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (ent ent (m) :1) ver(m):	oankme	3.0 No nt General Rationary Span)		8 8 8	Now 7 8 8	Municip Probled Frobled Explan Field e	ankment ation of Cone ntrance to NE					
Telephone Power Others Remarks Horizontal Align Vertical Alignm Roadway Width Embankment Sideslope (ent ent (m) :1) ver(m):	oankme	3.0 No nt General Rationary Span)		8 8 8	Now 7 8 8	Municip Probled Frobled Explan Field e	ankment ation of Cone ntrance to NE					

		Linotro	sem End
			Explanation of Condition
(Snon)	Last	INOW	Explanation of Condition
y Span)			
	X	X	
	X	X	
	7	7	
0			
			At S.B.
0			
	N	N	Snow covered.
	N	N	Snow covered.
	.,		Onew services.
No			
'	7	7	
	Brid	dae Cu	Nyart Barral
			Explanation of Condition
tion Code: MAIN Sn:			· ·
	(.y. <u>- 100</u>	
20-Feb-2013			
		7	New Feb 2013.
	3	3	
1200			Near R2/3 coupler.
2			Trour N2/0 couplor.
200			14.2%
14			
	5	5	
40			
2			
140			6.3%
6			
	5	5	Localized approx 25mm for most of pipe.
60			1
5			
No			
	6	6	
60			1
	X	X	
	, ,		-
	1200 2 200 14 40 2 140 6	N N N N N N N N N N	X X X X X X X X X X

		Bric	lge Cu	Ivert Barrel
Culvert Component		Last	Now	Explanation of Condition
(Pipe #: 1, Primary Span, Locat	tion Code: MAIN, Spa	n (mm): 2100	, Rise (mm): 1400, Type: FP)
Coating		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		Х	Х	
(Type:)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	5	Increase due to steel struts.
- and control and training				
				eam End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary	[/] Span)			
Direction		S		West pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		Х	X	
Collar		Х	Х	
Wingwalls		X	X	
(Shape:)				
Cutoff Wall		Х	Х	
Bevel End		X	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				At S.B.
Above/Below (mm)	0			
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	7	
			Upstre	am End
Culvert Component				Explanation of Condition
(Pipe # : 2, Span Type: Second	ary Span)			•
Direction		N		Center
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		Х	Х	
Collar		Х	Х	

78015 -1 Bridge Culvert

			Linotro	om End
Culvert Component				eam End Explanation of Condition
(Pipe # : 2, Span Type: Second	long Span\	Lasi	INOW	Explanation of Condition
	ary Spari)	X	V	
Wingwalls		X	X	
(Shape:)			V	
Cutoff Wall		X	X	
Bevel End		7	5	Bend at NE shoulder.
Heaving (mm)	0			
Invert Above/Below Stream Bed				At S.B.
Above/Below (mm)	0			
Scour Protection		N	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				-
Scour/Erosion		N	N	Snow covered.
COGUITETOSION		- 1	'`	Onew covered.
Beavers (Y/N)	No			
Upstream End General Rating		7	5	
		Bri	dae Cu	llvert Barrel
Culvert Component				Explanation of Condition
-	ocation Code: MAIN.			100, Rise (mm): 1400, Type: FP)
Barrel Last Accessible Date	20-Feb-2013			Location marked in culvert.
Darrot Lact / tooccolbic Date	20 1 00 2010			255aust marked in odivers.
Special Features				
Special Feature			7	New Feb 2013.
(Type: VERT STEEL STRUTS)				
Special Feature				
(Type:)				
Roof		3	3	
Measured Rise (mm)	1220			
Measured At Ring No.	3			
Sag (mm)	180			12.9%
Percent Sag	13			12.570
Sidewall		5	5	
Measured Span (mm)	2225			
Measured At Ring No.	4			
Deflection (mm)	125			
Percent Deflection	6			
Floor	-	5	5	Some bulge along most of length.
Bulge (mm)	50	3		_ Some surge along most of longth.
Measured At Ring No.	3			-
Abrasion (Y/N)	No			-
	INO	-	6	
Circumferential Seams	60	6	6	-
Separation (mm)	60		\ \ <i>\</i>	
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)				

		Brio	lge Cu	Ivert Barrel
Culvert Component		Last	Now	Explanation of Condition
(Pipe #: 2, Secondary Span, Lo	cation Code: MAIN, S	pan (n	nm): 21	100, Rise (mm): 1400, Type: FP)
Coating		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		Х	Х	
(Type:)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	5	Increase due to steel struts.
- and control and training				
				ream End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Second	ary Span)			
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		Х	X	
Wingwalls		X	X	
(Shape:)				
Cutoff Wall		Х	X	
Bevel End		X	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				At S.B.
Above/Below (mm)	0			
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	7	
			U <u>pstre</u>	am End
Culvert Component		Last		Explanation of Condition
(Pipe # : 3, Span Type: Second	ary Span)			
Direction		N		East pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		Х	Х	
Collar		Х	Х	

			linetre	eam End
Culvert Component				Explanation of Condition
(Pipe # : 3, Span Type: Second	lary Span)	Last	11011	Explanation of Condition
Wingwalls	ury opany	X	X	
(Shape:)				
Cutoff Wall		X	X	
Odion vvan				
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				At streambed.
Above/Below (mm)	0			
Scour Protection		N	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	N	Snow covered.
	1			
Beavers (Y/N)	No			
Upstream End General Rating	J.	7	7	
				Ivert Barrel
Culvert Component				Explanation of Condition
	cation Code: MAIN,	Span (r	nm): 2	100, Rise (mm): 1400, Type: FP)
Barrel Last Accessible Date	20-Feb-2013			
Special Features				
Special Feature			7	New Feb 2013.
(Type : VERT STEEL STRUTS)				146W 1 65 2010.
Special Feature				
(Type:)				
Roof		3	3	
Measured Rise (mm)	1210	3	3	
				At R2/3 coupler.
Measured At Ring No.	190			-
Sag (mm)	14			13.6%
Percent Sag	14			
Sidewall On an (com)	0000	5	5	-
Measured Span (mm)	2230			-
Measured At Ring No.	4			-
Deflection (mm)	130			6.2%
Percent Deflection	6	_	-	
Floor	 	5	5	Minor center bulge most of length.
Bulge (mm)	30			-
Measured At Ring No.	4			
Abrasion (Y/N)	No			
Circumferential Seams	1	6	6	
Separation (mm)	60			
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)				

78015 -1 Bridge Culvert

	Bridge Culvert Barrel								
Culvert Component		Last	Now	Explanation of Condition					
(Pipe #: 3, Secondary Span, Lo	cation Code: MAIN, S	Span (n	nm): 21	100, Rise (mm): 1400, Type: FP)					
Coating		5	5						
Corrosion By Soil (Y/N)	Yes								
Corrosion By Water (Y/N)	Yes								
Camber POS/ZERO/NEG	ZERO								
Ponding (Y/N)	No								
Fish Passage Adequacy		5	5						
Baffle		Х	Х						
(Type:)									
Waterway Adequacy		7	7						
Icing (Y/N)	No								
Silting (Y/N)	No								
Drift (Y/N)	No								
Barrel General Rating		3	5	Increase due to steel struts.					
		D	ownstr	ream End					
Culvert Component		Last	Now	Explanation of Condition					
(Pipe #: 3, Span Type: Second	lary Span)								
Direction		S							
End Treatment (Concrete, Steel, Others, None)	STEEL								
Headwall		Х	Х						
Collar		Х	Х						
Wingwalls		Х	Х						
(Shape:)									
Cutoff Wall		Х	Х						
Bevel End		Х	7						
Heaving (mm)	0								
Invert Above/Below Stream Bed				At S.B.					
Above/Below (mm)	0								
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	7						
		s	tructu	re Usage					
				Explanation of Condition					
Channel (U/S and D/S)									
Alignment		7	7						
Bank Stability		7	7						
HWM (m below Top of Culvert)				HWM not visible.					
Drift (Y/N)	No								

Structure Usage								
Last Now Explanation of Condition								
Channel Bottom Degrading/Aggrading	DEGRADING							
Beavers (Y/N)	No							
(Fish Compensation Measure 1 :	NONE)							
(Fish Compensation Measure 2 :	NONE)							
Channel General Rating 7								

		Maintanana	e Recommenda	tions					
Inspector Recommendations	Year	Inspector Comments		Department Comn	nents		Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS	i eai	Inspector Comments		Department Comi	Henris		Target Tear	ESI. COSI	Cal #
PLACE ADDITIONAL RIP RAP									+
REMOVE DRIFT ACCUMULATION									+
INSTALL CONCRETE/STEEL LINING	3								+
INSTALL STRUTS									+
INSTALL CONCRETE COLLAR/CUT	OFF								1
REPAIR SEAMS									
OTHER ACTION									
OTHER ACTION									
OTHER ACTION									
OTHER ACTION									
Structural Condition Rating (Last/N (%)	low) 33.3/55	.6 Sufficiency Rating (L	ast/Now) 55	5.8/65.6	Est. Repl. Yr	2033	Maint. Re	qd. (Y/N)	No
Special No action for sag, Comments for Next Inspection	pipes are strutted	d - monitor.		Department Comments					
Maintenance Reviewed By				Date		E	stimated Total	I 0	
Proposed Long-Term Strategy									
On 3-Year Program (Y/N)									
Proposed Action									
Previous Inspector's Name	Owen Salava		Previous As	ssistant's Name					
Next Inspection Date	20-May-2016		Previous In	spection Date	01-Mar-2010				
Inspection Cycle (Default) (months)	39								
Comment									