HUNT STREET BRIDGE

Site Number 983502

HUNT STREET, SIMCOE

0.2 km North of Highway 3

Ontario Structure Inspection Manual - Inspection Form **Site Number:** 983502

Inventory Data:

Structure Name	Hunt Street Bridge						
Main Hwy/Road #	HUNT ST NORTH	[X] On [ ] Under	Crossing Type:	[ ] Rail [ ] Ped.	[ ] Road [ ] Other	[ ] Navig. Water [X] Non-Navig. Water	
Hwy/Road Name	HUNT STREET, SIMCOE						
Structure Location	0.2 km North of Highway 3						
Latitude	42d 50' 45.7" N		Longitude	80d 19' 13" W			
Owner(s)	Norfolk County		Heritage Designation:	[X] Not Cons. [ ] Cons./not App.	[ ] List/not Design. [ ] Desig./not List	[ ] Desig. & List	
MTO Region	30 Southwestern		Road Class:	[ ] Freeway	[ ] Arterial	[X] Collector	[ ] Local
MTO District	31 London / Stratford		Posted Speed	50	No. of Lanes	2	
Old County	20 Norfolk		AADT	488	% Trucks		
Geographic Twp.	124 Windham		Inspection Route Sequence				
Structure Type	15 Rigid Frame, Vertical Legs		Interchange Number				
Total Deck Length	7 (m)		Interchange Structure Number				
Overall Str. Width	14.3 (m)		Min. Vertical Clearance	3.5 (m)			
Total Deck Area	100.1 (m^2)		Special Route	[ ] Truck	[ ] Emergency	[-] School	[ ] Bicycle
Roadway Width	11.5 (m)		Detour Length Around Bridge	5 (km)			
Skew Angle	(Degrees)		Direction of Structure	North / South			
No. of Spans	1		Fill on Structure	0 (m)			
Span Length	6.1 (m)						

Historical Data:

Year Built	1967	Year of Last Major Rehab.	
Last OSIM Inspection	July 10, 2014	Last Evaluation	
Last Enhanced OSIM Inspection		Current Load Limit	/ / (tonnes)
Enhanced Access Equipment (ladder, boat, lift, etc.)		Load Limit By-Law #	
Last Underwater Inspection		By-Law Expiry Date	
Last Condition Survey			

Rehab History: (Date/description)

Ontario Structure Inspection Manual - Inspection Form **Site Number:** 983502

Field Inspection Information:			
Date of Inspection:	July 12, 2016	Type of Inspection:	[X] OSIM [ ] Enhanced OSIM
Inspector:	Ben Buchwald M.Eng., EIT, G. Douglas Vallee Ltd.		
Others in Party:	N/A		
Access Equipment Used:	Hammer, Binoculars, Measuring Tape, Camera, etc.		
Weather:	Sunny		
Temperature:	33 ^{o}C		

	Additional Investigation Required:	Priority		
		None	Normal	Urgent
	Material Condition Survey			
X	Detailed Deck Condition Survey:		X	
X	Non-destructive Delamination Survey of Asphalt-Covered Deck:	X		
X	Concrete Substructure Condition Survey:	X		
X	Detailed Coating Condition Survey:	X		
X	Detailed Timber Investigation	X		
X	Post-Tensioned Strand Investigation	X		
	Underwater Investigation:	X		
	Fatigue Investigation:	X		
	Seismic Investigation:	X		
	Structure Evaluation:	X		
	Monitoring			
X	Monitoring of Deformations, Settlements and Movements:	X		
X	Monitoring Crack Widths:	X		
	Investigation Notes:			

Overall Structure Notes:			
Recommended Work on Structure:	[ ] None [X] Maintenance	[ ] Minor Rehab. [ ] Major Rehab.	[ ] Replace
Timing of Recommended Work:	[ ] 1 to 5 years	[ ] 6 to 10 years	
Overall Comments:			
Date of next Inspection:	July 12, 2018		

Suspected Performance Deficiencies

01	Load carrying capacity	**07**	Bearing not uniformly loaded/unstable	**12**	Slippery surfaces
02	Excessive deformations (deflections & rotations)	**08**	Jammed expansion joint	**13**	Flooding/channel blockage
03	Continuing settlement	**09**	Pedestrian/vehicular hazard	**14**	Undermining of foundation
04	Continuing movements	**10**	Rough riding surface	**15**	Unstable embankments
05	Seized bearings	**11**	Deck drainage	**16**	Other

Maintenance Needs

01	Lift and swing bridge maintenance	**07**	Repair to structural steel	**13**	Erosion control at bridges
02	Bridge cleaning	**08**	Repair of bridge concrete	**14**	Concrete sealing
03	Bridge handrail maintenance	**09**	Repair of bridge timber	**15**	Rout and seal
04	Painting steel bridge structures	**10**	Bailey bridges - maintenance	**16**	Bridge deck drainage
05	Bridge deck joint repair	**11**	Animal/pest control	**17**	Scaling (Loose concrete or ACR steel)
06	Bridge bearing maintenance	**12**	Bridge surface repair	**18**	Other

Ontario Structure Inspection Manual - Inspection Form **Site Number:** 983502

Rehabilitation Required:		Element	Priority				Estimated Construction Cost
Rehab	Replace		Urgent	Within 1 yr	1-5 yrs	6-10 yrs	
		Railing System					
		Drainage					
		Soffit Thick slab					
		Soffit Thin Slab					
		Wearing Surface					
		Embankments					
		Foundation (below ground level)					
						Total Cost	$0

Associated Work:	Comments	Estimated Construction Cost
Additional Investigations		
Traffic Management		
Utilities		
Road Allowance		
Environmental Assessment		
Engineering		
Other		
Contingencies		
	Total Cost	$0

Justification:

Notes:

Construction Cost:	$0
Associated Work Cost:	$0
TOTAL Estimated Cost:	$0

Ontario Structure Inspection Manual - Inspection Form **Site Number:** 983502

Element Data

Element Group:	400	Barriers	Length:	
Element Name:	402	Railing System	Width:	
Location:		Top of Sidewalk	Height:	
Material:	14	Steel	Count:	2
Element Type:		Steel Post and Steel Panel	Total Quantity:	2 Each
Environment:		Severe	Limited Inspection:	
Protection System:		Unknown	Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	Each	0	2	0	0

Comments:
No approach barriers, railing assemblies or hazard signs at quadrants. Surface corrosion on barrier rail.

Recommended Work:	Rehab ☐	Replace ☐			Maintenance Needs:	Bridge Concrete Repair	
Timing:	Urgent ☐	< 1yr ☐	1 - 5 yr ☐	6 - 10 yr ☐	☐ Urgent	☐ 1 year	☒ 2 year

Element Group:	100	Decks	Length:	
Element Name:	106	Drainage	Width:	
Location:		Through Deck	Height:	
Material:			Count:	1
Element Type:			Total Quantity:	1 Each
Environment:		Moderate	Limited Inspection:	
Protection System:		Unknown	Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	Each	0	1	0	0

Comments:

Recommended Work:	Rehab ☐	Replace ☐			Maintenance Needs:		
Timing:	Urgent ☐	< 1yr ☐	1 - 5 yr ☐	6 - 10 yr ☐	☐ Urgent	☐ 1 year	☐ 2 year

Element Group:	100	Decks	Length:	14.3
Element Name:	104	Soffit Thick slab	Width:	6.2
Location:			Height:	3.5
Material:	4	Cast-in-place Concrete	Count:	1
Element Type:			Total Quantity:	188.8 sq.m
Environment:			Limited Inspection:	X
Protection System:		Unknown	Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	sq.m	0	182.8	5.5	0.5

Comments:
Limited inspection due to water level. Transverse cracks noted two (2) with some leakage and chlorides. Storm sewer on north and south abutment walls. Discharge running down walls with staining and minor deterioration. Outlets should be extended.

Recommended Work:	Rehab ☐	Replace ☐			Maintenance Needs:	Bridge Concrete Repair	
Timing:	Urgent ☐	< 1yr ☐	1 - 5 yr ☐	6 - 10 yr ☐	☐ Urgent	☐ 1 year	☒ 2 year

Ontario Structure Inspection Manual - Inspection Form **Site Number:** 983502

Element Data

Element Group:	100	Decks				Length:	16
Element Name:	103	Soffit Thin Slab				Width:	
Location:		East and West				Height:	0.3
Material:	4	Cast-in-place Concrete				Count:	2
Element Type:						Total Quantity:	9.6 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	sq.m	0	9.6	0	0

Comments:
Includes sidewalk outside face. Minor localized cracks and spall at 1/3rds oriented N-S.

Recommended Work:		Rehab ☐	Replace ☐			Maintenance Needs:	Concrete Sealing
Timing:	Urgent ☐	< 1yr ☐	1 - 5 yr ☐	6 - 10 yr ☐		☐ Urgent ☐ 1 year	☒ 2 year

Element Group:	100	Decks				Length:	
Element Name:	101	Wearing Surface				Width:	
Location:		Top of Deck				Height:	
Material:	2	Asphalt				Count:	1
Element Type:						Total Quantity:	1 All
Environment:		Severe				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	All	0	1	0	0

Comments:
Transverse cracks in wearing surface at both approaches. Vegetation growing on curbs and sidewalks. Crack beginning to form in north approach joint.

Recommended Work:		Rehab ☐	Replace ☐			Maintenance Needs:	Rout and Seal
Timing:	Urgent ☐	< 1yr ☐	1 - 5 yr ☐	6 - 10 yr ☐		☐ Urgent ☐ 1 year	☒ 2 year

Element Group:	1400	Embankments & Streams				Length:	
Element Name:	1402	Embankments				Width:	
Location:						Height:	
Material:						Count:	1
Element Type:						Total Quantity:	1 All
Environment:						Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	All	0	1	0	0

Comments:
Banks stable

Recommended Work:		Rehab ☐	Replace ☐			Maintenance Needs:	
Timing:	Urgent ☐	< 1yr ☐	1 - 5 yr ☐	6 - 10 yr ☐		☐ Urgent ☐ 1 year	☐ 2 year

Ontario Structure Inspection Manual - Inspection Form **Site Number:** 983502

Element Data

Element Group:	1300	Foundations				Length:	
Element Name:	1301	Foundation (below ground level)				Width:	
Location:						Height:	
Material:						Count:	
Element Type:						Total Quantity:	
Environment:						Limited Inspection:	X
Protection System:		Unknown				Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor

Comments:
Limited inspection. Not visible.

Recommended Work:	Rehab ☐	Replace ☐			Maintenance Needs:		
Timing:	Urgent ☐	< 1yr ☐	1 - 5 yr ☐	6 - 10 yr ☐	☐ Urgent	☐ 1 year	☐ 2 year

Figure 1 North Approach

Figure 2 South Approach

Figure 3 East Profile (Outlet)

Figure 4 West Profile (Inlet)

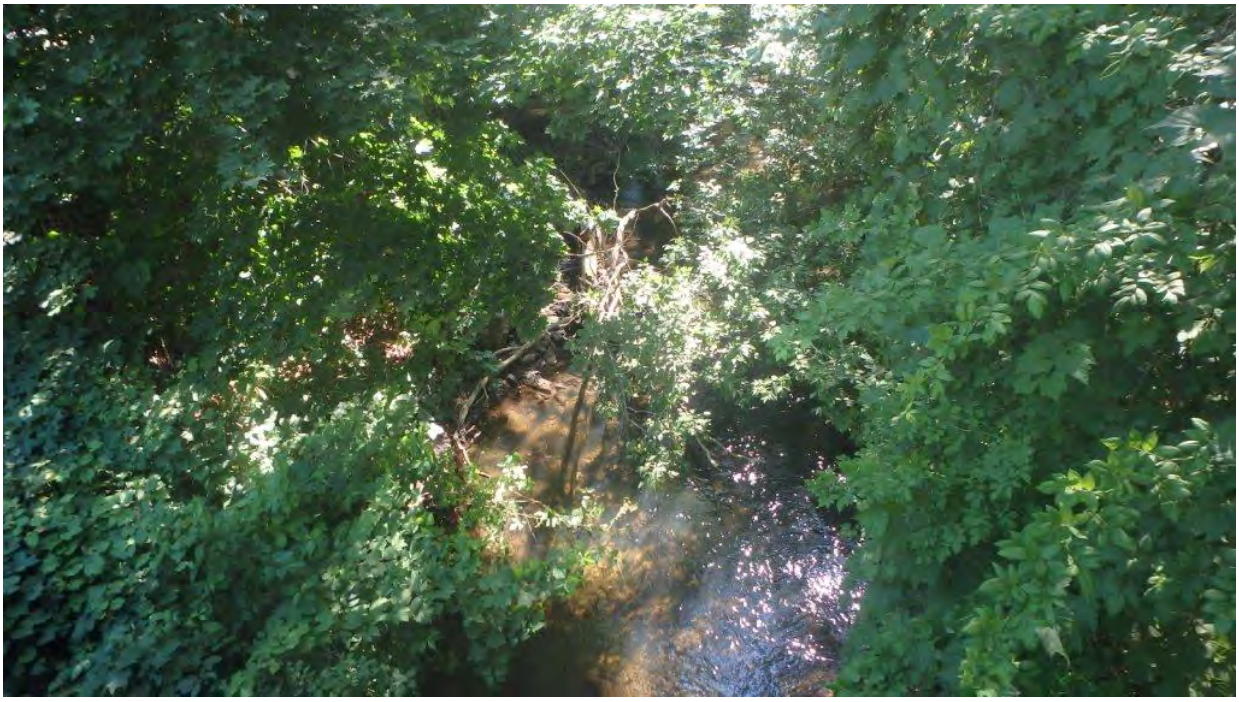

Figure 5 Upstream

Figure 6 Downstream

Figure 7 Soffit

Figure 8 North Wall

Figure 9 South Wall

Figure 10 Vertical Hairline Crack in South Wall

Figure 11 Staining & Minor Deterioration at Drains

Figure 12 Crack in Soffit with Leakage & Chlorides

Figure 13 Crack & Spall in Sidewalks

Figure 14 Geodetic Benchmark on West Fascia

Figure 15 Transverse Crack in Wearing Surface