

Level 2 Inspection - Concrete Deck							
Bridge File Number	76177 -1 Bridge			Form Type	CDK		
Year Built/Year Supstr	1967/1967			Lot No.			
Bridge or Town Name	LETHBRIDGE			Inspector Name	Jason Saly		
Located Over	3:08 R1 47.487;3:09 L1 0.016			Inspector Class	BR CLS A		
Located On	25:02 L1 0.372;25:02 R1 0.373			Assistant Name			
Water Body Cl./Year				Assistant Class			
Navigabil. Cl./Year				Inspection Date	17-Sep-2012		
Legal Land Location	SW SEC 11 TWP 9 RGE 22 W4M			Data Entry By	Jason Saly		
Longitude, Latitude	-112:53:31, 49:42:58			Data Entry Date	22-Feb-2013		
Road Authority	Alberta Transportation (AIT)			Reviewer Name	Paul Carter		
Contract Main. Area	CMA25			Review Date	23-Feb-2013		
Clear Roadway/Skew	15.2 / -22 deg. (LHF)			Dept. Reviewer Name	Tim Davies		
AADT/Year	4,130 / 2011 (A)			Dept. Review Date	25-Mar-2013		
Road Classification	RAU-211.8-110			Follow-Up By			
Detour Length (km)	3			Visual Inspection?	Y		
				CSE Testing?	Y		
				Chloride Testing?	N		
Allowable Load (t):	Single	CS1 41 GIRDER	Semi	CS2 56 GIRDER	Train	CS3 69 GIRDER	----> On Critical Spans ---->Critical Member
Design Loading:	HS20						----> Primary Span
(Primary Span : FC, Spans: 1,2,3,4, Lengths(m): 13.1-25.9-25.9-13.1)							
(Total Length : 13.1-25.9-25.9-13.1 = 78.0)							

Concrete Deck Inspection

		Last	Now	Explanation of Condition			
Wearing Surface							
Polymer? (Y/N)	N						
ACP? (Y/N)	Y						
Chip Seal Coat? (Y/N)	N						
	Type	Year Installed	Avg. Total Thickness (mm)		Area (m²)		
ACP	ACP	1987	50		1185.6		
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	90	9	1	0	0	
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 (m²)						X	
ACP Total Debonded /Lost Area (m²)				228		Thin layer of ACP ((0.5 - 1") on top of the original ACP wearing surface. Depths were mistakenly not taken.	
ACP Average Measured Depth (mm)				N			
ACP Crack Frequency (m/m²)				0.3			
Chip Seal Coat Total Lost Area (m²)				X			

Concrete Overlay

Overlay? (Y/N)	N						
Deck							
(Span Type : FC)							
(Span Numbers : 1, 2, 3, 4)							
(Deck Type : PRECAST CONCRETE (PRECAST STD WT))							

Concrete Deck Inspection						
		Last	Now	Explanation of Condition		
(Area(m ²) : 1185.6)						
(Year Constructed : 1967)						
(Year Widened :)						
(Thickness(mm) :)						
(Average Cylinder Strength(MPa) :)						
		Type	Size	Design Cover (mm)	Spacing (mm)	
Long. Reinforcing						
Trans. Reinforcing						
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)					96	
Standard Deviation of Measured Cover Depth (mm)					13	
Deck Underside Rating (% Area)						
	9-7	6/5	4	3	2/1	N/X
Last						
Now	0	100	0	0	0	0
Total Stained Area - Moderate (m ²)					4	
Total Stained Area - Heavy/Severe (m ²)					0	
Total Crack Length - Medium/Wide (m)					1	
% of Medium/Wide Cracks Stained					0	
There is typical shoe plate cracking. There is typical chamfer cracking. Some cracks extend into the deck underside, and web cracks remain unchanged. There is staining around the deck drains and weep tubes.						
Edge Elements						
Curbs? (Y/N)			Y			
Parapets? (Y/N)			N			
Medians? (Y/N)			Y			
Sidewalks? (Y/N)			N			
Curbs						
(Type : CONCRETE)						
(Total Length(m) : 156.0)						
(Height(mm) :)						
(Width(mm) :)						
(Average Cylinder Strength(MPa) :)						
Reinforcement Type		Size	Design Cover (mm)	Spacing (mm)		

Concrete Deck Inspection						
		Last	Now	Explanation of Condition		
Curb Rating (% Length)						
	9-7	6/5	4	3	2/1	N/X
Last						
Now	70	30	0	0	0	0
Total Crack Length - Medium/Wide (m)						21
Total Scaled Length - Light (m)						0
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)						101
Standard Deviation of Measured Cover Depth (mm)						12
Median						
(Type : Curb - CONCRETE)						
(Total Length(m) : 78.0)						
(Height(mm) :)						
(Width(mm) :)						
(Average Cylinder Strength(MPa) :)						
Reinforcement Type			Size		Design Cover (mm)	Spacing (mm)
Median Rating (% Length)						
	9-7	6/5	4	3	2/1	N/X
Last						
Now	0	100	0	0	0	0
Total Crack Length - Medium/Wide (m)						76
Total Scaled Area - Light (m ²)						0
Total Scaled Area - Moderate/Heavy/Severe (m ²)						0
Delaminated Area (m ²)						0
Spalled Area (m ²)						0
Patched Area (m ²)						0
Average Measured Cover Depth (mm)						N
Standard Deviation of Measured Cover Depth (mm)						N
Median cover measurements are not required.						
Deck Joints						
(Type : ARMOURED GLAND (WABO UNDER FINGER OR SLIDING PLATES))						
(Number of Joints : 2)						
(Expansion / Fixed? : EXPANSION)						
(Location : A1, A2)						
% Inspected						100
% Joints Leaks						0
% Joint Length Leaks						0
Superstructure Damage Rating						6
Substructure Damage Rating						6
Level 1 Joint Rating						7
CSE Testing						
Testing Date		25-Jul-2012			Previous Testing Date	07-Jun-2007
Weather Information						
Temperature (°C)		16				
Conditions		Sunny				
Equipment Information						
Test Equipment Make and Model		Corexco CDL - 200 EA/512				
Electrical Ground Location and Type		1DJ, south abutment along the median.				

CSE Testing

Measurement Locations Information									
Origin for Data		south east							
		Number		Length of Each (m)			Length of Last (m)		
X Increments (Length)		70		1.219			1.200		
Y Increments (Width)		15		1.219			0.600		
CSE Results									
Span Numbers		1,2,3,4							
Span Type		FC							
Wearing Surface		ACP							
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	28.4	40.6	27.9	3.0	0.1	-0.158	0.079	-0.121	0.080
2007	21.0	57.0	18.0	3.0	0.0	-0.157	0.076	-0.109	0.073
2002	11.0	66.0	21.0	2.0	0.0	-0.164	0.057	-0.124	0.075
CSE Prediction Model Optimum 5 year Rehab Start Year		2019							
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 (%)	50.0	Sufficiency Rating (%)	56.2			Est Repl Year	2025			
Level 1 Insp Date	02-Dec-2011	Next Level 1 Insp Date	02-Sep-2013	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	Jason Saly			Previous Level 2 Insp Date	07-Jun-2007					
Next Level 2 Insp Date	17-Sep-2016			Discontinue Level 2 Insp? (Y/N)	No					
Level 2 Insp Previously Completed	7			Level 2 Insp Cycle (Default) (Months)	48					
Detailed Report/Diagram? (Y/N)	Yes									
Level 2 Insp Comments	Bearings 3,4, and 9-13 at the north abutment pads are deteriorated.									
Next Level 2 Inspection/Test	Concrete Deck Insp? (Y/N)	Yes	CSE Testing? (Y/N)	Yes	Chloride Testing? (Y/N)	No				
Department Reviewer Comments										