

Bridge Inspection									
Bridge File Number	74381 -1 Bridge				Form Type	DT SG			
Year Built/Year Supstr	1957/1956				Lot No.	1			
Bridge or Town Name	DRAYTON VALL				Inspector Name	Wade Nanninga			
Located Over	NORTH SASKATCHEWAN RIVER, 6, WATERCRS-ST				Inspector Class	BR CLS A			
Located On	22:30 C1 5.356				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	18-Oct-2011			
Legal Land Location	NE SEC 3 TWP 49 RGE 7 W5M				Data Entry By	Theresa Lacusta			
Longitude, Latitude	-114:55:44, 53:12:21				Data Entry Date	26-Oct-2011			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	Eric Carcoux			
Contract Main. Area	CMA11				Review Date	25-Oct-2011			
Clear Roadway/Skew	8.5 /				Dept. Reviewer Name	Brent Herrick			
AADT/Year	6,540 / 2010 (A)				Dept. Review Date	14-Nov-2011			
Road Classification	RAU-210-110				Follow-Up By				
Detour Length (km)	25								
Allowable Load (t):	Single	CS1 33 U4L4	Semi	CS2 58 U4L4	Train	CS3 64 U7L8	----> On Critical Spans ---->Critical Member		
Design Loading:	HS20						----> Primary Span		
Posting Information									
Required Load Posting (t)	Single				Semi		Truck Train		
Posted Loading (t)	Single				Semi		Truck Train		
Posted:	Lane	EB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Posted:	Lane	WB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Remarks	Not required.								
Hazard Marker At Bridge (Y/N)	Yes								
Remarks	NE & SW are dirty.								
Other Sign Types	Curve, Warning, River ID, 75 km/hr.								
Utilities (Located at)									
Utility Attachments	TELEPHONE UTILITIES-PHONE LINE								
Telephone	Under bridge & CSE (on catwalk).				Gas				
Power					Municipal				
Others					Problem (Y/N)	Yes			
Remarks	Conduit separated @ 3 locations on North side of catwalk.								
Approach Road									
			Last	Now	Explanation of Condition				
Horizontal Alignment			5	5	Limited sight distance. Built on grade with crest. Vertical on West end and horizontal curve on both ends.				
Vertical Alignment			5	5					
Roadway Width (m)	9.600								
Approach Bump			6	6					
Guardrail (Y/N)	Yes				Insufficient posts. 2 layers of flexbeam for 2 sections @ each corner. Minor dents but functioning. NE corner measured 44.1m. Broekn post at NW				
Guardrail			5	4					
Length (m)	44.100								
Current Standard (Y/N)	No								
Termination Type	Turned Down								
Drainage			6	6					
Approach Road General Rating			5	5					

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : DT, 8 Spans, Lengths(m): 21.3-21.3-48.8-48.8-61-48.8-48.8-21.3, A-Ident Number: A0267-03;A0267-04;A0267-05;A0267-06;A0267-07;A0267-01;A0267-02;A0267-08)					
Special Features					
Special Feature			X	Catwalk missing gates both ends. Cable rail frayed near P6.	
(Type :)					
Catwalk Access		3	3		
(Type : UNLOCKED)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
Last					
Now	0.0	0.0	0.0	1.0	
Wearing Surface		4	3	Chip coat on epoxy, 25% failed. Approx 6m2 of concrete delamination at EBL span 3 near pier 2 - photo.	
(Material Type : CONCRETE - CONVENTIONAL CHIP SEAL COAT)					
(Thickness(mm) : 50)					
Deck Top		4	3	Transverse cracking throughout. Visible where wearing surface removed. S1 has wide diagonal cracks near A1 joint.	
Deck Rideability		6	5		
Deck Joints		3	3	(P3 joint leaks @ the East end around extension. 2002/07/18)	
Temperature (deg. C)		10			
(Expansion Type : ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES))					
(Fixed Type : ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES))				P2: 19 bolts missing. P3: 7 bolts missing. P4: 7 bolts missing. P5: 10 bolts missing. P6: 5 bolt missing. P7: 17 bolts missing, 2 loose. Paving lips broken.	
Gap Size (mm)		Gap Location			
55		Pier #2 - Fixed			
55		Pier #3 - Expansion			
50		Pier #4 - Fixed			
55		Pier #5-Expansion			
60		Pier #6 - Fixed			
70		Pier #7 - Expansion			
Deck Drainage		4	4	Dirt in gutters. (S5 at U4L4N drain leaks. South drain at middle of span 7 appears to leak.-01-Jul-2009)	
Drains Clogged (Y/N)		No			
Curbs/Median		3	3	Scaling & spalling on outside of curb & scaling at face. Estimate 20% of curb. Exposed rebar	
(Curb Type : Standard)					
Scaling (Percent Area)		20			
Bridge Rail		4	3	S1S & S4N rail over extended causing tube cracked. Broken concrete posts. S6N = 3, S5N = 1. Damaged crush pipes = 19. Retrofit rail placed in front of accident damage area span 4 South. Span 6 bent retrofit rail North side, still functional. 16 broken connections to rail. Cracked/broken conc. curb affecting post anchorage.	
(Type : GALVANIZED STEEL BRIDGE TUBE)					
Bridge Rail Posts		4	3		
(Type : CONCRETE;POST STEEL)					
Bridge Rail/Posts Coating		6	5		
(Type : GALVANIZED)					
Sidewalk		X	X		
Top Chord		5	5	Corroded at pier joints, some section loss. Some diagonals are pitting, losing section - minor. Some gussets are losing section. (Numerous FB to TC anchor braces broken. (See UT report for details.)	
Diagonals		3	3		
Verticals		6	6		
Connections		3	N	S4 U3L4S & S7 U5L4N outside top holes have <3mm cracks under rivet.	
Floor Beams		3	N	3 cracked stringers, span 6 U0 stringer 5 - 80mm crack, span 3 U8 stringer 4 - 335mm crack, span 3 U0 stringer 3 - 12mm. All cracks started at top cope and progressed near vertical downwards. -01-Jul-2009)	
Bottom Chord		5	5		
Stringers		2	N		

Superstructure						
Bridge Component				Last	Now	Explanation of Condition
(Primary Span : DT, 8 Spans, Lengths(m): 21.3-21.3-48.8-48.8-61-48.8-48.8-21.3, A-Ident Number: A0267-03;A0267-04;A0267-05;A0267-06;A0267-07;A0267-01;A0267-02;A0267-08)						
Diaphragms/Cross Frame				5	5	
Paint Condition				3	3	Active pitting up to 5mm deep on areas that get misted and under joints. Green.
(Colour Description :)						
(Colour Code :)						
Touchup Required (Y/N)	No					
Bearings				3	3	Bearings jammed at pier 5. Most anchor nuts are missing. (4 bearings missing cotter pins. S5 NE (1), S7 SW (2), S7 NW (2). Inside retainer plate broken and 1 missing at pier 7 roller nest.-01-Jul-2009) S7 NE cotter pin missing.
Temperature (deg. C)	10					
(Expansion Type : SLIDING PLATE;ROLLER NEST BEARING)						
(Fixed Type : PINNED BEARING)						
Coating Adequate (Y/N)	No					
Functioning (Y/N)	No					
Deck Underside				3	3	Cracks, efflorescence and corrosion stains on underside of deck with transverse cracks. Random severe scaling. Several areas at deck overhang with spalling and exposed rebar.
Stains (Percent Area)	15					
(Snow Slots Filled :)						
Span Alignment Problems						
Vertical (Y/N)	No					
Horizontal (Y/N)	No					
Superstructure General Rating				2	2	GR carried fwd from 01-Jul-2009
Superstructure						
Bridge Component				Last	Now	Explanation of Condition
(Secondary Span : RB)						
Special Features						
Special Feature					X	
(Type :)						
Special Feature					X	
(Type :)						
Wearing Surface/Deck Top Detail Ratings						
	N (%)	1 (%)	2 (%)	3 (%)		
Last						
Now						
Wearing Surface				4	4	Chipseal on top of epoxy. 25% failed. Several previously patched areas.
(Material Type : CONCRETE - CONVENTIONAL CHIP SEAL COAT)						
(Thickness(mm) : 50)						
Deck Top				4	4	Transverse cracking. Visible where wearing surface removed.
Deck Rideability				5	5	

Superstructure				
Bridge Component		Last	Now	Explanation of Condition
(Secondary Span : RB)				
Deck Joints		3	3	26 bolts missing abutment 2, plate bangs under traffic. 5 bolts missing, abutment 1. 3 bolts missing pier 1, 2 are plug welded.
Temperature (deg. C)	20			
(Expansion Type : ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES))				
(Fixed Type : ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES))				
Gap Size (mm)	Gap Location			
55	West abutment - A1			
45	Pier #1			
60	East abutment - A2			
Deck Drainage		4	4	Mid S7 drain leaks.-01-Jul-2009
Drains Clogged (Y/N)	No			
Curbs/Median		4	4	Scaling and spalling on outside of curb and scaling at face on approx 10%.
(Curb Type : Standard)				
Scaling (Percent Area)	10			
Bridge Rail		4	3	Retrofit rail installed. See main span. Some cracking & spalling. Broken bracket connections along tube rail.(2)
(Type : GALVANIZED STEEL BRIDGE TUBE)				
Bridge Rail Posts		5	3	
(Type : CONCRETE;POST STEEL)				
Bridge Rail/Posts Coating		6	3	
(Type : GALVANIZED)				
Sidewalk		X	X	
Girder/Beam				
Cover Plate		3	3	Span 8. Girder 1 has 21 stitch welds cracked. Girder 4 has 3 stitch welds cracked. G5 also has stitch welds cracked.
Flange		6	6	
Web		6	6	
Stiffeners		X	X	
Splice		X	X	
Weld		3	3	
Diaphragms/Cross Frame		7	7	
Paint Condition		3	3	Ext & pier areas have corrosion at East and West fascia and along top flanges. Green.
(Colour Description :)				
(Colour Code :)				
Touchup Required (Y/N)	No			
Bearings		4	4	Very rusty. Appears to be rusted tight.
Temperature (deg. C)	10			
(Expansion Type : SLIDING PLATE;ROLLER NEST BEARING)				
(Fixed Type : PINNED BEARING)				
Coating Adequate (Y/N)	No			
Functioning (Y/N)	Yes			
Deck Underside		3	3	Minor breaking at girders - scaling & spalling with exposed rebar at East span at ext. 200 x 200mm popout @ S8 between G4 & G5. Map cracks and staining up to 1st diaphragm between 2 exterior girders.
Stains (Percent Area)	10			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			

Superstructure				
Bridge Component		Last	Now	Explanation of Condition
(Secondary Span : RB)				
Superstructure General Rating		3	3	
Substructure				
Bridge Component		Last	Now	Explanation of Condition
Abutments				
Bearing Seats/Caps		5	5	Scaled and random cracking. Minor spalling at ends.
(Type : CONCRETE)				
Backwalls/Breastwalls		5	5	
Wingwalls		4	4	Cracked and spalled.
Piles		N	N	
Paint/Coating		X	X	
Abutment Stability		5	5	
Scour/Erosion		7	7	
Piers/Bents				
(Type : PIER-SOLID)				Spalled at South end and West side P2. Shotcrete repairs are cracking, delaminating. #3 & 6 pier scaling.
Bearing Seats/Caps		4	4	
(Type : CONCRETE)				
(Total Number of Bearing Piles : 0:0:0:0:0:0)				Pier #2 heavy scaling at shaft. Rebar exposed.
Pier Shaft/Piles		3	4	
Bracing/Struts/Sheathing		5	5	
Nose Plate		6	6	
Paint/Coating		4	4	Nose plate 90% superficial corrosion.
(Colour Description :)				
(Colour Code :)				
Pier Stability		6	6	
Scour		4	N	Scour holes @ P4 & 5.-01-Jul-2009
Debris (Y/N)	No			
Substructure General Rating		3	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel				
(U/S Direction : S)				On slight bend.
(D/S Direction : N)				
Alignment		6	6	
Bank Stability		7	7	
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			
Slope Protection		7	7	
(Type : RIP RAP; RIP RAP)				
Guidebank/Spurs		7	7	
Adequacy of Opening		7	7	

Structure Usage				
		Last	Now	Explanation of Condition
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		7	6	

Maintenance Recommendations							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	27.8/33.3	Sufficiency Rating (Last/Now) (%)	39.9/40.6	Est. Repl. Yr	2016	Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection	New bridge construction underway-completion by 2014			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	Garry Roberts		Previous Assistant's Name	Randy Bredo			
Next Inspection Date	18-Jul-2013		Previous Inspection Date	01-Jul-2009			
Inspection Cycle (Default) (months)	21						
Comment							