

VENISON CREEK BRIDGE

Site Number 000103

TROYER ROAD, SOUTH WALSINGHAM

0.35km N of County Road 60

Ontario Structure Inspection Manual - Inspection Form

Site Number:

Inventory Data:			
Structure Name	<input type="text" value="Venison Creek Bridge"/>		
Main Hwy/Road #	<input type="text" value="TROYER RD"/>	<input checked="" type="checkbox"/> On <input type="checkbox"/> Under	Crossing Type: <input type="checkbox"/> Rail <input type="checkbox"/> Road <input type="checkbox"/> Navig. Water <input type="checkbox"/> Ped. <input type="checkbox"/> Other <input checked="" type="checkbox"/> Non-Navig. Water
Hwy/Road Name	<input type="text" value="TROYER ROAD, SOUTH WALSHINGHAM"/>		
Structure Location	<input type="text" value="0.35km N of County Road 60"/>		
Latitude	<input n"="" type="text" value="42d 39' 13.6"/>	Longitude	<input type="text" value="80d 33' 16.7" w"=""/>
Owner(s)	<input type="text" value="Norfolk County"/>	Heritage Designation:	<input checked="" type="checkbox"/> Not Cons. <input type="checkbox"/> Cons./not App. <input type="checkbox"/> List/not Design. <input type="checkbox"/> Design. & List <input type="checkbox"/> Design./not List
MTO Region	<input type="text" value="30"/> Southwestern	Road Class:	<input type="checkbox"/> Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input checked="" type="checkbox"/> Local
MTO District	<input type="text" value="31"/> London / Stratford	Posted Speed	<input type="text" value="80"/> No. of Lanes <input type="text" value="2"/>
Old County	<input type="text" value="20"/> Norfolk	AADT	<input type="text" value="0"/> % Trucks <input type="text"/>
Geographic Twp.	<input type="text" value="585"/> South Walsingham	Inspection Route Sequence	<input type="text"/>
Structure Type	<input type="text" value="32"/> Half-Through Truss	Interchange Number	<input type="text"/>
Total Deck Length	<input type="text" value="22.2"/> (m)	Interchange Structure Number	<input type="text"/>
Overall Str. Width	<input type="text" value="4.9"/> (m)	Min. Vertical Clearance	<input type="text"/> (m)
Total Deck Area	<input type="text" value="108.8"/> (m ²)	Special Route	<input type="checkbox"/> Truck <input type="checkbox"/> Emergency <input type="checkbox"/> School <input type="checkbox"/> Bicycle
Roadway Width	<input type="text" value="4.4"/> (m)	Detour Length Around Bridge	<input type="text" value="9"/> (km)
Skew Angle	<input type="text"/> (Degrees)	Direction of Structure	<input type="text" value="North / South"/>
No. of Spans	<input type="text" value="1"/>	Fill on Structure	<input type="text" value="5"/> (m)
Span Length	<input type="text" value="21.8"/> (m)		

Historical Data:			
Year Built	<input type="text" value="1920"/>	Year of Last Major Rehab.	<input type="text"/>
Last OSIM Inspection	<input type="text" value="July 2, 2014"/>	Last Evaluation	<input type="text"/>
Last Enhanced OSIM Inspection	<input type="text"/>	Current Load Limit	<input type="text" value="12"/> / / (tonnes)
Enhanced Access Equipment (ladder, boat, lift, etc.)	<input type="text"/>	Load Limit By-Law #	<input type="text"/>
Last Underwater Inspection	<input type="text"/>	By-Law Expiry Date	<input type="text"/>
Last Condition Survey	<input type="text"/>		
Rehab History:	(Date/description)		

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Field Inspection Information:		
Date of Inspection:	July 12, 2016	Type of Inspection: <input checked="" type="checkbox"/> OSIM <input type="checkbox"/> Enhanced OSIM
Inspector:	Matt Alderson, G. Douglas Vallee Ltd.	
Others in Party:	N/A	
Access Equipment Used:	Hammer, Binoculars, Measuring Tape, Camera, etc.	
Weather:	Sunny	
Temperature:	30 °C	

Additional Investigation Required:	Priority		
	None	Normal	Urgent
Material Condition Survey			
<input checked="" type="checkbox"/> Detailed Deck Condition Survey:	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> Non-destructive Delamination Survey of Asphalt-Covered Deck:	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> Concrete Substructure Condition Survey:	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> Detailed Coating Condition Survey:	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> Detailed Timber Investigation	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> Post-Tensioned Strand Investigation	<input checked="" type="checkbox"/>		
Underwater Investigation:	<input checked="" type="checkbox"/>		
Fatigue Investigation:	<input checked="" type="checkbox"/>		
Seismic Investigation:	<input checked="" type="checkbox"/>		
Structure Evaluation:	<input checked="" type="checkbox"/>		
Monitoring			
<input checked="" type="checkbox"/> Monitoring of Deformations, Settlements and Movements:	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> Monitoring Crack Widths:	<input checked="" type="checkbox"/>		
Investigation Notes:			
Bridge is currently closed.			

Overall Structure Notes:	
Recommended Work on Structure:	<input type="checkbox"/> None <input type="checkbox"/> Minor Rehab. <input checked="" type="checkbox"/> Replace <input type="checkbox"/> Maintenance <input type="checkbox"/> Major Rehab.
Timing of Recommended Work:	<input checked="" type="checkbox"/> 1 to 5 years <input type="checkbox"/> 6 to 10 years
Overall Comments:	Bridge currently closed.
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 |

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Site Number: 000103

Element Data

Element Group:		1600 Approaches				Length:		
Element Name:		1601 Wearing Surface (Approaches)				Width:		
Location:						Height:		
Material:		6 Gravel				Count:		1
Element Type:						Total Quantity:		1 All
Environment:		Severe				Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition	Units	Exc.	Good	Fair	Poor			
Data:	All	0	0	1	0			
Comments: Road closed. West "Do not enter" sign missing.								
Recommended Work: Rehab <input type="checkbox"/> Replace <input type="checkbox"/>				Maintenance Needs:				
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year				

Element Group:		900 Abutments				Length:		
Element Name:		901 Abutment Walls				Width:		5
Location:		North and South				Height:		1.5
Material:		4 Cast-in-place Concrete				Count:		2
Element Type:						Total Quantity:		15 sq.m
Environment:		Moderate				Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition	Units	Exc.	Good	Fair	Poor			
Data:	sq.m	0	0	15	0	Load Carrying Capacity		
Comments: Ballast walls visible at roadway surface as well as below deck.								
Recommended Work: Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>				Maintenance Needs:				
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year				

Element Group:		1600 Approaches				Length:		
Element Name:		1601 Wearing Surface (Approaches)				Width:		
Location:		Both sides				Height:		
Material:		6 Gravel				Count:		1
Element Type:						Total Quantity:		1 Each
Environment:		Severe				Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition	Units	Exc.	Good	Fair	Poor			
Data:	Each	0	0	1	0			
Comments:								
Recommended Work: Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>				Maintenance Needs:				
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year				

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Element Data

Element Group:		400 Barriers				Length:		
Element Name:		402 Railing System				Width:		
Location:		4 Corners				Height:		
Material:		14 Steel				Count:		1
Element Type:						Total Quantity:		1 Each
Environment:		Severe				Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition	Units	Exc.	Good	Fair	Poor			
Data:	Each	0	0	1	0			
Comments:								
Hazards - narrow bridge - load limit. No guiderail.								
Recommended Work:				Rehab <input type="checkbox"/>		Replace <input type="checkbox"/>		
Timing:				Urgent <input type="checkbox"/>		< 1yr <input type="checkbox"/>		
				1 - 5 yr <input type="checkbox"/>		6 - 10 yr <input type="checkbox"/>		
				Maintenance Needs:				
				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year				

Element Group:		500 Beams/MLE's				Length:		4.5
Element Name:		502 Floor Beams				Width:		
Location:						Height:		
Material:		14 Steel				Count:		30
Element Type:						Total Quantity:		135 m
Environment:						Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition	Units	Exc.	Good	Fair	Poor			
Data:	m	0	0	113	22			
Comments:								
Severe corrosion throughout. Loss of cross sectional area on flanges & steel to steel and connections.								
Recommended Work:				Rehab <input type="checkbox"/>		Replace <input checked="" type="checkbox"/>		
Timing:				Urgent <input checked="" type="checkbox"/>		< 1yr <input type="checkbox"/>		
				1 - 5 yr <input type="checkbox"/>		6 - 10 yr <input type="checkbox"/>		
				Maintenance Needs:				
				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year				

Element Group:		700 Bracing				Length:		
Element Name:		701 Bracing				Width:		
Location:						Height:		
Material:		14 Steel				Count:		6
Element Type:						Total Quantity:		6 Each
Environment:						Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition	Units	Exc.	Good	Fair	Poor			
Data:	Each	0	0	0	6			
Comments:								
Replace bracing - considerable rusting.								
Recommended Work:				Rehab <input type="checkbox"/>		Replace <input checked="" type="checkbox"/>		
Timing:				Urgent <input checked="" type="checkbox"/>		< 1yr <input type="checkbox"/>		
				1 - 5 yr <input type="checkbox"/>		6 - 10 yr <input type="checkbox"/>		
				Maintenance Needs:				
				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year				

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Element Data

Element Group:		100 Decks				Length:	21.8
Element Name:		102 Deck Top				Width:	4.9
Location:		Top of Deck				Height:	
Material:		18 Wood				Count:	1
Element Type:		Laminated wood decking - transverse				Total Quantity:	106.8 sq.m
Environment:		Severe				Limited Inspection:	
Protection System:		Other type of waterproofing				Perform. Deficiencies	
Condition Data:	Units sq.m	Exc. 0	Good 0	Fair 106.8	Poor 0		
Comments: Leaks into beams. DST evident.							
Recommended Work:				Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>		Maintenance Needs: Concrete Sealing	
Timing:				Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input checked="" type="checkbox"/> 2 year	

Element Group:		1400 Embankments & Streams				Length:	
Element Name:		1401 Streams and Waterways				Width:	
Location:						Height:	
Material:						Count:	1
Element Type:						Total Quantity:	1 Each
Environment:						Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition Data:	Units Each	Exc. 0	Good 1	Fair 0	Poor 0		
Comments: Overgrown.							
Recommended Work:				Rehab <input type="checkbox"/> Replace <input type="checkbox"/>		Maintenance Needs:	
Timing:				Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year	

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: Not visible.							
Recommended Work:				Rehab <input type="checkbox"/> Replace <input type="checkbox"/>		Maintenance Needs:	
Timing:				Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year	

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Element Data

Element Group:		600 Trusses/Arches				Length:	21.8
Element Name:		602 Bottom Chords				Width:	
Location:						Height:	
Material:		14 Steel				Count:	2
Element Type:						Total Quantity:	43.6 m
Environment:		Severe				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor	Load Carrying Capacity	
Data:	m	0	0	0	43.6		
Comments: Load posted 12 tonnes. Road closed. Corroded with section loss up to 100% through on several areas - estimate 50% loss. Evaluation recommended.							
Recommended Work: Rehab <input type="checkbox"/> Replace <input checked="" type="checkbox"/>				Maintenance Needs: Repair to Structural Steel			
Timing: Urgent <input checked="" type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input checked="" type="checkbox"/> 2 year			

Element Group:		600 Trusses/Arches				Length:	
Element Name:		604 Connections				Width:	
Location:						Height:	
Material:						Count:	12
Element Type:		Riveted				Total Quantity:	12 Each
Environment:						Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor		
Data:	Each	0	0	6	6		
Comments: Gussets corroded through in several joints.							
Recommended Work: Rehab <input type="checkbox"/> Replace <input checked="" type="checkbox"/>				Maintenance Needs:			
Timing: Urgent <input checked="" type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year			

Element Group:		600 Trusses/Arches				Length:	21.8
Element Name:		603 Top Chords				Width:	
Location:		Each side				Height:	
Material:		14 Steel				Count:	2
Element Type:						Total Quantity:	43.6 sq.m
Environment:		Severe				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor		
Data:	sq.m	0	0	43.6	0		
Comments: Steel could use paint and cleaning of corrosion. (same as overall truss)							
Recommended Work: Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>				Maintenance Needs:			
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year			



Figure 1 East Approach



Figure 2 West Approach



Figure 3 Upstream



Figure 4 Downstream



Figure 5 Soffit



Figure 6 South Truss Overgrown



Figure 7 Severe Corrosion of Bottom Chord



Figure 8 North Truss



Figure 9 Deck