

**Level 2 Inspection - Concrete Deck**

Bridge File Number	76093 E-1 Bridge	Form Type	CDK
Year Built/Year Supstr	1968/1968	Lot No.	
Bridge or Town Name	EDMONTON	Inspector Name	Jason Saly
Located Over	CNR	Inspector Class	BR CLS A
Located On	SHERWOOD PARK FREEWAY:02 R1 0.505	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	04-Oct-2012
Legal Land Location	SW SEC 30 TWP 52 RGE 23 W4M	Data Entry By	Jason Saly
Longitude, Latitude	-113:23:11, 53:31:02	Data Entry Date	21-Feb-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Paul Carter
Contract Main. Area	ANTHONY HENDAY DRIVE	Review Date	22-Feb-2013
Clear Roadway/Skew	12.5 /	Dept. Reviewer Name	
AADT/Year	33,470 / 2012 (A)	Dept. Review Date	
Road Classification	RAD-412.4-120	Follow-Up By	
Detour Length (km)	1	Visual Inspection?	Y
		CSE Testing?	Y
		Chloride Testing?	N

Allowable Load (t):	Single	Semi	Train	----> On Critical Spans ---->Critical Member
Design Loading:	HS20			----> Primary Span
(Primary Span : <b>PM</b> , Spans: <b>1,2,3</b> , Lengths(m): <b>13.7-19.2-16.8</b> )				
(Total Length : <b>13.7-19.2-16.8 = 49.7</b> )				

**Concrete Deck Inspection**

	Last	Now	Explanation of Condition			
<b>Wearing Surface</b>						
Polymer? (Y/N)		N				
ACP? (Y/N)		N				
Chip Seal Coat? (Y/N)		N				
<b>Polymer Rating (% Area)</b>						
	9-7	6/5	4	3	2/1	N/X
<b>Last</b>						
<b>Now</b>	0	0	0	0	0	100
<b>ACP Rating (% Area)</b>						
	9-7	6/5	4	3	2/1	N/X
<b>Last</b>						
<b>Now</b>	0	0	0	0	0	100
<b>Chip Seal Coat Rating (% Area)</b>						
	9-7	6/5	4	3	2/1	N/X
<b>Last</b>						
<b>Now</b>	0	0	0	0	0	100
Polymer Total Debonded /Lost Area (m <sup>2</sup> )						N
ACP Total Debonded /Lost Area (m <sup>2</sup> )						N
ACP Average Measured Depth (mm)						N
ACP Crack Frequency (m/m <sup>2</sup> )						N
Chip Seal Coat Total Lost Area (m <sup>2</sup> )						N

<b>Concrete Overlay</b>	
Overlay? (Y/N)	Y
<b>(Span Type : PM)</b>	
(Span Numbers : <b>1, 2, 3</b> )	
(Overlay type : <b>CONCRETE (SILICA FUME)</b> )	
(Area(m <sup>2</sup> ) : <b>621.3</b> )	
(Year Installed : <b>1995</b> )	
(Thickness(mm) : <b>50</b> )	

Concrete Deck Inspection							
		Last	Now	Explanation of Condition			
(Average Cylinder Strength(Mpa) : )							
<b>Overlay Rating (% Area)</b>							
	9-7	6/5	4	3	2/1	N/X	
<b>Last</b>							
<b>Now</b>	0	100	0	0	0	0	
Total Crack Length - Medium/Wide (m)						11	Minor cracking
Total Scaled Area - Light (m <sup>2</sup> )						0	
Total Scaled Area -Moderate/Heavy/Severe (m <sup>2</sup> )						0	
Debonded Area (m <sup>2</sup> )						0	
Spalled Area (m <sup>2</sup> )						0	
Patched Area (m <sup>2</sup> )						0	
Average Measured Cover Depth (mm)						120	
Standard Deviation of Measured Cover Depth (mm)						15	
<b>Deck</b>							
<b>(Span Type : PM)</b>							
(Span Numbers : 1, 2, 3)							
(Deck Type : <b>PRECAST CONCRETE (PRECAST STD WT)</b> )							
(Area(m <sup>2</sup> ) : <b>621.3</b> )							
(Year Constructed : <b>1968</b> )							
(Year Widened : )							
(Thickness(mm) : )							
(Average Cylinder Strength(MPa) : )							
	Type		Size		Design Cover (mm)	Spacing (mm)	
Long. Reinforcing							
Trans. Reinforcing							
<b>Deck Top Rating (% Area)</b>							
	9-7	6/5	4	3	2/1	N/X	
<b>Last</b>							
<b>Now</b>	0	0	0	0	0	100	
Total Crack Length - Medium/Wide (m)						N	
Total Scaled Area - Light (m <sup>2</sup> )						N	
Total Scaled Area - Moderate/Heavy/Severe (m <sup>2</sup> )						N	
Delaminated Area (m <sup>2</sup> )						N	
Spalled Area (m <sup>2</sup> )						N	
Patched Area (m <sup>2</sup> )						N	
Average Measured Cover Depth (mm)						N	
Standard Deviation of Measured Cover Depth (mm)						N	
<b>Deck Underside Rating (% Area)</b>							
	9-7	6/5	4	3	2/1	N/X	
<b>Last</b>							
<b>Now</b>	0	0	0	0	0	100	
Total Stained Area - Moderate (m <sup>2</sup> )						N	Due to the design shape of the girders the deck underside could not be inspected. The underside of teh centre span has been stained from train exhaust. There are narrow lonitudinal cracks in teh bottoms of the girders on teh end spans. There is exposed stirrup along G14S3
Total Stained Area - Heavy/Severe (m <sup>2</sup> )						N	
Total Crack Length - Medium/Wide (m)						N	
% of Medium/Wide Cracks Stained						N	
<b>Edge Elements</b>							
Curbs? (Y/N)			N				
Parapets? (Y/N)			Y				
Medians? (Y/N)			N				
Sidewalks? (Y/N)			N				
<b>Parapets</b>							

Concrete Deck Inspection									
						Last	Now	Explanation of Condition	
<b>Parapet Rating (% Length)</b>									
	9-7	6/5	4	3	2/1	N/X			
<b>Last</b>									
<b>Now</b>	0	100	0	0	0	0	0		
Total Crack Length - Medium/Wide (m)								77	
Total Scaled Length - Light (m)								18	
Total Scaled Length - Moderate/Heavy/Severe (m)								0	
Delaminated Length (m)								0	
Spalled Length (m)								0	
Patched Length (m)								0	
Average Measured Cover Depth (mm)								68	
Standard Deviation of Measured Cover Depth (mm)								23	

**Deck Joints**(Type : **GLAND (WABO-MAUER, TRANSFLEX, ETC)**)(Number of Joints : **3**)(Expansion / Fixed? : **EXPANSION**)(Location : **A1, A2, P2**)

% Inspected		100	Joints were flooded no leakage was observed.
% Joints Leaks		0	
% Joint Length Leaks		0	
Superstructure Damage Rating		N	
Substructure Damage Rating		6	
Level 1 Joint Rating		7	

(Type : **GLAND (WABO-MAUER, TRANSFLEX, ETC)**)(Number of Joints : **1**)(Expansion / Fixed? : **FIXED**)(Location : **P1**)

% Inspected		100	There is spalling along the west side of the west pier cap.
% Joints Leaks		0	
% Joint Length Leaks		0	
Superstructure Damage Rating		N	
Substructure Damage Rating		4	
Level 1 Joint Rating		7	

**CSE Testing**

Testing Date	08-Aug-2012	Previous Testing Date	
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**Weather Information**

Temperature (°C)	21
Conditions	Sunny

**Equipment Information**

Test Equipment Make and Model	Corexco CDL - 200 EA/512
Electrical Ground Location and Type	1DJ, 2DJ

**Measurement Locations Information**

Origin for Data	SW		
	Number	Length of Each (m)	Length of Last (m)
X Increments (Length)	41	1.219	1.219
Y Increments (Width)	11	1.219	0.305

**CSE Results**

Span Numbers	1,2,3
Span Type	PM
Wearing Surface	CONCRETE (SILICA FUME)

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)	Std. Dev. Deck Reading	Avg. Curb Reading (V)	Std. Dev. Curb Reading
2012	9.4	37.4	48.8	4.3	0.1	-0.203	0.071	-0.239	0.078
CSE Prediction Model Optimum 5 year Rehab Start Year			2027						
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									
<b>Structural Condition Rating (%)</b>	<b>38.9</b>	<b>Sufficiency Rating (%)</b>	<b>49.6</b>	<b>Est Repl Year</b>	<b>2035</b>				
Level 1 Insp Date	10-Jan-2013	Next Level 1 Insp Date	10-Apr-2016	Current Level 1 Insp Cycle (Default) (Months)	39				
Special Comments for Next Insp	Monitor girder delam, spalls @ rusting, staining on underside.								
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	Jason Saly		Previous Level 2 Insp Date	01-Aug-2000					
Next Level 2 Insp Date	04-Oct-2016		Discontinue Level 2 Insp? (Y/N)	No					
Level 2 Insp Previously Completed	1		Level 2 Insp Cycle (Default) (Months)	48					
Detailed Report/Diagram? (Y/N)	Yes								
Level 2 Insp Comments	There is an erosion gully along teh SW wingwall.								
Next Level 2 Inspection/Test	Concrete Deck Insp? (Y/N)	Yes	CSE Testing? (Y/N)	Yes	Chloride Testing? (Y/N)	No			
Department Reviewer Comments									