					2rida	o Culve	ert Inspe	etion						
Bridge Eile Nur	mhor	70470	1 Bridge Culve		<u>ənia</u> g	e Cuive	Form T			CULM				
Bridge File Number 70479 -1 Bridge Culvert Year Built 1990								off No. 1						
Bridge or Town	Nama	MORRI	NI				Inspector Name			Owen Salava				
Located Over	IIVallie		ARY TO WES	T MICHICE	41 CB	FFK	1	or Class	:	Owen Salava BR CLS A				
Located Over		3.35.2.4	, WATERCRS	-ST		· L L I X,		nt Name		DIX OLO A				
Located On		27:10 C	1 35.934					nt Class						
Water Body Cl.	./Year							ion Date		25-Oct-2012				
Navigabil. Cl./Y	'ear							Data Entry By Marcia Chavez						
Legal Land Loc	cation	SW SE	C 14 TWP 31 R	RGE 20 W4	М			Data Entry By Marcia Chavez  Data Entry Date 08-Nov-2012						
Longitude, Lati	tude	-112:44	:12, 51:38:56					er Name		John O'Brien				
Road Authority		Alberta	Transportation	(AIT)				deview Date 30-Oct-2012						
Contract Main.	Area	CMA20							Name	Andrew Smikl	es			
Clear Roadway	//Skew	9.5 / -45	deg. (LHF)					eview Da		19-Nov-2012				
AADT/Year		1,970 /	2011 (A)				Follow-							
Road Classifica	ation	RAU-21	0-110					. ,						
Detour Length		6												
Bridge Culver														
Number of Cul			2			_					<b>D.</b> (C)			
Pipe #	Barrel	Span Rise (or			ia.)	Туре		Length		Corr. Profile	Pl./Slab Thickness	Shape		
1	MAIN		-	3000		MP		45		125X26	3.5	ROUND		
2	MAIN	- 3000				MP		45		125X26	3.5	ROUND		
Special Features														
Special Feature		ment												
•														
					Uti	ilities (L	ocated	at)						
Utility Attachme								Cas Crosses 150m E						
Telephone	South	ditch.						Gas Crosses 150m E.						
Power							Municipal  Problem (V/N) No.							
Others							Problen	blem (Y/N) No						
Remarks				Λn	2400	sh Door	d / Emba	volem on t						
A					Last	Now		ation of		tion				
Horizontal Aligi	nment				9	9		West of						
Vertical Alignm					8	8	1000111	VV001 01		<i>5</i> joi:				
Roadway Widtl			9.500											
Troduitay Trial			0.000											
Embankment				8	8	ACP uneven & settled 50mm over pipes, has been patched. Starts at 4:1 then 3:1.					oatched.			
Sideslope (_			3.0				otarts a	แ 4.1 tne	n 3.7.					
(Height of Cover(m) : 1.6)														
Guardrail (Y/N)		Yes				Both sid	des.							
Approach Roa	ad / Eml	bankmeı	nt General Rat	ing	8	8								
						Unctre	am End							
Culvert Comp	onent				Last		Explana	ation of	Condi	tion				
(Pipe # : 1, Sp		e: Prima	rv Span)		Luot	111011	LXPIGIT	ution or	Oonai					
Direction	у р	ια	رما ح	ı	N		West pi	pe						
End Treatment Others, None)	(Concre	ete, Stee	I, STEEL				oo. p.	PO						
Headwall					X	X								
Collar					X	X								
Wingwalls					Χ	X								
(Shape: )														

			Unetro	am End
Culvert Component				Explanation of Condition
(Pipe # : 1, Span Type: Primary	/ Span)		1.1011	
Cutoff Wall	, -	Х	X	
Bevel End		6	6	Minor rusting on floor.
Heaving (mm)	100			
Invert Above/Below Stream Bed				
Above/Below (mm)	100			
Scour Protection		N	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : <b>400</b> )		1	1	
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
			dere-G-	hort Powel
Culvert Component			Now	Ivert Barrel Explanation of Condition
(Pipe # : 1, Primary Span, Loca	tion Code: MAIN, Sp			, Rise (mm): 3000, Type: MP)
Barrel Last Accessible Date	24-Oct-2012		<del>.,.</del>	West pipe.
Barrer East / (000001510 Bate	21 000 2012			Troot pipe.
Special Features				
Special Feature				
(Type:)			1	
Special Feature				
(Type:)				
Roof	1	3	3	Not able to measure rise due to ice. R3/4 seam 2320, est. 350mm ice ~2670.
Measured Rise (mm)	2670			- 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.
Measured At Ring No.	4			
Sag (mm)	330			
Percent Sag	11		1	
Sidewall	I	4	4	
Measured Span (mm)	3278			
Measured At Ring No.	3			9.3%
Deflection (mm)	278			
Percent Deflection	9		1	
Floor	T -	5	5	Partially viewed.
Bulge (mm)	0			
Measured At Ring No.	<u> </u>			
Abrasion (Y/N)	No	_	T _	
Circumferential Seams	70	5	5	1st + 2nd seam from South not seating well. No infiltration.
Separation (mm)	70			
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)				
Coating		6	6	Minor corrosion lower wall.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

			dae Cu	Ivert Barrel
Culvert Component		1		Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span				, Rise (mm): 3000, Type: MP)
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		Х	X	
(Type:)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	
			1	ream End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary	r Span)	1 -		I
Direction End Treatment (Concrete, Steel,	STEEL	S		West pipe
Others, None) Headwall		X	Х	
Collar		X	X	
Wingwalls		X	X	
(Shape: )				
Cutoff Wall		Х	Х	
Bevel End		4	4	Side & top of bevel bent.
Heaving (mm)	0			Average 250mm bends.
Invert Above/Below Stream Bed	<del> </del>			
Above/Below (mm)	100			
Scour Protection		N	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm): 400)				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Ratio	ng	4	4	
				am End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Second	ary Span)			
Direction		N		East pipe
End Treatment (Concrete, Steel, Others, None)	STEEL		1	
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape: )				
Cutoff Wall		X	X	

Last   Now   Explanation of Condition   Explanation   Explanation of Condition   Explanation   Explanation of Condition   Explanation   Explana				Unstre	eam End
	Culvert Component				
Bevel   To   150	-	larv Span)	,	1	
Heaving (mm)		, , , , , , , , , , , , , , , , , , ,	5	5	Rust on lower floor.
Invert Above/Below (nrm)		150			
Above/Below (mm)   200					
Scour Protection   N N N   N   N   N   N   N   N   N					
(Type : RIP RAP) (Avg. Rock Size(mm) : 400)  Beavers (Y/N)    No	` '		N	N	(Some 800mm rock, 22Feb2008) - Snow covered.
Avg. Rock Size(mm) : 400   N					
Securif Erosion					
Description   S   5   5	Scour/Erosion		N	N	
Stide   Culvert Component   Last   Now   Explanation of Condition   Rise (mm): 3000, Type: MP)	Beavers (Y/N)	No			
Culvert Component (Pipe # 2, Secondary Span, Location Code: MAIN, Span (mm): 7, Rise (mm): 3000, Type: MP)         East pipe.           Sarcel Last Accessible Date Special Features Special Feature (Type : ) Special Feature (Type : ) Special Feature (Type : )	Upstream End General Rating		5	5	
Culvert Component (Pipe # 2, Secondary Span, Location Code: MAIN, Span (mm): 7, Rise (mm): 3000, Type: MP)         East pipe.           Sarcel Last Accessible Date Special Features Special Feature (Type : ) Special Feature (Type : ) Special Feature (Type : )			Brio	dge Cu	Ilvert Barrel
Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm):	Culvert Component				
East pipe.   East pipe.   East pipe.   East pipe.   East pipe.     East pipe.	-	cation Code: MAIN			
Special Feature   Crype : )	Barrel Last Accessible Date	24-Oct-2012			East pipe.
Special Feature   Crype : )	Special Features				
Type :   Special Feature					
Special Feature   Common   Control of the Notable Indicates   Control of Bulge (mm)   Control of Bul			'		
Not able to measure rise due to ice. 2380 to ice, est. 350mm ice   Measured Rise (mm)   2710   -2730.					
A	•				
Measured Rise (mm)			4	4	Not able to measure rise due to ice 2380 to ice est 350mm ice
Measured At Ring No.   3   3   3   3   4   4   4   5   5   5   5   5   5   5		2710			~2730.
Sag (mm)   290					
Percent Sag					
Sidewall					
Measured Span (mm)         3230           Measured At Ring No.         3           Deflection (mm)         230           Percent Deflection         7           Floor         N         N           Bulge (mm)         0           Measured At Ring No.         Abrasion (Y/N)           Abrasion (Y/N)         No           Circumferential Seams         5           Separation (mm)         120           Longitudinal Seams         X           Total No. of Cracked Rings         Total No. of Cracked Rings           Total No. of Rings with Two Cracked Seams         Total No. of Rings with Two Cracked Seams           Min. Remaining Steel Between Cracks (mm)         Between Cracks (mm)           Proper Lap (Y/N)         Total No. of Cracked Rings           Contosion By Soil (Y/N)         No           Minor corrosion on lower walls.			4	4	
Measured At Ring No.         3         7.7%           Deflection (mm)         230         7.7%           Percent Deflection         7         Ice covered.           Floor         N N N         Ice covered.           Bulge (mm)         0         Ice covered.           Measured At Ring No.         Abrasion (Y/N)         No           Circumferential Seams         5 5 No infiltration.           Separation (mm)         120         Ice covered.           Longitudinal Seams         X X         X           Total No. of Cracked Rings         X         X           Total No. of Rings with Two Cracked Seams         Image: Cracked Seams         Image: Cracked Seams           Min. Remaining Steel Between Cracks (mm)         Image: Cracked Seams         Image: Cracked Seams           Min. Remaining Steel Between Cracks (mm)         Image: Cracked Seams		3230			
Deflection (mm) 230 7.7%  Percent Deflection 7					
Percent Deflection 7  Floor N N N  Bulge (mm) 0  Measured At Ring No. Abrasion (Y/N) No  Circumferential Seams 5 5 No infiltration.  Separation (mm) 120  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)  Coating 7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N) No  Corrosion By Water (Y/N) Yes					7.7%
Floor N N N Ice covered.  Bulge (mm) 0					
Bulge (mm) 0 Measured At Ring No. Abrasion (Y/N) No  Circumferential Seams 5 5 5 No infiltration.  Separation (mm) 120  Longitudinal Seams X 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)  Coating 7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N) Yes			N	N	Ice covered
Measured At Ring No. Abrasion (Y/N) No  Circumferential Seams Separation (mm) 120  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)  Coating 7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N) Yes		0	- 11	- ' '	loo coverou.
Abrasion (Y/N) No  Circumferential Seams 5 5 No infiltration.  Separation (mm) 120  Longitudinal Seams X 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)  Coating 7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N) No  Corrosion By Water (Y/N) Yes					-
Circumferential Seams  Separation (mm)  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)  Coating  Corrosion By Soil (Y/N)  No  Corrosion By Water (Y/N)  Yes  No infiltration.		No			
Separation (mm)  Longitudinal Seams  X			5	5	No infiltration.
Longitudinal Seams  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  7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N)  Yes		120	Ū		
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  7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N)  Corrosion By Water (Y/N)  Yes			Y	X	
Total No. of Rings with Two Cracked Seams  Min. Remaining Steel Between Cracks (mm)  Proper Lap (Y/N)  Longitudinal Stagger (Y/N)  Coating  7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N)  Corrosion By Water (Y/N)  Yes					
Min. Remaining Steel Between Cracks (mm)  Proper Lap (Y/N)  Longitudinal Stagger (Y/N)  Coating  7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N)  Corrosion By Water (Y/N)  Yes	Total No. of Rings with Two				-
Proper Lap (Y/N)  Longitudinal Stagger (Y/N)  Coating 7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N) No  Corrosion By Water (Y/N) Yes	Min. Remaining Steel				
Longitudinal Stagger (Y/N)  Coating  7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N)  Corrosion By Water (Y/N)  Yes	, ,				1
Coating 7 7 Minor corrosion on lower walls.  Corrosion By Soil (Y/N) No  Corrosion By Water (Y/N) Yes					
Corrosion By Soil (Y/N) No Corrosion By Water (Y/N) Yes			7	7	Minor corrosion on lower walls
Corrosion By Water (Y/N) Yes		No	,		Millor correction of tower walls.
	Camber POS/ZERO/NEG	ZERO			

		Brid	Bridge Culvert Barrel						
Culvert Component		1	Now	Explanation of Condition					
(Pipe # : 2, Secondary Span, Lo	cation Code: MAIN, S			, Rise (mm): 3000, Type: MP)					
Ponding (Y/N)	No		Í						
Fish Passage Adequacy		7	7						
Baffle		Х	Х						
(Type:)									
Waterway Adequacy		7	7						
Icing (Y/N)	No								
Silting (Y/N)	No								
Drift (Y/N)	No								
Barrel General Rating		4	4						
		D	lownstr	ream End					
Culvert Component		Last		Explanation of Condition					
(Pipe # : 2, Span Type: Second	larv Span)	1_0.01	1						
Direction				East pipe					
End Treatment (Concrete, Steel, Others, None)	STEEL	S		Luck pipo					
Headwall		Х	Х						
Collar		Х	X						
Wingwalls		Х	Х						
(Shape: )									
Cutoff Wall			Х						
Bevel End		7	7						
Heaving (mm)	0								
Invert Above/Below Stream Bed									
Above/Below (mm)	0								
Scour Protection		N	N	Snow covered.					
(Type : RIP RAP)									
(Avg. Rock Size(mm) : 400)									
Scour/Erosion		N	N	Snow covered.					
Beavers (Y/N)	No								
Downstream End General Ratio	ng	7	7						
-		6	truotu	re Usage					
			Now	Explanation of Condition					
Channel (U/S and D/S)		Last	INOW	Explanation of condition					
Alignment		6	6	Parallels hwy to SW.					
Bank Stability		8	8						
HWM (m below Top of Culvert)				HWM not visible.					
Drift (Y/N)	No								
Channel Bottom Degrading/Aggrading				Unknown.					
Beavers (Y/N)	No								
(Fish Compensation Measure 1 :	NONE)								
(Fish Compensation Measure 2 :	NONE)								
<b>Channel General Rating</b>		6	6						

		Maintenance Recommendations	commendations				
Inspector Recommendations	Year	Inspector Comments	Department Comments	omments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS	2013	If required, both barrels.					
INSTALL CONCRETE COLLAR/CUTOFF	)FF						
REPAIR SEAMS							
OTHER ACTION	2013	Level 2 barrel inspection (not in winter) to confirm distortion.	r) to				
OTHER ACTION	2013	Straighten d/s bevel, W pipe.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	ow) 33.3/33.3	.3 Sufficiency Rating (Last/Now) (%)	ow) 49.2/48.9	Est. Repl. Yr 2025	Maint. Reqd. (Y/N)		Yes
Special Comments for Next Inspection			Department Comments				
Maintenance Reviewed By			Date	3	<b>Estimated Total</b>	0	
Proposed Long-Term Strategy	2004.04.09 Mo	2004.04.09 Monitor normal BIM. Strut if required. Estimated Replacement Year 2030.	nated Replacement Year	2030.			
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Owen Salava		Previous Assistant's Name	0			
Next Inspection Date	25-Jul-2014		Previous Inspection Date	20-Dec-2010			
Inspection Cycle (Default) (months)	21						
Comment							

			Maintenance Re	commend	lations						
Inspector Recommendations	Year	Inspect	or Comments		Department C	Commer	nts		Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS											
PLACE ADDITIONAL RIP RAP											
REMOVE DRIFT ACCUMULATION											
INSTALL CONCRETE/STEEL LINING	3										
INSTALL STRUTS	2013	If requi	red, both barrels.		Continue to m	nonitor					
INSTALL CONCRETE COLLAR/CUT	OFF										
REPAIR SEAMS											
OTHER ACTION		Level 2 confirm	barrel inspection (not in wint distortion.	ter) to	Defer						
OTHER ACTION		Straigh	ten d/s bevel, W pipe.		Next time on	site					
OTHER ACTION											
OTHER ACTION											
OTHER ACTION											
Structural Condition Rating (Last/N (%)	low) 33.3/3	3.3	Sufficiency Rating (Last/	Now)	49.2/48.9	Est	t. Repl. Yr	2025	Maint. Re	eqd. (Y/N)	Yes
Special Comments for Next Inspection					Department Comments	been ir it being	ncreasing whe	en the cu ery likely	ar BIM inspecti llvert was meas y to now be in a or 2022.	urable, bec	ause of
Maintenance Reviewed By Andrew Smikles					Date	20-Dec	20-Dec-2012 Estimated Total 0				
Proposed Long-Term Strategy	2004.04.09 N	lonitor nor	mal BIM. Strut if required. Es	stimated R	eplacement Ye	ear 2030	).	·		-	
On 3-Year Program (Y/N)											
Proposed Action											
Previous Inspector's Name	Owen Salava			Previous	Assistant's Nar	me					
Next Inspection Date	25-Jul-2014			Previous	Inspection Date	e	20-Dec-2010				
Inspection Cycle (Default) (months)	21										
Comment											