

Level 2 Inspection - Concrete Deck									
Bridge File Number	00233 -1 Bridge				Form Type	CDK			
Year Built/Year Supstr	1960/1960				Lot No.				
Bridge or Town Name	CHAUVIN				Inspector Name	Jason Saly			
Located Over	BATTLE RIVER, 5, WATERCRS-ST				Inspector Class	BR CLS A			
Located On	17:06 C1 1.701				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	27-Jun-2012			
Legal Land Location	SW SEC 12 TWP 45 RGE 1 W4M				Data Entry By	Jason Saly			
Longitude, Latitude	-110:01:08, 52:51:24				Data Entry Date	26-Feb-2013			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	Paul Carter			
Contract Main. Area	UNDEFINED CMA				Review Date	27-Feb-2013			
Clear Roadway/Skew	8.5 /				Dept. Reviewer Name				
AADT/Year	1,880 / 2012 (A)				Dept. Review Date				
Road Classification	RAU-211.8-110				Follow-Up By				
Detour Length (km)	15				Visual Inspection?	Y			
					CSE Testing?	Y			
					Chloride Testing?	N			
Allowable Load (t):	Single	CS1 28	Semi	CS2 49	Train	CS3 62	----> On Critical Spans ---->Critical Member		
Design Loading:	HS20						----> Primary Span		
(Primary Span : PO , Spans: 1,2,3 , Lengths(m): 19.5-24.4-19.5)									
(Total Length : 19.5-24.4-19.5 = 63.4)									

Concrete Deck Inspection

	Last	Now	Explanation of Condition				
Wearing Surface							
Polymer? (Y/N)		Y					
ACP? (Y/N)		N					
Chip Seal Coat? (Y/N)		N					
Polymer Rating (% Area)							
	9-7	6/5	4	3	2/1	N/X	
Last							
Now	80	15	5	0	0	0	
ACP Rating (% Area)							
	9-7	6/5	4	3	2/1	N/X	
Last							
Now	0	0	0	0	0	100	
Chip Seal Coat Rating (% Area)							
	9-7	6/5	4	3	2/1	N/X	
Last							
Now	0	0	0	0	0	100	
Polymer Total Debonded /Lost Area (m ²)						30	There are random areas of lost epoxy.
ACP Total Debonded /Lost Area (m ²)						X	
ACP Average Measured Depth (mm)						X	
ACP Crack Frequency (m/m ²)						X	
Chip Seal Coat Total Lost Area (m ²)						X	

Concrete Overlay	
Overlay? (Y/N)	Y
(Span Type : PO)	
(Span Numbers : 1, 2, 3)	
(Overlay type : CONCRETE (HIGH DENSITY))	
(Area(m ²) : 538.9)	
(Year Installed : 1982)	
(Thickness(mm) : 50)	

Concrete Deck Inspection						
		Last	Now	Explanation of Condition		
(Average Cylinder Strength(Mpa) :)						
Overlay Rating (% Area)						
	9-7	6/5	4	3	2/1	N/X
Last						
Now	0	0	0	0	0	100
Total Crack Length - Medium/Wide (m)						N
Total Scaled Area - Light (m ²)						N
Total Scaled Area -Moderate/Heavy/Severe (m ²)						N
Debonded Area (m ²)						0
Spalled Area (m ²)						N
Patched Area (m ²)						N
Average Measured Cover Depth (mm)						128
Standard Deviation of Measured Cover Depth (mm)						22
Deck						
(Span Type : PO)						
(Span Numbers : 1, 2, 3)						
(Deck Type : CONCRETE (CLASS C))						
(Area(m ²) : 538.9)						
(Year Constructed : 1960)						
(Year Widened :)						
(Thickness(mm) : 150)						
(Average Cylinder Strength(MPa) :)						
	Type	Size	Design Cover (mm)	Spacing (mm)		
Long. Reinforcing	REINFORCING STEEL	10	25	450		
Trans. Reinforcing	REINFORCING STEEL	20	25	225		
Deck Top Rating (% Area)						
	9-7	6/5	4	3	2/1	N/X
Last						
Now	0	0	0	0	0	100
Total Crack Length - Medium/Wide (m)						N
Total Scaled Area - Light (m ²)						N
Total Scaled Area - Moderate/Heavy/Severe (m ²)						N
Delaminated Area (m ²)						N
Spalled Area (m ²)						N
Patched Area (m ²)						N
Average Measured Cover Depth (mm)						N
Standard Deviation of Measured Cover Depth (mm)						N
Deck Underside Rating (% Area)						
	9-7	6/5	4	3	2/1	N/X
Last						
Now	50	50	0	0	0	0
Total Stained Area - Moderate (m ²)						0
Total Stained Area - Heavy/Severe (m ²)						0
Total Crack Length - Medium/Wide (m)						0
% of Medium/Wide Cracks Stained						0
Edge Elements						
Curbs? (Y/N)			Y			
Parapets? (Y/N)			N			
Medians? (Y/N)			N			
Sidewalks? (Y/N)			N			
Curbs						
(Type : CONCRETE)						

The HDOL is mostly covered by polymere overlay protection system. There is deterioration along the deck joints.

There is random patching in the deck underside. Exterior girders at the south abutment have cracks propagating from the bearings. G4 on span 3 has a spall along the east girder on the north span in the anchorzone at P2 stirrups are exposed. Griders would be rated '3'

Concrete Deck Inspection						
Last	Now	Explanation of Condition				
(Total Length(m) : 126.8)						
(Height(mm) :)						
(Width(mm) :)						
(Average Cylinder Strength(MPa) :)						
Reinforcement Type			Size	Design Cover (mm)		Spacing (mm)
			10	50		300
Curb Rating (% Length)						
	9-7	6/5	4	3	2/1	N/X
Last						
Now	0	60	30	10	0	0
Total Crack Length - Medium/Wide (m)						93
Total Scaled Length - Light (m)						31
Total Scaled Length - Moderate/Heavy/Severe (m)						13
Delaminated Length (m)						6
Spalled Length (m)						8
Patched Length (m)						0
Average Measured Cover Depth (mm)						51
Standard Deviation of Measured Cover Depth (mm)						12
The curbs are in poor condition.						
There is significant scaling and spalling with several sections of exposed rebar.						

Deck Joints(Type : **ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES)**)(Number of Joints : **4**)(Expansion / Fixed? : **EXPANSION**)(Location : **A1, A2, P1, P2**)

% Inspected	100	Joints were inspected in the rain. Leakage was observed at all joints except the south pier joint. Missing cover plate anchor bolts from south pier and the north abutment plate have been welded together. There is horizontal cracking in both abutments. Scalling on the north abutment seat. north backwall has spalling. piers have vertical cracks. North pier has heavy scaling and a delamination at the northeast corner.
% Joints Leaks	75	
% Joint Length Leaks	20	
Superstructure Damage Rating	3	
Substructure Damage Rating	3	
Level 1 Joint Rating	3	

CSE Testing

Testing Date	05-Jul-2012	Previous Testing Date	11-May-2009
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Weather Information

Temperature (°C)	17
Conditions	Sunny

Equipment Information

Test Equipment Make and Model	Corexco CDL - 200 EA/512
Electrical Ground Location and Type	1CR, third span along the west curb.

Measurement Locations Information

Origin for Data	North West		
	Number	Length of Each (m)	Length of Last (m)
X Increments (Length)	52	1.219	1.200
Y Increments (Width)	7	1.219	1.200

CSE Results

Span Numbers	1,2,3								
Span Type	PO								
Wearing Surface	CONCRETE (HIGH DENSITY)								
Testing Year	% Deck Area 0 to -0.1 V	% Deck Area < -0.1 to -0.2 V	% Deck Area < -0.2 to -0.3 V	% Deck Area < -0.3 to -0.4 V	% Deck Area < -0.4 V	Avg. Deck Reading (V)	Std. Dev. Deck Reading	Avg. Curb Reading (V)	Std. Dev. Curb Reading
2012	0.0	4.7	49.9	29.4	16.0	-0.317	0.102	-0.473	0.076
2009	0.0	16.0	45.0	26.0	13.0	-0.300	-0.103	-0.472	-0.094
2005	0.0	29.0	47.0	18.0	6.0	-0.266	0.094	-0.416	0.100

CSE Testing

CSE Prediction Model Optimum 5 year Rehab Start Year	2014
Comments	

Maintenance Recommendations										
Inspector Recommendations	Year	Inspector Comments			Department Comments			Target Year	Est. Cost	Cat #
SEAL CURBS										
PATCH DECK										
SEAL DECK										
OVERLAY DECK										
REPAIR/REPLACE DECK JOINTS										
WASHING										
CRACK REPAIRS/TREATMENT										
PATCH CURBS/PARPETS										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (%)	38.9	Sufficiency Rating (%)			41.4			Est Repl Year	2025	
Level 1 Insp Date	27-Jun-2012	Next Level 1 Insp Date			27-Mar-2014		Current Level 1 Insp Cycle (Default) (Months)			21
Special Comments for Next Insp	Repair girder at next major rehab & ensure jnts are water tight.									
Snooper? (Y/N)	No	Lift? (Y/N)	No	Traffic Control? (Y/N)	Yes	Boat? (Y/N)	No	Ladder? (Y/N)	No	
Other Special Requirements Comments	Converted from CDIS									
Previous Level 2 Inspector's Name	Jason Saly			Previous Level 2 Insp Date	11-May-2009					
Next Level 2 Insp Date	27-Jun-2016			Discontinue Level 2 Insp? (Y/N)	No					
Level 2 Insp Previously Completed	10			Level 2 Insp Cycle (Default) (Months)	48					
Detailed Report/Diagram? (Y/N)	Yes									
Level 2 Insp Comments	The fourth panel of bridgerail from the north along the west curb. fifth post from the north along the west crub was cracked at the base plate weld									
Next Level 2 Inspection/Test	Concrete Deck Insp? (Y/N)		Yes	CSE Testing? (Y/N)	Yes	Chloride Testing? (Y/N)		No		
Department Reviewer Comments										