

Bridge Inspection										
Bridge File Number	01031 -1 Bridge				Form Type	PCS				
Year Built/Year Supstr	1989/1989				Lot No.	2				
Bridge or Town Name	TWO HILLS				Inspector Name	Jason Saly				
Located Over	VERMILION RIVER, 6.5, WATERCRS-ST				Inspector Class	BR CLS A				
Located On	36:20 C1 31.716				Assistant Name					
Water Body Cl./Year					Assistant Class					
Navigabil. Cl./Year					Inspection Date	10-Jan-2013				
Legal Land Location	SW SEC 32 TWP 54 RGE 12 W4M				Data Entry By	Marcia Chavez				
Longitude, Latitude	-111:44:47, 53:42:20				Data Entry Date	12-Feb-2013				
Road Authority	Alberta Transportation (AIT)				Reviewer Name	John O'Brien				
Contract Main. Area	CMA14				Review Date	19-Jan-2013				
Clear Roadway/Skew	13.3 / 30 deg. (RHF)				Dept. Reviewer Name	Darron Ahlstedt				
AADT/Year	1,290 / 2011 (A)				Dept. Review Date	13-Feb-2013				
Road Classification	RAU-211.8-110				Follow-Up By					
Detour Length (km)	11									
Allowable Load (t):	Single	CS1 28	Semi	CS2 49	Train	CS3 62	---> On Critical Spans --->Critical Member			
Design Loading:	MS300						---> Primary Span			
Posting Information										
Required Load Posting (t)	Single				Semi		Truck Train			
Posted Loading (t)	Single				Semi		Truck Train			
Posted:	Lane	NB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No		
Posted:	Lane	SB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No		
Remarks	Posting not required.									
Hazard Marker At Bridge (Y/N)	Yes									
Remarks	SE HM missing.									
Other Sign Types										
Utilities (Located at)										
Utility Attachments	TELEPHONE UTILITIES-PHONE LINE									
Telephone	East r/w & West r/w.				Gas					
Power	3 wires OH 20m East of c/l.				Municipal					
Others					Problem (Y/N)		No			
Remarks										
Approach Road										
			Last	Now	Explanation of Condition					
Horizontal Alignment			8	8	In town limits. Speed limit 60 kph. No passing, both directions.					
Vertical Alignment			8	8						
Roadway Width (m)	12.000									
Approach Bump			8	8						
Guardrail (Y/N)	Yes				(Missing 2 connection bolts at SW corner & misaligned - photo. Missing 3 posts @ each corner & 1 section too short - photo. Guardrail too low, 370-460mm top of ACP to guardrail c/l. 42.0m @ NE, SE & SW. 56.2m @ NW. 08Dec2010). (Missing splice bolt at all terminal ends. 12Aug2009) - Snow covered. Rating maintained based on previous inspector's comments.					
Guardrail			3	3						
Length (m)	42.000									
Current Standard (Y/N)	No									
Termination Type	Turned Down									
Drainage			4	4	(NW corner has creek along ditch that is eroding the banks, armoured. Current road drainage drains off end of approach curb & onto abutment seat, should install curb to direct drainage away from abutments - photos. 12Aug2009). Previous r=4 carried forward.					
Approach Road General Rating			8	8						

Superstructure							
Bridge Component		Last	Now	Explanation of Condition			
(Primary Span : SMC, 4 Spans, Lengths(m): 11-11-11-11, A-Ident Number:)							
Special Features							
Special Feature			X				
(Type :)							
Special Feature			X				
(Type :)							
Wearing Surface/Deck Top Detail Ratings							
	N (%)	1 (%)	2 (%)	3 (%)			
Last	60	0	0	0			
Now	70.0	0.0	0.0	0.0			
Wearing Surface		N	5	Intermittant transverse cracks approx every 3.0m. (ACP delam in S2 wheelpath, both lanes - photo. 12Aug2009) - Snow & dirt covered.			
(Material Type : ACP)							
(Thickness(mm) : 90)							
Lateral Connection Problem (Y/N)		No					
Deck Top		N	N				
Deck Rideability		7	7				
Deck Joints		8	N	Paved over.			
Bump (Y/N)		No					
Deck Drainage		4	4	SE drain extension, S3, is missing, staining girder u/s. S2 surface delam, staining around SW drain.			
Drains Clogged (Y/N)		No					
Curbs/Median		N	N	(Spalled @ NW corner, plow damage. Minor shrinkage cracks where anchor assemblies are located. Also minor area spalled concrete at corners under last post - photo. Curb face is max 170mm. 12Aug2009). Snow/ice covered.			
(Curb Type : Standard)							
Scaling (Percent Area)		5					
Bridge Rail		7	7	Snow covered.			
(Type : GALVANIZED STEEL BRIDGE TUBE)							
Bridge Rail Posts		7	N				
(Type : GALVANIZED POST STEEL; GALVANIZED POST STEEL)							
Bridge Rail/Posts Coating		7	7				
(Type : GALVANIZED)							
Sidewalk		X	X				
Girder Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last	0	0	0	0			
Now	0	0	0	0			
Girders		5	5	Typical diagonal crack @ ends on about 1/2 of girders. Curbs have hairline crack @ mid height on outside face. Shrinkage cracks on 50% of CIP section on curb exterior. Graffiti on girder underside, both abut spans.			
Last Complete Inspection Date		10-Jan-2013					
Cracking (Y/N)		Yes					
Spalling (Percent Area)		0					
Lift or Connector Pocket Grouted (Y/N)		Yes					
(Number Of Girders : 48)							
Span Alignment Problems							
Vertical (Y/N)		No					
Horizontal (Y/N)		No					
Superstructure General Rating		5	5				

Substructure						
Bridge Component		Last	Now	Explanation of Condition		
Abutments						
(Extended Backwall Piles (Y/N) : N)						
(Extended Backwall Piles Spacing(mm) :)						
(Total Number of Caps/Corbels : 1:1)						
Bearing Seats/Caps/Corbels Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
Last	0	0	0	0		
Now	0	0	0	0		
Bearing Seats/Caps/Corbels				7	7	
(Type : CONCRETE)						
(Depth(mm) : 900)						
(Width(mm) : 700)						
Backwalls/Breastwalls			X	N		
Greatest Height (m)		1.20				
Wingwalls			8	N		
				Snow covered.		
(Total Number of Bearing Piles : 0:0)						
Piles Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
Last	100	0	0	0		
Now	100	0	0	0		
Piles				N	N	
Paint/Coating			5	5		
				No coating on SE wingwall or abutment seats.		
Abutment Stability			8	8		
Scour/Erosion			8	7		
Piers/Bents						
(Type : PIER-COLUMN)						
(Total Number of Caps/Corbels : 1:1:1)						
Bearing Seats/Caps/Corbels Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
Last	0	0	0	0		
Now	0	0	0	0		
Bearing Seats/Caps/Corbels				8	8	
(Type : CONCRETE)						
(Depth(mm) : 900)						
(Width(mm) : 700)						
(Total Number of Bearing Piles : 8:8:8)						
Piles Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
Last	0	0	0	0		
Now	0	0	0	0		
Pier Shaft/Piles				8	8	
Greatest Height (m)		4.20				
Bracing/Struts/Sheathing			8	8		
Nose Plate			X	X		
Paint/Coating			4	4		
(Colour Description : BLUE)				(Pier caps vary in depth due to construction error as noted on C-drawing for file. 97/08/28).		
(Colour Code : 15182)				Graffiti on pier columns. Rusted piles 300mm above water level. No action required at this time. (17/July/2008)		

Substructure				
Bridge Component		Last	Now	Explanation of Condition
Pier Stability		8	8	
Scour		8	N	
Debris (Y/N)	Yes			Old piles under bridge in streambed.
Substructure General Rating		7	7	
Structure Usage				
		Last	Now	Explanation of Condition
Channel				
(U/S Direction : W)				
(D/S Direction : E)				
Alignment		8	8	
Bank Stability		8	N	All grassed in and stable. Snow covered, but no signs of problems.
HWM (m below Top of Curb)	3.5			(3.5m. 17Jul2008) - HWM not visible.
Drift (Y/N)	No			
Slope Protection		8	8	
(Type : RIP RAP; RIP RAP)				
Guidebank/Spurs		X	X	
Adequacy of Opening		8	8	
(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 #	
REPAIR/REPLACE BRIDGE RAIL							
SEAL CURBS	2013	Patch spalls @ NW & patch post grout pad under end post, all corners, if not yet done.					
PATCH DECK							
OVERLAY DECK	2013	Chipseal or overlay ACP wearing surface.					
STRAIGHTEN/REPLACE MEMBERS							
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
INSTALL STRUTS							
OTHER ACTION	2013	Extend SE drain 100 diameter @ girder.					
OTHER ACTION	2013	Trim old piles @ water level under bridge or remove.					
OTHER ACTION	2013	Upgrade approach guardrail to meet standard height, if not yet done.					
OTHER ACTION	2013	Consider installing curb @ approach corners to direct road drainage away from abutments, if not yet done.					
OTHER ACTION	2013	Install connector bolts, 2 @ SW or upgrade to thrie beam to meet standard, if not yet done.					
OTHER ACTION	2013	Seal cracks in ACP wearing surface.					
OTHER ACTION	2013	Replace SE HM.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	66.7/66.7	Sufficiency Rating (Last/Now) (%)	65.6/65.7	Est. Repl. Yr	2049	Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection			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	Dave Lam	Previous Assistant's Name	
Next Inspection Date	10-Oct-2014	Previous Inspection Date	08-Dec-2010
Inspection Cycle (Default) (months)	21		
Comment			

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL							
SEAL CURBS	2013	Patch spalls @ NW & patch post grout pad under end post, all corners, if not yet done.	when next working on the site.				
PATCH DECK							
OVERLAY DECK	2013	Chipseal or overlay ACP wearing surface.	at next rehab or when next working on the site.				
STRAIGHTEN/REPLACE MEMBERS							
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
INSTALL STRUTS							
OTHER ACTION	2013	Extend SE drain 100 diameter @ girder.	when next working on the site.				
OTHER ACTION	2013	Trim old piles @ water level under bridge or remove.	when next working on the site.				
OTHER ACTION	2013	Upgrade approach guardrail to meet standard height, if not yet done.	For operations				
OTHER ACTION	2013	Consider installing curb @ approach corners to direct road drainage away from abutments, if not yet done.	when next working on the site.				
OTHER ACTION	2013	Install connector bolts, 2 @ SW or upgrade to thrie beam to meet standard, if not yet done.	when next working on the site.				
OTHER ACTION	2013	Seal cracks in ACP wearing surface.	for operations				
OTHER ACTION	2013	Replace SE HM.	for Operations				
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	66.7/66.7	Sufficiency Rating (Last/Now) (%)	65.6/65.7	Est. Repl. Yr	2049	Maint. Req. (Y/N)	Yes

Special Comments for Next Inspection		Department Comments	maintinence recommendations carried since 2009 with no change in the GR		
Maintenance Reviewed By	John Umlah	Date	18-Apr-2013	Estimated Total	0
Proposed Long-Term Strategy					
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Dave Lam	Previous Assistant's Name			
Next Inspection Date	10-Oct-2014	Previous Inspection Date	08-Dec-2010		
Inspection Cycle (Default) (months)	21				
Comment					