LOT 13 TOWNLINE ROAD

Site Number 002426

MIDDLETON – NORTH WALSINGHAM TOWNLINE ROAD

2.0 km W of Highway 59

Ontario Structure Inspection Manual - Inspection Form **Site Number:** 002426

Inventory Data:

Structure Name	Lot 13 Townline road						
Main Hwy/Road #	MIDDLETON-N WALS TL	[X] On [ ] Under	Crossing Type:	[ ] Rail [ ] Ped.	[ ] Road [ ] Other	[ ] Navig. Water [X] Non-Navig. Water	
Hwy/Road Name	MIDDLETON – NORTH WALSINGHAM TOWNLINE ROAD						
Structure Location	2.0km W of Highway 59						
Latitude	42d 46' 03.8" N		Longitude	80d 37' 50.3" 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	[ ] Collector	[X] Local
MTO District	31 London / Stratford		Posted Speed	80	No. of Lanes	2	
Old County	20 Norfolk		AADT	596	% Trucks		
Geographic Twp.	123 Middleton		Inspection Route Sequence				
Structure Type	10 Arch Culvert		Interchange Number				
Total Deck Length	3.2 (m)		Interchange Structure Number				
Overall Str. Width	30 (m)		Min. Vertical Clearance	1.4 (m)			
Total Deck Area	96 (m^2)		Special Route	[ ] Truck	[ ] Emergency	[X] School	[ ] Bicycle
Roadway Width	12 (m)		Detour Length Around Bridge	8 (km)			
Skew Angle	(Degrees)		Direction of Structure	North / South			
No. of Spans	1		Fill on Structure	3 (m)			
Span Length	3.0 (m)						

Historical Data:

Year Built	1970	Year of Last Major Rehab.	
Last OSIM Inspection	May 12, 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:** 002426

Field Inspection Information:			
Date of Inspection:	July 28, 2016	Type of Inspection:	[X] OSIM [ ] Enhanced OSIM
Inspector:	Matt Alderson, G. Douglas Vallee Ltd.		
Others in Party:	N/A		
Access Equipment Used:	Hammer, Binoculars, Measuring Tape, Camera, etc.		
Weather:	Overcast		
Temperature:	28 °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:
No signs or barriers. Utility buried on North side.

Overall Structure Notes:			
Recommended Work on Structure:	[ ] None	[ ] Minor Rehab.	[ ] Replace
	[X] Maintenance	[ ] Major Rehab.	
Timing of Recommended Work:	[ ] 1 to 5 years	[ ] 6 to 10 years	
Overall Comments:	Wearing surface has many transverse cracks. Rout and Seal		
Date of next Inspection:	July 28, 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:** 002426

Rehabilitation Required:		Element	Priority				Estimated Construction Cost
Rehab	Replace		Urgent	Within 1 yr	1-5 yrs	6-10 yrs	
		Wearing Surface (Approaches)					
		Barrels					
		Inlet Components					
		Outlet Components					
						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:** 002426

Element Data

Element Group:	1600	Approaches				Length:	
Element Name:	1601	Wearing Surface (Approaches)				Width:	
Location:		Top of Fill				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	0	0.9	0.1

Comments:
Transverse cracks in road surface. Surface is polished. No barriers or signs.

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

Element Group:	1200	Culverts				Length:	30
Element Name:	1203	Barrels				Width:	3.2
Location:		Inside				Height:	1.5
Material:	5	Corrugated Steel				Count:	1
Element Type:						Total Quantity:	150.8 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	sq.m	0	146.603	4.2	0

Comments:
Minor corrosion at waterline and at bolts. Some Multiplate joints are leaking.

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

Element Group:	1200	Culverts				Length:	3.2
Element Name:	1201	Inlet Components				Width:	
Location:						Height:	1.5
Material:						Count:	1
Element Type:						Total Quantity:	4.8 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	sq.m	0	4.8	0	0

Comments:

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:** 002426

Element Data

Element Group:	1200	Culverts				Length:	3.2
Element Name:	1202	Outlet Components				Width:	
Location:						Height:	1.5
Material:						Count:	1
Element Type:						Total Quantity:	4.8 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	

Condition Data:	Units	Exc.	Good	Fair	Poor
	sq.m	0	4.8	0	0

Comments:

Recommended Work: Rehab ☐ Replace ☐

Timing: Urgent ☐ < 1yr ☐ 1 - 5 yr ☐ 6 - 10 yr ☐

Maintenance Needs:

☐ Urgent ☐ 1 year ☐ 2 year

Figure 1 East Approach

Figure 2 West Approach

Figure 3 North Profile, Inlet

Figure 4 South Profile, Outlet

Figure 5 Upstream

Figure 6 Downstream

Figure 7 Barrel, Looking South

Figure 8 Leaking Multiplate Joints

Figure 9 Transverse Crack in Wearing Surface