

Appendix N.1 – Structural Inspection Report

Kennedy Road Environmental Assessment between Steeles Avenue and Major Mackenzie Drive



Structural Inspection Report

Class Environmental Assessment for Kennedy Road from Steeles Avenue to Major Mackenzie Drive

August 30, 2017

DRAFT

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1. Introduction

York Region is reviewing opportunities for improvements to Kennedy Road from Steeles Avenue to Major Mackenzie Drive. HDR has been retained to carry out a Municipal Class Environmental Assessment (Schedule 'C') study. The scope of the Environmental Assessment (EA) study includes Structural Assessment based on a visual inspection of all the structures included in the Kennedy Road study corridor. Site visits were conducted by HDR Structural staff on June 8, 2017. The preliminary structure assessment presented in this report is based on review of the available materials and visual observation of these bridges and may be modified as design progresses or when additional information becomes available.

2. Existing Structures

The structures included in the study corridor are located along Kennedy Road between Steeles Avenue and Major Mackenzie Drive and include the following bridges:

- CN Rail Underpass
- 407ETR Overpass
- Rouge River Bridge

These site visits were conducted under the supervision of Sardar Nabi, P.Eng., during day time without traffic interruption. Weather at time of inspection was as follows:

• Sunny, +22 C degrees, June 8, 2017

The photographs of each structure are included in **Appendix A** to this Report.

2.1 CN Rail Underpass

The existing bridge, Structure No. 03-03 B0380, is owned by York Region.

2.1.1 Location

The CN York Subdivision Bridge over Kennedy Road is located approximately 380m north of 14th Avenue, in the City of Markham. It currently carries two rail tracks over two northbound and two southbound lanes of traffic.

2.1.2 Existing Structure

Constructed in 1963, the CN Rail Underpass is simply supported, one span bridge with a steel ballast tray deck on transverse floor beams and two steel through plates. The structure has a span length of 22.1m and a width of 9.3m. The bridge deck is covered with railway ballast and carries two railway tracks.

The bridge spans over four traffics lanes (13.7m total), two sidewalks/boulevards (8.4m total), and has a vertical clearance of 4.57m (derived from existing drawings).

The substructure consists of reinforced concrete abutments and wingwalls supported on concrete footings.



The Ontario Structure Inspection Manual (OSIM) report, found in **Appendix B**, which was carried out on October 3, 2016, showed that the bridge was in good condition, but needed minor repairs for the following:

- Wide, stained, and map cracks on abutments
- Minor impact damage on Southeast girder's bottom flange
- Light to moderate corrosion of soffit

The site visual inspection carried out on June 8, 2017, verified that the 2016 OSIM report findings and recommendations are consistent with the current site conditions, with the addition of missing sections of the South trainmen's walk and wet areas on the soffit.

2.2 407ETR Overpass

The existing bridge is located at Site No. 37-1485.

2.2.1 Location

The 407ETR Overpass at Kennedy Road is located in the City of Markham. It currently carries three northbound and three southbound lanes of Kennedy Road over five eastbound and five westbound lanes of 407ETR.

2.2.2 Existing Structure

The 407ETR Overpass is a continuous, two span, cast-in-place concrete slab deck on 26 PCG 1900 girders (13 girders per span), bridge that was constructed in 1997. The structure has spans of 41.0m and 41.0m, with total length of 82.4m and a width of 30.46m.

The bridge deck is 0.225m deep and carries four 3.5m (inner) traffic lanes, two 3.75m (outer) lanes, two 1.5m shoulders, two 1.5m sidewalks, two 0.48m barrier walls, and one 2.0m median, and has a vertical clearance of 5.05m.

The substructure consists of reinforced concrete abutments and piers supported on steel piles, and wingwalls.

The OSIM reports for this bridge are not available at this time to verify. The site visual inspection carried out on June 8, 2017, found that the bridge is in good condition, but with the following defects:

- Impact damage on all guiderails
- Asphalt cracks and deterioration on newly paved transverse strip at both approach slabs
- Cracking on all sidewalks
- Cracking and spalling on all barrier walls
- Long vertical cracks on North abutment
- Concrete segregation at top of both abutments
- Concrete curb spalling by Northeast catch basin
- Northeast guiderail missing
- Partially filled pothole on Southeast road surface



- Impact damage on Southeast guiderail/barrier wall connection
- Delamination and cracks on South abutment

2.3 Rouge River Bridge

The existing bridge, Structure No. 03-06 B0400, is owned by York Region.

2.3.1 Location

Rouge River Bridge is located approximately 0.4km north of Regional Road 7 (Hwy 7), in the City of Markham. It currently carries two northbound and two southbound lanes of Kennedy Road over the Rouge River.

2.3.2 Existing Structure

The Rouge River Bridge is a simply supported, single span, cast-in-place concrete topping slab on fourteen precast concrete side by side boxgirders, bridge that was constructed in 1981. The structure has a span length of 30.5m and a width of 17m.

The box beams are 1.07m deep, and the topping slab is 0.127m deep and carries four traffic lanes (15.2m total) and two 1.83 m sidewalks (including railings).

The substructure consists of reinforced concrete abutments supported on steel tube piles, and wingwalls.

The OSIM report, found in **Appendix B**, which was carried out on September 15, 2016, showed that the bridge was in good condition, but needed minor repairs, including:

- Wide cracks and delamination on North abutment
- Spalls, stained, and wet areas on Northwest abutment
- Wide cracks, medium raveling, sealed cracks, and pot holes on asphalt road surface
- Spalls and delamination on North concrete end post
- Abrasion damage, unsecured, and missing end caps on railings
- Spalling at girder ends, exposed rebars
- Delamination on soffit, exposed rebar
- Missing blocks on abutment slope protection
- Spalls, cracks, and asphalt patches at top of expansions joints
- Cracking and spalling on sidewalks
- Local rail separation at railing post

The site visual inspection carried out on June 8, 2017, verified that the 2016 OSIM report findings and recommendations are consistent with the current site conditions, with the additions/exceptions of:

- Cracks on abutments and wingwalls not visible due to paint
- Paint peeling off and graffiti
- Spalling of Northwest bearing seat
- Missing cover of Northeast electrical box with spalling



- Dents on Northeast, Northwest, and Southwest guiderails
- Loss of concrete at underside of Northeast expansion joint
- Spalling of guiderail connections at Southwest, Northwest, and Northeast concrete end posts
- Exposed tie rod anchor at Southeast girder end
- Recommendation to replace existing handrails with new PL2 concrete barrier walls with railings
- Bridge found to be in moderate condition

2.4 Structural Evaluation

As part of this study an evaluation of the structures has not been carried out in accordance with the CHBDC CAN/CSA-S6-06 (CHBDC) and MTO Structural Manual.

3. Conclusion

Recommendations for the rehabilitation/modification/strengthening, or replacement of existing structures will be updated as the study progresses and alternative designs for Kennedy Road are developed. The preliminary design of each structure shall include, but is not limited to, consideration of structural bearing capacity, remaining service life, and constructability.

Inspected by Matthew Zalecki, Bridge EIT.
Checked by Vladimir Rogachyov, P.Eng., Structural Project Manager.
July 17, 2017.



Appendix A – 2017 Site Visit Photos

Kennedy Road Environmental Assessment between Steeles Avenue and Major Mackenzie Drive



Exhibit 01 – Kennedy Rd – CN Rail Underpass North Elevation with Overhead Cable (view from North)



Exhibit 02 – Kennedy Rd – CN Rail Underpass East Abutment (view from West)



Exhibit 03 – Kennedy Rd – CN Rail Underpass Wide Crack on East Abutment, Base of Middle Portion (view from West)



Exhibit 04 – Kennedy Rd – CN Rail Underpass Wide & Map Cracking on East Abutment, Top of Middle Portion (view from West)



Exhibit 05 – Kennedy Rd – CN Rail Underpass Stained Map Cracks on Southeast Wingwall (view from Southwest)



Exhibit 06 – Kennedy Rd – CN Rail Underpass Northeast Girder End with Utilities (view from North)



Exhibit 07 – Kennedy Rd – CN Rail Underpass

Map Cracks and Efflorescence on Southwest Bearing Seat (view from South)



Exhibit 08 – Kennedy Rd – CN Rail Underpass South Exterior Girder & Trainmen's Walk, Missing Sections (view from West)



Exhibit 09 – Kennedy Rd – CN Rail Underpass Soffit (view from West)

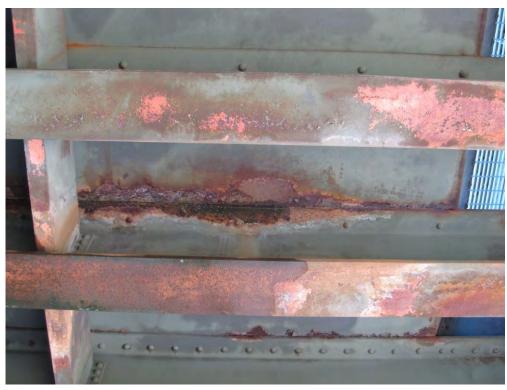


Exhibit 10 – Kennedy Rd – CN Rail Underpass Corrosion & Wet Areas on Southwest Soffit (view from West)



Exhibit 11 – Kennedy Rd – CN Rail Underpass
Impact Damage on Bottom Flange of Southeast Girder (view from Southeast)



Exhibit 12 – Kennedy Rd – CN Rail Underpass Top of Deck (view from West)



Exhibit 13 – Kennedy Rd – 407ETR Overpass West Elevation (view from West)



Exhibit 14 – Kennedy Rd – 407ETR Overpass North Abutment (view from West)



Exhibit 15 – Kennedy Rd – 407ETR Overpass

Delamination on Southeast Abutment (view from North)



Exhibit 16 – Kennedy Rd – 407ETR Overpass Concrete Segregation on North Abutment, Top of Middle Portion (view from South)



Exhibit 17 – Kennedy Rd – 407ETR Overpass Southeast Wingwall (view from Northeast)



Exhibit 18 – Kennedy Rd – 407ETR Overpass Soffit & Piers (view from North)

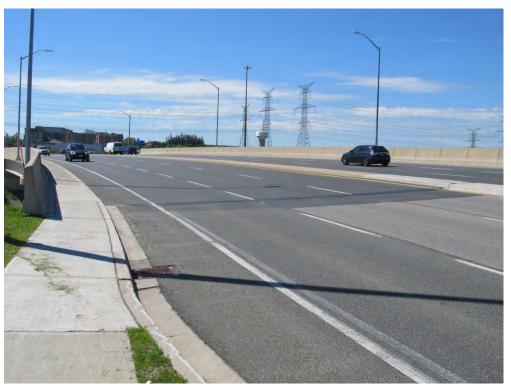


Exhibit 19 – Kennedy Rd – 407ETR Overpass Road Surface on Deck (view from Northeast)



Exhibit 20 – Kennedy Rd – 407ETR Overpass Cracks and Deterioration on North Approach (view from West)

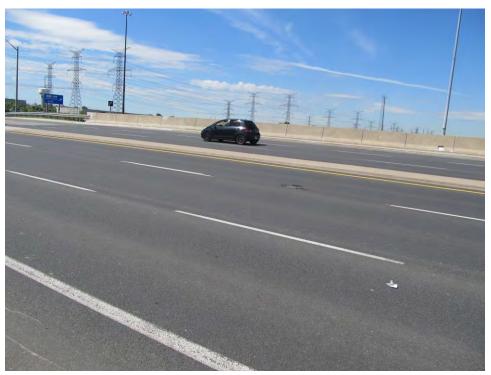


Exhibit 21 – Kennedy Rd – 407ETR Overpass Pot Hole on Southeast Road Surface (view from East)



Exhibit 22 – Kennedy Rd – 407ETR Overpass Missing Guiderail at Southeast Barrier Wall & Sidewalk (view from North)



Exhibit 23 – Kennedy Rd – 407ETR Overpass Wide Crack on Southeast Sidewalk (view from North)



Exhibit 24 – Kennedy Rd – 407ETR Overpass Cracks & Spalls on East Barrier Wall at Middle Light Pole (view from West)



Exhibit 25 – Kennedy Rd – 407ETR Overpass Impact Damage at Southeast Barrier Wall/Guiderail Connection (view from North)



Exhibit 26 – Kennedy Rd – 407ETR Overpass Damage on Southwest Guiderail (view from East)



Exhibit 27 – Kennedy Rd – Rouge River Bridge East Elevation (view from Southeast)



Exhibit 28 – Kennedy Rd – Rouge River Bridge North Abutment, Graffiti & Missing Slope Protection Blocks (view from Southeast)



Exhibit 29 – Kennedy Rd – Rouge River Bridge Soffit (view from North)



Exhibit 30 – Kennedy Rd – Rouge River Bridge Delamination & Exposed Rebar on North End of Soffit (view from South)



Exhibit 31 – Kennedy Rd – Rouge River Bridge Spalling on Northwest Bearing Seat (view from West)



Exhibit 32 – Kennedy Rd – Rouge River Bridge Exposed Rebar on Southwest Girder End (view from West)



Exhibit 33 – Kennedy Rd – Rouge River Bridge Loss of Concrete under Northeast Expansion Joint (view from East)



Exhibit 34 – Kennedy Rd – Rouge River Bridge Southeast Wingwall (view from Northeast)



Exhibit 35 – Kennedy Rd – Rouge River Bridge Road Surface on Deck (view from North)



Exhibit 36 – Kennedy Rd – Rouge River Bridge South Expansion Joint, Cracks/Deterioration/Patches (view from West)



Exhibit 37 – Kennedy Rd – Rouge River Bridge West Sidewalk & Railing, Cracks & Spalling (view from North)



Exhibit 38 – Kennedy Rd – Rouge River Bridge Spall & Missing Cover from Northeast Electrical Box (view from West)



Exhibit 39 – Kennedy Rd – Rouge River Bridge Spalling & Loose End Caps on Southeast Railing (view from West)



Exhibit 40 – Kennedy Rd – Rouge River Bridge Dent & Missing Bolt on Northeast Guiderail (view from West)



Appendix B—
2014 and 2016
Ontario Structure
Inspection Manual
Reports (by others)

Kennedy Road Environmental Assessment between Steeles Avenue and Major Mackenzie Drive

Summary Action Report Structure 03-03 B0380 (MTO Site No. 037-0671) Kennedy CNR Underpass

Inspection Date 09/18/2014 mm/dd/yyyy **Condition Index Value (BCI)** 73.6 Next Biennial Inspection 09/18/2016 mm/dd/yyyy **Current Rep. Value** \$3,017,495 **Additional Investigations** Investigation **Priority** Cost Investigation **Priority** Cost No additional investigations required. **Performance Deficiencies** No Performance Deficiencies **Maintenance Needs Element Group** Element **Maintenance Required Priority** Comment Sidewalks/curbs Sidewalks/Medians Other Reweld trainmen's walk to 2 yr bracket Repair/Rehabilitation **Element Group Element** Repair/Rehabilitation Priority Cost Abutments Abutment Walls Rehab Seal cracks \$5,000 1-5 yrs Total Repair/Rehabilitation Cost \$5,000 Region of York 100 % \$19,000.00 **Total Associated Work Cost** \$14,000 0 % \$0.00 **Total Cost** \$19,000 **Overall Comments** Seal cracks in abutment.



Municipal Structure Inspection Form

Inventory Data						
Structure Name	Kennedy CNR Underpa	ss	Hwy No.	3 Key	Photo	
Cross. Type Over	☐Road ✓ Rail ☐	Ped Nav. Wat	ter Non-Nav. Wat	Other		
Cross. Type Under	✓ Road Rail	Ped Nav. Wat	ter Non-Nav. Wat	Other	1	
Road Name	Kennedy Road				Bankers Francisco Bagna Bada)	
Structure Location	0.38km North of 71 - 14	th Avenue				
Latitude	43.84695 Longitud	de -79.30592	Cur. Rep.Value \$3,0	017,495		
Owner(s)/	Region of York	10	0 %	**	1	
% Share			0 % Heritage Status	Not Considered	for Designation	
MTO Region	Central		Road Side Env.	Urban		
MTO District	Central		Road Class	Arterial		
Old County	York		Lane Type			
Geographic Twp.			Posted Speed	60	No. of Lanes	4
Structure Type	I-Beam or Girders		AADT	37825	Pct. Trucks	6
Structure Material	Structural Steel		Inspection Route	Sequence		
Articulation	Simply Supported		Interchange Numb	per		
Total Deck Length	23.1 m Road V	Width 13.7	m Interchange Struc	ture Number		
Overall Width	9.3 m Vert. C	Clear. 0	m Detour Length	0 km	Skew Angle	0 °
Total Deck Area	214.83 m ² No. of	Spans 1	Fill on Structure	0 m	Struct. Dir.	East/West
Special Routes	✓ Transit ✓ School	☐ Truck ☐ Bicy	cle Insp. Duration	2 hr		
Spans			eplacement of the existing strespecific cost factors and req			
Span Name	S	pan Length Spar	n Name	Sı	oan Length	
Span 1		22.1 m				
Historical Data						
Year Built	1963 yy	yy Yea	r of Last Major Rehab		уууу	
Last OSIM Inspection	n 08/09/2012 mi	m/dd/yyyy Con	tract No. When Built]
Last Enhanced OSIM	l m	m/dd/yyyy Las	t Evaluation		mm/dd/yyyy	*
Last Enhanced Acce	ss m	m/dd/yyyy Cur	rent Load Limit	t	t t	
Last Underwater Insp	o. mr	m/dd/yyyy Loa	d Limit By-Law No.		mm/dd/yyyy	
Last Condition Surve	ey mı	m/dd/yyyy By- l	Law Expiry Date		mm/dd/yyyy	

Rehab History

Municipal \$	Structure Inspe	ction Form	;	Structu	ure Num	ber:	03-03	B0380
Field Inspe	ction Information	:						
Inspection Date	09/18/2014 mr	n/dd/yyyy 🔲 🏻	Multi Day Inspe	ection	V (OSIM E	nhanced OSIM	BCI 73.6
Inspector	T. Fediw		Eng	. Respons	sible D. L.	Baxter, P. E	ng.	
Others in Party	P. Adams							
Access Equip.	Lift Lac	dder 🗌 Boa	at Brid	lge Master	Other			
Other Equip.	Camera, Hammer, 0	Other Hand Tools						
Weather	Rain				Tempera	ture	18 °C	
Additional I	nvestigations Re	quired:						
Investigation				Nama	Priority	Unnant		Estimated Cost
Detailed Deck Co	andition Survey			None	Normal	Urgent		\$0
	vey of Asphalt-Covered D	eck						\$0
	ucture Condition Survey	-						\$0
Detailed Coating	Condition Survey							\$0
Detailed Timber	Investigation							\$0
Post-Tensioned	Strand Investigation							\$0
Underwater Inves	stigation							\$0
Fatigue Investiga	tion							\$0
Seismic Investiga	ation							\$0
Structure Evalua	tion							\$0
Monitoring of Def	formations, Movements ar	d Settlements						\$0
Monitoring of Cra	ack Widths							\$0
Investigation No	otes						Total Cost	\$0
	ucture Notes:) and a s			
	Work on Structure	None	✓ Rehab		Replace	Remo		
	Seal cracks in abutment.	None	∐ Now		to 5 years	6 tO 1	0 years	
BCI Change Justification								
Next Inspection	09/18/2016 n	nm/dd/yyyy		Estimate	ed Load Lim	i it t	t	t



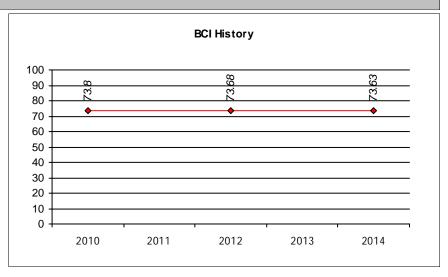
Municipal Structure Inspection Form

Structure Number:

03-03 B0380

BCI History

Insp. Date	BCI	Inspector
11-Nov-10	73.8	J.M. Youk
09-Aug-12	73.68	D. Kelly
18-Sep-14	73.63	T. Fediw



All BCI values are based on the MTO BCI methodology published in April 2008. As a result, BCI values for 2007 and earlier are approximate only, with potential discrepancies resulting from changes (over time) in the way quantities for certain elements are calculated.

Standard Codes

Suspected Performance Deficiencies

- 00
- 01 Load carrying capacity
- Excessive deformations (deflections/rotations) 02
- 03 Continuing settlement
- 04 Continuing movements
- 05 Seized bearings
- **Maintenance Needs**
- Lift and Swing Bridge Maintenance
- 02 Bridge Cleaning
- Bridge Handrail Maintenance
- Painting Steel Bridge Structures
- Bridge Deck Joint Repair
- Bridge Bearing Maintenance

- Bearing not uniformly loaded/unstable 06
- Jammed expansion joint 07
- 08 Pedestrian/vehicular hazard
- 09 Rough riding surface
- 10 Surface ponding
- 11 Deck drainage

- 12 Slippery surfaces
- Flooding/channel blockage 13
- Undermining of foundation 14
- 15 Unstable embankments
- 16 Other

- 07
 - Repair to Structural Steel Repair of Bridge Concrete 08
 - Repair of Bridge Timber 09
 - 10 Bailey Bridges - Maintenance
 - Animal/Pest Control
 - 12 Bridge Surface Repair
- **Erosion Control at Bridges** 13
- Concrete Sealing 14
- 15 Rout and Seal
- 16 Bridge deck Drainage
- Scaling (Loose Concrete or ACR Steel) 17
- 18

Municipal Structure Inspection Form

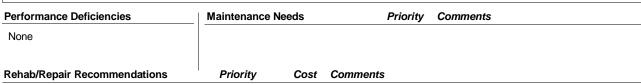
Structure Number:

03-03 B0380

Element Data						
Beams/MLE's - G	irders					
Element Group	Beams/MLE's			Length 2	3.00 Width 0.45	
Element Name	Girders			Height	2.50 Count 2.00	
Location	All			To	otal Quantity 292.10	
Material Steel				Limited Inspection		
Element Type I-type				Environment		
Protection System Red lead primer/all		alkyd		✓ Benign		
Condition Data Units Excel		ell. Good Fair	Poor	Moderate		
Comments	sq. m	0.00 292.10 0	.00	Severe		
Light corrosion.						
	_					
Performance Deficience	eies	Maintenance Needs	Priority	Comments		
None						
Rehab/Repair Recomm	nendations	Priority Cost Co	mments			
•		·				
Beams/MLE's - F	loor Beams					
Element Group	Beams/MLE's			Length	9.30 Width 0.25	
Element Name	Floor Beams			Height	0.60 Count 25.00	
Location	Between Girders			To	otal Quantity 453.38	
Material	Steel			Limited Inspection		
Element Type				Environment		
Protection System	Red lead primer/s	alkyd		✓ Benign		
Condition Data	Units Exc	ell. Good Fair	Poor	Moderate		
0	sq. m	0.00 453.38 0	.00 0.00	Severe		
Comments Light corrosion.	-					
_g						
Performance Deficience	eies	Maintenance Needs	Priority	Comments		
None						
Rehab/Repair Recomm	nendations	Priority Cost Co	mments			
· · · · · ·		•				



Region of York **Municipal Structure Inspection Form Structure Number:** 03-03 B0380 **Abutments - Abutment Walls Element Group Abutments** Length 11.00 Width 0.00 2.00 **Element Name** Abutment Walls Height 4.40 **Count** Location East Side and West Side 96.80 **Total Quantity** ☐ Limited Inspection Material Cast-in-place concrete Conventional Closed **Element Type Environment Protection System** None Benign **Condition Data** Moderate Units Excell. Good Fair Poor 0.00 1.00 1.00 sq. m 94.80 ✓ Severe Comments Narrow stained crack, wet area, wide cracks. **Performance Deficiencies Maintenance Needs** Priority **Comments** None Rehab/Repair Recommendations **Priority** Cost Comments Rehab 1-5 yrs Seal cracks \$5,000 **Abutments - Bearings** 0.00 0.00 Width **Element Group** Abutments Length 0.00 Count 4.00 **Element Name Bearings** Height **Total Quantity** 4.00 Location Top of Abutments Limited Inspection Material Steel **Element Type** Other **Environment Protection System** Red lead primer/alkyd ✓ Benign Units Moderate **Condition Data** Excell. Good Fair Poor Each 0.00 4.00 0.00 0.00 Severe Comments





nameipai oti a	cture Ins _l	pection F	−orm	Stru	cture Nu	mber:	03-03 B0	380	
Abutments - Ba	llast Walls								
Element Group	Abutments					Length	11.00 Width	0.00	
Element Name	Ballast Wal	ls				Height	1.40 Count	2.00	
_ocation	East Side a	and West Side					Total Quantity	30.80	
Material	Cast-in-place	ce concrete				Limite	ed Inspection		
Element Type						Environment			
Protection System	None					✓ Benig	n		
Condition Data	Units Excell. Good Fair Poor			☐ Mode	rate				
Comments sq. m			30.80	0.00	0.00	Sever	e		
Performance Deficier	ncies	Mainte	enance Needs		Priority	Comments			
None									
Rehab/Repair Recom	mendations	Prio	ority C	ost Commer	nts				
Abutments - Wi	ngwalls								
Element Group	Abutments					Length	5.60 Width	0.00	
Element Name	Wingwalls					Height	4.00 Count	4.0	
ocation	All Quadrar	nts					Total Quantity	89.6	
Material	Cast-in-place	ce concrete	ncrete			Limite	ed Inspection		
Element Type						Environn	nent		
Protection System	None					Benig	n		
Condition Data	Units	Excell.	cell. Good Fair Poor			✓ Mode	rate		
Comments	sq. m	0.00	89.60	0.00	0.00	Sever	е		
Comments Narrow map cracking.			enance Needs		Priority	Comments	e		
Performance Deficier	ncies	Mainte							
Performance Deficier None Rehab/Repair Recom		Mainte	urity C	ost Comme	nte				



Municipal Structure Inspection Form Structure Number: 03-03 B0380

Embankments &	Streams - En	nbankments				
Element Group	Embankments &	Streams		Length	0.00 Width	0.00
Element Name	Embankments			Height	0.00 Count	4.00
Location	All Quadrants				Total Quantity	4.00
Material	Other			Limite	d Inspection	
Element Type				Environm	ent	
Protection System	Vegetation			Benigr	า	
Condition Data	Units Exc	ell. Good Fair	Poor	Moder	ate	
Comments	Each	0.00 4.00 0.	0.00	Severe	e	
Performance Deficience	cies	Maintenance Needs	Priority	Comments		
None						
Rehab/Repair Recomm	mendations	Priority Cost Coi	mments			
Embankments &	Streams - Slo	ope Protection				
Element Group	Embankments 8	Streams		Length	0.00 Width	0.00
Element Name	Slope Protection			Height	0.00 Count	4.00
Location	All Quadrants				Total Quantity	4.00
Material	Vegetation			Limite	d Inspection	
Element Type	Vegetation			Environm	ent	
Protection System	None			Benigr	า	
Condition Data	Units Exc	ell. Good Fair	Poor	Moder	ate	
Comments	Each	0.00 4.00 0.	0.00	Severe	е	
Performance Deficience	cies	Maintenance Needs	Priority	Comments		
Rehab/Repair Recomm	nendations	Priority Cost Col	mments			



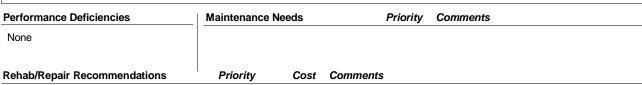
Municipal Structure Inspection Form

Structure Number: 03-03 B0380

Foundations - F	oundations (k	pelow ground leve	el)				
Element Group	Foundations				Length	0.00 Width	0.00
Element Name	Foundations (be	low ground level)			Height	0.00 Count	0.00
Location	Below Abutment	ts				Total Quantity	0.00
Material					✓ Limite	d Inspection	
Element Type					Environm	ent	
Protection System					Benigi	n	
Condition Data	Units Exc	cell. Good	Fair	Poor	Moder	ate	
Comments					Severe	е	
Limited inspection.							
Performance Deficien	cios	│ Maintenance Needs		Priority	Comments		
None	cies	waintenance Needs	•	Priority	Comments		
None							
Rehab/Repair Recom	mendations	Priority Co	ost Comment	s			
Coatings - Struc	tural Steel						
Element Group	Coatings				Length	0.00 Width	0.00
Element Name	Structural Steel				Height	0.00 Count	0.00
Location	Girders					Total Quantity	760.00
Material	Other				Limite	d Inspection	
Element Type	Red lead primer	/alkyd			Environm	ent	
Protection System	None				Benigi	n	
Condition Data	Units Exc	cell. Good	Fair	Poor	Moder Moder	rate	
Comments	sq. m	0.00 490.00	270.00	0.00	✓ Severe	е	
Breakdown of coating r	noted.						
D. of a sure of D. ff. i and	-1			Dutante	0		
Performance Deficient	cies	Maintenance Needs)	Priority	Comments		
None							
Rehab/Repair Recom	mendations	Priority Co	ost Comment	s			



Region of York **Municipal Structure Inspection Form Structure Number:** 03-03 B0380 Decks - Soffit - Thick Slab **Element Group** Decks Length 23.10 Width 9.30 1.00 **Element Name** Soffit - Thick Slab Height 0.00 **Count** Location 214.83 Underside of Deck **Total Quantity** ☐ Limited Inspection Material Steel **Element Type Environment Protection System** Red lead primer/alkyd Benign Excell. Moderate **Condition Data** Units Good Fair Poor 0.00 0.00 0.00 sq. m 214.83 Severe Comments Light to moderate corrosion. **Performance Deficiencies Maintenance Needs** Priority **Comments** None Comments Rehab/Repair Recommendations **Priority** Cost Beams/MLE's - Stringers Beams/MLE's 0.60 Width 0.10 **Element Group** Length Stringers 48.00 **Element Name** Height 0.50 **Count Total Quantity** 48.00 Location On Floor Beams Limited Inspection Material Steel **Element Type** I-type **Environment Protection System** Red lead primer/alkyd ✓ Benign Units Moderate **Condition Data** Excell. Good Fair Poor Each 0.00 48.00 0.00 0.00 Severe Comments Light corrosion. **Performance Deficiencies Maintenance Needs Priority Comments**





Region of York **Municipal Structure Inspection Form Structure Number:** 03-03 B0380 Sidewalks/curbs - Sidewalks/Medians **Element Group** Sidewalks/curbs Length 21.30 Width 0.78 2.00 **Element Name** Sidewalks/Medians Height 0.00 **Count** Location North Side and South Side 33.23 **Total Quantity** ☐ Limited Inspection Steel Material **Element Type Environment Protection System** None ✓ Benign **Condition Data** Moderate Units Excell. Good Fair Poor 0.00 1.00 1.00 sq. m 31.23 Severe Comments Trainmen's walk in Northeast quadrant is not welded to the support bracket. **Performance Deficiencies Maintenance Needs** Priority **Comments** Other None 2 yr Reweld trainmen's walk to bracket Comments Rehab/Repair Recommendations **Priority** Cost **Accessories - Utilities** 0.00 0.00 Width **Element Group** Accessories Length 1.00 **Element Name** Utilities Height 0.00 **Count Total Quantity** 1.00 Location North Side Limited Inspection Material Steel **Element Type Environment Protection System** ✓ Benign Hot dip galvanizing Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 1.00 0.00 0.00 Each Severe Comments Light corrosion. **Performance Deficiencies Maintenance Needs Priority** Comments None Rehab/Repair Recommendations **Priority** Cost Comments



Region of York

Municipal Structure Inspection Form Structure Number: 03-03 B0380

Accessories - Si	igns						
Element Group	Accessories				Length	0.00 Width	0.00
Element Name	Signs				Height	0.00 Count	2.00
Location	North and South	h Sides	<u> </u>			Total Quantity	2.00
Material					☐ Limite	ed Inspection	
Element Type					Environm	nent	
Protection System					Benig	n	
Condition Data	Units Ex	cell. Good	Fair	Poor	✓ Moder	rate	
Comments	Each	0.00 2.00	0.00	0.00	Sever	е	
Minor collision damage	to sign walkway no	oted.					
Performance Deficien	ncies	Maintenance Need	ls	Priority	Comments		
None							
Rehab/Repair Recom	mendations	Priority (Cost Commen	ts			



Municipal Structure Inspection Form

Structure Number:

03-03 B0380

Repair/Reh	abilitation Required	d		
Element Group	Element	Repair/Rehabilitation	Priority	Cost
Abutments	Abutment Walls	Rehab	1-5 yrs	\$5,000
			Total Repair/Rehabilitation Cost	\$5,000
	147 1			

Estimated Cost
\$0
\$0
\$5,000
\$0
\$0
\$0
\$0
** \$1,000
** \$8,000
st \$14,000
st \$5,000
st \$19,000
% \$19,000





Looking East Over Bridge



North Elevation



South Elevation



Trainmans Walk not Welded Down



Typical Soffit



Typical Soffit



Vehicle Strike Damage on Exterior Sign



Vehicle Strike Damage on Sign



Fascia



Corrosion on Girder



Corrosion on Girder



Crack on Abutment



Crack on Abutment



West Abutment



Bearing



Typical Wingwall



Map Cracking on Wingwall



Southeast Wingwall



Northeast Wingwall



Top of Retaining Wall



Bridge Inspection Form

Struct. ID	03-03 E	30380									
Inventory Data											
Structure Name	Kennedy	CNR	Underpass					2			4.53
Structure Location	0.38km N	lorth of	f 71 - 14th Av	enue/							1997
Road Number	3			On 🗌		Under X		165			1
Road Name	Kennedy	Road	-					To De Low			
Watercourse Name										Man 's Fulury O' Trans Course Management Provide Inc. See Transport	
Crossing Type:	Roa Rive	d X	Rail Other	-	ater _	Navigable wa	aterway [
Hwy Direction	2-EAST/\	NEST		<u>- </u>							
Owner Category											
Maint.Resp.						Northing			43.846	95	
Region	York Reg	ion				Easting			-79.30	592	
District	Southeas	t				National Highw	ay Systen	n			
Municipality	Markham					Highway Desig	nation				
Township						Hwy Functiona	l Classific	ation			
Structure Category	Bridge					AADT			No. of I	Lanes	4
Main Struct. Subcateg.	Beam/Gir	rder				Trucks (%)		6	Posted	l Speed	60
Main Struct. Type	Half-throเ	ugh Be	ams / Girder	'S		District Bridge	Engineer				
Deck Length (Total)			23.10 ((m)		Road Authority					
Overall Structure Width			9.30 ((m)		Bridge Plan #					
Deck Area (Total)			214.83 (Sq.m)		Min. Vertical Cl	earance				(m)
Width (Traffic)			13.70 (m)		Detour Distanc	e				(km)
Skew Angle			0.00			Speed on Deto	ur				(kph)
Number of spans			1			Fill Height					(m)
Total Length / Spans (m)	Total = 2	2.10; ((1) = 22.1							•	
Historical Data											
Year Built		19	963		Eval	uation Year					
Last Biennial Inspection		Octo	ber 03, 2016	3	Curre	ent Load Limit					
Last Bridge Master Inspecti	ion				Curr	ent BCI				73.44	
Last Condition Survey					Curr	ent BCU				43.00	
Last Underwater Inspection	1				Curr	ent SI				13.04	
Rehab. History											



Bridge Inspection Form

Struct. ID	0	3-03 B0380						
Scheduled	Improvements							
Regional Pr	iority Number				Programmed	d Wo	rk Year	
Nature of P	rogrammed Work	-						
Appraisal I	ndices				Cor	nmei	nts	
Load Capac	city Index							
Flood Index	(
Barrier Inde	ex							
Curb Index								
Seismic Ind	lex							
Fatigue Ind	ex							
Scour Index								
Structure Ir	ndex							
Suspected I	Performance Deficiencies							
00	None		06	Bearings not uniformly loaded/unstab	ele	12	Slippery surface	
01 02	Load carrying capacity Excessive deformations (deflections		07	Jammed expansion joint		13	Flooding/channel blockage	
03	Continuing settlement		08	Pedistrian/vehicular hazard Rough riding surface		14 15	Undermining of foundation Unstable embankments	
04	Continuing movements		10	Surface ponding				
05	Seized bearings		11	Deck drainage		16	Other	
Maintenan	ce Needs							
01	Lift and Swing Bridge Maintenance		07	Repairs 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 06	Bridge Deck Joint Repair Bridge Bearing Maintenance		11 12	Animal/Pest Control Bridge Surface Repair		17	Other	



Bridge Inspection Form

Struct. ID	0:	3-03 B0380								
Field Inspection Inf	ormation									
Inspection Date		October 03, 20	16				Weather			Cloudy
Inspector							Tempera	ture		16
Others in Party		Shane McDade	e, Ritesh Pat	tel, Jigish Naik						
Equipment Used		Camera, Hamn								
Access Equipment Use	d	Ladder		Boat 🗍			Bucket '	Truck 🗍		Hip Waders
Access Equipment 650	"	Access			Climbir	ng Inspec		_	l Inda	er Bridge Inspection Unit
Special Notes		710000	110y <u> </u>		Ollition	<u>порос</u>			Onde	er bridge mapecuon orin [
Overall in good condition flagging.	n. Maintenar	ce needs identi	fied on the a	abutment wall.	Some el	ements w	ere not ac	cessible due to	o una	availability of rail
Upcoming Inspection	ons and Inv	estigations								
Inspection Type			Due Date		Pri	ority		Comment		
Recommended Insp	ections an	d Investigatio	ns							
Recommended Inspecti	on Type			Due Date	None	Priority Normal	/ Urgent	Estimated Cost (\$)		Comments
Material Condition Survey:										
Detailed Deck Condition S	Survey									
Non-destructive Delamina	tion Survey of	Asphalt-Covered	Deck							
Concrete Substructure Co	ndition Survey	<u> </u>								
Detailed Coating Condition	n Survey									
Detailed Timber Investigat										
Post-Tensioned Strand Inv	estigation/				닏ᆜ					
Underwater Investigation					무					
Fatigue Investigation					무	<u> </u>	무			
Seismic Investigation					片片			 		
Structure Evaluation Monitoring						Ц_	<u> </u>			
Monitoring of Deformation	s. Settlements	and Movements				\Box		†		
Monitoring Crack Widths							一百			
Overall Structure R	ecommend	lations:								
Work Category	None X		Minor Reh	nab 📗		M	ajor Rehal	o 🗌		Replacement
Timing	None 🗓	l	Jrgent 🔲		< 1 y	ear 🔲		1 - 5 year		6 - 10 year 🗍
Est. Total Cost			<u> </u>					-		
Comments										



Bridge Inspection Form

Struct. ID		03-0	3 B0380							
Element Data										
Group	Abutme	nts				3	Length	N/A	11.00	(m)
Element	Abutme	nt walls					Width		0.00	(m)
Span Num							Height		4.40	(m)
Material	Cast-in-	-place concre	ete				Count		2.00	
Туре	Conven	ntional closed	<u>t</u>				Quantity		96.800	(Sq.m)
Env't	F	Benign 🗌	Mode	erate 🗌	Sev	ere 🛛	Not Inspected			
Location	East Si	de and West	Side	·		Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	Sq.m	0.000	93.800	2.000	1.000					
Comments									CR =	5
Narrow stained	I crack, w	et area, wide	cracks.							
Maintenance N	Needs					Need	Timing			
8-Repair of B	ridge Cor	ncrete				2 Yea	irs			
Performance D)eficienci	es								
0-None										
Recommended	d Work			- 4						
				Categor		Timing	•	nit Cost		Cost (\$)
				Minor R		Timing 1 - 5 year	Quantity Ur 0.000	nit Cost		Cost (\$) 5000
						_	•	nit Cost		000
Group	Abutme	nts				_	0.000	N/A		000
Group Element						1 - 5 year	0.000		5	5000 1
	Abutmei					1 - 5 year	0.000 Length		11.00	(m)
Element	Abutmel					1 - 5 year	0.000 Length Width		11.00	(m) (m)
Element Span Num	Abutmel	walls	əte			1 - 5 year	0.000 Length Width Height		11.00 0.00 1.40	(m) (m) (m)
Element Span Num Material	Abutmer Ballast v Cast-in-	walls -place concre			ehab	1 - 5 year 5	0.000 Length Width Height Count		11.00 0.00 1.40 2.00	(m) (m) (m)
Span Num Material Type	Abutmer Ballast v Cast-in-	walls -place concre N/A	Mode	Minor R	ehab	1 - 5 year 5	0.000 Length Width Height Count Quantity		11.00 0.00 1.40 2.00	(m) (m) (m)
Span Num Material Type Env't Location Condition	Abutmer Ballast v Cast-in-	walls -place concre N/A Benign X	Mode	Minor R	ehab	1 - 5 year 5	0.000 Length Width Height Count Quantity	N/A	11.00 0.00 1.40 2.00	(m) (m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location	Abutmer Ballast v Cast-in-	walls -place concre N/A Benign X de and West	Mode t Side	Minor R	ehab	1 - 5 year 5 ere Description	0.000 Length Width Height Count Quantity Not Inspected	N/A	11.00 0.00 1.40 2.00 30.800	(m) (m) (m) (m) (Sq.m)
Span Num Material Type Env't Location Condition	Abutmer Ballast v Cast-in-	walls -place concre N/A Benign X de and West Excellent	Mode t Side Good	Minor R erate Fair	Seve	1 - 5 year 5 ere Description	0.000 Length Width Height Count Quantity Not Inspected	N/A	11.00 0.00 1.40 2.00 30.800	(m) (m) (m) (sq.m)
Span Num Material Type Env't Location Condition Data	Abutmer Ballast v Cast-in-	walls -place concre N/A Benign X de and West Excellent	Mode t Side Good	Minor R erate Fair	Seve	1 - 5 year 5 ere Description	0.000 Length Width Height Count Quantity Not Inspected	N/A	11.00 0.00 1.40 2.00 30.800	(m) (m) (m) (sq.m)
Span Num Material Type Env't Location Condition Data Comments	Abutmer Ballast v Cast-in-	-place concre N/A Benign X de and West Excellent 0.000	Mode t Side Good	Minor R erate Fair	Seve	1 - 5 year 5 ere Description	0.000 Length Width Height Count Quantity Not Inspected	N/A	11.00 0.00 1.40 2.00 30.800	(m) (m) (m) (sq.m)
Element Span Num Material Type Env't Location Condition Data Comments	Abutmer Ballast v Cast-in-	-place concre N/A Benign X de and West Excellent 0.000	Mode t Side Good	Minor R erate Fair	Seve	1 - 5 year 5 ere Description	0.000 Length Width Height Count Quantity Not Inspected	N/A	11.00 0.00 1.40 2.00 30.800	(m) (m) (m) (sq.m)
Span Num Material Type Env't Location Condition Data Comments	Abutmer Ballast v Cast-in-	-place concre N/A Benign X de and West Excellent 0.000	Mode t Side Good	Minor R erate Fair	Seve	1 - 5 year 5 ere Description	0.000 Length Width Height Count Quantity Not Inspected	N/A	11.00 0.00 1.40 2.00 30.800	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments	Abutmer Ballast v Cast-in-	-place concre N/A Benign X de and West Excellent 0.000	Mode t Side Good	Minor R erate Fair	Seve	1 - 5 year 5 ere Description	0.000 Length Width Height Count Quantity Not Inspected	N/A	11.00 0.00 1.40 2.00 30.800	(m) (m) (m) (sq.m)



Bridge Inspection Form

Struct. ID		03-0	3 B0380							
Element Data	1									
Group	Abutme	nts				4	Length	N/A	0.00	(m)
Element	Bearing	ıs					Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count		4.00	
Туре	Other						Quantity		4.000	(Each)
Env't	I	Benign X	Mode	erate 🗌	Seve	ere 🗌	Not Inspected			
Location	Top of	Abutments				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	Each	0.000	4.000	0.000	0.000					
Comments									CR =	1
Performance D	Jeficienci	es								3
Group	Abutme	ents				6	Length	l	5.60	(m)
Element	Wingwa					·	Width	N/A	0.00	(m)
Span Num							Height		4.00	(m)
Material	Cast-in	-place concre	ete				Count		4.00	
Туре	Reinfor	ced concrete	.				Quantity		89.600	(Sq.m)
Env't		Benign 🗌	Mode	erate X	Seve	ere 🗌	Not Inspected			
Location	All Qua					Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	Sq.m	0.000	89.600	0.000	0.000					
Comments									CR =	1
Narrow map cr	acking.									
Performance D)eficienci	ies								



Bridge Inspection Form

Struct. ID		03-0	3 B0380							
Element Data	ı									
Group		nents, Signs, a	and Utilities			15	Length	N/A	0.00	(m)
Element	Signs					_	Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count	N/A	2.00	
Туре		N/A					Quantity	<u> </u>	2.000	(Each)
Env't		Benign 🗌	Mode	erate 🗌	Seve	ere 🗌	Not Inspected			
Location	North a	and South Sid	des	ī	T	Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	Each	0.000	2.000	0.000	0.000					
Comments									CR =	1
Minor collision	damage	to sign walkwa	ay noted.							
D	S - 6' - 1'	•								
Performance Downson	Peticienc	ies								
0-None										
										5
Croun	Attachn	nents, Signs, a	and I Itilities			14	Length	N/A	0.00	(100)
Group Element	Utilities		ind Othitics			' '	Width	N/A		
						1		N/A	0.00	(m)
Span Num		N/A					Height Count	N/A	1.00	(m)
Material								IN/A		(Each)
Туре		N/A	Made	erate 🗍	Sove	ere 🗌	Quantity	$+$ \vdash	1.000	(Lacii)
Env't		Benign	IVIOUE	erate \square	Seve	Description	Not Inspected	_		
Location	North S	1	Cand	Fain	Deer	· ·	Perform. Deficiencies	Mainten	ongo Na	odo.
Condition Data	Unit Each	Excellent 0.000	Good 1.000	Fair 0.000	Poor 0.000	V. Poor	Perform. Deliciencies	Iviainten	ance ive	eus
	Lacii	0.000	1.000	0.000	0.000					
Comments									CR =	1
Light corrosion	1.									
Performance D	Deficienc	ies								
0-None										



Bridge Inspection Form

Struct. ID		03-0	3 B0380					
Element Data								
Group	Beams/					2	Length	9.30 (m)
Element	Floor B	eams				_	Width	0.25 (m)
Span Num							Height	0.60 (m)
Material	Steel						Count	25.00
Туре	I type						Quantity	453.375 (Sq.m
Env't		Benign X	Mode	erate 🗌	Seve	ere 🗌	Not Inspected	
Location	Betwee	en Girders				Description		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	453.375	0.000	0.000			
Comments								CR = 1
Light corrosion								
)eficienci							
Performance D		ies						
Performance D 0-None		les						
		les						
		es						
0-None						1	Length	23.00 (m)
0-None Group	Beams/	MLE's				1	Length	23.00 (m)
0-None Group Element		MLE's				1	Width	0.45 (m)
O-None Group Element Span Num	Beams/ Girders	MLE's				1	Width Height	0.45 (m) 2.50 (m)
Group Element Span Num Material	Beams/ Girders Steel	MLE's				1	Width Height Count	0.45 (m) 2.50 (m) 2.00
Group Element Span Num Material Type	Beams/ Girders Steel	MLE's	Mode	erate \square	Sour		Width Height Count Quantity	0.45 (m) 2.50 (m)
Group Element Span Num Material Type Env't	Beams/ Girders Steel I type	MLE's	Mode	erate 🗌	Seve	ere 🗌	Width Height Count	0.45 (m) 2.50 (m) 2.00
Group Element Span Num Material Type Env't Location	Beams/ Girders Steel I type	MLE's Benign X		1		ere Description	Width Height Count Quantity Not Inspected	0.45 (m) 2.50 (m) 2.00 292.100 (Sq.m
Group Element Span Num Material Type Env't	Beams/ Girders Steel I type All Unit	MLE's Benign X	Good	Fair	Poor	ere 🗌	Width Height Count Quantity	0.45 (m) 2.50 (m) 2.00
Group Element Span Num Material Type Env't Location Condition Data	Beams/ Girders Steel I type	MLE's Benign X		1		ere Description	Width Height Count Quantity Not Inspected	0.45 (m) 2.50 (m) 2.00 292.100 (Sq.m
Group Element Span Num Material Type Env't Location Condition Data Comments	Beams/ Girders Steel I type All Unit Sq.m	Benign X Excellent 0.000	Good 291.100	Fair 1.000	Poor 0.000	ere Description	Width Height Count Quantity Not Inspected	0.45 (m) 2.50 (m) 2.00 292.100 (Sq.m
Group Element Span Num Material Type Env't Location Condition Data	Beams/ Girders Steel I type All Unit Sq.m	Benign X Excellent 0.000	Good 291.100	Fair 1.000	Poor 0.000	ere Description	Width Height Count Quantity Not Inspected	0.45 (m) 2.50 (m) 2.00 292.100 (Sq.m
Group Element Span Num Material Type Env't Location Condition Data Comments	Beams/ Girders Steel I type All Unit Sq.m	Benign X Excellent 0.000 npact damage	Good 291.100	Fair 1.000	Poor 0.000	ere Description	Width Height Count Quantity Not Inspected	0.45 (m) 2.50 (m) 2.00 292.100 (Sq.m
Group Element Span Num Material Type Env't Location Condition Data Comments Light corrosion	Beams/ Girders Steel I type All Unit Sq.m	Benign X Excellent 0.000 npact damage	Good 291.100	Fair 1.000	Poor 0.000	ere Description	Width Height Count Quantity Not Inspected	0.45 (m) 2.50 (m) 2.00 292.100 (Sq.m
Group Element Span Num Material Type Env't Location Condition Data Comments Light corrosion Performance D	Beams/ Girders Steel I type All Unit Sq.m	Benign X Excellent 0.000 npact damage	Good 291.100	Fair 1.000	Poor 0.000	ere Description	Width Height Count Quantity Not Inspected	0.45 (m) 2.50 (m) 2.00 292.100 (Sq.m



Bridge Inspection Form

Struct. ID		03-0)3 B0380							
Element Data	3									
Group	Beams/					12	Length		0.60	(m)
Element	Stringer	rs					Width		0.10	(m)
Span Num							Height		0.50	(m)
Material	Steel						Count		48.00	
Туре	I type						Quantity	<u> </u>	48.000	(Each)
Env't	<u> </u>	Benign X	Mode	erate 🗌	Seve	ere 🗌	Not Inspected			
Location	On Flo	or Beams	•	, 	,	Description		,		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance Ne	eds
Data	Each	0.000	48.000	0.000	0.000					
Comments									CR =	1
Light corrosion	١.								<u>-</u>	
5 - f - massace F	C - la al									
Performance D 0-None	Deficienci	es								
U-INOLIE										
										9
Group	Coating	S				10	Length	N/A	0.00	(m)
Element	_	ral Steel					Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count	N/A	0.00	
Туре	Red lea	ad primer/alk	yd				Quantity		760.000	(Sq.m)
Env't		Benign 🗌	Mode	erate 🗌	Seve	ere 🛚	Not Inspected			
Location	Girders	;				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance Ne	eds
Data	Sq.m	0.000	490.002	269.998	0.000					
Comments	_								CR =	1
Breakdown of	coating n	oted.								
Performance D	Deficienci	es								
0-None										
0-None										



Bridge Inspection Form

Struct. ID		03-0	3 B0380							
Element Data	a									
Group	Decks					11	Length		23.10	(m)
Element	Soffit -	Thick Slab					Width		9.30	(m)
Span Num							Height	N/A	0.00	(m)
Material	Cast-in	-place concre	ete				Count	N/A	1.00	
Туре		N/A					Quantity	- 2	214.830	(Sq.m)
Env't	!	Benign X	Mode	erate 🗌	Sev	ere 🗌	Not Inspected			
Location	Unders	ide of Deck				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance Ne	eds
Data	Sq.m	0.000	209.830	5.000	0.000					
Comments									CR =	1
Light to moder	ate corros	sion.								
Performance I	Doficionci	oc.								
0-None	Jencienci	es								
0 140110										
										11
Group	Embank	ments & Strea	ams			7	Length	N/A	0.00	(m)
Element	Embanl	kments				•	Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count	N/A	4.00	
Туре		N/A					Quantity		4.000	(Each)
Env't	1	Benign 🗌	Mode	erate 🗌	Sev	ere 🗌	Not Inspected			
Location	All Qua	ndrants				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance Ne	eds
Data	Each	0.000	4.000	0.000	0.000					
Comments									CR =	1
Performance I	Deficienci	es								
0-None										



Bridge Inspection Form

Struct. ID		03-0	3 B0380							
Element Data	1									
							1	ı		
Group		ments & Strea	ams			8		N/A	0.00	(m)
Element	Slope p	rotection					Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count	N/A	4.00	
Туре	Vegetat	ion					Quantity	<u> </u>	4.000	(Each)
Env't	E	Benign 🗌	Mode	erate 🗌	Seve	ere 🗌	Not Inspected			
Location	All Qua	drants				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data ———	Each	0.000	4.000	0.000	0.000					
Performance D	Deficienci	es								
2	Foundat	ii-ua				0	I	I N/A	2.00	13
Group Element		tions tion (below gro	ound level)			9	Length	N/A	0.00	
	1 Ourida	TIOLI (DEIOM ALC	Juliu level)				Width	N/A N/A	0.00	(m)
Span Num	l						Height	+	0.00	(m)
Material	Unknov						Count	N/A	0.00	(0 :: ::->)
Туре	Unknov						Quantity	 	1.000	(Sq.m)
Env't		Benign 🗌	Moae	erate 🗌	Seve	ere	Not Inspected			
Location	 	Abutments				Description	D (D Calamata)	1.4 :	. NI-	
Condition Data	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance ive	eds
	Sq.m	0.000	1.000	0.000	0.000					
Comments									CR =	1
Limited inspec	tion.									
Performance D	Deficienci	es								
0-None										



Bridge Inspection Form

Struct. ID		03-0	3 B0380						
Element Data									
Group	Sidewal	Sidewalks/curbs				13	Length	21.30	(m)
Element	Sidewal	lk and median	s				Width	0.78	(m)
Span Num							Height	0.00	(m)
Material	Cast-in-	-place concr	ete				Count	2.00	
Туре	N/A					Quantity	33.228	(Sq.m)	
Env't	I	Benign 🛚	Mode	erate 🗌	Sev	ere 🗌	Not Inspected	X	
Location	North S	Side and Sou	th Side			Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Ne	eds
Data	Sq.m	0.000	31.228	1.000	1.000				
	Comments Trainmen's walk in Northeast quadrant is not welded to the support bracket. Condition quantities and comments carried forward from previous inspection.							5	
Maintenance N	laintenance Needs Need Timing								
17-Other 2 Years									
Performance D	eficienci	es							
0-None									15



Bridge Inspection Form

Struct. ID 03-03 B0380

Recommended Work (Element Level)							
Time							Estimated Cost (\$)
Abutments / Abutment walls / Conventional closed					х		5,000
	·					Total Cost	5,000

Recommended Work (Structure Level)					
Associated Work	<u>Comments</u>		Estimated Cost (\$)		
Approaches					
Detours					
Other					
Traffic Control					
Utilities					
	То	tal Cost			
	Grand Tot	al Cost:	\$5,000		



Bridge Inspection Form

Struct. ID

03-03 B0380



Description

South elevation, general photo

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect Descript2

Defect

Other

File Name

DSCN7303.JPG



Description

Southeast wingwall

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

Abutments/Abutment walls

Conventional closed

Cast-in-place concrete

South

File Name

DSCN7304.JPG



Bridge Inspection Form

Struct. ID

03-03 B0380



Description

West abutment, narrow map crack/stained crack

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

Abutments/Abutment walls
Conventional closed

Cast-in-place concrete

West

File Name DSCN7306.JPG



Description

West abutment, narrow crack

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect

Other

Abutments/Abutment walls

Cast-in-place concrete

Conventional closed

West

File Name DSCN7308.JPG



Bridge Inspection Form

Struct. ID

03-03 B0380



Description

General photo

Elem Grp/Class
Elem Type
Sub Element
Material Type

Locator
Defect Descript1

Defect Descript2

Defect Other Beams/MLE's/Girders

I type

Steel

File Name

DSCN7310.JPG



Description

West abutment, general photo

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect

Other

Abutments/Abutment walls

Conventional closed

Cast-in-place concrete

West

File Name

DSCN7318.JPG



Bridge Inspection Form

Struct. ID 03-03 B0380



Description

East abutment, wide crack

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Other

Abutments/Abutment walls
Conventional closed

Cast-in-place concrete
East
Poor condition

Crack

File Name DSCN7322.JPG



Description

South girder impact damage, northbound lane

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

File Name DSCN7327.JPG



Bridge Inspection Form

Struct. ID 03-03 B0380

Summary Action Report Structure 03-06 B0400 (MTO Site No. 037-1103-) **Rouge River Bridge**

Inspection Date 09/18/2014 mm/dd/yyyy **Condition Index Value (BCI)** 73.3 Next Biennial Inspection 09/18/2016 mm/dd/yyyy **Current Rep. Value**

Additional Investigations

Investigation	Priority	Cost	Investigation	Priority	Cost
No additional investigations required.					

Performance Deficiencies

No Performance Deficiencies

Maintenance Needs

Element Group	Element	Maintenance Required	Priority	Comment
Decks	Wearing Surface	Bridge Surface Repair	Urgent	Patch pot hole
Approaches	Wearing Surface	Bridge Surface Repair	Urgent	Fill pothole
Barriers	Railing Systems	Bridge Handrail Maintenance	2 yr	Secure end-caps

Repair/Rehabilitation

Element Group	Element		Repair/Re	habilitation	Priority	Cost
Decks	Wearing Surface		Rehab	Seal cracks and patch pot hole	e 1-5 yrs	\$5,000
Approaches	Wearing Surface		Rehab	Seal cracks	1-5 yrs	\$5,000
Sidewalks/curbs	Sidewalks/Medians		Rehab	Patch repair	6-10 yrs	\$5,000
Barriers	Barrier/Parapet Walls	Interior	Rehab	Patch repair	6-10 yrs	\$5,000
Joints	Concrete End Dams		Rehab	Patch repair	1-5 yrs	\$5,000
Joints	Seals/Sealants		Rehab	Replace expansion joint seals	1-5 yrs	\$30,000
Abutments	Wingwalls		Rehab	Patch repair	6-10 yrs	\$2,000
Abutments	Abutment Walls		Rehab	Seal cracks and patch repair	6-10 yrs	\$2,000
Abutments	Ballast Walls		Rehab	Patch repair	6-10 yrs	\$1,000
Beams/MLE's	Girders	End	Rehab	Patch repair	1-5 yrs	\$35,000
Beams/MLE's	Girders	Middle	Rehab	Patch repair	1-5 yrs	\$5,000
Embankments & Streams	Slope Protection		Rehab	Restore slope protection	1-5 yrs	\$5,000
Approaches	Approach Guiderail	Buried En	Rehab	Upgrade guiderail end treatme	nts 1-5 yrs	\$30,000
Approaches	Approach Guiderail	Terminal	Rehab	Upgrade end treatments	1-5 yrs	\$30,000
				Total Repair/Rehabili	tation Cost	\$165,000
Region of York		100 % \$22	28,000.00	Total Associa	ted Work Cost	\$63,000

Overall Comments



\$0.00

0 %

\$228,000

Total Cost

\$3,193,950

- 1 5 years: Seal cracks in asphalt concrete end dams, girders, replace expansion joint seals, upgrade guiderail end treatments.
- 6 10 years: Repair sidewalk, concrete end post, wingwalls, abutment and ballast wall.



Municipal Structure Inspection Form

Structure Number:

03-06 B0400

Inventory Data			
Structure Name	Rouge River Bridge	Hwy No.	3 Key Photo
Cross. Type Over	✓ Road ☐ Rail ☐ Ped ☐ Nav. V	Water ☐ Non-Nav. Wat	Other Other
Cross. Type Under	Road Rail Ped Nav.	Water 🗌 Non-Nav. Wat	✓ Other
Road Name	Kennedy Road		
Structure Location	0.4 km North of 7-Regional Road 7		
Latitude	43.86523 Longitude -79.30437	Cur. Rep.Value \$3	193,950
Owner(s)/	Region of York	100 %	**
% Share		0 % Heritage Status	Not Considered for Designation
MTO Region	Central	Road Side Env.	Urban
MTO District	Central	Road Class	Arterial
Old County	York	Lane Type	
Geographic Twp.		Posted Speed	60 No. of Lanes 4
Structure Type	Box Beams or Girders	AADT	49660 Pct. Trucks 4
Structure Material	Prestressed Precast Concrete	Inspection Route	e Sequence
Articulation	Simply Supported	Interchange Nur	nber
Total Deck Length	31.7 m Road Width 17	.3 m Interchange Stru	icture Number
Overall Width	21 m Vert. Clear.	0 m Detour Length	0 km Skew Angle 0 °
Total Deck Area	665.70 m ² No. of Spans	1 Fill on Structure	0 m Struct. Dir. North/South
Special Routes	☐ Transit ✓ School ☐ Truck ☐ B	icycle Insp. Duration	2 hr
Spans			structure and calculated using benchmark costs. Capital equirements for widening or lengthening of the structure.
Span Name	Span Length S	pan Name	Span Length
Span 1	30.0 m		
Historical Data			
Year Built	1981 yyyy Y	ear of Last Major Rehab	уууу
Last OSIM Inspectio	n 09/24/2012 mm/dd/yyyy (Contract No. When Built	
Last Enhanced OSIN	nm/dd/yyyy L	ast Evaluation	mm/dd/yyyy
Last Enhanced Acce	ess mm/dd/yyyy (Current Load Limit	t t
Last Underwater Ins	p. mm/dd/yyyy l	oad Limit By-Law No.	mm/dd/yyyy
Last Condition Surv	ey mm/dd/yyyy E	By-Law Expiry Date	mm/dd/yyyy

Rehab History

Municipal Municipal	Structure Inspe	ction Form	S	tructu	ıre Num	ber:	03-06	B0400	
Field Inspe	ection Information):							
Inspection Dat	e 09/18/2014 mr	n/dd/yyyy 🔲 N	lulti Day Inspe	ction	✓ C	SIM Er	nhanced OSIM	ВСІ	73.3
Inspector	T. Fediw		Eng.	Respons	sible D. L.	Baxter, P. E	ing.		
Others in Party	y P. Adams								
Access Equip.	Lift Lac	dder 🗌 Boa	t Bridg	e Master	Other				
Other Equip.	Camera, Hammer,	Other Hand Tools	3						
Weather	Clear				Tempera	ture	10 °C		
Additional	Investigations Re	eauired:							
Investigation	gg	4			Priority			Estimated	l Cost
3				None	Normal	Urgent			
	Condition Survey								\$0
	urvey of Asphalt-Covered	Deck							\$0
	tructure Condition Survey								\$0
	g Condition Survey								\$0
Detailed Timbe	_								\$0 ©0
Underwater Inv	d Strand Investigation								\$0 \$0
Fatigue Investig	_								\$0
Seismic Investi	-								\$0
Structure Evalu									\$0
	eformations, Movements	and Settlements							\$0
Monitoring of C									\$0
Investigation N							Total Cost		\$0
	condition survey in 2012.								
Overall Str	ructure Notes:								
Recommended	d Work on Structure	None	✓ Rehab		teplace	☐ Remo	ove		
	ommended Work	None	Now		to 5 years		0 years		
Overall Comments	1 - 5 years: Seal cracks i treatments.	n asphalt concret	e end dams, gi	rders, rep	olace expans	sion joint sea	als, upgrade gui	derail end	
	6 - 10 years: Repair side	walk, concrete en	d post, wingwa	lls, abutm	nent and ball	last wall.			
DOI OL									
BCI Change Justification									
Next Inspectio	n 09/18/2016 n	nm/dd/yyyy		Estimate	ed Load Lim	nit t	t	t	

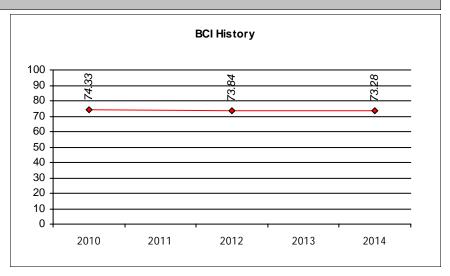


Structure Number:

03-06 B0400

BCI History

Insp. Date	BCI	Inspector
11-Nov-10	74.33	J.M. Youk
24-Sep-12	73.84	D. Kelly
18-Sep-14	73.28	T. Fediw



All BCI values are based on the MTO BCI methodology published in April 2008. As a result, BCI values for 2007 and earlier are approximate only, with potential discrepancies resulting from changes (over time) in the way quantities for certain elements are calculated.

Standard Codes

Suspected Performance Deficiencies

- 00
- 01 Load carrying capacity
- Excessive deformations (deflections/rotations) 02
- 03 Continuing settlement
- 04 Continuing movements
- 05 Seized bearings

- 06 Bearing not uniformly loaded/unstable
- 07 Jammed expansion joint
- 08 Pedestrian/vehicular hazard
- 09 Rough riding surface
- 10 Surface ponding 11 Deck drainage
- 14

12

- Slippery surfaces Flooding/channel blockage 13
- Undermining of foundation Unstable embankments 15
- 16 Other

Maintenance Needs

- Lift and Swing Bridge Maintenance
- Bridge Cleaning
- Bridge Handrail Maintenance
- Painting Steel Bridge Structures
- Bridge Deck Joint Repair
- Bridge Bearing Maintenance

- Repair to Structural Steel Repair of Bridge Concrete 07
- 08
- Repair of Bridge Timber 09 10 Bailey Bridges - Maintenance
- 11 Animal/Pest Control
- 12 Bridge Surface Repair
- **Erosion Control at Bridges** 13
- Concrete Sealing 14
- 15 Rout and Seal
- 16 Bridge deck Drainage
- Scaling (Loose Concrete or ACR Steel) 17
- 18

Structure Number:



Region of York **Municipal Structure Inspection Form Structure Number:** 03-06 B0400 **Approaches - Wearing Surface Element Group** Length 6.00 Width 17.30 Approaches 2.00 0.00 | Count **Element Name** Wearing Surface Height North and South **Total Quantity** 208.00 Location ☐ Limited Inspection Material Asphalt **Element Type Environment Protection System** None Benign Moderate **Condition Data** Units Excell. Good Fair Poor 204.00 2.00 0.00 2.00 sq. m ✓ Severe Comments Narrow to wide cracks, pothole, narrow random crack. **Performance Deficiencies Maintenance Needs** Priority **Comments** None Bridge Surface Repair Urgent Fill pothole Rehab/Repair Recommendations **Priority** Cost Comments Rehab 1-5 yrs \$5,000 Seal cracks Approaches - Approach Slabs 6.00 Width 17.30 **Element Group** Approaches Length 2.00 **Element Name** Approach Slabs Height 0.00 **Count Total Quantity** 207.60 Location North and South ☐ Limited Inspection Material Cast-in-place concrete **Element Type Environment Protection System** None Benign **Condition Data** Units Excell. Good Fair Poor ✓ Moderate sq. m 0.00 2.00 1.00 204.60 Severe Comments **Performance Deficiencies Maintenance Needs** Priority Comments None Rehab/Repair Recommendations **Priority** Cost Comments



Structure Num	nber:
---------------	-------

Element Group	Sidewalks/curbs -	Sidewalks/N	l edians					
Material Cast-in-place concrete Limited Inspection	Element Group	Sidewalks/curbs	3			Length	43.70 Width	1.85
Material Cast-in-place concrete Element Type Protection System None Condition Data Units Excell. Good Fair Poor Moderate Sq. m 0.00 157.69 3.00 1.00 Severe Comments Abrasions, severe spall, asphalt patches, narrow to medium cracks. Performance Deficiencies None Rehab/Repair Recommendations Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Barriers Element Group Barriers Railing Systems Element Name Railing Systems Length 36.80 Width 0.00 Element Name Railing Systems Length 36.80 Width 0.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Environment Environment Environment	Element Name	Sidewalks/Media	ans			Height	0.00 Count	2.00
Element Type	Location	East and West					Total Quantity	161.69
Protection System None	Material	Cast-in-place co	oncrete			Limite	ed Inspection	
Condition Data Units Excell. Good Fair Poor Moderate sq. m 0.00 157.69 3.00 1.00 V Severe Comments Abrasions, severe spall, asphalt patches, narrow to medium cracks. Performance Deficiencies None Rehab/Repair Recommendations Priority Cost Comments Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Barriers Element Anne Railing Systems Length 36.80 Width 0.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Environment	Element Type					Environm	nent	
Comments Abrasions, severe spall, asphalt patches, narrow to medium cracks. Performance Deficiencies None Rehab/Repair Recommendations Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Element Name Railing Systems Length 36.80 Width 0.00 Element Name Railing Systems Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Environment Element Type 4 Rail Metal Railing - Aluminum Environment Environment	Protection System	None				Benig	n	
Comments Abrasions, severe spall, asphalt patches, narrow to medium cracks. Performance Deficiencies None Rehab/Repair Recommendations Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Element Name Railing Systems Length 36.80 Width 0.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Environment	Condition Data	Units Exc	ell. Good	Fair	Poor	Mode	rate	
Abrasions, severe spall, asphalt patches, narrow to medium cracks. Performance Deficiencies Maintenance Needs Priority Comments	Comments	sq. m	0.00 157.69	3.00	1.00	✓ Sever	e	
Rehab/Repair Recommendations Rehab Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Element Name Railing Systems Length 36.80 Width 0.00 Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Element Type 4 Rail Metal Railing - Aluminum Environment		, asphalt patches	, narrow to medium o	cracks.				
Rehab/Repair Recommendations Rehab Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Element Name Railing Systems Length 36.80 Width 0.00 Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Element Type 4 Rail Metal Railing - Aluminum Environment								
Rehab/Repair Recommendations Rehab Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Railing Systems Length 36.80 Width 0.00 Element Name Railing Systems Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Environment	Performance Deficien	cies	Maintenance Nee	ds	Priority	Comments		
Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Barriers Length 36.80 Width 0.00 Element Name Railing Systems Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Element Type 4 Rail Metal Railing - Aluminum Environment	None							
Rehab 6-10 yrs \$5,000 Patch repair Barriers - Railing Systems Element Group Barriers Length 36.80 Width 0.00 Element Name Railing Systems Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Element Type 4 Rail Metal Railing - Aluminum Environment	D. I. al. /D		Duta utto	01 0	-			
Barriers - Railing Systems Element Group Barriers Length 36.80 Width 0.00 Element Name Railing Systems Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Element Type 4 Rail Metal Railing - Aluminum Environment		nendations						
Element Group Barriers Length 36.80 Width 0.00 Element Name Railing Systems Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Element Type 4 Rail Metal Railing - Aluminum Environment		Systems	0 10 yis	φο,σοσ 1 αισι1 I				
Element Name Railing Systems Height 0.00 Count 2.00 Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Element Type 4 Rail Metal Railing - Aluminum Environment						I enath	36.80 Width	0.00
Location East and West Total Quantity 73.60 Material Aluminum Limited Inspection Element Type 4 Rail Metal Railing - Aluminum Environment]		- 1		
Material Aluminum Limited Inspection Element Type 4 Rail Metal Railing - Aluminum Environment			•			rieigiit		
Element Type 4 Rail Metal Railing - Aluminum Environment						Limite	- L	73.00
			ling Aluminum				-	
Destantion Custom None		None None	iing - Aluminum					
			all Cand	Fair	Door			
Condition Data Units Excell. Good Fair Poor	Condition Data							
Comments				0.00	1.00	▼ Sever	e 	
Abrasion, unsecured and missing end-caps.	Abrasion, unsecured a	nd missing end-ca	ips.					
Performance Deficiencies Maintenance Needs Priority Comments	Performance Deficien	cies	Maintenance Nee	ds	Priority	Comments		
None Bridge Handrail Maintenance 2 yr Secure end-caps	None		Bridge Handrail Ma	aintenance	2 yr	Secure end-	caps	
Rehab/Repair Recommendations Priority Cost Comments	Bohoh/Bonoir Bosom	mandations	Priority	Cost Common	10			
Rehab/Repair Recommendations Priority Cost Comments	neliab/nepair necomi	nenuauons	Friority (COSE COMMEN	. .			



Region of York **Municipal Structure Inspection Form Structure Number:** 03-06 B0400 **Barriers - Posts Element Group Barriers** Length 0.00 Width 0.00 34.00 Posts 0.00 | Count **Element Name** Height East and West **Total Quantity** 34.00 Location ☐ Limited Inspection Material Aluminum **Element Type Environment Protection System** None Benign Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 Each 0.00 34.00 0.00 ✓ Severe Comments **Performance Deficiencies Maintenance Needs** Priority Comments None Comments Rehab/Repair Recommendations **Priority** Cost **Barriers - Barrier/Parapet Walls** 1.20 Width 0.00 **Element Group Barriers** Length 4.00 **Element Name** Barrier/Parapet Walls Interior Height 1.50 **Count Total Quantity** 7.20 Location **End Posts** ☐ Limited Inspection Material Cast-in-place concrete **Element Type Environment Protection System** None Benign **Condition Data** Units Excell. Good Fair Poor Moderate 0.00 5.20 1.00 1.00 sq. m ✓ Severe Comments Spall and delamination at North end posts. **Performance Deficiencies Maintenance Needs** Priority Comments None Rehab/Repair Recommendations **Priority** Cost Comments Rehab 6-10 yrs \$5,000 Patch repair



Barriers - Barrier	/Parapet Wal	ls					
Element Group	Barriers				Length	1.20 Width	0.00
Element Name	Barrier/Parapet	Barrier/Parapet Walls Exterior				1.15 Count	4.00
Location	End Posts					Total Quantity	5.52
Material	Cast-in-place c	oncrete			Limite	ed Inspection	
Element Type					Environm	nent	
Protection System	None				Benig	n	
Condition Data	Units Ex	cell. Good	Fair	Poor	✓ Mode	rate	
Comments	sq. m	0.00	.52 0.00	0.00	Sever	re	
Performance Deficien	cies	Maintenance N	Needs	Priority	Comments		
None							
Rehab/Repair Recom	mendations	Priority	Cost Commer	nts			
Joints - Concrete	End Dams						
Element Group	Joints				Length	17.30 Width	0.36
Element Name	Concrete End [Dams			Height	0.00 Count	4.00
Location	North and Sout	:h				Total Quantity	24.91
Material	Cast-in-place c	oncrete			Limited Inspection		
Element Type					Environm	nent	
Protection System	None				Benig	n	
Condition Data	Units Ex	cell. Good	Fair	Poor	Moderate		
Comments	sq. m	0.00	.91 3.00	2.00	✓ Severe		
Severe spall, medium							
Performance Deficien	cies	Maintenance N	Needs	Priority	Comments		
None							
Rehab/Repair Recom	mendations	Priority	Cost Commer	nts			
Rehab		1-5 yrs	\$5,000 Patch	repair			



Region of York **Municipal Structure Inspection Form Structure Number:** 03-06 B0400 Joints - Armouring/Retaining Devices **Element Group Joints** Length 17.30 Width 0.09 4.00 **Element Name** Armouring/Retaining Devices Height 0.00 **Count** North and South **Total Quantity** 69.20 Location ☐ Limited Inspection Material Steel **Element Type Environment Protection System** None Benign **Condition Data** Moderate Units Excell. Good Fair Poor 0.00 m 0.00 0.00 69.20 ✓ Severe Comments Scrapes. **Performance Deficiencies Maintenance Needs** Priority Comments None Rehab/Repair Recommendations **Priority** Cost Comments Joints - Seals/Sealants 17.30 Width **Joints** 0.00 **Element Group** Length 2.00 **Element Name** Seals/Sealants Height 0.00 **Count Total Quantity** 2.00 Location North and South ☐ Limited Inspection Material Other **Element Type** Compression Seal **Environment Protection System** None Benign **Condition Data** Units Excell. Good Fair Poor Moderate Each 0.00 0.00 0.00 2.00 ✓ Severe Comments Gaps: North = 38mm; South = 15mm. Both seals are cracked and leaking. **Performance Deficiencies Maintenance Needs** Priority Comments





Region of York **Municipal Structure Inspection Form Structure Number:** 03-06 B0400 **Abutments - Wingwalls Element Group Abutments** Length 4.60 Width 0.00 4.00 Wingwalls Height 1.40 **Count Element Name Total Quantity** 25.76 Location All Quadrants ☐ Limited Inspection Material Cast-in-place concrete **Element Type Environment Protection System** None Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 22.76 1.00 0.00 2.00 sq. m Severe Comments Narrow stained crack, wet areas, efflorescence deposits, spall in Northwest quadrant. **Performance Deficiencies Maintenance Needs** Priority Comments None Rehab/Repair Recommendations **Priority** Cost Comments Rehab 6-10 yrs \$2,000 Patch repair **Abutments - Abutment Walls** 18.00 Width 0.00 **Element Group** Abutments Length 2.00 **Element Name Abutment Walls** Height 2.00 **Count** 72.00 Location North and South **Total Quantity** ☐ Limited Inspection Material Cast-in-place concrete **Element Type** Conventional Closed **Environment Protection System** None ✓ Benign **Condition Data** Units Excell. Good Fair Poor Moderate 0.00 70.00 1.00 1.00 sq. m Severe Comments Wide crack, and delamination on the North abutment. **Performance Deficiencies Maintenance Needs** Priority Comments None



Rehab

Rehab/Repair Recommendations

Cost Comments

Seal cracks and patch repair

\$2,000

Priority

6-10 yrs

Region of York **Municipal Structure Inspection Form Structure Number:** 03-06 B0400 **Abutments - Bearings Element Group** Abutments Length 0.00 Width 0.00 28.00 **Element Name Bearings** Height 0.00 **Count** North Abutment **Total Quantity** 28.00 Location ☐ Limited Inspection Material Elastomeric Elastomeric pad **Element Type Environment Protection System** None Benign ✓ Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 0.00 Each 28.00 0.00 Severe Comments **Performance Deficiencies Maintenance Needs** Priority Comments None Rehab/Repair Recommendations **Priority** Cost Comments **Abutments - Ballast Walls** 0.00 Abutments 18.00 Width **Element Group** Length 2.00 **Element Name Ballast Walls** Height 1.00 **Count Total Quantity** 36.00 Location North and South ☐ Limited Inspection Material Cast-in-place concrete **Element Type Environment Protection System** None Benign **Condition Data** Units Excell. Good Fair Poor ✓ Moderate 0.00 33.00 2.00 1.00 sq. m Severe Comments Stained areas, wet areas, spall in Northwest quadrant. **Performance Deficiencies Maintenance Needs** Priority Comments None Rehab/Repair Recommendations **Priority** Cost Comments Rehab 6-10 yrs \$1,000 Patch repair



Beams/MLE's - G	irders						
Element Group	Beams/MLE's				Length	2.00 Width	1.22
Element Name	Girders		End		Height	1.00 Count	28.00
Location	Below Deck					Total Quantity	180.32
Material	Precast concre	te			☐ Limite	ed Inspection	
Element Type	Box/Trapezoida	ıl			Environn	nent	
Protection System	None				Benig	jn	
Condition Data	Units Ex	cell. Good	Fair	Poor	✓ Mode	erate	
Comments	sq. m	0.00 166.32	7.00	7.00	Seve	re	
Spall of the North girds			-				
Performance Deficient	cies	Maintenance Nee	eds	Priority	Comments		
Rehab/Repair Recom		Priority 1-5 yrs	Cost Commer \$35,000 Patch				
Element Group	Beams/MLE's				Length	26.00 Width	1.27
Element Name	Girders		Middle		Height	1.00 Count	14.00
Location	Below Deck					Total Quantity	1190.28
Material	Precast concre	te			Limite	ed Inspection	
Element Type	Box/Trapezoida	ıl			Environn	nent	
Protection System	None				✓ Benig	jn	
Condition Data	Units Exc	cell. Good	Fair	Poor	Mode	erate	
Comments	sq. m	0.00 1188.28	1.00	1.00	Seve	re	
Small spall near South	end.						
Performance Deficien	cies	Maintenance Nee	eds	Priority	Comments		
None							
Rehab/Repair Recom	mendations	Priority	Cost Commer	nts			
Rehab		1-5 yrs	\$5,000 Patch				



Municipal Structure Inspection Form Structure

Embankments &	Streams - Em	nbankments					
Element Group	Embankments 8	& Streams			Length	0.00 Width	0.00
Element Name	Embankments				Height	0.00 Count	6.00
Location	All Quadrants, In Front of Abutments				Total Quantity	6.00	
Material	Other				Limite	ed Inspection	
Element Type						nent	
Protection System						n	
Condition Data	Units Exc	Inits Excell. Good Fair Poor				rate	
Comments	Each	0.00 6.00	0.00	0.00	Sever	re	
Performance Deficien	ata a	Maintenance Needs		Priority	Comments		
None Performance Deficien	cies	waintenance Needs	s <i>r</i>	riority	Comments		
Rehab/Repair Recomi	mendations	Priority Co	ost Comments				
Embankments &					Г		
Element Group	Embankments 8				Length	0.00 Width	0.00
Element Name	Slope Protection	n			Height	0.00 Count	4.00
Location	All Quadrants					Total Quantity	4.00
Material	Vegetation				☐ Limite	ed Inspection	
Element Type					Environm		
Protection System	None				Benig		
Condition Data		cell. Good		Poor	Mode		
Comments	Each	0.00 4.00	0.00	0.00	Sever	e	
Performance Deficien	cies	Maintenance Needs	s /	Priority	Comments		
None							
Rehab/Repair Recomi	mendations	Priority Co	ost Comments				



Structure Number:

Embankments &	Streams - Slop	pe Protection						
Element Group	Embankments &	Streams			Length	0.00 v	Vidth	0.00
Element Name	Slope Protection				Height	0.00	ount	2.00
Location	In Front of Abutm	nents				Total Qua	antity	2.00
Material	Precast concrete	l			Limite	ed Inspection	n	
Element Type	Precast units				Environn	nent		
Protection System	None				Benig	ın		
Condition Data	Units Exce	ell. Good	Fair	Poor	Mode	rate		
Comments	Each	0.00 2.00	0.00	0.00	Seve	re		
Missing blocks noted, o	gap between abutm	nent and slope prot	ection.					
Performance Deficien	cies	Maintenance Ne	ads	Priority	Comments			
None	cies	waintenance Nee	eus	Priority	Comments			
Rehab/Repair Recomi	mendations	Priority	Cost Comment	s				
Rehab		1-5 yrs	\$5,000 Restore	slope prot	ection			
Abutments - Bea	rings							
Element Group	Abutments				Length	0.00 V	Vidth	0.00
Element Name	Bearings				Height	0.00 C	ount	28.00
Location	South Abutment					Total Qua	antity	28.00
Material	Elastomeric				Limite	ed Inspection	n	
Element Type	Elastomeric pad				Environn	nent		
Protection System	None				Benig	ın		
Condition Data	Units Exce	ell. Good	Fair	Poor	✓ Mode	rate		
Comments	Each	0.00 28.00	0.00	0.00	Seven	re		
Performance Deficien	cies	Maintenance Nee	eds	Priority	Comments			
None								
Rehab/Repair Recomi	nendations	Priority	Cost Comment	s				



Foundations - Fo	oundations (b	elow ground le	evel)				
Element Group	Foundations				Length	0.00 Width	0.00
Element Name	Foundations (be	elow ground level)			Height	0.00 Count	0.00
Location	At Abutments	At Abutments				Total Quantity	0.00
Material	Unknown			✓ Limite	ed Inspection		
Element Type				Environn	nent		
Protection System					Benig	ŋn	
Condition Data	Units Exc	its Excell. Good Fair Poor				erate	
Comments					Seve	re	
Limited inspection.							
Performance Deficien	· oloo	Maintananaa Na		Priority	Comments		
None Performance Deficient	icies	Maintenance Ne	eeus	FHOIR	Comments		
Rehab/Repair Recom	mendations	Priority	Cost Comr	nents			
Approaches - Ap	proach Guide	erail					
Element Group	Approaches				Length	0.00 Width	0.00
Element Name	Approach Guide	erail	Buried End		Height	0.00 Count	2.00
Location	Northeast and S	Southwest Quadran	nts			Total Quantity	2.00
Material	Steel				Limite	ed Inspection	
Element Type	Steel Beam on	Wood Posts			Environn	nent	
Protection System	Hot dip galvaniz	zing			Benig	gn	
Condition Data	Units Exc	cell. Good	Fair	Poor	☐ Mode	erate	
Comments	Each	0.00 2.0	0.00	0.00	✓ Seve	re	
Performance Deficien	ncies	Maintenance Ne	ands	Priority	Comments		
None		wantenance ive	,cu3	THOITE	Comments		
Rehab/Repair Recom	mendations	Priority	Cost Comr	nents			
Rehab		1-5 yrs	\$30,000 Up	grade guiderail	end treatment	ts	



Structure Number: 03-06 B0400 **Approaches - Approach Guiderail Element Group** Approaches Length 0.00 **Width** 0.00 2.00 Terminal End 0.00 **Count Element Name** Approach Guiderail Height Location Northwest and Southeast Quadrants **Total Quantity** 2.00 ☐ Limited Inspection Steel Material Steel Beam on Wood Posts **Element Type Environment Protection System** Hot dip galvanizing Benign Moderate **Condition Data** Units Excell. Good Fair Poor 0.00 0.00 Each 2.00 0.00 ✓ Severe Comments Priority Comments **Performance Deficiencies Maintenance Needs**

None		
Rehab/Repair Recommendations	Priority	Cost Comments
Rehab	1-5 yrs	\$30,000 Upgrade end treatments



Structure Number:

Repair/Reh	abilitation Required				
Element Group	Element		Repair/Rehabilitation	Priorit	y Cost
Abutments	Abutment Walls		Rehab	6-10 yr	s \$2,000
Approaches	Approach Guiderail	Terminal	Rehab	1-5 yrs	\$30,000
Approaches	Approach Guiderail	Buried E	Rehab	1-5 yrs	\$30,000
Abutments	Ballast Walls		Rehab	6-10 yr	s \$1,000
Barriers	Barrier/Parapet Walls	Interior	Rehab	6-10 yr	s \$5,000
Joints	Concrete End Dams		Rehab	1-5 yrs	\$5,000
Beams/MLE's	Girders	Middle	Rehab	1-5 yrs	\$5,000
Beams/MLE's	Girders	End	Rehab	1-5 yrs	\$35,000
Joints	Seals/Sealants		Rehab	1-5 yrs	\$30,000
Sidewalks/curbs	Sidewalks/Medians		Rehab	6-10 yr	s \$5,000
Embankments & Streams	Slope Protection		Rehab	1-5 yrs	\$5,000
Approaches	Wearing Surface		Rehab	1-5 yrs	\$5,000
Decks	Wearing Surface		Rehab	1-5 yrs	\$5,000
Abutments	Wingwalls		Rehab	6-10 yr	s \$2,000
			Tota	al Repair/Rehabilitation Cost	\$165,000

	Comments		Estimated Cost
Approaches			\$0
Detours			\$0
Traffic Control			\$10,000
Utilities			\$0
Right-of-Way			\$0
Environmental Study			\$0
Other			\$0
Contingencies		10 % **	\$18,000
Engineering		20 % **	\$35,000
** If based on a percentage calculated values rounded-up to the nearest thousand dollars.		Total Associated Work Cost	\$63,000
		Total Repair/Rehabilitation Cost	\$165,000
		Total Cost	\$228,000
		Region of York Share @ 100%	\$228,000

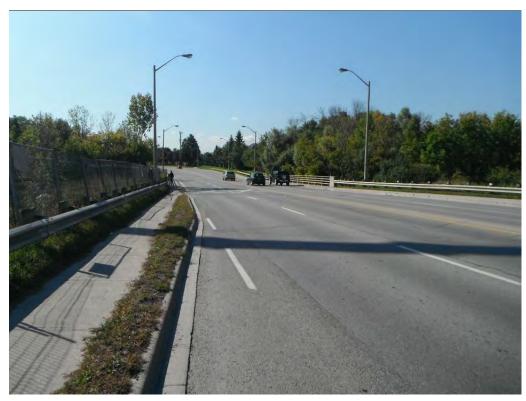


Structure Number:	03-06 B0400		
	Structure Number:		





Looking North at Bridge



Looking South at Bridge



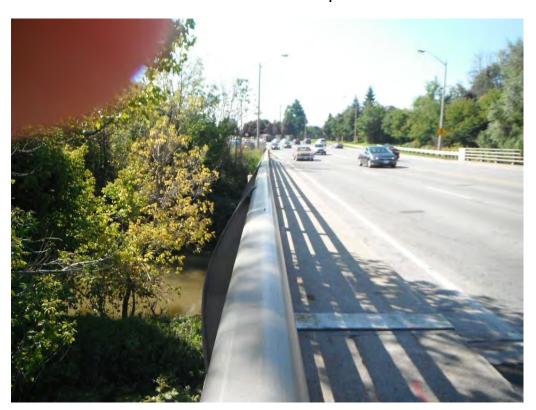
East Elevation



West Elevation



Bent and Broken End Caps



Bent Hand Rail



Missing End Caps



Northeast End of Barrier Wall



Spall on Interior Barrier Wall



Severe Spall on Curb



Sealed and Unsealed Cracks on Surface



Sealed Crack on Deck Surface



Medium Crack on Concrete End Dam



North Expansion Joint



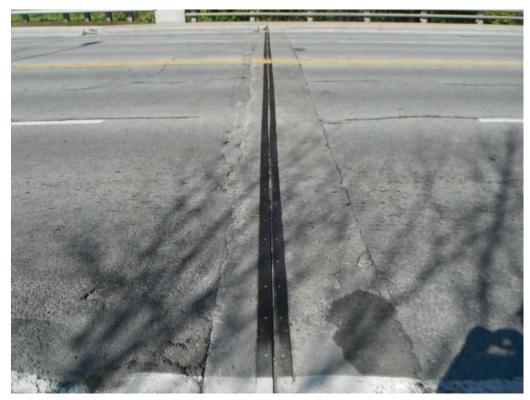
North Expansion Joint



Asphalt Adjacent to Expansion Joint



Pot Hole Adjacent to North Expansion Joint



Pot Holes at South Expansion Joint



Spall and Exposed Rebar at Expansion Joint



Typical Soffit



Delamination on Girder End



Spall on Girder End



Exterior Soffit



East Fascia



Spall on Abutment and Ballast Wall



Typical Bearing



Typical Bearing



Southeast Wingwall



Crack on Northeast Wingwall



Looking East at Dam



Spall on Sidewalk



Medium Cracks on Sidewalk



Spall on Sidewalk



Northwest End of Barrier Rail



Southeast End of Barrier Rail



Southwest End of Barrier Rail



York Region

Bridge Inspection Form

Struct. ID	03-06 B040	0								
Inventory Data										
Structure Name	Rouge River Bridge					List.	No.	V		
Structure Location		of 7-Regional Road 7				A CONTRACTOR		AS .		
Road Number	3	On X		Under		71				
Road Name	Kennedy Road					V				
Watercourse Name							3		160	
Crossing Type:	Road River									
Hwy Direction	1-NORTH/SO	UTH				1				
Owner Category						16				
Maint.Resp.				Northing 4		43.865	43.86523			
Region	York Region			Easting			-79.304	137		
District	Southeast			National Highw	ay System	1				
Municipality	Markham	Varkham Hig			Highway Designation					
Township				Hwy Functiona	l Classific	ation				
Structure Category	Bridge			AADT	49,	49,660 No		anes	4	
Main Struct. Subcateg.	Beam/Girder			Trucks (%)		4	Posted	Speed	60	
Main Struct. Type	Box Beams / Girders			District Bridge Engineer						
Deck Length (Total)	31.70 (m)			Road Authority						
Overall Structure Width	21.00 (m)			Bridge Plan #						
Deck Area (Total)		665.70 (Sq.m)		Min. Vertical Clearance				(m)		
Width (Traffic)	17.30 (m)			Detour Distance				(km)		
Skew Angle	0.00		Speed on Detour				(kph)			
Number of spans				Fill Height					(m)	
Total Length / Spans (m)							,			
Historical Data										
Year Built		1981	Eval	uation Year						
Last Biennial Inspection Sep		ptember 15, 2016	Current Load Limit							
Last Bridge Master Inspection			Current BCI				73.39			
Last Condition Survey			Current BCU				38.75			
Last Underwater Inspection		Curr	Current SI		13.46					
Rehab. History		_					•			

RptInspection 2017/1/20 16:20



Bridge Inspection Form

Struct. ID	0	3-06 B0400						
Scheduled	Improvements							
Regional Pr	iority Number				Programme	d Wo	rk Year	
Nature of P	rogrammed Work	-						
	_							
Annraigal	Indiana				0.0		-4-	
Appraisal I	indices				Co	mme	nts	
Load Capac	city Index							
Flood Index	(
Barrier Inde	ex							
Curb Index								
Seismic Ind	lex							
Fatigue Ind	ex							
Scour Index								
Structure Ir	ndex							
Suspected I	Performance Deficiencies							
00	None		06	Bearings not uniformly loaded/unstab	le	12	Slippery surface	
01 02	Load carrying capacity Excessive deformations (deflections		07	Jammed expansion joint Pedistrian/vehicular hazard		13	Flooding/channel blockage	
03	Continuing settlement		08 09	Rough riding surface		14	Undermining of foundation Unstable embankments	
04	Continuing movements		10	Surface ponding		15 16	Other	
05	Seized bearings		11	Deck drainage		10	Other	
Maintenan	ce Needs							
01	Lift and Swing Bridge Maintenance	1	07	Repairs to Structural Steel		13	Erosion Control at Bridges	
02	Bridge Cleaning	1	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 11	Bailey bridges - Maintenance		16	Bridge Deck Drainage	
05 06	Bridge Deck Joint Repair Bridge Bearing Maintenance		11 12	Animal/Pest Control Bridge Surface Repair		17	Other	



Bridge Inspection Form

Struct. ID	0	3-06 B0400								
Field Inspection Inf	formation									
Inspection Date		September 15,	2016				Weather		Clea	r / Sunny
Inspector							Temperat	ture		21
Others in Party		S. McaDade, R	R. Patel, J. N	laik, P. Eng., S	upervisir	ng Eng.	-		!	
Equipment Used		Camera, Hamm				., .,				
Access Equipment Use	vd.	Ladder	•	Boat 🗍			Bucket ⁻	Truck 🗍		Hip Waders
Access Equipment Ose	·u	Access	_		Climbir	ıg Inspec		_	Inder Brid	ge Inspection Unit
Special Notes		710000	110 <i>y</i> 📙		Omnon	ig mopeo			nider brid	ge inspection onit [
•	n Maintanar	noo noodo idontii	fied on the v	vooring curfoo	o oidowe	ulka jainta	ahutman	t wall wingwall	hallast u	vall and
Overall in good conditio girders.	n. Maintenar	ice needs identil	ned on the v	vearing surface	e, sidewa	iiks, joinis	s, abulmen	t wall, willgwall	, Dallast w	and
Upcoming Inspection	ons and Inv	restigations								
Inspection Type			Due Date		Pri	ority		Comment		
Recommended Insp	pections an	d Investigatio	ns							
Recommended Inspect	ion Type			Due Date	None	Priority Normal	/ Urgent	Estimated Cost (\$)	Com	ments
Material Condition Survey:										
Detailed Deck Condition S	Survey									
Non-destructive Delamina	ation Survey of	Asphalt-Covered	Deck							
Concrete Substructure Co	ondition Survey	/								
Detailed Coating Condition	n Survey									
Detailed Timber Investiga	tion									
Post-Tensioned Strand In	vestigation							<u> </u>		
Underwater Investigation								 		
Fatigue Investigation					무		<u> </u>	 		
Seismic Investigation							<u> </u>			
Structure Evaluation Monitoring							<u> </u>	+		
Monitoring of Deformation	ne Settlements	and Movements								
Monitoring Crack Widths	is, octionicità	and Movements			늄		ᅟᅟᅟᅟ			
Overall Structure R	Recommend	dations:								
Work Category	None 🗌		Minor Rel	nab [X]		M	ajor Rehal	о П		Replacement
	None	1	Jrgent □		< 1 v	ear 🔲	<u>سام، المالما</u>	1 - 5 year	 ⊽l	6 - 10 year
Timing			л успк Ц		- ı y			i - o yeai	스	0 - 10 year [
	67,600	and an dear					مام ما			
Comments S	eai replacem	ent and upgradi	ng the guide	e raii end treatr	nent is r	ecommen	aea			



Bridge Inspection Form

Struct. ID		03-0	6 B0400								
Element Data	l										
	A l t					44	I. "	N/		0.00	1
Group	Abutme					14	Length	N/A			(m)
Element	Abutme	nt walls					Width	<u> </u>		0.00	(m)
Span Num							Height	<u> </u>		2.00	(m)
Material	Cast-in-	-place concre	ete				Count			2.00	
Туре		ntional closed					Quantity	 _	72.	.000	(Sq.m)
Env't		Benign X	Mode	erate 🗌	Seve	ere 🗌	Not Inspected				
Location	North a	ind South		T	Γ	Description		+			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maint	enanc	e Ne	eds
Data	Sq.m	0.000	70.000	1.000	1.000						
Comments									C	CR =	5
Wide crack, an	d delamir	nation on the N	North abutme	nt.							
Maintenance N	leeds					Need	Timing				
8-Repair of B	ridge Cor	ncrete				2 Yea	ars				
Performance D	eficienci	es									
0-None											
											1
Group	Abutme	nts				16	Lenath		A 1	8.00	(m)
Group Element	Abutme Ballast v					16	Length Width	N//			(m) (m)
Element						16	Width	N/A	C	0.00	(m)
Element Span Num	Ballast	walls	ete			16	Width Height	N/A	1	0.00 1.00	<u>`</u>
Span Num Material	Ballast	walls -place concre	ete			16	Width Height Count	N//	1	0.00 1.00 2.00	(m) (m)
Span Num Material Type	Ballast v	walls -place concre		erate 🕅	Sevi		Width Height Count Quantity	N//	1	0.00 1.00 2.00	(m)
Span Num Material Type Env't	Ballast v	walls -place concre N/A Benign		erate 🔀	Seve	ere 🗌	Width Height Count	N//	1	0.00 1.00 2.00	(m) (m)
Span Num Material Type Env't Location	Cast-in-	walls -place concre N/A Benign and South	Mode	<u>-</u>		ere Description	Width Height Count Quantity Not Inspected		1 2 36.	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Span Num Material Type Env't	Ballast v	walls -place concre N/A Benign		erate X Fair 2.000	Seven Poor 1.000	ere 🗌	Width Height Count Quantity	N//	1 2 36.	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Span Num Material Type Env't Location Condition Data	Cast-in-	-place concre N/A Benign and South Excellent	Mode Good	Fair	Poor	ere Description	Width Height Count Quantity Not Inspected		36. enanc	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Span Num Material Type Env't Location Condition	Cast-in- Cast-in- North a Unit Sq.m	-place concre N/A Benign and South Excellent 0.000	Good 33.000	Fair 2.000	Poor	ere Description	Width Height Count Quantity Not Inspected		36. enanc	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Span Num Material Type Env't Location Condition Data Comments	Cast-in- North a Unit Sq.m	-place concre N/A Benign and South Excellent 0.000	Good 33.000	Fair 2.000	Poor	ere Description V. Poor	Width Height Count Quantity Not Inspected		36. enanc	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Stained areas,	Cast-in- North a Unit Sq.m wet areas	-place concre N/A Benign and South Excellent 0.000 s, spall in North	Good 33.000	Fair 2.000	Poor	ere Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies		36. enanc	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Stained areas, Maintenance N	Cast-in- North a Unit Sq.m wet areas leeds	place concre N/A Benign Ind South Excellent 0.000 s, spall in North	Good 33.000	Fair 2.000	Poor	ere Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies		36. enanc	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Stained areas, Maintenance N 8-Repair of B	Cast-in- North a Unit Sq.m wet areas leeds	place concre N/A Benign Ind South Excellent 0.000 s, spall in North	Good 33.000	Fair 2.000	Poor	ere Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies		36. enanc	0.00 1.00 2.00 .000	(m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Stained areas, Maintenance N 8-Repair of B Performance D	Cast-in- North a Unit Sq.m wet areas leeds	place concre N/A Benign Ind South Excellent 0.000 s, spall in North	Good 33.000	Fair 2.000	Poor	ere Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies		36. enanc	0.00 1.00 2.00 .000	(m) (m) (Sq.m)



Bridge Inspection Form

Struct. ID		03-0	6 B0400							
Element Data	1									
								,	,	
Group	Abutme	nts				22	Length	N/A	0.00	(m)
Element	Bearing	S				_	Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count		28.00	
Туре	Elaston	neric pad					Quantity		28.000	(Each)
Env't	F	Benign 🗌	Mode	erate 🛛	Seve	ere 🗌	Not Inspected			
Location	South A	Abutment		=		Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	ance Ne	eds
Data	Each	0.000	28.000	0.000	0.000					
Comments									CR =	1
Performance D)eficienci	es								3
Group	Abutme	nts				15	Length	N/A	0.00	(m)
Element	Bearing	s				•	Width	N/A	0.00	(m)
Span Num						_	Height	N/A	0.00	(m)
Material		N/A					Count	<u> </u>	28.00	
Туре	Elaston	neric pad					Quantity		28.000	(Each)
Env't		Benign 🔲	Mode	erate X	Seve	ere 🗌	Not Inspected	П		
Location		butment				Description	·			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	ance Ne	eds
Data	Each	0.000	28.000	0.000	0.000					
Comments				-	-	-			CR =	1
Performance D)eficienci	es								4



Bridge Inspection Form

Struct. ID		03-0	6 B0400					
Element Data	1							
Group	Abutme	ents				13	Length	4.60 (m)
Element	Wingwa	alls				_	Width	N/A 0.00 (m)
Span Num							Height	1.40 (m)
Material	Cast-in	n-place concre	ete				Count	4.00
Туре	Reinfor	rced concrete)				Quantity	25.760 (Sq.m)
Env't		Benign 🗌	Mode	erate 🛛	Sev	ere 🗌	Not Inspected	
Location	All Qua	adrants				Description		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	22.760	2.000	1.000			
Comments								CR = 5
Narrow stained	d crack, w	vet areas, efflo	rescence dep	osits, spall in	Northwest qua	adrant.		
Maintenance I	Needs					Need	Timing	
8-Repair of B	Bridge Co	ncrete				2 Yea	ırs	
Performance D	Deficienci	ies						
0-None								
								5
Group	Approa							J
Element	Approa	ches				24	Length	N/A 0.00 (m)
Span Num		ches ich Guiderail (\	⁄ork)			24	Length Width	
			⁄ork)			24		N/A 0.00 (m)
Material			⁄ork)			24	Width	N/A 0.00 (m) N/A 0.00 (m)
		ch Guiderail (\	∕ork)			24	Width Height	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m)
Material Type Env't		ch Guiderail (\ N/A		erate 🗌	Sev	24ere	Width Height Count	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00
Туре		ch Guiderail (Y N/A N/A	Mode	-	Sev		Width Height Count Quantity	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00
Type Env't		N/A N/A Benign	Mode	-	Sev	ere 🗌	Width Height Count Quantity	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00
Type Env't Location	Northe	N/A N/A Benign ast and Sout	Mode hwest Quad	rants		ere Description	Width Height Count Quantity Not Inspected	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00 2.000 (m)
Type Env't Location Condition	Northe Unit	N/A N/A Benign ast and Sout	Mode hwest Quad Good	rants Fair	Poor	ere Description	Width Height Count Quantity Not Inspected	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00 2.000 (m)
Type Env't Location Condition Data	Northe Unit	N/A N/A Benign ast and Sout	Mode hwest Quad Good	rants Fair	Poor	ere Description	Width Height Count Quantity Not Inspected	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00 2.000 (m) Maintenance Needs
Type Env't Location Condition Data	Northe Unit	N/A N/A Benign ast and Sout	Mode hwest Quad Good	rants Fair	Poor	ere Description	Width Height Count Quantity Not Inspected	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00 2.000 (m) Maintenance Needs
Type Env't Location Condition Data	Northe Unit m	N/A N/A Benign ast and Sout Excellent 0.000	Mode hwest Quad Good	rants Fair	Poor	ere Description	Width Height Count Quantity Not Inspected	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00 2.000 (m) Maintenance Needs
Type Env't Location Condition Data Comments	Northe Unit m	N/A N/A Benign ast and Sout Excellent 0.000	Mode hwest Quad Good	rants Fair	Poor	ere Description	Width Height Count Quantity Not Inspected	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00 2.000 (m) Maintenance Needs
Type Env't Location Condition Data Comments	Northe Unit m	N/A N/A Benign ast and Sout Excellent 0.000	Mode hwest Quad Good	rants Fair	Poor 0.000	ere Description	Width Height Count Quantity Not Inspected	N/A 0.00 (m) N/A 0.00 (m) N/A 0.00 (m) N/A 2.00 2.000 (m) Maintenance Needs



Bridge Inspection Form

Struct. ID		03-0	6 B0400							
Element Data	1									
							T	1		
Group	Approa					25		N/A	0.00	(m)
Element	Approa	ch Guiderail (\	/ork)				Width	 	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count	N/A	2.00	
Туре		N/A					Quantity	2	.000	(m)
Env't		Benign 🗌	Mode	erate 🗌	Sev	ere 🗌	Not Inspected			
Location	Northw	est and Sout	theast Quad	rants		Description		•		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenand	ce Ne	eds
Data ———	m	0.000	2.000	0.000	0.000			<u> </u>		
Comments								(CR =	1
		_								
Performance D	Deficienc	ies								
0-None Recommende	d Work			Catana		Timin a	O man title			
Recommende	u work			Catego	ry	Timing	Quantity Un	it Cost	Total C	ost (\$)
				Donloo	mont	1 E voor			00	
				Replace	ement	1 - 5 year			30	000 7
				Replace	ement					000 7
Group	Approa			Replace	ement	1 - 5 year			6.00	000 ₇
Element		ches ch slabs		Replace	ement		Width		6.00	000 7 (m) (m)
				Replace	ement		-		6.00 7.30 0.00	000 ₇
Element	Approa		ete	Replace	ement		Width		6.00 7.30 0.00 2.00	(m) (m) (m)
Element Span Num	Approa	ch slabs	ete	Replace		4	Width Height		6.00 7.30 0.00 2.00	000 7 (m) (m)
Element Span Num Material	Approa	ch slabs		Replace			Width Height Count		6.00 7.30 0.00 2.00	(m) (m) (m)
Span Num Material Type	Approa	ch slabs n-place concre N/A				4	Width Height Count Quantity		6.00 7.30 0.00 2.00	(m) (m) (m)
Span Num Material Type Env't Location Condition	Approa	ch slabs -place concre N/A Benign				4 ere 🗌	Width Height Count Quantity		6.00 7.30 0.00 2.00	(m) (m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location	Approa	ch slabs -place concre N/A Benign and South	Mode	erate X	Sev	ere Description	Width Height Count Quantity Not Inspected	207	6.00 7.30 0.00 2.00	(m) (m) (m) (m) (Sq.m)
Span Num Material Type Env't Location Condition	Cast-in North a	n-place concre N/A Benign and South Excellent	Mode Good	erate 🔀	Sev	ere Description	Width Height Count Quantity Not Inspected	207	6.00 7.30 0.00 2.00	(m) (m) (m) (Sq.m)
Span Num Material Type Env't Location Condition Data	Approa	and South Excellent 0.000	Mode Good 204.600	erate 🔀	Sev	ere Description	Width Height Count Quantity Not Inspected	207	6.00 7.30 0.00 2.00 .600	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Wide cracks, p	Approa Cast-in North a Unit Sq.m	and South Excellent 0.000	Mode Good 204.600	erate 🔀	Sev	ere Description	Width Height Count Quantity Not Inspected	207	6.00 7.30 0.00 2.00 .600	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Wide cracks, p	Approa Cast-in North a Unit Sq.m	and South Excellent 0.000	Mode Good 204.600	erate 🔀	Sev	ere Description	Width Height Count Quantity Not Inspected	207	6.00 7.30 0.00 2.00 .600	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Wide cracks, p	Approa Cast-in North a Unit Sq.m	and South Excellent 0.000	Mode Good 204.600	erate 🔀	Sev	ere Description	Width Height Count Quantity Not Inspected	207	6.00 7.30 0.00 2.00 .600	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Wide cracks, p	Approa Cast-in North a Unit Sq.m	and South Excellent 0.000	Mode Good 204.600	erate 🔀	Sev	ere Description	Width Height Count Quantity Not Inspected	207	6.00 7.30 0.00 2.00 .600	(m) (m) (m) (Sq.m)



Bridge Inspection Form

Struct. ID		03-0	6 B0400					
Element Data	l							
Group	Approac	ches				3	Length	6.00 (m)
Element	Wearing	g surface				_	Width	17.30 (m)
Span Num							Height	0.00 (m)
Material	Asphal	t					Count	2.00
Туре		N/A					Quantity	208.000 (Sq.m)
Env't	l	Benign 🗌	Mode	erate 🗌	Sev	ere 🛛	Not Inspected	
Location	North a	and South		T		Description		•
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	198.000	8.000	2.000			
Comments								CR = 5
Narrow to wide	cracks,	pothole, narrov	w random cra	ck.				
Maintenance N	leeds					Need	Timing	
12-Bridge Sur		pair				1 Yea		
15-Rout and S						1 Yea	ar	
Performance D	eticienci	les						
O Nono								
0-None								
0-None								
0-None								9
	Barriers					8	Length	
Group	Barriers Barrier/				Interi		Length	1.20 (m)
Group Element		s Parapet Walls			Interi		Width	1.20 (m) N/A 0.00 (m)
Group Element Span Num	Barrier/	Parapet Walls			Interi		Width Height	1.20 (m) N/A 0.00 (m) 1.50 (m)
Group Element Span Num Material	Barrier/				Interi		Width Height Count	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00
Group Element Span Num Material Type	Barrier/ Cast-in Other	Parapet Walls	ete	erate Π		or	Width Height Count Quantity	1.20 (m) N/A 0.00 (m) 1.50 (m)
Group Element Span Num Material Type Env't	Barrier/ Cast-in Other	Parapet Walls -place concre	ete	erate 🗌		ere 🛛	Width Height Count	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00
Group Element Span Num Material Type Env't Location	Cast-in Other	Parapet Walls -place concre Benign	ete Mode		Sevi	ere 🛛 Description	Width Height Count Quantity Not Inspected	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m)
Group Element Span Num Material Type Env't	Cast-in Other End Po Unit	Parapet Walls -place concre	ete	Fair		ere 🛛	Width Height Count Quantity	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00
Group Element Span Num Material Type Env't Location Condition Data	Cast-in Other	Parapet Walls -place concre Benign osts Excellent	ete Mode Good		Sevi	ere 🛛 Description	Width Height Count Quantity Not Inspected	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m) Maintenance Needs
Group Element Span Num Material Type Env't Location Condition	Cast-in Other End Po Unit Sq.m	Parapet Walls -place concre Benign osts Excellent 0.000	Mode Good 5.200	Fair	Sevi	ere 🛛 Description	Width Height Count Quantity Not Inspected	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments	Cast-in Other End Po Unit Sq.m	Parapet Walls -place concre Benign osts Excellent 0.000	Mode Good 5.200	Fair	Sevi	ere 🗓 Description V. Poor	Width Height Count Quantity Not Inspected	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m) Maintenance Needs
Group Element Span Num Material Type Env't Location Condition Data Comments Spall and delar	Cast-in Other End Po Unit Sq.m	Parapet Walls -place concre Benign bsts Excellent 0.000 at North end p	Mode Good 5.200	Fair	Sevi	ere 🗓 Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m) Maintenance Needs
Group Element Span Num Material Type Env't Location Condition Data Comments Spall and delar Maintenance N	Cast-in Other End Po Unit Sq.m Meeds ridge Co	Parapet Walls -place concre Benign osts Excellent 0.000 at North end p	Mode Good 5.200	Fair	Sevi	ere X Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m) Maintenance Needs
Group Element Span Num Material Type Env't Location Condition Data Comments Spall and delar Maintenance N 8-Repair of B	Cast-in Other End Po Unit Sq.m Meeds ridge Co	Parapet Walls -place concre Benign osts Excellent 0.000 at North end p	Mode Good 5.200	Fair	Sevi	ere X Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m) Maintenance Needs
Group Element Span Num Material Type Env't Location Condition Data Comments Spall and delar Maintenance N 8-Repair of B Performance D	Cast-in Other End Po Unit Sq.m Meeds ridge Co	Parapet Walls -place concre Benign osts Excellent 0.000 at North end p	Mode Good 5.200	Fair	Sevi	ere X Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies	1.20 (m) N/A 0.00 (m) 1.50 (m) 4.00 7.200 (Sq.m) Maintenance Needs



Bridge Inspection Form

Struct. ID		03-0	6 B0400							
Element Data	ı									
Group	Barriers	5				9	Length		1.20	(m)
Element	Barrier/	Parapet Walls			Exter	ior 	Width	N/A	0.00	(m)
Span Num						_	Height		1.15	(m)
Material	Cast-in	n-place concre	ete				Count		4.00	
Туре	Other					_	Quantity		5.520	(Sq.m)
Env't		Benign 🗌	Mode	erate 🛛	Sev	ere 🗌	Not Inspected			
Location	End Po	osts				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintena	ınce Ne	eds
Data ———	Sq.m	0.000	5.520	0.000	0.000					
Performance D	Deficienc	ies								11
Group	Barriers	3				7	Length	1	0.00	(m)
Element	Posts						Width		0.00	(m)
Span Num							Height		0.00	(m)
Material	Alumin	ium				-	Count		34.00	
Туре		N/A					Quantity	:	34.000	(Each)
Env't		Benign 🗌	Mode	erate 🗌	Sev	ere 🛛	Not Inspected			
Location		nd West				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintena	ınce Ne	eds
Data	Each	0.000	34.000	0.000	0.000					
Performance DO-None	Deficienc	ies							CR =	1



Bridge Inspection Form

Struct. ID		03-0	06 B0400					
Element Data	1							
Group	Barriers					6	Length	36.80 (m)
Element	Railing	Systems				_	Width	N/A 0.00 (m)
Span Num							Height	0.00 (m)
Material	Alumini	um					Count	2.00
Туре	4 Rail M	letal Railing	- Aluminum				Quantity	73.600 (Sq.m)
Env't	E	Benign 🗌	Mode	erate 🗌	Seve	ere 🛛	Not Inspected	
Location	East an	d West				Description		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	67.600	5.000	1.000			<u></u>
Comments								CR = 5
Abrasion, unse	ecured and	d missing end	-caps.					
Maintenance N 3-Bridge Han Performance D 0-None	ıdrail Mair					Need 2 Yea	Timing ars	
Group	Beams/I	MLE's				17	Length	2.00 (m)
Element	Girders				End		Width	1.22 (m)
Span Num						_	Height	1.00 (m)
Material	Precast	concrete					Count	28.00
Туре	Box/trap	pezoidal					Quantity	180.320 (Sq.m)
Env't		Benign 🔲	Mode	erate X	Seve	ere 🗌	Not Inspected	
Location	Below [Deck				Description		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	166.320	7.000	7.000			
Comments								CR = 5
Spall of the No	rth girders	s at the exteri	or, delaminatio	on of the botto	om flanges, ex	posed corroded	rebars.	
Maintenance N 8-Repair of B Performance D 0-None	Bridge Cor					Need 2 Yea	Timing ars	
								14



Bridge Inspection Form

Struct. ID		03-0)6 B0400						
Element Data	l								
Group	Beams/	MLE's				18	Length	26.00	(m)
Element	Girders				Middl		Width	1.27	(m)
Span Num						_	Height	1.00	(m)
Material	Precast	t concrete					Count	14.00	()
Туре		pezoidal					Quantity	+	(Sq.m)
Env't		Benign X	Mode	erate 🗍	Seve	ere 🗌	Not Inspected	Г	
Location	Below I					Description	'	<u> </u>	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Nee	eds
Data	Sq.m	0.000	1,188.280	1.000	1.000				
Comments								CR =	5
Small spall nea	ar South e	end.							
Maintenance N	Needs					Need	Timing		
8-Repair of B	ridge Cor	ncrete				2 Yea	•		
Performance D	eficienci	es							
0-None									
									45
									15
Group	Decks					2	Length	31.70	(m)
Element	Deck to	р					Width	21.00	(m)
Span Num						_	Height	0.00	(m)
Material	Cast-in-	-place concr	ete				Count	N/A 0.00	
Туре	Solid or	r voided slab	1				Quantity	665.700	(Sq.m)
Env't	I	Benign 🗌	Mode	erate 🛛	Seve	ere 🗌	Not Inspected		
Location	Below I	Roadway				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Ne	eds
Data	Sq.m	0.000	653.700	11.000	1.000				
Comments								CR =	1
Asphalt patche	s in wear	ing surface.							
Performance D	eticienci	es							
0-None									



Bridge Inspection Form

Struct. ID		03-0	6 B0400							
Element Data	1									
							<u> </u>	1		
Group	Decks					1	19		31.70	(m)
Element	Wearing	surface				_	Width		17.30	(m)
Span Num							Height		0.00	(m)
Material	Asphalt						Count	N/A	0.00	
Туре		N/A					Quantity	_ 5	48.410	(Sq.m)
Env't	E	Benign 🗌	Mode	erate 🗌	Seve	ere 🛛	Not Inspected			
Location	Above I	Deck		•	-	Description		,		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	Sq.m	0.010	536.400	12.000	0.000					
Comments									CR =	1
Narrow to med	ium crack	, sealed crack	s, light to me	dium raveling	, patched area	IS.				
Performance D 0-None										17
Group	Embank	ments & Strea	ams			19	Length	N/A	0.00	(m)
Element	Embank	ments					Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count	N/A	6.00	
Туре		N/A				_	Quantity		6.000	(Each)
Env't	E	Benign 🗌	Mode	erate 🗌	Seve	ere 🗌	Not Inspected			
Location	All Qua	drants, In Fr	ont of Abutm	nents		Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	Each	0.000	6.000	0.000	0.000					
Comments									CR =	1
Performance D 0-None	Deficiencio	es								18



Bridge Inspection Form

Width N/A 0.00 (m)			Streams							
Midth	Group En		Streams							
Midth	Group En		Streams							
Span Num		ope protection	Olicanis			21	Length	N/A	0.00	(m)
Material	Element Sl						Width	N/A	0.00	(m)
Precast units	Span Num						Height	N/A	0.00	(m)
Service	Material	N/A					Count	N/A	2.00	
Description In Front of Abutments	Type Pr	ecast units					Quantity		2.000	(Each)
Unit Excellent Good Fair Poor V. Poor Perform. Deficiencies Maintenance Needs	Env't	Benign	Mod	erate 🗌	Seve	ere 🗌	Not Inspected			
Data Each 0.000 2.000 0.000	Location In	Front of Abut	ments			Description				
Comments CR = 1		Init Excelle	nt Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Note Category Timing Quantity Unit Cost Total Cost (\$)	Data E	ach 0.000	2.000	0.000	0.000					
Performance Deficiencies 0-None Recommended Work Category Timing Quantity Unit Cost Total Cost (\$) Siroup Embankments & Streams 20 Length N/A 0.00 (m) Signa Num Width N/A 0.00 (m) Material N/A Count N/A 0.00 (m) Env't Benign Moderate Severe Not Inspected	Comments								CR =	1
Category Timing Quantity Unit Cost Total Cost (\$)	Missing blocks not	ed, gap betwee	en abutment and	slope protectio	n.					
Category Timing Quantity Unit Cost (\$) Total Cost (\$) Total	Daufaurranaa Dafia									
Category Timing Quantity Unit Cost Total Cost (\$) 5000 19 1 - 5 year 0.000 0.000 19 19 1 - 5 year 0.000 19 19 1 - 5 year 0.000 19 19 10 10 10 10 10		ciencies								
Minor Rehab 1 - 5 year 0.000 5000 19		ork		Catama		Timina	0			
Samp	Recommended W	OIK				•	_	it Cost		
Some protection Width N/A 0.00 (m)				IVIIIIOI K	ченар	i - 5 yeai	0.000			
Some protection Width N/A 0.00 (m)			21			00		l	0.00	
Height N/A 0.00 (m)			Streams			20		 		
Material N/A Count N/A 4.00 Type Vegetation Quantity 4.000 (Each) Env't Benign Moderate Severe Not Inspected Not Inspected Location All Quadrants Description Condition Data Unit Excellent Good Fair Poor V. Poor Perform. Deficiencies Maintenance Needs Each 0.000 4.000 0.000 0.000 0.000 0.000 Comments CR = 1		ope protection				_		 		
Type Vegetation Quantity 4.000 (Each) Env't Benign							-			(m)
Env't Benign Moderate Severe Not Inspected Location All Quadrants Condition Data Each 0.000 4.000 0.000 0.000 Comments Performance Deficiencies	Material							N/A		
Description		_						_	4.000	(Each)
Condition Data Unit Excellent Good Fair Poor V. Poor Perform. Deficiencies Maintenance Needs Each 0.000 4.000 0.000 0.000 Comments Performance Deficiencies	Env't		Mod	erate 🔲	Seve		Not Inspected			
Data Each 0.000 4.000 0.000 0.000		i	<u> </u>					1		
Comments CR = 1 Performance Deficiencies						V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Performance Deficiencies	1 -	ach 0.000	4.000	0.000	0.000					
	Comments								CR =	1
	Performance Defic	riancias								
	0-None	Jenoles								
o none	0.140.110									



Bridge Inspection Form

Struct. ID		03-0	6 B0400							
Element Data	1									
							ı	1		
Group	Foundations 23						Length	N/A	0.00	(m)
Element	Founda	ition (below gro	ound level)				Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material	Unknov	wn					Count	N/A	0.00	
Туре	Unknov	wn					Quantity	<u> </u>	1.000	(Sq.m)
Env't		Benign 🗌	Mode	erate 🗌	Seve	ere 🗌	Not Inspected			
Location	At Abut	tments		·		Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	Sq.m	0.000	1.000	0.000	0.000					
Comments									CR =	1
Limited inspec	tion.									
Deufeumenee F	`-f -lama	•								
Performance I 0-None	eticienci	ies								
O-INOLIG										
										21
Group	Joints					11	Length		17.30	(m)
Element		ng/retaining de	vices				Width	N/A	0.09	(m)
Span Num							Height	N/A	0.00	(m)
Material	Steel						Count		4.00	
Туре		N/A					Quantity		69.200	(m)
Env't		Benign 🔲	Mode	erate 🗌	Seve	ere 🛛	Not Inspected	П		
Location	North a	and South				Description		. —		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	m	0.000	69.200	0.000	0.000					
Comments									CR =	1
Scrapes.										
Performance D)eficienci	ies								
0-None										



Bridge Inspection Form

Struct. ID	03-06 B0400									
Element Data										
Group	Joints					10	Length	<u> </u>	17.30	(m)
Element	Concre	te end dams					Width		0.36	(m)
Span Num							Height	N/A	0.00	(m)
Material	Cast-in	-place concre	ete				Count		4.00	
Туре		N/A					Quantity		24.912	(Sq.m)
Env't		Benign 🗌	Mode	erate 🗌	Seve	ere 🛛	Not Inspected			
Location	North a	and South				Description				
Condition Data	Unit Sq.m	Excellent 0.002	Good 19.910	Fair 3.000	Poor 2.000	V. Poor	Perform. Deficiencies	Maintenance Needs		
Comments Severe spall, m		l l							CR =	6
Maintenance N 8-Repair of B Performance D 0-None	ridge Co					Need 2 Yea	Timing ars			23
Group	Joints					12	Length		17.30	(m)
Element	Seals/s	ealants					Width	N/A	0.00	(m)
Span Num							Height	N/A	0.00	(m)
Material		N/A					Count		2.00	
Туре	Compre	ession seal					Quantity		2.000	(m)
Env't		Benign 🔲	Mode	erate 🔲	Seve	ere 🛛	Not Inspected			
Location	North a	and South				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance Ne	eds
Data	m	0.000	0.000	0.000	2.000					
Comments Both seals are Performance D 0-None		_							CR =	6
Recommended	d Work			Categoi	у	Timing	Quantity	Unit Cost	Total C	Cost (\$)
JS400 Replace Default Joint Seal (m.)				Replace		1 - 5 year	2.000	1300		2600



Bridge Inspection Form

Struct. ID	03-06 B0400							
Element Data								
Group	Sidewal	ks/curbs				5	Length	43.70 (m)
Element	Sidewalk and medians					_	Width	1.85 (m)
Span Num							Height	0.00 (m)
Material	Cast-in-	-place concr	ete				Count	2.00
Туре	Cast-in-place concrete N/A					-	Quantity	161.690 (Sq.m)
Env't	E	Benign 🔲	Mode	Moderate Se		ere 🛛	Not Inspected	
Location	East ar	nd West				Description		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	157.690	3.000	1.000			
Comments	-		-			-		CR = 5
Abrasions, spa	lls, aspha	alt patches, na	rrow to mediu	m cracks.				
Maintenance N	leeds					Need	Timing	
8-Repair of Bridge Concrete 2					2 Yea	ars		
Performance Deficiencies								
0-None								
								25



Bridge Inspection Form

Struct. ID 03-06 B0400

Recommended Work (Element Level)									
			Time						
Element	Repair / Rehabilitation	<u>None</u>	<u>Urgent</u>	< 1 year	<u>1 - 5 year</u>	<u>6 - 10 year</u>	Cost (\$)		
Joints / Seals/sealants / Compression seal	JS400 Replace Default Joint Seal (m.)				Х		2,600		
Embankments & Streams / Slope protection / Precast units					Х		5,000		
Approaches / Approach Guiderail (York)					Х		30,000		
Approaches / Approach Guiderail (York)					Х		30,000		
Total Cost									

Recommended Work (Structure Level)						
Associated Work	<u>Comments</u>	Estimated Cost (\$)				
Approaches						
Detours						
Other	Contingencies & Engineering	53,000				
Traffic Control		10,000				
Utilities						
	Total Cost	63,000				
	Grand Total Cost:	\$130,600				



Bridge Inspection Form

Struct. ID

03-06 B0400



Description

East barrier, general photo

Elem Grp/Class **Elem Type Sub Element Material Type** Locator

Defect Descript1 Defect Descript2 Defect

Barriers/Barrier/Parapet Walls

Other Interior

Cast-in-place concrete

East

File Name

DSCN4156.JPG



Description

Other

East sidewalk, spall

Elem Grp/Class **Elem Type Sub Element Material Type** Locator **Defect Descript1 Defect Descript2**

Defect

Other

Cast-in-place concrete East

Sidewalks/curbs/Sidewalk and me

Fair condition

Spalling

File Name

DSCN4157.JPG

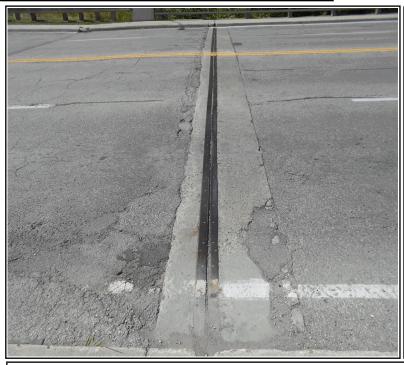
2017/1/20 16:20 **RptInspection**



Bridge Inspection Form

Struct. ID

03-06 B0400



Description

South expansion joint, spalls, asphalt patch, cracking

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect Descript2

Defect

Other

File Name DSCN4158.JPG



Description

South approach, pot holes, map cracking

Elem Grp/Class Approaches/Wearing surface

Elem Type
Sub Element
Material Type Asphalt
Locator South
Defect Descript1 Poor condition

Defect Descript2
Defect Potholes
Other

File Name DSCN4159.JPG



Bridge Inspection Form

Struct. ID

03-06 B0400



Description

Pot holes filled, sealed cracks

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2

Decks/Wearing surface

Asphalt Middle

Fair condition

Cracking

File Name DSCN4160.JPG



Description

Defect

Other

North expansion joint, spall

Elem Grp/Class

Elem Type
Sub Element

Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

File Name

DSCN4164.JPG