Level 2 Inspection - Concrete Deck

Bridge File Number	75195 W-2 Bridge	Form Type	CDK
Year Built/Year Supstr	1961/1961	Lot No.	
		Inspector Name	Jason Saly
Bridge or Town Name	CARVEL CORNE	Inspector Class	BR CLS A
Located Over	43:22 R1 23.819;43:22 L1 23.856	Assistant Name	
Located On	16:12 L1 51.547	Assistant Class	
Water Body Cl./Year		Inspection Date	02-Aug-2012
Navigabil. Cl./Year		Data Entry By	Jason Saly
Legal Land Location	SW SEC 15 TWP 53 RGE 2 W5M	Data Entry Date	22-Jan-2013
Longitude, Latitude	-114:13:17, 53:34:13	Reviewer Name	Paul Carter
Road Authority	Alberta Transportation (AIT)	Review Date	25-Feb-2013
Contract Main. Area	CMA11	Dept. Reviewer Name	
Clear Roadway/Skew	12.2 / 38 deg. (RHF)	Dept. Review Date	
AADT/Year	17,030 / 2012 (A)	Follow-Up By	
Road Classification	RAD-412.4-120	Visual Inspection?	Y
Detour Length (km)	1	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 : **RB, Spans: 1,2,3, Lengths(m): 14-24.4-17.1**)

(Total Length : **14-24.4-17.1 = 55.5**)

Concrete Deck Inspection

		Last	Now	Explanation of Condition
Wearing Surface				
Polymer? (Y/N)	Y			
ACP? (Y/N)	N			
Chip Seal Coat? (Y/N)	Y			

	Type	Year Installed	Avg. Total Thickness (mm)	Area (m^2)
Seal Coat	CONVENTIONAL CHIP SEAL COAT	1994		677.1

Polymer Rating (% Area)

	9-7	6/5	4	3	2/1	N/X
Last						
Now	0	0	0	0	0	100

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	100	0	0	0	0	0

Polymer Total Debonded /Lost Area (m^2)		2
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)		0

Concrete Overlay	
Overlay? (Y/N)	Y

(Span Type : RB)

(Span Numbers : **1, 2, 3**)

(Overlay type : **CONCRETE (HIGH DENSITY)**)

(Area(m^2) : **677.1**)

Concrete Deck Inspection

	Last	Now	Explanation of Condition
(Year Installed : **1982**)			
(Thickness(mm) : **50**)			
(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

Covered by chip seal coat and epoxy

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)		127
Standard Deviation of Measured Cover Depth (mm)		11

Deck

(Span Type : RB)

(Span Numbers : **1, 2, 3**)

(Deck Type : **CONCRETE (CLASS C)**)

(Area(m^2) : **677.1**)

(Year Constructed : **1961**)

(Year Widened :)

(Thickness(mm) : **150**)

(Average Cylinder Strength(MPa) :)

	Type	Size	Design Cover (mm)	Spacing (mm)
Long. Reinforcing	REINFORCING STEEL			
Trans. Reinforcing	REINFORCING STEEL			

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	0	100	0	0	0	0

Old accident fire caused staining on the deck underside.
Small construction spalls between G4G5 S1. several high load scrapes, above southbound traffic on highway 43.
Transverse cracks.
Slight sag along centre span.

Total Stained Area - Moderate (m^2)		7
Total Stained Area - Heavy/Severe (m^2)		0
Total Crack Length - Medium/Wide (m)		160
% of Medium/Wide Cracks Stained		50

Edge Elements

Curbs? (Y/N)	Y
Parapets? (Y/N)	N
Medians? (Y/N)	N
Sidewalks? (Y/N)	N

Concrete Deck Inspection

		Last	Now	Explanation of Condition
Curbs				
(Type : **CONCRETE**)				
(Total Length(m) : **111.0**)				
(Height(mm) :)				
(Width(mm) :)				
(Average Cylinder Strength(MPa) :)				

Reinforcement Type	Size	Design Cover (mm)	Spacing (mm)

Curb Rating (% Length)

	9-7	6/5	4	3	2/1	N/X	
Last							
Now	0	88	2	0	0	10	Partially covered by gravel.

Total Crack Length - Medium/Wide (m)		16	
Total Scaled Length - Light (m)		19	
Total Scaled Length - Moderate/Heavy/Severe (m)		1	
Delaminated Length (m)		0	
Spalled Length (m)		1	Isolated spall along the south curb.
Patched Length (m)		5	
Average Measured Cover Depth (mm)		105	
Standard Deviation of Measured Cover Depth (mm)		12	

Deck Joints

(Type : **SLIDING PLATES**)

(Number of Joints : **2**)

(Expansion / Fixed? : **EXPANSION**)

(Location : **A1, A2**)

% Inspected		100	
% Joints Leaks		100	
% Joint Length Leaks		100	
Superstructure Damage Rating		5	
Substructure Damage Rating		4	
Level 1 Joint Rating		5	

CSE Testing

Testing Date	18-Jul-2012	Previous Testing Date	24-Jul-2008

Weather Information

Temperature (°C)	17
Conditions	Sunny

Equipment Information

Test Equipment Make and Model	Corexco CDL - 200 EA/512
Electrical Ground Location and Type	1DJ, West abutment along the south curb 2DJ, West abutment along the north curb

Measurement Locations Information

Origin for Data	Southwest		
	Number	Length of Each (m)	Length of Last (m)
X Increments (Length)	54	1.219	0.900
Y Increments (Width)	10	1.219	1.200

CSE Results

Span Numbers	1,2,3
Span Type	RB
Wearing Surface	CONVENTIONAL CHIP SEAL COAT, CONCRETE (HIGH DENSITY)

CSE Testing									
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)	Stnd. Dev. Deck Reading	Avg. Curb Reading (V)	Stnd. Dev. Curb Reading
2012	0.0	0.8	43.0	46.8	9.4	-0.320	0.072	-0.422	0.092
2008	0.0	1.0	38.0	55.0	7.0	-0.323	0.069	-0.169	0.168
2004	0.0	7.0	51.0	38.0	3.0	-0.291	0.068	-0.352	0.073
CSE Prediction Model Optimum 5 year Rehab Start Year			2028						
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						
OTHER ACTION						
CRACK REPAIRS/TREATMENT						
PATCH CURBS/PARPETS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (%)	**44.4**	**Sufficiency Rating (%)**	**43.2**	Est Repl Year	2020

Level 1 Insp Date	07-Aug-2012	Next Level 1 Insp Date	07-May-2014	Current Level 1 Insp Cycle (Default) (Months)	21
Special Comments for Next Insp					

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									

Previous Level 2 Inspector's Name	Brian Cote	Previous Level 2 Insp Date	24-Jul-2008
Next Level 2 Insp Date	02-Aug-2016	Discontinue Level 2 Insp? (Y/N)	No
Level 2 Insp Previously Completed	11	Level 2 Insp Cycle (Default) (Months)	48
Detailed Report/Diagram? (Y/N)	Yes		
Level 2 Insp Comments			

Next Level 2 Inspection/Test	Concrete Deck Insp? (Y/N)	Yes	CSE Testing? (Y/N)	Yes	Chloride Testing? (Y/N)	No
Department Reviewer Comments						