

Bridge Inspections The Town of Parry Sound

Inspection Report FINAL

prepared by:

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1 Introduction

C.C. Tatham & Associates Ltd. (CCTA) was retained by the Town of Parry Sound to perform detailed visual inspections for 5 bridges at various locations within the Town. This work is required in compliance with Ontario Regulation (O.Reg.) 104/97 as amended by O.Reg. 472/10. This regulation states that bridges are to be inspected every two years and these inspections are to be conducted in accordance with the Ontario Structure Inspection Manual (OSIM). The objectives of this work are to:

- Protect and prolong the useful life of the structures;
- Identify maintenance, repair, load limit posting, and rehabilitation needs;
- Provide a basis for a structure management system for the planning and funding of the maintenance and rehabilitation of the structures.

The bridges that were inspected are listed in Table 1.

Bridge Name Road Name Location Seguin Street Bridge Seguin Street 0.08 km West of River Street 0.1 km South of Seguin Street Seguin River Pedestrian Bridge **Fitness Trail** over Seguin River Cascade Street Bridge No. 1 Cascade Street 0.1 km East of Water Street Cascade Street 0.02 km East of Water Street Cascade Street Bridge No. 2 **Fitness Trail** Waubuno Street Pedestrian Bridge Waubuno Street at Georgian Bay

Table 1: Bridge Locations

The detailed visual inspections required by O.Reg.'s 104/97 and 472/10 involve an element by element analysis of the structure. Elements are reviewed and their condition is assessed based on observations made by the inspector. The condition is then quantified and categorized as excellent, good, fair, or poor. Action may be required if elements are partially or wholly in poor condition. Maintenance needs, repair work, and/or large scale repairs are then specified and time frames are recommended to assist the Town with prioritization of the work.

This report summarizes the results of the detailed visual inspections and provides costing and scheduling information for the recommended maintenance work.

1.1 Definitions

In order to convey the results of the visual inspections, certain terms are used to identify particular deficiencies with respect to concrete condition. These terms are used in accordance with the OSIM guidelines and are defined below for clarification.

1.1.1 Concrete

Delamination: This is the separation of a thin portion of surface concrete from the main concrete element and is usually due to the corrosion of the reinforcing steel. Concrete is substantially, but not completely detached from the concrete below or above it.

Efflorescence: This is a chloride residue that forms on the concrete surface due to the passage of water through the concrete. It is usually white in colour. Normally, the percolation of water through the concrete creates the potential for damage due to such processes as corrosion of the reinforcing steel or freeze-thaw cycling.

Honeycombing: This occurs when an area of concrete forms and the cement portion of the concrete mixture fails to fill the voids between the coarse aggregate. Honeycombing is vulnerable to deterioration.

Scaling: This occurs on concrete surfaces when water penetrates the surface of the concrete and experiences freeze-thaw cycles. The pressures caused by the expansion and contraction of water causes the surface concrete to erode and break away. Scaling damage appears as though the concrete surface finish has worn away resulting in a bumpy surface with exposed aggregate.

Scour: This is the erosion of the concrete footing, base of the concrete abutment, or the soil base below or surrounding the footing/abutment. This is usually caused by water flow and can lead to the loss of soil bearing support.

Spalling: This occurs when a piece of concrete separates from the main body of concrete and breaks off. Typically, spalling is caused by deep set freeze-thaw cycles or internal corrosion of reinforcing steel. Spalling differs from delamination in that typically, when spalling occurs, the piece of separated concrete is thicker, and the separated concrete has usually become completely detached, whereas when delamination occurs, the separated concrete is thin and still partially attached.

1.1.2 Wood

Abrasion and Wear: deterioration brought about by vehicle or snowplough blades scraping against wood surface, coupled with abrasive influence of sand, dirt or debris.

Checks: longitudinal tissue separations along the side grain of wood members.

Connection Deficiencies: connections loosened due to repetitive or dynamic loads, wear or decay of members.

Cracking, Splintering, Crushing and Shattering: physical damage as a result of impact loading or overloading of a member.

Fire and Chemical Damage: damage resulting from fire or from the use of non-preservative chemicals on the wood surface over a long period of time.

Insect Damage: Loss of section caused by tunnelling/boring by insects or larvae.

Rot or Decay: decomposition of wood.

Shakes: tissue separation that follow the growth rings and are visible at the ends of wood members.

Splits: severe separations similar to checks, extending to the ends of wood members.

Weathering: this occurs as a result of exposure to the actions of sun, rain, wind, frost and atmospheric pollutants, resulting in the gradual deterioration of the wood.

1.1.3 Steel

Connection Deficiencies: loose connections, cracking or excesive corrosion of the connector, gusset plate or fasteners.

Corrosion: deterioration of steel by chemical/electro-chemical reaction resulting from exposure to air, moisture, and other contaminants in the environment in which it is placed.

Cracking: linear fractures in steel extending partly or completely through the member.

Permanent Deformations: bending, buckling, twisting or elongation.

2 Inspection Summaries

The following summaries describe the observations and results from the bridge inspections. In addition to the deficiencies addressed by the maintenance and rehabilitation works described in the summaries below, complete information regarding the condition of each bridge can be found in the OSIM reports which include photos of each element. OSIM reports are included in Appendix A.

The summaries below categorize recommended works as maintenance work or rehabilitation work. This categorization is made to differentiate between smaller scale maintenance work that could be completed by the Town's works department, and larger scale rehabilitation work that may require higher costs and specialized design. Condition surveys, if required, are included as rehabilitation works.

2.1 Seguin Street Bridge

The Seguin Street Bridge is located on Seguin Street approximately 0.08 km west of River Street. The single span structure has a span of 55 m. The structure type is a concrete deck on steel box girder supported on concrete abutments. The bridge is approximately 20.6 m wide with a travelled roadway width of 15.0 m.

The bridge is in generally good condition with no evidence of movement or significant deterioration. No detailed investigations are recommended at this time.

The following maintenance is recommended:

- Clean out deck drains and gutters (1 year);
- Seal sidewalk cracks on deck & approaches (1 year);
- Clean out west abutment wall drains (1 year);
- Paint walls with anti-graffiti paint (1 year);
- Patch and seal concrete retaining walls (1 year); and
- Repair concrete at pedestrian barrier post base on walkway beneath west end (2 Year).

The following rehabilitation is recommended:

- Replace northeast approach barrier connection with standard connection (urgent);
- Clean and recoat structural steel inside boxes and at exterior ends (1-5 years);
- Replace expansion joints or convert to semi-integral abutments (1-5 years); and

• Patch and seal deck soffit cracks within box girders (1-5 years).

No load posting is recommended at this time. It is proposed the next OSIM inspection occur in 2020.

2.2 Seguin River Pedestrian Bridge

The Seguin River Pedestrian Bridge is located on the fitness trail which was previously the railway bed. It is approximately 0.1 km south of the Seguin Street Bridge and crosses the Seguin River. The structure is 12 spans long and is made up of different structure types. The nine eastern spans are timber trestles, followed by a through plate girder span, a deck on steel girder span, and another through plate girder span.

Generally the bridge is in fair condition with no evidence of movement or significant deterioration. Updated steel condition testing is recommended along with a structural evaluation to confirm extent of ongoing corrosion and section loss particularly at the previously noted members governing load capacity. Additionally, an underwater inspection is recommended to determine the extent and severity of deterioration of the piers and timber cribs below the waterline.

The following maintenance is recommended:

- Replace missing pickets and top rail and retaining wall barriers (urgent);
- Install pedestrian barrier at northeast approach (urgent);
- Repair unsupported conduit at west end (urgent);
- Increase barrier height for snowmobiles on snow packed trails and/or bicycles (1 year);
- Clean off debris from bearing seats and girders (1 year);
- Clean and seal west concrete abutment (1 year);
- Remove vegetation on wingwall timbers (1 year); and
- Replace deteriorated curb sections (1 year).
- Replace missing and damaged lagging in abutment and ballast wall (2 year);

The following rehabilitation is recommended:

- Clean and recoat structural steel (1-5 years);
- Replace deteriorated timbers on east wingwalls (1-5 years);
- Repair crack in concrete retaining wall (1-5 years);
- Replace post anchor and post at retaining wall barrier southwest end (1-5 years);

- Repair west concrete abutment (1-5 years);
- Replace damaged timber pier brace (1-5 years); and
- Repair concrete piers (6-10 years).

The current load rating recommendation of pedestrian and snowmobile use is recommended to remain in place. It is proposed that the next OSIM inspection occur in 2020. It is also recommended that the abutments and piers be monitored for movement as they are supported on timber cribs, and the upper timbers are now exposed at the east pier.

2.3 Cascade Street Bridge No. 1

The Cascade Street Bridge No. 1 is located on Cascade Street approximately 0.1 km east of Water Street. The structure is 2 spans of approximately 26.45 m and is approximately 11.2 m wide. The structure is a precast concrete box girder bridge with concrete deck and has been converted to semi-integral abutments. The bridge has a travelled roadway width of 8.5 m.

The bridge is in generally good condition with no evidence of movement or significant deterioration. No additional investigations are recommended at this time.

The following maintenance is recommended:

- Patch repair concrete curb on approaches (1 year);
- Rout and seal crack at end of approach slab
- Clean out deck drains, gutters, and sidewalk (1 year);
- Provide slope protection at Northwest embankment (1 year); and
- Rout and seal cracks, repair pothole in asphalt (2 years).

The following rehabilitation is recommended:

- Replace damaged guide rail sections and install end treatments (urgent); and
- Concrete sidewalk repair (1-5 years).

No load posting is recommended at this time. It is proposed the next OSIM inspection occur in 2020.

2.4 Cascade Street Bridge No. 2

The Cascade Street Bridge No. 2 is also located on Cascade Street. It is adjacent to Cascade Street Bridge No. 1 and is approximately 0.02 km east of Water Street. The structure is a concrete rigid

frame with vertical legs. It has a span of 10 m and a width of 11.2 m. The travelled roadway width is approximately 8 m.

The bridge is in excellent to good condition with no evidence of movement or significant deterioration.

The following maintenance is recommended:

- Rout and seal cracks in asphalt wearing surface (1 year);
- Clean off bridge and approach driving surface, gutters and sidewalk (1 year); and
- Replace missing end caps on structure barrier (1 year).

The following rehabilitation is recommended:

- Upgrade barrier connections to structure at north quadrants (urgent);
- Repair cracks in south foundation and install steel armouring (1-5 years);
- Repair cracks in concrete wingwall at the northeast quadrant and replace joint seals at southwest and northwest quadrants (1-5 years);
- Repave approaches (6-10 years).

No load posting is recommended at this time. It is proposed the next OSIM inspection occur in 2020.

2.5 Waubuno Street Bridge

The Waubuno Street Bridge is located along the Parry Sound Fitness trail and crosses Waubuno Street at Georgian Bay. It is a timber girder bridge with timber plank deck, timber barriers, and timber trestle supports. The structure is 3 spans of 3.73 m, 4.18 m, and 3.53 m. The travelled width is 3.17 m and the overall width is 3.57 m. It is currently used by pedestrian and snowmobiles, and is posted with a 10 tonne limit.

Generally the bridge is in good condition, however the ballast wall and timber piles show evidence of some severe deterioration. The existing barriers appear to be deficient in height and strength for use by snowmobiles. The structure is currently restricted to pedestrian and snowmobile use – while one pier pile is severely deteriorated, the load capacity is not required to be reduced. No detailed investigations are recommended at this time.

The following maintenance is recommended:

- Repair eroded part of wearing surface (urgent);
- Reorient bridge signage to face approaches (1 year);

- Clean off bridge wearing surface (1 year);
- Replace damaged curb timber (1 year);
- Replace damaged post pickets on structure barrier (1 year);
- Install slope protection in eroded areas on embankment (1 year); and
- Install slope protection on north abutment slope interior face (1 year) ; and
- Replace 4 OFSC trail signs (2 years).

The following rehabilitation is recommended:

- Replace southwest timber pile (1 year);
- Replace bridge barrier with CHBDC code-compliant system (1-5 years); and
- Replace deteriorated ballast walls (1-5 years).

It is recommended that the existing load posting remain. It is proposed the next OSIM inspection occur in 2020.

3 Recommendations

Overall the structures within the Town are in good condition with minimal investigation and rehabilitation work recommended. The various maintenance and rehabilitation activities recommended in Section 2 are recommended to be completed at all structures within the indicated time frames.

We trust the above is sufficient for your purposes. If you have any questions or comments regarding the above, please do not hesitate to contact our office.



Authored by: Kieran Ferguson

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Appendix A: OSIM Forms

Inventory Data:				
Structure Name	Seguin Street B	Bridge		
Main Hwy/Road #		On X Under	Crossing Navig. Water Type: Rail	r X Non-Navig. Water Road Ped Other
Road Name	Seguin Street			
Structure Location	0.081 km west o	of River Street		
Latitude	45° 20' 45" N		Longitude 80° 01' 52"	W
Owner(s)	Town of Parry S	Sound	Heritage Not Cons. X Designation: Desig	Cons./Not App. List/Not Desig
MTO Region	50 - Northeaste	rn	Road Class: Freeway	Arterial X Collector Local
MTO District	52 - Huntsville		Posted Speed 50	No. of Lanes 4
Old County	44 - Parry Soun	ıd	AADT unknown	% Trucks unknown
Geographic Twp.	452 - McDougal	I	Special Routes: Transit	Truck School Bicycle
Structure Type	4 - Box Beam G	Girder	Detour Length Around Bridge	2.2 (km)
Total Deck Length	55.9	(m)	Fill on Structure	0 (m)
Overall Str. Width	20.6	(m)	Skew Angle	0.0 (Degrees)
Total Deck Area	1151.54	(sq.m)	Direction of Structure	E-W
Roadway Width	15	(m)	No. of Spans	1
Span Lengths	55			(m)
Historical Data:				
Year Built		1987	Year of Last Major Rehab.	
Last OSIM Inspection	n	2015	Last Evaluation	2007
Last Enhanced OSI	M Inspection		Current Load Limit	/ / (tonnes)
Enhanced Access E (ladder, boat, lift, etc	iquipment c.)	boat	Load Limit By-Law #	
Last Underwater Ins	spection		By-Law Expiry Date	
Last Condition Surv	еу	2007	Min. Vertical Clearance	(m)
Rehab. History: (Da 2007 - Steel thickne	te/description) ess measuremen	ts were completed and	an evaluation for load capacity w	vas completed

Field Inspection Information	:								
Date of Inspection:	June 27, 2018 Type of Inspection: X OSIM Enhance								
Inspector:	Kieran Ferguson								
Others in Party:	Jesse Godin, Safety Design Systems Rescue Technician								
Access Equipment Used:	Access Ladder, Air Monitor, Flashlig	nt, Restraining Harness, Retrieval System, Boa	at						
Weather:	Light Rain / Overcast								
Temperature:	21 °C								

Additional Investigations Required:		Estimated Cost		
	None	Normal	Urgent	Estimated Cost
Material Condition Survey				
Detailed Deck Condition Survey:	Х			
Non-destructive Delam. Survey of Asphalt-Covered Deck:	Х			
Concrete Substructure Condition Survey:	Х			
Detailed Coating Condition Survey:	Х			
Detailed Timber Investigation:	Х			
Post-Tensioned Strand Investigation:	Х			
Underwater Investigation	Х			
Fatigue Investigation	Х			
Seismic Investigation	Х			
Structure Evaluation:	Х			
Monitoring (deformations, settlements, movements, crack widths)	Х			
Load Posting - Estimated Load			Total Cost	\$0.00
Investigation Notes:				

Overall Structure Notes:	
Overall Comments:	Overall in good condition. Minor deterioration of the deck and girders.
Date of Next inspection:	2020

Overall Bridge Condition											
% Poor in Deck	% Poor in Beams	% Poor in Substructure	e % Poor in Barrier	Bridge Condition Index (BCI or BCIp)							
2%	4%	0.24%	0%	BClp 97.80	BCI 72.04						
Overal Bridge Su	Overal Bridge Sufficiency										
Traffic	Economic	Width	Alignment	Bridge Sufficie	ncy Index (BSI)						

67.04

Element Data:							
Element Group:	Decks		Length:	55.	.9		
Element Name:	Wearing Surface		Width:	15			
Location:			Height:	0.0	19		
Material:	Asphalt		Count:	1	1		
Element Type:			Total Quantity:				
Environment:	Severe		Limited Inspec	ction:			
Protection System:	None					Performance	
	Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:	sam	838 5					
Comments: Asphalt has be	en repaved and is in ex	xcellent condition.		Maintenanc	ce Needs:		
			Nonoi V				
orgent:	i-b reals: 6-1		Noue: V		i year:	z rear:	
Element Photo:							
Description of Photo:	Photo 1 - Wearing Sur	fface					

Element Data:						
Element Group:	Decks		Length:		55.9	
Element Name:	Deck Top		Width:		20.6	
Location:			Height:		0.225	
Material:	Cast-in-place C	oncrete	Count:		1	
Element Type:	CIP Concrete or	n supports, composite	Total Quantit	ty:	1151.54	
Environment:	Moderate		Limited Inspe	ection:	Х	
Protection System:	Asphalt and Wa	terproofing				Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data.	sq.m		1151.54			
Recommended Work:		Rehab: Replace	e:	Mainten	ance Needs:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:
Element Photo:		*		4		
					-	
100 m 10 m						

Description of Photo: Photo 2 - Deck Top

Element Data:								
Element Group:	Deck		Length:	2				
Element Name:	Soffit - Inside	e Boxes	Width:	3.4				
Location:	Ends		Height:					
Material:	CIP Concrete	5	Count:	Count: 3				
Element Type:			Total Quant	ity: 20.	4			
Environment:	Moderate		Limited Insp	ection:				
Protection System:						Performance		
	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:	sa m		20.2	0.2				
Commonte Som	o wot stains on concrete	at drainago tubo locativ	ans in good condit	ion overall				
			. —					
Recommended Wo	ork:	Rehab: Re	eplace:	Maintenanc	e Needs:			
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:		
Element Photo								
						25		

Description of Photo: Photo 3 - Interior Soffit End

Element Data:							
Element Group:	Decks		Length:		51.9		
Element Name:	Soffit - Inside Boxes		Width:		3.4		
Location:	Middle		Height:				
Material:	CIP Concrete		Count:		3		
Element Type:			Total Quant	ity:	529.38		
Environment:	Moderate		Limited Insp	ection:			
Protection System:							Performance
	Units	Excellent	Good	Fair	Poo	or*	Deficiencies
Condition Data:	ca m		524 59	2.4	2	Λ	
	SQ.III		324.30	Z.4	Ζ.	4	
Recommended Work:	Reh	ab: X Repla	ce:	Mainte Urgent:	nance Needs:	ear:	2 Year:
These cracks should be repa	ired by epoxy injectio	n.		orgona			
Element Photo:						30	
Description of Photo:	Photo 4 - Interior Soffi	t Mid					

Element Data:									
Element Group:		Decks		Length:		500 mm wide x 230 deep drain			
Element Name:		Drainage System		Width:		200 mm dia	200 mm dia pipes		
Location:				Height:					
Material:		Steel		Count:		8			
Element Type:		Metal Drain Pipes		Total Quant	Total Quantity: 8				
Environment:		Severe		Limited Insp	ection:				
Protection System	1:	Hot Dip Galvanizing	l					Performance	
		Units	Excellent	Good	Fair	Po	or*	Deficiencies	
Condition Data:		each		8					
Comments: Drai	ins appear to) be in good conditio	n. Moderate debris	s buildup in drain	grating. Ve Mainte	ry light corros	ion on b 16 - E	ottoms of drain pipe. Bridge Deck Drainage	
	<u> </u>				I I		V		
Urgent:	1-	5 Years: 6-	10 Years:	None: X	Urgent	: <u> </u>	ear: X	2 Year:	
					Clean	out drain scup	pers.		
	5.								
Description of	f Photo:	Photo 5 - Drain							



Element Data:	:													
Element Group:	D	Decks					Len	igth:			2			
Element Name:	S	offit Thin S	lab				Wic	lth:			15.3	}		
Location:	E	nd					Hei	ght:						
Material:	C	CIP Concrete	Э				Соц	unt:			2			
Element Type:							Tot	al Quant	tity:		61.2	<u>)</u>		
Environment: Moderate							Lim	ited Insp	pecti	on:				
Protection System	ו:													Performance
		Units		Exc	ellent		Go	od		Fair			Poor*	Deficiencies
Condition Data:		cam					61	<u>ົ</u>		-				
Comments: Soff Recommended W	fit near girder e /ork:	ends is in go	ood cond Reh	dition. ab:	R	eplace:				Mainte	enance	e Need	ds:	
Urgent [,]	1-5	Years:	6-10) Years			No	ne: X	1	Urgent	:]	1 Year:	2 Year:
Element Phote														
Description of	f Photo: P	hoto 8 - Soff	fit End											



Element Data	:											
Element Group:		Decks				Length:			51.9			
Element Name:		Soffit - Thin	Slab			Width:			4.25			
Location:		Exterior	Exterior									
Material:		Concrete				Count:	Count: 1					
Element Type:						Total Quantity: 220.6						
Environment:		Moderate				Limited Insp	ited Inspection:					
Protection System	n:					•						Performance
,		Units		Good		Fair		Poor*		Deficiencies		
Condition Data:		sa m				220.6						
a	 	34.111				220.0						66'1
Recommended W	/ork:	5 Years:	Reh	nab:	Replace	e: None: X	1	Mainten Urgent:	ance I	Needs: 1 Year:		2 Year:
			0-1]	None. X	<u> </u>	orgeni.				
Element Phot	0:											
Description o	f Photo:	Photo 10 - Sc	offit Exter	ior								



Element Data:							
Element Group:	Decks		Length:	Length: 51.9			
Element Name:	Soffit Thin Slab		Width:				
Location:	Interior		Height:				
Material:	Concrete		Count:				
Element Type:			Total Quant	ity:	352.9		
Environment:	Benign		Limited Insp	ection:	Х		
Protection System:						Performance	
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:	sq.m		352.9				
Recommended Work:	Ref	nab: Repla	ace:	Mainter	nance Needs:		
	1.5 Voars: 6.1		Nono: X	Urgont	1 Voar	2 Voar:	
				30			
Element Photo:							
Description of Pho	oto: Photo 13 - Soffit Interi	or					



Description of Photo: Photo 15 - Soffit Interior

Element Data:							
Element Group:	Joints	Length:		20.6			
Element Name:	Seals/Sealants			Width:			
Location:				Height:			
Material:	Neoprene			Count:		2	
Element Type:	Strip Seal			Total Quantit	y:	2	
Environment:	Severe			Limited Inspe	ection:	Х	
Protection System:							Performance
Condition Data:	Units	Excellent		Good	Fair	Poor*	Deficiencies
Condition Data:	each			2			
Recommended Work:	Reh	ab: 🗌 R	Replace:	Х	Mainten	nance Needs:	
Urgent: 1-	5 Years: X 6-1	0 Years:		None:	Urgent:	1 Year:	2 Year:
Convert to semi-integral abut	ment or replace joints	S.					
Element Photo:							
Description of Photo:	Photo 16 - Expansion	Joint					



Element Data:								
Element Group:	Joints		Length:	1	5			
Element Name:	Concrete End Dams		Width:	C	0.5			
Location:	East and West		Height:					
Material:	Concrete		Count:	4	ļ			
Element Type:			Total Quant	ity: 3	80			
Environment:	Severe		Limited Insp	ection:				
Protection System:	Steel Angle		•			Performance		
	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:	sq.m			30				
Recommended Work:	Reh	ab: X Replac	e:	Maintena	nce Needs:			
Lirgent [.]	-5 Years: X 6-10) Years:	None	Urgent [.]	1 Year	2 Year		
Patch or convert to semi-inte	egral abutments		None.	orgent.	i rouit	2 1001.		
	igraf abuthents.							
Element Photo:								

Description of Photo: Photo 18 - End Dam



Element Data:						
Element Group:	Joints		20.6			
Element Name:	Armouring/Retaining	J Devices	Width:			
Location:	East and West		Height:			
Material:	Steel		Count:		2	
Element Type:	Angle		Total Quantit	y:	41.2	
Environment:	Severe		Limited Inspe	ection:		•
Protection System:						Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data.	m			41.2		
Recommended Work:	Reh	nab: Replace	X	Mainter	nance Needs:	
Urgent: 1	-5 Years: X 6-1	0 Years:	None:	Urgent:	1 Year:	2 Year:
Replace or convert to semi-in	ntegral abutment.					
Element Photo:						
Description of Photo:	Photo 20 - Steel Angle	e Armouring				

Element Data:	:											
Element Group: Sidewalks / Curbs						Length:		55	5.9			
Element Name:		Sidewalks					Width: 2.8					
Location:		North and So	outh				Height:		0.			
Material:		Concrete					Count:		2			
Element Type:							Total Quant	tity:	31	3		
Environment:		Severe					Limited Insp	pectio	on:			
Protection System	n:	Epoxy Coate	d Steel									Performance
		Units		Exce	llent		Good		Fair	Po	or*	Deficiencies
Condition Data:		sq.m					298.4		13.6			
Comments: Trar spa	nsverse light Iling of the c	to medium ci urb along the	racks ald majority	ong both y of curb a	the nor at both	rth and sides	I south side of the road	walk way.	c - 14 on the	North and	25 on th	ne South. Minor
Recommended W	/ork:		Reh	nab:	Rep	place:			Maintenan	ce Needs:	8 - Rep	air of Bridge Concrete
Urgent:	1-	5 Years:	6-1	0 Years:			None: X		Urgent:	1 Y	ear: X	2 Year:
									Seal crack	S.		
Element Photo	o:											
Description of	f Photo:	Photo 21 - Sic	dewalk									



Element Data:										
Element Group:	Barriers			72						
Element Name:	Railing Systems		Width:							
Location:	North and South		Height:	Height:						
Material:	Aluminum		Count:		2					
Element Type:	4 Rail Metal Railing -	Aluminum	Total Quantity	y:	144					
Environment:	Severe		Limited Inspe	ction:						
Protection System:			I			Performance				
	Units	Excellent	Good	Fair	Poor*	Deficiencies				
Condition Data:	m		136	8						
Comments: One crack on th	e north side of the brid	dge. Some minor d	ents and scrapes	s throughout	with some wear o	f the coating.				
	Ren	ab: Replac		Maintena	ance weeds:					
Urgent: 1	-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:				
Description of Photo:	Photo 24 - Railing									



Element Data:										
Element Group:	Length: 6.8									
Element Name:	Diaphragms	;			Width:					
Location:	End				Height: 2.4					
Material:	Steel				Count:		1	10		
Element Type:							1	10		
Environment:	Moderate	Moderate					n:			
Protection System	Epoxymast	Epoxymastic						_		Performance
Condition Data	Units		Excellen	ıt	Good		Fair		Poor*	Deficiencies
Condition Data.	each				10					
Comments: Gran	dition.	est end, t					lea. The (still be in good
Recommended W	'ork:	Reh	nab:	Replace	:	_	Maintena	nce Nee	eds:	
Urgent:	1-5 Years:	6-1	0 Years:		None: X		Urgent:		1 Year:	2 Year:
Element Photo	0:									
Description of	f Photo: Photo 27 - E	nd Diaphi	ragm							
Element Photo:										
--										
Description of Photo: Photo 28 - End Diaphragm										
Element Photo:										

Element Data:									
Element Group:		Beams			Length:		15.85		
Element Name:		Diaphragms			Width:		0.125		
Location:		Intermediate			Height:		2.4		
Material:		Steel			Count:		75		
Element Type:					Total Quant	ity:	75		
Environment:		Moderate			Limited Insp	ection:			
Protection System	1:	Weathering S	Steel						Performance
<u> </u>		Units		Excellent	Good	Fair		Poor*	Deficiencies
Condition Data:		oach			70	5			
		each			70	C			
Recommended W	'ork:		Reh	ab: Rep	lace:	Mainte	enance N	leeds:	
Urgent:	1.	-5 Years:	6-10) Years:	None: X	Urgent	:	1 Year:	2 Year:
Element Photo	o:								
Description of	f Photo:	Photo 29 - Cr	oss Braci	ng					



Element Data:						
Element Group:	Beams		Length:		1.2	
Element Name:	Girders		Width:		2.2	
Location:	End		Height:		2.8	
Material:	Steel		Count:		6	
Element Type:	Box/Trapezoidal		Total Quanti	ity:	56	
Environment:	Moderate		Limited Insp	ection:		
Protection System:	Epoxymastic					Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	sa m		55		1	
Recommended Work:	Ret	nab: Replace		Mainter	nance Needs:	
Urgent: 1- Clean and recoat in conjunct	-5 Years: X 6-1 tion with interior recor	0 Years: ating.	None:	Urgent:	1 Year:	2 Year:
Element Photo:						
Description of Photo:	Photo 31 - Girder Enc					



Element Data:						
Element Group:	Beams		Length:	Ę	53.5	
Element Name:	Girders		Width:	2	2.2	
Location:	Middle		Height:	4	2.8	
Material:	Steel		Count:		3	
Element Type:	Box/Trapezoidal		Total Quantit	ty:	1251.9	
Environment:	Moderate		Limited Inspe	ection:		
Protection System:	Weathering Steel					Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	sq.m		1251.9			
Recommended Work:	Ref	nab: 📄 Repla	ice:	Maintena	ince Needs:	
Urgent [.] 1	-5 Years 6-1	0 Years [.]	None [.] X	Urgent [.]	1 Year	2 Year
Element Photo:	Photo 34 - Girder Mid					
Description of Photo:	Photo 34 - Girder Mid					



Element Data:										
Element Group:		Beams				Length:		1.2		
Element Name:		Inside Boxes				Width:		2.2		
Location:		End				Height:		2.8		
Material:		Steel				Count:		6		
Element Type:						Total Quant	tity:	56		
Environment:		Benign				Limited Insp	pection:			
Protection System	:						E.L.		D +	Performance
Condition Data:		Units		Excell	lent	Good	Fair		Poor [^]	Deficiencies
	• .•	sq.m	<u> </u>			31	12.5		12.5	
Comments: The corre	oded on the	north and sou	th girde	r at both	ends, b	ut the middle gir	ders are in b	better co	ndition.	ellers dre Severery
Recommended We	ork:		Reha	ab: X	Repla	ace:	Mainte	nance N	eeds:	
Urgent:	1-1	5 Years: X	6-10) Years:		None:	Urgent:		1 Year:	2 Year:
Clean and recoat	the inside o	f the north and	l south	girders.						<u> </u>
				0						
Element Photo	p:									

Description of Photo: Photo 36 - Gider End Inside



Description of Photo: Photo 38 - Girder End Inside





Element Data:						
Element Group:	Beams		Length:	53.	5	
Element Name:	Inside Boxes	6	Width:	2.2		
Location:	Middle		Height:	2.8	1	
Material:	Steel		Count:	3		
Element Type:	Box/Trapezo	idal	Total Quant	tity: 125	51.9	
Environment:	Benign		Limited Insp	pection:		
Protection System	: Weathering	Steel				Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	sq.m		1146.7	8.55	96.65	
Comments: Corr mod	osion of the girders on the erate corrosion and pittir	e webs and bottom a ig.	nd edge of flange. In	good condition	overall. Some sp	ooradic areas of
Recommended W	ork:	Rehab: X	Replace:	Maintenanc	e Needs:	
Urgent:	1-5 Years: X	6-10 Years:	None:	Urgent:	1 Year:	2 Year:
Clean and coat th	ne bottom flange.		<u> </u>			
Element Photo):					



Description of Photo: Photo 45 - Girder Mid Inside





Element Data:						
Element Group:	Coatings		Length:		1,2	
Element Name:	Structural Steel		Width:		2.2	
Location:	Ends		Height:		2.8	
Material:			Count:		6	
Element Type:			Total Quantit	y:	112	
Environment:			Limited inspe	ection:	X	Derfermense
Protection System:	Lipito	Eveellent	Cood	Foir	Door*	Performance
Condition Data:	Units	Excellent	G000	Fall	P001	Denciencies
	sq.m		98.5		13.5	
coating corrosic moderate corros	on around the drain ho ded.	les in the bottom fla	ange. Girder has	s worn coatii	ng throughout. Ste	el diaphragms are
Recommended Work:	Reh	ab: X Replace	e:	Maintena	ance Needs:	
Urgent: 1-	5 Years: X 6-10) Years:	None:	Urgent:	1 Year:	2 Year:
Clean and recoat the interior	of the girders to preve	ent further corrosion	1.			
Element Photo:						

Element Data:													
Element Group:		Abutments					Le	ngth:					
Element Name:		Abutment Wa	alls				Wi	dth:			19.5		
Location:							He	ight:			5.73		
Material:		Concrete					Со	unt:			2		
Element Type:		Conventiona	I Closed				То	tal Quant	tity:		223.47		
Environment:		Moderate					Lin	nited Insp	pecti	on:			
Protection System	1:	None											Performance
		Units		Exce	ellent		Go	od		Fair	Р	or*	Deficiencies
Condition Data:		sam					222	0.47		1			
Comments: Two bear	narrow and ring seats. C	one medium Grafitti throug	vertical c hout surf	crack in face, esp	the w pecial	vest abu	utmei t side	ht face. (Wall dr	Crac ains	king is lo s are plug	posted benea gged with ga	th the nc rbage.	orth and south
Recommended W	Ork:	<u>гу</u> []	Reha	ab:		Replace	:		1	Mainten	nance Needs:		18 - Other
Urgent:	1-	5 Years:	6-10	Years:			N	one: X	1	Urgent:	1`	rear: X	2 Year:
										Remove with ant	e garbage fro li-grafitti paii	om wall d nt.	rains. Paint walls
Element Photo	o:							RI					
Description of	f Photo:	Photo 50 - Ab	outment										



Description of Photo: Photo 52 - Abutment

Element Data	:										
Element Group:		Abutments				Length:					
Element Name:		Ballast Walls	5			Width:			19.5		
Location:						Height:			3.23		
Material:		Concrete				Count:			2		
Element Type:						Total Quant	tity:		125.9)7	
Environment:						Limited Insp	pecti	on:		Х	
Protection System	n:					1					Performance
		Units		Excellent	t	Good		Fair		Poor*	Deficiencies
Condition Data:		sa.m				124.97	1	1			
Comments: Lim cen	ited inspecti tre and south	on as some o n girder and c	f the wa racking	ll is hidden b where the ins	y the d sulated	iaphragms. Na pipe penetrate	arro es th	w crack r ne ballast	noted t wall.	on the west ba	Illast wall between
Recommended W	/ork:		Reh	ab:	Replace	e:		Mainten	ance	Needs:	
Urgent:	1-	5 Years:	6-1	0 Years:]	None: X]	Urgent:		1 Year:	2 Year:
	<u> </u>				<u>.</u>						<u> </u>
Element Phot	0:										
Description o	f Photo:	Photo 53 - Ba	illast Wal	I							



Description of Photo: Photo 55 - Ballast Wall

Element Data:						
Element Group:	Abutments		Length:	0.5		
Element Name:	Bearings		Width:	0.6		
Location:			Height:	0.1		
Material:			Count:	6		
Element Type:			Total Quantity:	6		
Environment:			Limited Inspecti			
Protection System:	Linito	Eveellent	Cood	Fair	Door*	Performance
Condition Data:	orms	Excellent	6000	Falí	P001	Deliciencies
Comments: East end bearing	g pads were not acces	sible and were not ir	nspected. Bearing	gs on west en	d appear to be in	good condition.
Recommended Work:	Reh	ab: Replace:		Maintenance	Needs:	
Urgent: 1-	5 Years: 6-10) Years:	None: X	Urgent:	1 Year:	2 Year:
<image/>						

Description of Photo: Photo 56 - Bearings



Element Data:											
Element Group:		Abutments				Length:		8	8.5		
Element Name:		Wingwalls				Width:					
Location:		All Quadrants				Height:			2.1		
Material:		Concrete				Count:		4	4		
Element Type:		Reinforced Co	oncrete			Total Quant	ity:	-	71.4		
Environment:		Moderate				Limited Insp	ectio	on:			
Protection System	:	None									Performance
Canalitian Data		Units		Excel	lent	Good		Fair		Poor*	Deficiencies
Condition Data:		sq.m				70.4				1	
Recommended W	ork:		Reha	ab:	Repl			Maintena	ance Ne	eeds:	
Urgent:	1-	5 Years:	6-10) Years:		None: X]	Urgent:		1 Year:	2 Year:
Element Photo):										
Description of	Photo:	Photo 59 - Nort	thwest V	Vingwall							



Element Data:											
Element Group:	Retaining Wa	alls		Length:	1	10.05 (avg.)					
Element Name:	Walls			Width:							
Location:	NW and SW	Quadrants		Height:	4	l (avg.)					
Material:	Concrete			Count:	Count: 4						
Element Type:	Reinforced C	Concrete		Total Quant	ity:	60.8					
Environment:	Moderate			Limited Insp	pection:						
Protection System:	None							Performance			
Canalitian Data	Units		Excellent	Good	Fair	Po	or*	Deficiencies			
Condition Data:	sq.m			158.8	2						
narrow vert	ment Data: ment fromp: Retaining Walls With: 10.05 (avg.) riatin: Walls With: 4 (avg.) riatin: Walls Ount: 4 (avg.) riatin: Walls Ount: 4 (avg.) riatin: Worker Concrete Ount: 4 (avg.) riatin: Worker None Poort 10.8 rownent: None Sagm 158.8 2 Poort ments: Some minor spalling on the top of the southwest retaining wall where water drains from above. Northwest nerve wertical crack full height. Rough concrete surface throughout. I'rgent: 1 Year. X mmmended Work: Rehab: Replace: Maintenance Needs I Prov utrgent: 1-5 Years: 6-10 Years: None X Urgent: 1 Year. X patch and seal concrete Year. X patch and seal concrete <td< th=""><th></th></td<>										
Recommended Work:		Rehab	: Re	eplace:	Maintena	nce Needs:	8 - Rep	air of Bridge Concrete			
Urgent:	1-5 Years:	6-10 Y	/ears:	None: X	Urgent:	1 Y	'ear: X	2 Year:			
					Patch and	d seal conci	rete.				
Element Photo:											

Description of Photo: Photo 62 - Retaining Wall



Description of Photo: Photo 64 - Retaining Wall

Element Group: Barriers Length: 7.9 Element Name: Railings Width:	
Element Name: Railings Width:	
Location: Northwest Quadrant Height: I Material: Aluminum Count: 1 Element Type: 4 Rail Metal - Aluminum Total Quantity: 7.9 Environment: Moderate Limited Inspection: Perform Protection System: Image: State	
Material: Aluminum Count: 1 Element Type: 4 Rail Metal - Aluminum Total Quantity: 7.9 Environment: Moderate Limited Inspection: Perform Protection System:	
Element Type: 4 Rail Metal - Aluminum Total Quantity: 7.9 Environment: Moderate Limited Inspection: Perform Protection System: Imited Inspection: Perform Deficien Condition Data: Units Excellent Good Fair Poor* Deficien Condition Data: m 7.9 Imited Inspection: Poor* Deficien Comments: Railing in good condition. Rehab: Replace: Maintenance Needs: Imited Inspection: Imited Inspection: Recommended Work: Rehab: Replace: Maintenance Needs: Imited Inspection: Imited Inspection: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	
Environment: Moderate Limited Inspection: Protection System: Protection System: Perform Condition Data: Units Excellent Good Fair Poor* Deficier Condition Data: m 7.9 Image: Condition System: Image: ConditiSystem:	
Protection System: Perform Perform Condition Data: M Excellent Good Fair Poor* Deficier m 7.9 Image: Comments: Railing in good condition. Fair Poor* Deficier Commented Work: Rehab: Replace: Maintenance Needs: Fair 1 Year: 2 Year:	
Condition Data: Units Excellent Good Fair Poor* Deficient m 7.9 - <	ance
m 7.9 Comments: Railing in good condition. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	icies
Comments: Railing in good condition. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	
Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	
Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	
Element Photo:	

Description of Photo: Photo 65 - Northwest Railing

Element Data:								
Element Group:	Retaining Walls		Length:		50			
Element Name:	Barrier Systems on \	Walls	Width:					
Location:			Height:					
Material:	Steel		Count:		1			
Element Type:	Pedestrian Handrail	iantity: 50						
Environment:	Moderate		Limited Insp	ection:				
Protection System:	Hot-Dip Galvanized				_			Performance
	Units	Excellent	Good	Fair		Po	or*	Deficiencies
Condition Data:	m		19.9			1	<u>ົ</u>	
Comments: Pedestrian hand base. Minor rust	rail along path under staining throughout.	the west end of th		DST CONNEC	enance	S Cracke	d and is	seperated at the
						Needs.		
Urgent: 1-	5 Years: 6-1	0 Years:	None: X	Urgen	t:	1 Y	ear:	2 Year: X
				Repai	r post b	ase.		
Element Photo:	Dhoto 66 - Stool Hano							



Element Data:						
Element Group:	Foundations		Length:			
Element Name:	Foundation (below g	round level)	Width:			
Location:	West		Height:			
Material:			Count:	1		
Element Type:	Spread		Total Quant	ity:		
Environment:			Limited Insp	ection:		
Protection System:						Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data.	all			1		
Recommended Work: Urgent: 1- Element Photo:	Ref 5 Years: 6-1	nab: Rep 0 Years:	lace: None: X	Maintenan Urgent:	ce Needs:	2 Year:

Element Data:	:												
Element Group:		Foundations	;			L	ength:						
Element Name:		Foundation	(below g	round le	evel)	V	/idth:						
Location:		East				H	eight:			Ļ			
Material:		D'I				C	ount:			_			
Element Type:		Piles					otal Quant	ity:		-			
Environment:						L	mited insp	Decti	on:				Dorformonoo
FIDIECTION SYSTEM	l.	Unite		Evo	ollont		ood		Enir		Door*		Deficiencies
Condition Data:				EXU	ellerit		iuuu		Fall		FUUI	_	Deliciencies
		N/A											
Recommended W	/ork:	E Voare:	Reh	ab:] Rep	olace:		1	Mainter	nance N	Veeds:		2 Voor:
Urgent:	1-:	o Years:	6-10) Years:			None: X]	Urgent:		1 Year:		2 Year:
Element Photo	o:								1	A STATE OF			
												×	
Description of	f Photo:	Photo 70 - Ea	ast Found	ation									

Element Data:								
Element Group:	Er	mbankment	s & Stre	ams	Length:			
Element Name:	St	treams & Wa	aterways	S	Width:			
Location:					Height:			
Material:					Count:			
Element Type:					Total Quanti	ty:		
Environment:					Limited Insp	ection:		
Protection System	1:							Performance
Condition Data:	l	Units		Excellent	Good	Fair	Poor*	Deficiencies
Condition Data.		all			all			
Recommended W Urgent:	ork: 1-5 Y	/ears:	Reha	ab: Repl	ace: None: X	Maintenanc	e Needs:	2 Year:
Description of	f Photo: Pr	hoto 71 - Wa	iterway					

Element Data:						
Element Group:	Embankmen	its & Streams	Length:			
Element Name:	Embankmen	its	Width:			
Location:			Height:			
Material:			Count:	4		
Element Type:			Total Quant	iity: 4		
Environment:			Limited Insp	pection:		-
Protection System:	vegetation		-			Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
	each		4			
Comments: No a						
Recommended Wo	ork:	Rehab: Rep	lace:	Maintenanc	e Needs:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:
Element Photo):					

Description of Photo: Photo 72 - Embankment



Element Group: Embarkments & Streams Length Element Name: Slope Protection Width: Location: Height: Location: Material: Count: 2 Element Type: Rock Protection Total Quantity: 2 Environment: Protection System: Prefrommance Protection System: Imited Inspection: X Condition Data each 2 1 Connents: Rock protection in front of east abutment, northwest and northeast retaining walls appears to be in good condition. Recommended Work: Rehab: Replace: Maintenance Needs Urgent: 1-5 Years: 6-10 Years: None: Wurgent: 1 Year: 2 Year:	Element Data															
Element Name: Slope Protection Widh:	Element Group:		Embankmen	ts & Stre	eams			Ler	ngth:						 	
Location: Image: Count: 2 Material: Count: 2 Element Type: Rock Protection Talai Quantity: 2 Environment: Imited Inspection: X Protection System: Imited Inspection: X Condition Data: each 2 Imited Inspection: X Condition Data: each 2 Imited Inspection: X Condition Data: each 2 Imited Inspection: X Comments: Rock protection in front of east abutment, northwest and northeast relatining walls appears to be in good condition. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year. 2 Year. Element Photo: Imited Inspection: Imited Inspection: Imited Inspection: Imited Inspection: Imited Inspection:	Element Name:		Slope Protec	ction				Wie	dth:							
Material: Count: 2 Element Type: Rock Protection Total Quantity: 2 Environment: Limited Inspection: X Protection System: Performance Condition Data: each 2 each 2 Imited Inspection: Comments: Rock protection in front of east abutment, northwest and northeast retaining walls appears to be in good condition. Recommended Work: Rehab: Replace: Maintenance Needs. Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year. 2 Year.	Location:							He	ight:							
Element Type: Rock Protection Total Quantity: 2 Environment: Limited Inspection: X Protection System:	Material:	Material: Count: 2														
Environment: X Protection System: Performance Condition Data: units Excellent Good Fair Poor* Deficiencies Condition Data: cach 2 2 Deficiencies Comments: Rock protection in front of east abutment, northwest and northeast retaining walls appears to be in good condition. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: Element Photo: Element Option Element Option Element Option Element Option Element Option	Element Type:	Element Type: Rock Protection Total Quantity: 2														
Protection System: Units Excellent Good Fair Poor Deficiencies Condition Data: each 2 1 Performance Comments: Rock protection in front of east abutment, northwest and northeast retaining walls appears to be in good condition. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1 Year. 2 Year. Element Photo:	Environment: Limited Inspection: X															
Condition Data: Units Excellent Good Fair Poor* Deticiencies Condition Data: each 2	Protection System	1:													Perform	ance
commenta: each 2 Comments: Rock protection in front of east abutment, northwest and northeast retaining walls appears to be in good condition. Recommented Work: Rehab: Recommented Work: Rehab: Recommented Work: Rehab: Replace: Maintenance Needs Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: Element Photo:			Units		Exc	ellent		Go	bod		Fair			Poor*	Deficier	ncies
Comments: Rock protection in front of east abutment, northwest and northeast retaining walls appears to be in good condition. Recommended Work: Rehab: Replace: Maintenance Needs Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: Element Photo:	Condition Data:		each					2)							
Urgent: 1-5 Years: 6-10 Years: None: Urgent: 1 Year: 2 Year: Element Photo: Image: Comparison of the second of	Recommended W	ork:		Reh	ab:] R	Replace:				Mainter	nance	e Need	ls:	 	
Element Photo:	Urgent:	1-!	5 Years:	6-10	0 Years:			No	one: X]	Urgent:		1	1 Year:	2 Year	:
<section-header></section-header>																
		D:														

Element Data	:								
Element Group:		Approaches			Length:		6		
Element Name:		Wearing Surfa	ce		Width:		15		
Location:		East and West	t		Height:		0.09)	
Material:		Asphalt			Count:		2		
Element Type:		-			Total Quan	ntity:	180		
Environment:		Severe			Limited Ins	pecti	ion:		
Protection System	n:	None					-		Performance
		Units		Excellent	Good		Fair	Poor*	Deficiencies
Condition Data:		sam		190			-		
Comments: Rec	cently repave	d and in excelle	ent con	dition.					
Recommended W	/ork:		Reha	ab: Repl	lace:	_	Maintenance	e Needs:	
Urgent:	1-	5 Years:	6-10) Years:	None: X		Urgent:	1 Year:	2 Year:
Element Phot	o:								
Description o	f Photo:	Photo 75 - Wes	st Appro	ach					


Element Data	:														
Element Group:		Approaches					Ler	igth:			6				
Element Name:		Approach Sla	abs				Wid	Jth:			15				
Location:		East and We	st				Hei	ght:			0.25	5			
Material:		Concrete					Со	unt:			2				
Element Type:							Tot	al Quanti	ity:		180)			
Environment:		Moderate					Lim	lited Insp	pectio	on:	Х				
Protection System	n:	None												_	Performance
Condition Data:		Units		Exc	cellent		Gor	od		Fair			Poor*		Deficiencies
Condition Data.		sq.m	I				18	0							
Comments: Stat	Recommended Work: Rehab: Replace: Maintenance Needs:														
		F Voars:	6-1						1]	1 Vear		2 Voar
Element Phot	0:					-						-			
<section-header></section-header>															

Element Data:						
Element Group:	Approaches		Length:			
Element Name:	Drainage		Width:			
Location:	East and West Sides		Height:			
Material:	Concrete		Count:	5		
Element Type:			Total Quanti	ity: 5		
Environment:	Severe		Limited Insp	ection:	Х	
Protection System:	Cast Iron Grating					Performance
Condition Data	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	each		5			
Comments: Limited i the south	nspection of the culvert. The	re is some crackin	g of the asphalt	at the catch ba	asın. There is a bu	uildup of sediment on
Recommended Work:	Reh	ab: Repla	ce:	Maintenan	nce Needs:	
Urgent:	1-5 Years: 6-10) Years:	None: X	Urgent:	1 Year:	2 Year:
Element Photo:						

Description of Photo: Photo 78 - Approach Drainage

Element Data	:												
Element Group:		Approaches				Length:			6				
Element Name:		Curb/Gutters	6			Width:							
Location:		All Quadrant	S			Height:			0.14				
Material:		Concrete				Count:			4				
Element Type:						Total Quant	tity:		24				
Environment:		Severe				Limited Insp	pectio	n:					
Protection System	ו:	None				•						Performa	nce
		Units		Excelle	nt	Good		Fair		Poor	*	Deficience	cies
Condition Data:						12		11		1			
Comments: Winter damage to the tops and edges of the curb throughout, likely due to showprows. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year:													
Urgent:	1-	5 Years:	6-1	0 Years:		None: X		Urgent:		1 Yea	ir:	2 Year:	
Description of		P11010 19 - Ap	proach (ann									

Element Data:															
Element Group:	Ap	proaches					Lengt	h:			6				
Element Name:	Sic	dewalk					Width	:			1.8				
Location:	All	l Quadrants					Heigh	nt:							
Material:	Co	oncrete					Count	t:			4				
Element Type:							Total	Quantit	ty:		43.2				
Environment:	Se	vere					Limited Inspection:								
Protection System	i: No	one												Pe	rformance
Condition Data:	l	Jnits		Exce	ellent		Good			Fair		Poo	or*	De	eficiencies
oonullon Data.	S	sq.m					40			2.2		1			
Comments: 1wo the e	edge of the wing	sverse cracks gwalls.	at the s	southea	ast cor	ner.	Some m	ninor lo	ocal	lized spal	lls in i	the cond	rete sui	rface. (Cracking at
Recommended W	ork:		Rehab):	Rej	place:				Mainten	ance	Needs:	14	- Concre	te Sealing
Urgent:	1-5 Y	ears:	6-10	Years:			None	e: X		Urgent:		1 Ye	ear: X	2	Year:
										Seal the penetrat	conc tion.	rete crae Patch co	cks to p oncrete.	revent	noisture
Element Photo):														
Description of	Photo: Ph	noto 80 - Approa	ach Sid	lewalk			to find the second second								

Element Data	:											
Element Group:		Accessories				Length:						
Element Name:		Utilities			1	Width:						
Location:						Height:						
Material:						Count:			6			
Element Type:		Various				Total Quant	ity:		6			
Environment:						Limited Insp	ectio	on:		Х		
Protection System	1:										Pe	rformance
Condition Data:		Units		Excellent		Good		Fair		Poor*	De	eficiencies
Condition Data.		each				6						
Recommended W Urgent:	l bell also api ctrical also is ewalk. /ork: 	5 Years:	Ref 6-1	and race of the branches of th	Idge, in soffit. The dra	None: X		Maintena Urgent:		Needs: 1 Year:	2	Year:



Element Data:							
Element Group:		Accessories		Length:			
Element Name:		Other - Light Standar	ds	Width:			
Location:				Height:			
Material:				Count:	3		
Element Type:		Lighting Poles		Total Quant	iity: 3		
Environment:				Limited Insp	pection:		
Protection System:						-	Performance
		Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:		each		3			
Comments: In go	oa conaitio	n. Reh	ab [.] Renl	ace	Maintenanc	e Needs:	
Urgent:	1-	5 Years: 6-10) Years:	None: X	Urgent:	1 Year:	2 Year:
Element Photo	·						
Description of	Photo:	Photo 84 - Light Stand	ard				

Element Data:						
Element Group:	Approaches		Length:	14	4.6 m (NE) and 11.0	0 (SW)
Element Name:	Barriers		Width:			
Location:	SW and NE 0	Quadrants	Height:			
Material:	Steel Beam (Guiderail	Count:			
Element Type:	Beam		Total Quant	ity: 25	5.6	
Environment:	Severe		Limited Insp	ection:		
Protection System	: Galvanized (Coating				Performance
Canditian Data	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	m		25.6			
Comments: The conc coni	northeast end is flared wi crete barriers are outdated nection to the concrete er	ith a standard end termir d. Southwest corner has nd wall and is supported	aal hidden behind one steel beam g on old cable guide	a flowerbox wil uide rail sectio erail posts.	th retaining wall. C n with no end tern	connections to the ninal and no
Recommended W	ork:	Rehab: Rep	blace: X	Maintenan	nce Needs:	
Urgent:	X 1-5 Years:	6-10 Years:	None:	Urgent:	1 Year:	2 Year:
Replace substan	dard connection with curr	rent standard.				
Element Photo	.					



Repair and Rehabili	tation Required:		Pric	ority		Estimated Structural
Element ¹	Repair and Rehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost
Demolition						
Replacement						
Deck						
Sidewalk/Curb	Rehab. = Seal cracks		Х			\$7,500.00
Barrier						
Joints	Rehab. = Replace joints		Х			\$150,000.00
Beams	Rehab. = Clean and coat		Х			\$50,000.00
Abutment	Rehab. = Seal cracks		Х			\$7,500.00
Soffit	Rehab. = Seal cracks		Х			\$7,500.00
Estimated Rehabilita Total Deck Leng	Estimated Rehabilitated or Replacement Structure Dimensions ³ Total Deck Length (m) Overall Str. Width (m)			Total Str	uctural Cost	\$222,500.00

Indicate specific costs for structure replacement OR for rehabilitation under the given headings.
 Give a very brief description of the rehabilitation work required.

3 - Estimated structure dimensions after completion of the proposed work - if it is expected to change.

Associated Work	Comments	Estimated Associated
		Work Cost
Approaches	Upgrade Structure Connections	\$20,000.00
Detours		
Traffic Control	Barriers, Flagging, Etc	\$10,000.00
Utilities		
Other	Engineering and Contingency	\$80,000.00
	Mobilization / Demobilization, General, Insurance	\$50,000.00
	Environmental and Access	\$30,000.00
	Total Associated Work Cost	\$190,000.00
	Total Construction Cost	\$412,500.00

Justification:

Seal cracks in sidewalks and curbs over strucutre. Replace deteriorated joints where structure meets approaches. Clean and recoat deteriorated portions of structural steel girders. Seal cracks in abutment and soffit. Recommend that deficient steel beam guide rail structure connections be replaced.

Inventory Data:			
Structure Name	Seguin River Pedestrian Bridge		
Main Hwy/Road #	On X Under	Crossing Navig. Water	X Non-Navig. Water
Road Name	Parry Sound Fitness Trail		
Structure Location	0.1 km South of Seguin Street over th	e Seguin River	
Latitude	45° 20' 45" N	Longitude 80° 01' 52" W	
Owner(s)	Town of Parry Sound	Heritage Not Cons. X Designation: Desig./N	Cons./Not App. List/Not Desig. Not List
MTO Region	50 - Northeastern	Road Class: Freeway	Arterial Collector Local X
MTO District	52 - Huntsville	Posted Speed 0	No. of Lanes 0
Old County	44 - Parry Sound	AADT 0	% Trucks 0
Geographic Twp.	452 - McDougall	Special Routes: Transit	Truck School Bicycle X
Structure Type	Varies	Detour Length Around Bridge	N/A (km)
Total Deck Length	96.5 (m)	Fill on Structure	0 (m)
Overall Str. Width	4.6 (m)	Skew Angle	0.0 (Degrees)
Total Deck Area	332.93 (sq.m)	Direction of Structure	E-W
Roadway Width	3.45 (m)	No. of Spans	12
Span Lengths	3.4, 3.8, 4.0, 4.0, 3.9, 3.8, 3.8, 3.75, 3.65	5, 22.6, 14.3, 25.5	(m)
Historical Data:			
Year Built	1920	Year of Last Major Rehab.	
Last OSIM Inspection	on 2015	Last Evaluation	2007
Last Enhanced OSI	M Inspection	Current Load Limit	Pedestrian & Snowmobile
Enhanced Access E (ladder, boat, lift, etc	Equipment c.)	Load Limit By-Law #	
Last Underwater Ins	spection	By-Law Expiry Date	
Last Condition Surv	ey 2007	Min. Vertical Clearance	(m)
Rehab. History: (Da 1990 - Converted fr 2007 - Steel thickne 2008 - Additional st 2014 / 2015 - Deteri	te/description) om a railway traffic bridge to a pedestri ess measurements were completed and teel thickness measurements complete orated timber planks and railing pickets	ian bridge I an evaluation for load capacity was d to confirm web thickness s replaced	completed

Field Inspection Information	:		
Date of Inspection:	June 28, 2018	Type of Inspection: X OSIM	Enhanced OSIM
Inspector:	Kieran Ferguson		
Others in Party:	Scott Cahill		
Access Equipment Used:	Powered Watercraft		
Weather:	Overcast / Sunny		
Temperature:	24 °C		

Additional Investigations Required:			Priority		Estimated Cost
		None	Normal	Urgent	ESIIIIaleu Cosi
Material Condition Survey					
Detailed Deck Condition Survey:		х			
Non-destructive Delam. Survey of Asphalt-Covered E	ck:	х			
Concrete Substructure Condition Survey:	х				
Detailed Coating Condition Survey:		х			
Detailed Timber Investigation:		х			
Post-Tensioned Strand Investigation:		х			
Underwater Investigation			х		\$5,000.00
Fatigue Investigation		х			
Seismic Investigation		х			
Structure Evaluation:			х		\$25,000.00
Monitoring (deformations, settlements, movements, crack	idths)		х		\$2,500.00
Load Posting - Estimated Load			•	Total Cost	\$32,500.00

Investigation Notes:

Updated steel thickness measurements should be completed in order to check the continued deterioration and steel section loss. A follow up structure evaluation for posting should be completed to confirm suitability for pedestrian loads. Monitor Piers for signs of movement.

Overall Structure Notes:	
Overall Comments:	The bridge consists of 2 Through Girder Spans, 1 Slab on Girder Span and, 9 Timber Trestle Spans. Timber Trestle Spans are in a generally good condition. The Steel spans have medium to severe corrosion and rust. Piers have severe deterioration and spalling.
Date of Next inspection:	2020

Overall Bridge Condition													
% Poor in Deck	% Poor in Beams	% Poor in Substructure	% Poor in Barrier	Bridge Condition I	ndex (BCI or BCIp)								
0%	32%	10%	0%	BClp 87.30	BCI 50.66								

Overal Bridge Sut	fficiency			
Traffic	Economic	Width	Alignment	Bridge Sufficiency Index (BSI)
0	0	0	0	50.66

Element Kange Decks Length 98.8 Element Name: Entire Structure Height 0.05 Material 2 X 10 Timber Planks Count 1000000000000000000000000000000000000	Element Group: Decks Length: 98.8						
Element Name: Wortng Survive: High: 34.6 Location: Entrice Structure: High: 0.05 Material: 2 x 10 Timber Planks Count: 340.86 Enternent: Moderate United functions Performance Protection System: None Performance Deficiencies Condition Data: sq.m 256.65 85.22 Deficiencies Comments: Prevlously deteriorated deck boards have been replaced and have since been in good condition. Boards along center of par have ward due to snowmobile use. Maintenance Meeds: Urgent: 1.5 Years 6.10 Years None X Urgent: 1 Year: 2 Year: Element Photo: Element Photo: Element Photo: Station of the prove of the part of the prove of the part of the prove of the part of		98.8					
Location: Entire Structure Height: 0.05 Alacitat: 2 x 10 Timber Planks Count:	Element Name: Wearing Surface Width: 3.45						
Malarat 2 x 10 Timber Planks Count: Element Type: Total Quantity: 340.86 Environment: None Performance Poticion System: None Performance Condition Data: sq.m 255.65 85.22 Image: Comment: Comments: Previously deteriorated deck boards have been replaced and have since been in good condition. Boards along center of pathave war due to snownobile use. Malintenance Needs Recommended Work: Rehab: Replace: Malintenance Needs Urgent: 1-5 Years 6-10 Years: None: X Urgent: 1 Year 2 Year Element Photo: Element Photo: Element Photo: Element Photo: Image: Common comparison of the photo of	Location: Entire Structure Height: 0.05						
Element Type: Total Quanity. 340.86 Protection System: None Performance Condition Data units Excellent Cood Fair Poor Deltclencies Condition Data sq.m 255.65 B5.22 Image: Condition Boards along center of pair have wear due to snowmobile use. Performance Deltclencies Recommended Work: Rehab: Replace: Maintenance Meets Image: Condition Boards along center of pair have wear due to snowmobile use. Recommended Work: Rehab: Replace: Maintenance Meets Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year. 2 Year. Element Photo: Element Photo: Element Condition Boards along center of pair in the pair in t	Material: 2 x 10 Timber Planks Count:						
Environment: Moderate Limited inspectors: Protection System: None Performance Condition Data: sq.m 255.65 85.22 1 Comments: Previously deteriorated deck boards have been replaced and have since been in good condition. Boards along center of pathave wear due to snowmobile use. Maintenance Needs: Recommended Work: Rehab; Replace; Maintenance Needs: Urgent: 1.5 Years; 6-10 Years; None; Vigent; 1 Year; 2 Year;	Element Type: Total Quantity: 340.86						
Protection System: None Performance Condition Data: g.m 255.5 85.22 i Comments: Previously deteriorated deck boards have been replaced and have since been in good condition. Boards along center of pathwave ward due to snowmobile use. Maintenance Needs	Environment: Moderate Limited Inspection:						
Units Excellent Good Fair Poor* Deliciencies comments: Previously delerotate deck bare been replaced and have since been in good condition. Boards along center of pair have wear due to snowmobile use. Bioinformaticate deck bare been replaced and have since been in good condition. Boards along center of pair have wear due to snowmobile use. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1.5 Years: 6.10 Years: None: X Urgent: 1 Year. 2 Year. Element Photo: Element of pair in good condition. Boards along center of pair in good condition. Element photo: Element photo: Element photo:	Protection System: None	Performance					
Comments: sq.m 256.6 85.22 Comments: Previously deteriorated deck boards have been replaced and have since been in good condition. Boards along center of particular to an ownoble use. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Element Photo: Image: State Sta	Units Excellent Good Fair Poor*	Deficiencies					
Comments: Previously deteriorated deck boards have been replaced and have since been in good condition. Boards along center of pat have wear due to snowmobile use. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1.5 Years: 6.10 Years: None: X Urgent: 1 Year: 2 Year:	sq.m 255.65 85.22						
Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: Element Photo:	Comments: Previously deteriorated deck boards have been replaced and have since been in good condition. Boards a have wear due to snowmobile use.	along center of path					
Urgent: 1-5 Years: 6-10 Years: Element Photo:	Recommended Work: Rehab: Replace: Maintenance Needs:						
	Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year:	2 Year:					
<section-header></section-header>							
	<image/>						

Description of Photo: Photo 1 - Wearing Surface



Description of Photo: Photo 3 - Wearing Surface

Element Data:	:														
Element Group:		Decks				Ler	ngth:			4.4					
Element Name:		Deck Top				Wio	Width: 0.2								
Location:		Steel Spans			-	Hei	aht:			0.4					
Material:		200 mm x 40	0 mm Ti	mbers		Со	unt:			205					
Element Type:		Deck Beams	-			Tot	Total Quantity:			288.64					
Environment:		Moderate				Lin	Limited Inspection:				X				
Protection System		Preservative	Treatme	ent						Performance					
		Linits		Excell	ent	Go	ho		Fair		Poor*		Deficiencies		
Condition Data:		OTINS		LACCIN	SIIL	00	ou	_			1 001	_	Deliciencies		
		sq.m							288.64						
Comments: Dec	k beams app	pear to be in fa	air cond	ition. Only	/ minor	deteriora	tion not	ed.	Exposed	ends w	ere inspe	cted bu	ut middle		
sect	tions were co	overed by tim	ber deck	, planks. 7	4 timbe	ers on ea	st throu	qh q	jirder stru	cture, 8	38 on wes	t throu	igh girder		
stru	cture, and 4	3 on deck-on-	airder co	entre span	. Centr	e span ti	mbers a	re ir	, 1 unknowr	n condit	ion due to	o due t	o limited access.		
0114			ginatorio	ondoopun		oopunn			i uniti o m	roonan		Juuoi			
Decement of deal W	(e ul :		Duk		Deal				Maintona		a al a				
Recommended w	OFK:		Ren	iad:	Керіа	ace:			Maintena	ance Nee	eas:				
Urgont	1	F Voore:	6 1			Mc			Urgont		1 Voor		2 Voar		
orgeni.	1-		0-1	u reals.	<u> </u>	INC	ne. x		orgenii.		i real.				
Element Phot	0:														
Description of	f Photo:	Photo 4 - Dec	k Timbe	rs											



Element Data:												
Element Group:	Sidewalks / (Curbs		Length:		98.8	}					
Element Name:	Curbs			Width:		0.4						
Location:	North and So	outh Side	e of Deck	Height:		0.12	25					
Material:	400 mm x 12	5 mm x 3	3960 mm	Count:								
Element Type:	Lumber			Total Quant	Total Quantity: 103.74							
Environment:	Severe			Limited Insp	Limited Inspection:							
Protection System:									Performance			
	Units		Excellent	Good		Fair	Ροοι	*	Deficiencies			
Condition Data:	01113	Excellent		22.74			P00i		8 - Pedestrian / vehicular			
	sq.m			23.74		50	30		hazard			
Commented Work: Rehab: Replace: Maintenance Needs: 9 - Repair of Bridge Timber Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: X 2 Year: Remove and replace deteriorated curb sections Remove and replace deteriorated curb sections.												
A A A A					1	4						
Description of Ph	oto: Photo 7 - Tim	ber Curb										



Element Data:															
Element Group:		Barriers				Length:			48 (L	umber)	and §	50.8 (Steel)		
Element Name:		Railing Syste	ems			Width:			n/a						
Location:		Entire Bridge	e Length			Height:			1.067	' (Lumb	oer) ar	nd 2.4	4 (Stee	l)	
Material:		Steel and Lu	mber			Count:			2						
Element Type:		Post and Ste	el Barrie	rs		Total Qu	Total Quantity: 198								
Environment:		Moderate				Limited I	nspect	tion:							
Protection System	1:												Perf	ormance	
Condition Data:		Units		Excell	ent	Good		Fair		Po)0r*		Defi	ciencies	ular
		m				197		0.5		0).5		o - reues	nazard	liai
Comments: Tim bolt for s gen timk	ber railing sy hole location snowmobiles erally good c per post.	estem on slab ns. Height sa when snow i condition des	on girde tisfies re is preser pite its w	er span an quirement it on deck reathered	d timbe t of 42" . Steel surface	er trestle span from deck for through girde e. Southeast q	s in go pede: r acts uadrai	ood condi strians bu as railing nt has 4 m	tion o t does syste iissing	overall. s not sa em on tl g timbe	Some atisfy l hroug r post	post: heigh h girc is and	s are s t for bi ler spa I 1 dam	olitting a cycles, o ns and is laged	t >r s in
Recommended W	'ork:		Reh	ab:	Repl	ace:		Mainten	ance l	Needs:	3 - B	ridge l	Handrail	Maintenar	nce
Urgent:	1-{	5 Years:	6-10) Years:		None:	Х	Urgent:		1)	/ear:	Х	2 Y	ear:	
								Increase	e heig	ht of tir	mber ı	rail to	satisfy	/ CHBDC	, r.
Elelment Phot															

Description of Photo: Photo 10 - Railing



Element Data:										
Element Group:	Coating		Length:							
Element Name:	Structural Steel		Width:							
Location:			Height:							
Material:	Steel		Count:	Count:						
Element Type:	6		I otal Quanti	ity: 81	2.5					
Environment:	Severe		Limited Insp	ection:	Х					
Protection System:	Coating					Performance				
Condition Data:	Units	Fair	Poor*	Deficiencies						
Condition Data.	sq.m			305	507.5					
Comments: Coating has faile Club in 2005 but has caused then	across the majority areas susceptible to to corrode and breal	debris build-up a k away.	ignout. The thro	ugn girder eien ure have failed.	Failed coating at	the base of stiffeners				
Recommended Work:	Reh	ab: X Repla	ace:	Maintenan	ce Needs:	2 - Bridge Cleaning				
Urgent: 1-	5 Years: X 6-10) Years:	None:	Urgent:	1 Year: X	2 Year:				
Clean and recoat steel to pre-	vent further corrosion			Annual cle	aning of bridge w	ill extend life of				
				coatings a	nd steel.					
<image/>										

Element Data:												
Element Group:	Abutments		Length:	5								
Element Name:	Abutment Wa	alls	Width:									
Location:	West Side of	Bridge	Height:	1.2								
Material:	Cast-in-place	e Concrete	Count:	1								
Element Type:	·		Total Quant	Total Quantity: 8								
Environment:	Moderate		Limited Insp	pection:	Х							
Protection System:						Performance						
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies						
Condition Data.	sq.m			6	2							
Comments: Concrete abutment has a rough weathered surface and a build up of debris on bearing seats. Moderate staining and efflorescence with some deterioration present. Severe spalls visible on ballast wall. Ballast walls hidden behind end diaphragm - not inspected. Recommended Work: Rebab: Y Poplace: Maintenance Needs: 14- Concrete Sealing												
Recommended Wo	rk:	Rehab: X R	eplace:	Maintenanc	e Needs:	14 - Concrete Sealing						
Urgent:	1-5 Years: X	6-10 Years:	None:	Urgent:	1 Year:	X 2 Year:						
Renair concrete				Clean and s	eal concrete							
Element Photo												



Element Data:																		
Element Group:		Abutments						L	Length: 5									
Element Name:		Abutment W	alls					V	Vidth	ו:								
Location:		East Side of	Bridge					H	leigh	nt:				1.2				
Material:		Timber						Count: 1										
Element Type:							Total Quantity: 8											
Environment:		Severe	Severe								oecti	on:						
Protection System	1:	Creosote															Performan	ice
		Units		E	xce	ellent		(Good	1		F	air		Po	or*	Deficiencie	es
Condition Data:		sam										-	7		1	-		
Comments: East abutment is made up of timber posts, timber cap, and lagging. Lagging is in fair condition. Ballast wall wood has become worn and is disintegrating. Bottom ballast timber has a 300mm x 100mm section missing. Recommended Work: Rehab: Replace: Maintenance Needs: 9 - Repair of Bridge Timber																		
Recommended W	'ork:		Reh	ab:		R	?epla	ce:			1	Ма	ainten	nance	Needs:	9 - Re	epair of Bridge Tin	nber
Urgent:	1-	5 Years:	6-1	0 Year	ſS:			1	None	e: X		Urg	gent:		1 Y	ear:	2 Year:	Х
												rep abu	lace utmer	miss nt an	ing and o d ballast	damage wall	d lagging in	
Element Photo	0:																	
Description of	f Photo:	Photo 16 - Ea	ast Abutm	nent														



Element Data	:											
Element Group:		Abutments					Length:					
Element Name:		Bearings					Width:					
Location:		West Abutm	ent				Height:					
Material:		Steel					Count:					
Flement Type:							Total Quant					
Environment:		Severe					Limited Inst	pectic	on:			
Protection System	n	None					Linitot	/00	51			Performance
		Units		Fx	cellent		Good		Fair	Po	∩r*	Deficiencies
Condition Data:					Schent		0000		1 an		Ui	
		each									<u>}</u>	5 - Seized bearings
dete	erioration of	the girders ar	id the co		near the		ig seats.	<u>aleu</u>			Causing	
Recommended w	/ork:		Ren	iab:		place:	<u> </u>		Maintenance	e Needs:	6 - Briaç	ge Bearing Maintenance
Urgent:	1-	5 Years:	6-1	0 Years:	:		None: X		Urgent:	1 Y	ear: X	2 Year:
	<u> </u>							-	Clean debri	s from be	aring se	ats.
											u	
Element Phot	0:											-
					100							
			and the		-	1	-interior				-	
Description o	f Photo:	Photo 19 - W	/est Abut	iment Be	arings							



Element Data:													
Element Group:	Abutments		Length:		2.4								
Element Name:	Wingwalls		Width:										
Location:	West Side of Structu	re	Height:		1.2								
Material:	Concrete		Count:		2								
Element Type:	Reinforced Concrete		Total Quanti	ity:	5.76								
Environment:	Moderate		Limited Insp	ection:									
Protection System:	None					Performance							
	Units	Excellent	Good	Fair	Poor*	Deficiencies							
Condition Data:	sq.m	5.76											
Comments: Concrete has a rough surface but is in good condition overall. Recommended Work: Rehab: Replace: Maintenance Needs: Maintenance Needs:													
Recommended Work:	Ret	e:	Maintena	ance Needs:									
Urgent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:							
<image/>													

Description of Photo: Photo 21 - Southwest Wingwall

Element Data:									
Element Group:	Abutments		Length:	1.8	1.8				
Element Name:	Wingwalls	Wingwalls							
Location:	East Side of Struc	ture	Height:	0.4	average				
Material:	Timber		Count:	2					
Element Type:			Total Quant	ity: 1.44	ŀ				
Environment:	Moderate		Limited Insp	pection:					
Protection System:	None					Performance			
O and little and Dealer	Units	Excellent	Good	Fair	Poor*	Deficiencies			
Condition Data:	sq.m			1.44					
Recommended Work:		Rehab:	Replace: X	Maintenance	e Needs:	2 - Bridge Cleaning			
	1.5 Voars: X	6 10 Voars	Nono		1 Voar	(2 Voar			
Replace top timber in w	vingwall at northeast and	l southeast qua	drants.	Remove veg deterioration	etation growth 1 of timber	on wingwall to slow			
Element Photo:									

Description of Photo: Photo 22 - Southeast Wingwall

Element Photo:
Description of Photo: Photo 23 - Northeast Wingwall
Element Photo:

Element Data:						
Element Group:	Retaining Walls		Length:		40	
Element Name:	Walls		Width:			
Location:	Southwest	Height:		1.2		
Material:	CIP Concrete		Count:		1	
Element Type:	Reinforced Concrete	Total Quanti	itv:	48		
Environment:	Moderate	Limited Insp	ection:	-		
Protection System	None					Performance
		Excellent	Good	Fair	Door*	Deficiencies
Condition Data:		LACCHEIR			1001	שכווטכוטוכט
Comments: Concrete appear	sq.m rs in good condition. 1	1 large crack at st	46 ructure connectio	2 on. A wide v	vertical crack was for	und on a previous
inspection but w	ras hidden by vegetati	ion.				
Recommended Work:	Reh	ab: X Repla	ace:	Mainte	nance Needs:	
Urgent: 1-	5 Years: X 6-10	0 Years:	None:	Urgent:	1 Year:	2 Year:
Element Photo:						
Description of Photo:	Photo 24 - Southwest	Retaining Wall				

Element Data:									
Element Group:	Retaining Walls		Length:	10	10				
Element Name:	Barrier Systems on	Width:	n/a	n/a					
Location:	Southwest		Height:	1.07	76				
Material:	Timber		Count:	2					
Element Type:			Total Quantit	y: 21.!	52				
Environment:	Moderate		Limited Inspe	ection:					
Protection System:				-		Performance			
Condition Data:	Units	Excellent	Good	Fair	Poor*	8 - Pedestrian / vehicular			
Comments: 17 broken or m	nissing posts in barrie	r system. 20m of top	p rail is missing.	Several post an	L	hazard me unattached.			
Recommended Work:	Re	ehab: X Repla	ce:	Maintenance	e Needs: 9 - R	epair of Bridge Timber			
Urgent: X	1-5 Years: 6-	10 Years:	None:	Urgent: X	1 Year:	2 Year:			
Replace missing and broke	n posts, and anchor.			Replace mis	sing and broker	pickets and top rail.			
Element Photo:									



Element Data:	:															
Element Group:		Accessories				Length:										
Element Name:		Signs				Width:										
Location:		East End					Height:									
Material:							Со	unt:			1					
Element Type:							Tot	al Quanti	ity:		1					
Environment:		Benign					Lin	nited Insp	ectio	on:						
Protection System	ו:	¥						I							Perfor	mance
		Units		Exc	ellent		Go	od		Fair		Poor*			Defici	encies
Condition Data:		each								1						
Recommended W	/ork:		Reha	ab:] R	eplace:			J.	Mainter	nance	e Needs				
Urgent [.]	1-5	Years [.]	6-10) Years [.]	\Box		No	one [.] X		Urgent [.]		1	Year [.]		2 Yea	ır.
Element Photo	0:			SE	GUII stance AY ST PER SMG	N RIV	VER 7km									
														the week		

Element Data:									
Element Group:	Approaches		Length:		6				
Element Name:	Wearing Surface	Width:		3					
Location:	West and East End		Height:		unknown				
Material:	Gravel		Count:		2				
Element Type:			Total Quanti	ty:	36				
Environment:	Severe		Limited Insp	ection:					
Protection System:	None					Performance			
	Units	Excellent	Good	Fair	Poor*	Deficiencies			
Condition Data:	sq.m		36						
Decommonded Work:	Dob	ob. 🔽 Davios		Mainton	anco Noodo:				
	Rena	ao: Repiac	e:	Wantena	ance needs:				
Urgent:	1-5 Years: 6-10) Years:	None: X	Urgent:	1 Year:	2 Year:			
<image/>									

Description of Photo: Photo 29 - West Approach
Element Photo:
Description of Photo: Photo 30 - East Approach
Element Photo:
Description of Photo:

Element Data:													
Element Group:		Accessories											
Element Name:		Utilities (Ligh	nting)				Width:						
Location:		Entire Struct	ure				Height:						
Material:		Steel Light P	osts				Count:		2				
Element Type:							Total Quanti						
Environment:		Benign					Limited Insp	ection:					
Protection System	1:	Protective Co	oating							_		Performance	
Condition Data:		Units		Exce	llent		Good	Fa	air		Poor*		Deficiencies
Condition Data.		each				<u>)</u>							
Comments: Posts appear to be in fair condition. One light standard had a bottom housing and the other does not.													
Recommended W	ork:		Reha	ab:	Repl	lace:		Mai	ntenand	ce Nee	eds:		
Urgent:	1-5	5 Years:	6-10) Years:			None: X	Urg	ent:		1 Year:		2 Year:
Element Photo	D:												

Description of Photo: Photo 31 - Light Standard

Element Photo:
Description of Photo: Photo 32 - Light Standard
Element Photo:
Description of Photo:

Element Data	:													
Element Group:		Accessories				L	ength:							
Element Name:		Electrical				V	Width:							
Location:		Entire Struct	ure			H	leight:							
Material:		PVC				C	Count: 1							
Element Type:						Т	otal Ouan	titv:						
Environment:		Benian				1								
Protection System	ן.	Conduit						0000	0111				Performance	
Trotection Oysten		Units		Evco	llont		Sood		Fair		Poo	r*	Deficiencies	
Condition Data:				LACC	lient		3000		I dii		FUU	1	Deliciencies	
		each							1				16 - Other	
Recommended W Urgent:	/ork:	5 Years:	Reh	nab: 0 Years: [Repl	lace:	None:		Mainter Urgent:	nance	Needs: 1 Ye	ear:	18 - Other 2 Year:	
			01						Provide	supp	ort to bro	oken co	nduit.	
Element Phot														
Description o	f Photo:	Photo 33 - Bro	oken Co	nduit										

Element Data	:												
Element Group:		Approaches				L	ength:			3.1			
Element Name:		Barriers				V	/idth:						
Location:		NW, SW, NE,	and SE	Quadra	nts	ŀ	leight:						
Material:		Lumber				(Count:						
Element Type:						Т	otal Quan	tity:					
Environment:		Moderate				L	Limited Inspection:						
Protection System	ו:												Performance
,		Units		Exc	ellent	(Good		Fair		Poor*		Deficiencies
Condition Data:							21						
Comments: Barrier on the southeast approach is good condition. No barriers are required on the west end due to the retaining wall barrier. Recommended Work: Rehab: Replace: Maintenance Needs:													
Urgent:	1.	5 Years:	6-1	0 Years:			None: X	1	Urgent:		1 Year:		2 Year:
Element Phot	o:												
Description o	f Photo:	Photo 34 - Sc	outhwest	Approac	h Barrie	er							



Element Data:										
Element Group:	Beams	Lenath:		34.1						
Element Name:	Main Beams		Width:		0.25					
Location:	Timber Trestle Span	S	Height:		0.4					
Material:	Timber		Count:		8					
Element Type:			Total Quant	iity:	354.64					
Environment:	Severe		Limited Inst	pection:						
Protection System:	Creosote					Performance				
	Units	Excellent	Good	Fair	Poor*	Deficiencies				
Condition Data:	sam	LAGONOM	251 45			201010101000				
Comments: No deteriora Recommended Work:	tion noted on exposed ti	mbers.	ice:	Mainten	ance Needs:					
Urgent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:				
					<u> </u>					
Description of Photo:	: Photo 37 - Timber Be	ams								

Element Photo:
Description of Photo: Photo 38 - Timber Beams
Element Photo:

Element Data	:													
Element Group:		Beams			4	1.6								
Element Name:		Stringers					Vidth:		0	0.2				
Location:		Timber Trest	le Span	S			leight:		0).2				
Material:		Timber	·				Count:		114					
Flement Type:		Beams					Total Quan	titv:	4	28.64				
Environment [.]		Severe				_	imited Ins	necti	ion [.]					
Protection System	n:	Creosote Tre	atment							Performance				
		Units		Exc	ellent		Good		Fair		Poor*	Deficiencies		
Condition Data:	-	Units		LAC	CIICIII				1 dii		1 001	Denerencies		
		sq.m				2	28.64							
Comments: No Recommended W	deterioration	noted on exp	Ref	nbers.	Rei	blace:	7		Maintena	nce Ne	eds:			
								٦	г					
Urgent:	1-	5 Years:	6-1	U Years:			ivone: X		Urgent:		I Year:	2 Year:		
Element Phot	0:													
Description o	f Photo:	Photo 39 - Str	ringer Be	eams										

Element Photo:
Description of Photo: Photo 40 - Stringer Beams
Element Photo:
Description of Photo:

Element Data:														
Element Group:		Piers					Length:		5					
Element Name:		Pile Caps					Width:		0.	.35				
Location:		Timber Trest	tle Spans				Height:		0.	.35				
Material:		Timber				_	Count:		9					
Element Type:						_	Total Quanti	ity:	65.2					
Environment:		Severe					Limited Insp	pection:				_	5 (
Protection System	:	Creosote		F			0		- .			_	Performance	ce
Condition Data:				EXC	ellent		G000		Fair		Poor		Deficiencie	es
		sq.m				1.	00.2							
Comments: Prie cap has a ventical split in its end. Timber is in good condition overall. Recommended Work: Rehab: Replace: Maintenance Needs:														
Recommended We	ork:		Reha	ab:	Rep	place:		N	laintenar	nce Nee	eds:			
Urgent:	1-5	5 Years:	6-10) Years:			None: X	U	rgent:		1 Year:		2 Year:	
Element Photo	p:													

Description of Photo: Photo 41 - Pile Cap



Element Data:										
Element Group:	Piers		Length:	5.9						
Element Name:	Diagonal Bracing		Width:	0.07	75					
Location:	Timber Trestle Span	S	Height:	0.25						
Material:	Timber		Count:	18						
Element Type:			Total Quantity:							
Environment:	Severe		Limited Inspec	tion:						
Protection System:	Creosote				Performance					
	Units	Excellent	Good	Fair	Poor*	Deficiencies				
Condition Data:	sq.m		68	0.5	0.5					
Recommended Work:	Ref	nab: X Replace	:	Maintenance	e Needs:					
Urgent: 1-	5 Years: X 6-1	0 Years:	None:	Urgent:	1 Year:	2 Year:				
Replace damaged brace						<u> </u>				
Toplass admaged brace										
<image/>										

Description of Photo: Photo 44 - Timber Bracing



Element Data:															
Element Group:		Piers					L	ength:							
Element Name:		Bearings					V	Vidth:							
Location:							H	leight:							
Material:		Steel					C	Count:			10				
Element Type:							Т	otal Quant	tity:		10				
Environment:		Severe					L	imited Insp	oecti	on:	>	(
Protection System	1:													Performance	
		Units		E	xcell	ent	(Good		Fair		Poor	*	Deficiencies	
Condition Data:		oach								0	_				
Comments: Limicon	ited inspecti crete spallin	on due to heig g away and de	jht restrieteriorat	iction. ing ne	. Dec ear e	ck on (dges o	girder be of bearin	earings ap igs.	pea	r to be se	everely	deteriora	ated at	east end. Some	
Recommended w	OFK:		Ren	iad:		кер	lace:			wainten		eeus:			
Urgent:	1-	5 Years:	6-1	0 Year	s:			None: X		Urgent:		1 Yea	r:	2 Year:	
Element Photo	p:														
Description of	Photo:	Photo 46 - Pie	er Bearin	g											



Description of Photo: Photo 48 - Pier Bearing

Element Data:							
Element Group:	Piers		Length:		5		
Element Name:	Shafts/Columns/Pile	/Bents	Width:		3.5		
Location:	West spans		Height:		4.83	3	
Material:	Cast-in-place Concre	ete	Count:		3		
Element Type:	Reinforced Concrete)	Total Quant	tity:	246	.33	
Environment:	Severe		Limited Insp	pection:		Х	
Protection System:	None						Performance
	Units	Excellent	Good	F	air	Poor*	Deficiencies
Condition Data:	sam			10	5 33	51.00	
Comments: Severe spalling a efflorescence no Recommended Work:	and erosion of concre oted at all piers. Seve Reh	ete. East pier has exp re erosion at base o nab: X Replace	bosed rebar. I f central pier a	Narrow to at waterli Ma	o mediun ne. intenance	n cracking with	staining and
	5 Years' 6 1	0 Years X	None		ent [.]	1 Vear	2 Vear
				JUIG	сні.	i real:	Z TEdi.
Abutments originally designe impact serviceabilty for a whi if supported on cribs.	ed for railway loading ile. However, they sh	- deterioration not a ould be monitored for	nticipated to or movement				
Element Photo:							
Description of Photo:	Photo 49 - Pier						





Description of Photo: Photo 53 - Pier

Element Data:	:											
Element Group:		Foundations	;			L	ength:					
Element Name:		Foundation ((below g	jround le	vel)	M	/idth:					
Location:		West abutme	ent and i	inwater p	iers	Н	eight:					
Material:				·		С	ount:					
Element Type:		Unknown				Т	otal Quan	tity:				
Environment:						L	mited Ins	pecti	ion:			
Protection System	1:											Performance
Condition Data:		Units		Exce	ellent	G	lood		Fair	P	00r*	Deficiencies
Condition Data.		N/A					1					
Comments: Eas visil	t pier concre ble. There is	te is supporte no sign of mo	ed on tin	nber crib: i. Upper f	s. No e timbers	vidence o s are expo)f cribs de)sed.	eteri	orating obse	rved. We	st abutm	nent foundation is not
Recommended W	/ork:		Reh	nab:	Re	place:	<u> </u>		Maintenance	e Needs:		
Urgent:	1-	5 Years:	6-1	0 Years:		1	None: X		Urgent:	<u> </u>	Year:	2 Year:
Element Photo	0:											
Description of	f Photo:	Photo 54 - Pie	er Found	lation								



Description of Photo: Photo 56 - Pier Foundation

Element Data	:											
Element Group:		Beams				Length:			14.3			
Element Name:		Girders				Width:			0.43			
Location:		Slab on Girde	er Spans	S		Height:			2.45			
Material:		Steel				Count:			2			
Element Type:						Total Quanti	ity:		177			
Environment:		Severe				Limited Insp	oectic	n:		Х		
Protection System	า:	Paint										Performance
O and the Date		Units		Excellent	t	Good		Fair		Poor*		Deficiencies
Condition Data:		sq.m				77				100		1 - Load carrying capacity
Comments: Well on s	o stiffener ar surfaces with	nd bottom flan h minimal sect	ges hav tion loss	e minor buck s of steel.	kling the	roughout. Expo	osed	l web and	d bott	om flanges h	ave	severe corrosion
							1				_	
Urgent:	1.	-5 Years:	6-1	0 Years:		None: X		Urgent:		1 Year:		2 Year:
	o.	Photo 57 - Str										
Description of	i photo:	Photo 57 - Ste	ei Girde	:r								



Element Data:													
Element Group:		Beams					_ength:			24 (a	verage)		
Element Name:		Girders				N	Nidth:			0.43	-		
Location:		Through Gire	der Spar	าร			Height:			2.45			
Material:		Steel					Count:			4			
Element Type:							Fotal Quan	tity:		635.5	<u>j</u>		
Environment:		Severe					_imited Ins	pecti	on:		Х		
Protection System):	Paint											Performance
5		Units		Excel	ent		Good		Fair		Po	or*	Deficiencies
Condition Data:		sq.m					475.5				16	50	1 - Load carrying capacity
Comments: Bott 100 ^c an is	toms of stiffe % section log ssue due to l	eners have ge ss due to corr loads being li	nerally (osion. 1 mited to	eroded aw 00% section pedestria	ay with on loss n and s	appro of stif	ximately 5 feners on obile load:	0% s nort s.	section lo h side of	oss. L west	ower er through	nds of w span. N	eb stiffeners have lot suspected to be
Recommended W	ork:		Reh	nab: X	Repl	ace:			Mainten	nance	Needs:		
Urgent [.]	1-	5 Years: X	6-1	0 Years:			None:	1	Urgent:		1 Y	ear:	2 Year:
Clean and recoat	structural s	teel											
Element Photo	p:												
Description of	Photo:	Photo 60 - Ste	eel throu	gh girder									



Element Data:	:												
Element Group:		Beams					Length:			3.96			
Element Name:		Diaphragms					Width:						
Location:		Deck on Giro	der Span				Height:			2.45			
Material:		Steel					Count:			5			
Element Type:							Total Quan	ntity:		5			
Environment:		Severe					Limited Ins	pecti	ion:	Х	(
Protection System	า:											Perform	ance
Constituen Data		Units		Exc	ellent		Good		Fair		Poor*	Deficier	icies
Condition Data:		each							5				
Comments: Diap	phragms hav	e moderate c	orrosion	through	nout.	anlaca.	<u> </u>		Mainten	ance N	eeds:		
	1.	5 Vears:	6-1			place.	None X				1 Vear	2 Vear	
Element Photo	0:									1	1		
Description of	f Photo:	Photo 63 - St	eel Diaph	nragm									



Element Data:						
Element Group:	Beams		Length:		4.4	
Element Name:	Floor Beams		Width:			
Location:	Through Girder Spa	ins	Height:			
Material:	Steel		Count:		15	
Element Type:			Total Quantity:	:	15	
Environment:	Severe		Limited Inspec	tion:	Х	
Protection System:						Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	onno	Extoonon	15	i uii	1 001	Deneronene
Comments: Inaccesible for Recommended Work:	measurement. Moder	ate corroded surface	throughout. No	section lo	oss of steel is visible.	
Element Photo:						



Element Data:	:														
Element Group:		Embankmen	its & Stre	eams			Le	ngth:							
Element Name:		Embankmen	its				Wi	dth:							
Location:		NW, SW, NE,	, and SE	Quadra	nts		He	ight:							
Material:		Trees, Shrub	os, and E	arth			Со	unt:			4				
Element Type:		Vegetation					То	tal Quant	tity:		4				
Environment:		Moderate					Lin	nited Insp	pecti	on:					
Protection System	ו:	Vegetation												Perform	ance
5		Units		Exc	ellent		Go	od		Fair		Po	or*	Deficien	icies
Condition Data:		oach						1							
Comments: No a	apparent ma ′ork:	terial loss. Er	mbankm Reh	ents are	e vege	tated a	nd ap	pear sta	ble.	Mainte	enance	e Needs:			
Urgent:	1-	5 Years:	6-10	0 Years:			N	one: X]	Urgent	:] 1 Y	ear:	2 Year:	
Element Photo	o:														
Description of	f Photo:	Photo 67 - Sc	outhwest	Embank	ment										



Description of Photo: Photo 69 - East Embankment

Element Data	:						
Element Group:		Embankments & Str	eams	Length:			
Element Name:		Streams & Waterway	/s	Width:			
Location:		North and South		Height:			
Material:				Count:			
Element Type:				Total Quanti	ty: 1		
Environment:		Benign		Limited Inspe	ection:		
Protection System	n:						Performance
		Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:			1	0000	i dii	1 001	Deneleneles
		all	I				
Comments: Wat	terway is free	e flowing and is free o	of debris.				
Recommended W Urgent:	/ork: 1-	Ref 5 Years: 6-1	nab: Replac 0 Years:	xe: None: X	Maintenance	Needs: 1 Year:	2 Year:
Element Phot	0:						
Description o	f Photo:	Photo 70 - Waterway					

Repair and Rehabilit	tation Req	uired:		Pric	ority		Estimated Structural	
Element ¹	Repair and	Rehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost	
Demolition								
Replacement								
Beams/MLEs	Rehab. =	Clean and recoat		Х			\$400,000.00	
Abutments	Rehab. =	Repair concrete		Х			\$12,000.00	
Retaining Wall	Rehab. =	Repair concrete		Х			\$7,500.00	
Retaining Wall Barrier	Rehab. =	Repair barrier				х	\$2,000.00	
Piers	Rehab. =	Repair concrete, replace deteriorated timbers	х				\$500,000.00	
Wingwalls	Rehab. =	Replace deteriorated timbers		Х			\$12,000.00	
Estimated Rehabilitate	ed or Replace	ement Structure Dimensions ³						
Total Deck Lengt	h (m)	Overall Str. Width (m)			Total Str	ructural Cost	\$933,500.00	

1 - Indicate specific costs for structure replacement OR for rehabilitation under the given headings.

 $\ensuremath{\mathbf{2}}$ - Give a very brief description of the rehabilitation work required.

3 - Estimated structure dimensions after completion of the proposed work - if it is expected to change.

Associated Work	Comments	Estimated Associated
		WORK COST
Approaches		
Detours	Trail Closure Signage	\$1,000.00
Traffic Control		
Utilities		
Other	Engineering and Contingency	\$100,000.00
	Mobilization / Demobilization, General, Insurance	\$100,000.00
	Access / Dewatering / Environmental	\$150,000.00
	Total Associated Work Cost	\$351,000.00
	Total Construction Cost	\$1 284 500 00

Justification:

Main Structural Steel on through Girder and Deck on Girder spans has loss of coating with moderate to severe corrosion of the members and areas of localized section loss. Estimate 1-5 Years for sand blast and repainting of structural steel elements. Concrete abutment has surface defects and recomend rehabilitation work to extend life. Barrier on path at the southwest quadrant has deteriorated and requires repairs. Piers have deteriorated, especially around the waterline. Recommended budgeting for rehabilitation work to repair piers in 10 years. An underwater investigation is recommended to confirm the extent of repairs required.

Inventory Data:							
Structure Name	Cascade Street Bridge No. 1						
Main Hwy/Road #	Cascade Street On X	Under	Crossing Type:	Navig. Water [Rail Ro	Non-Navig.	Water X	
Road Name	Cascade Street						
Structure Location	0.095 km east of Water Stree	et					
Latitude	45° 21' 01" N		Longitude	80° 01' 33" W	1		
Owner(s)	Town of Parry Sound		Heritage Designation:	Not Cons. X Desig./	Cons./Not App Not List	o List/Not De Desig. & List	sig.
MTO Region	50 - Northeastern		Road Class:	Freeway	Arterial Co	ollector X Local	
MTO District	52 - Huntsville		Posted Speed	40	No. of Lane	es 2	
Old County	44 - Parry Sound		AADT Un	known	% Truck	s Unknown	
Geographic Twp.	452 - McDougall		Special Routes:	Transit	Truck	School Bicycle	
Structure Type	4 - Box Beam Girder (Concr	ete)	Detour Length Ar	ound Bridge	2.2	(km)	
Total Deck Length	52.9	(m)	Fill on Structure		0	(m)	
Overall Str. Width	11.2	(m)	Skew Angle		0.0	(Degrees)	
Total Deck Area	592.5	(sq.m)	Direction of Struc	ture	N-S		
Roadway Width	8.5	(m)	No. of Spans		2		
Span Lengths	26.45, 26.45					(m)	
Historical Data:							
Year Built	1981		Year of Last Majo	or Rehab.	2009		J
Last OSIM Inspection	on 2015		Last Evaluation]
Last Enhanced OSI	M Inspection		Current Load Lim	nit			(tonnes)
Enhanced Access E (ladder, boat, lift, etc	Equipment c.)		Load Limit By-La	w #			
Last Underwater Ins	spection		By-Law Expiry Da	ate			J
Last Condition Surve	еу		Min. Vertical Clea	arance			(m)
Rehab. History: (Da	te/description)		6 1 1		с. <u>с</u> н		

2009 - Conversion to semi-integral abutments, the removal of asphalt pavement and waterproofing, full depth and partial depth concrete removals, cast-in-place reinforced concrete, concrete patching, galvanic anodes, replacing damaged pedestrian railing panels, traffic control, steel beam guide rail, hot-mix asphalt paving, bridge deck waterproofing and other miscellaneous works.

Field Inspection Information	:					
Date of Inspection:	June 28, 2018	Type of In:	spection:	X OS	SIM	Enhanced OSIM
Inspector:	Kieran Ferguson					
Others in Party:	None					
Access Equipment Used:	None					
Weather:	Overcast / Sunny					
Temperature:	24 °C					
Additional Investigations Re	auired:			Priority		
	•		None	Normal	Urgent	Estimated Cost
Material Condition Survey						
Detailed Deck Condition Survey	:		Х			
Non-destructive Delam. Survey	of Asphalt-Covered Deck		Х			
Concrete Substructure Conditio	n Survey:		Х			
Detailed Coating Condition Surv	/ey:		Х			
Detailed Timber Investigation:			Х			
Post-Tensioned Strand Investig	ation:		Х			
Underwater Investigation			Х			
Fatigue Investigation			Х			
Seismic Investigation			Х			
Structure Evaluation:			Х			
Monitoring (deformations, settlemen	ts, movements, crack widt	ths)	Х			
Load Posting - Estimated Load				•	Total Cost	\$0.00
Investigation Notes:	·					
Overall Structure Notes:						
Overall Comments:	The bridge is ir deficiencies.	a generally very	good condition. I	Minimal wear	and tear. No m	najor performance
Date of Next inspection:	2020					
Overall Bridge Condition						

overall bridge condition					
% Poor in Deck	% Poor in Beams	% Poor in Substructure	% Poor in Barrier	Bridge Condition I	ndex (BCI or BCIp)
0%	0%	0%	0%	BClp 100.00	BCI 71.73

Overal Bridge Sufficiency					
Traffic	Economic	Width	Alignment	Bridge Sufficiency Index (BSI)	
0	3	0	0	68.73	

Element Data:							
Element Group:	Decks			5	52.8		
Element Name:	Wearing Surface		Width:		8.5		
Location:	Deck		Height:	0	0.08		
Material:	Asphalt		Count:				
Element Type:			Total Quantity	y: 4	/: 448.8		
Environment:	Severe		Limited Inspe	ction:			
Protection System:						Performance	
	Units	Excellent	Good	Fair	Poor	* Deficiencies	
Condition Data:	sq.m		323.8	100	25		
surface throug	hout. Long but minor c	racking along the co	enterline. 300mr	n x 300mm po	othole.	ounu iane. Kougii, scoureu	
Recommended Work:	Reh	ab: Replace	9:	Maintena	nce Needs:	15 - Rout and Seal	
Urgent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Yea	r: 2 Year: X	
				Rout and end.	seal cracks. I	Fill in depression at south	
Elelment Photo:							


Element Data:						
Element Group:	Decks		Length:		52.8	
Element Name:	Deck Top		Width:		11.2	
Location:	Deck		Height:		0.125	
Material:	Concrete		Count:			
Element Type:			Total Quantity	/:	591.36	
Environment:	Moderate		Limited Inspec	ction:	Х	
Protection System:	Waterproofing and As	phalt Pavement			-	Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	sam		591 36			
Commonter Limited Inspect	ion Condition based or	n condition of asph	alt wearing sur	face above	the deck	
Recommended Work:	Rehal	b: Replace Years:	None: X	Mainter Urgent:	nance Needs:	2 Year:
Elelment Photo:						
Description of Photo:	Photo 4 - Deck Top					

Element Data:						
Element Group:	Decks		Length:			
Element Name:	Drainage System		Width:			
Location:	East and West Side		Height:			
Material:	Cast Iron Grate - CSI	P Pipe	Count:			
Element Type:		•	Total Quantit	ty: 4		
Environment:	Severe		Limited Inspe	ection:		
Protection System:	Cast Iron Grate					Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	each			3	1	11 - Deck drainage
Comments: Asphalt in mode drain. Other drai	rately poor condition in pipes appeared cle	around grate. The ar.	drains are in fair	Condition. Dirt a	and debris h	as clogged northeast
				Waintenance		
Urgent: 1-	5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year	r: X 2 Year:
				Clean out de	eck drains.	
Description of Photo:	Photo 5 - Drain					



Element Data:										
Element Group:	Sidewalks / Curbs		Length:	52	52.8					
Element Name:	Sidewalks		Width:	1.	1.8					
Location:	East Side of Bridge		Height:	0.	15					
Material:	Concrete		Count:	1						
Flement Type			Total Quanti	ity: 10)2.96					
Environment:	Severe		Limited Insp	ection:						
Protection System	001010		Linited insp			Porformanco				
Trotection System.	Linite	Excollont	Good	Fair	Door*	Doficioncios				
Condition Data:	sam	LACEMENT	90	12.96	FUUI	Deliciencies				
Comments: Generally abrasion a connectio cracking a	fair-to-good condition. 0.5 along edge. 2 cracks full wi in between deck and appro at north end. 300mm x 500r	m long transverse cr dth of sidewalk 3 m r ach. Minor scrapes a nm delamination. Sou	ack at the sout north of north d nd gouges thro me map crackir	th connection b drain. Longitudi bughout. Light ng along curb.	between deck an inal crack 1.2 m rebar staining a	d approach. Minor long 0.6 m from north nd some heavy				
Recommended work.	Ke			Walliterian	ice neeus.					
Urgent:	1-5 Years: X 6-	10 Years:	None:	Urgent:	1 Year:	2 Year:				
Concrete repair										
Elelment Photo:										

Description of Photo: Photo 7 - East Sidewalk



Element Data:														
Element Group:		Sidewalks / C	Curbs				Le	ngth:			52.8			
Element Name:		Curbs					W	idth:			0.9			
Location:		West Side of	Bridge				He	Height: 0.15						
Material:		Concrete					Сс	Count: 1						
Element Type:							То	tal Quant	ity:		55.44			
Environment:		Severe					Lir	nited Insp	ectio	on:				
Protection System	:							·						Performance
		Units		Ex	cellent		G	boc		Fair		Poor*		Deficiencies
Condition Data:		sam					F	33		2 11				
Comments: Mino Recommended Wo	or abrasion a	along length. I	In good	conditional conditiona	on ove	erall. Mi	inor r	ust stain	ing.	Mainten	ance N	leeds:		
Urgent:	1-	5 Years:	6-10	0 Years	:		N	one: X]	Urgent:		1 Year:		2 Year:
Eleiment Phot	o:													
Description of	Photo:	Photo 10 - We	est Curb											



Description of Photo: Photo 12 - West Curb

Element Data:							
Element Group:	Barriers			Length:		2.4	
Element Name:	Railing Systems			Width:			
Location:	East and West Sid	de		Height:		1.12	
Material:	Aluminum			Count:		50	
Element Type:	4 Rail Metal Railin	ng - Aluminum		Total Quant	ity:	120	
Environment:	Severe	-		Limited Insp	ection:		
Protection System:							Performance
	Units	Excellent		Good	Fair	Poor*	Deficiencies
Condition Data:	m			100	19	1	8 - Pedestrian / vehicular
Comments: West side is in e units. East side Recommended Work:	excellent condition has some minor a	with the exceptio brasion and scrap Rehab:	on of 2 s ping an eplace:	small dents. d one small c	Recent weld dent. Mainter	ed connection between ance Needs:	een aluminum rail
Urgent: 1	E Voore:	6 10 Voore		Nonor	Urgont		2 Voor
Eleiment Photo:							
Description of Photo:	Photo 13 - Railing						



Description of Photo: Photo 15 - Railing

Element Data:																
Element Group:		Abutments				Le	ength:									
Element Name:		Abutment Wa	alls			N	Width:				11.1					
Location:		North and So	outh			Н	e ight :			4.3						
Material:		Concrete				С	ount:			2						
Element Type:						T	otal Quanti	ity:		95.4	16					
Environment:		Moderate				Li	Limited Inspection:									
Protection System	:	None													Perform	ance
		Units		Exce	ellent	G	ood		Fair			Poor*			Deficier	ncies
Condition Data:		sq.m					90		5.46							
Comments: Nort (bas wall.	h: 2 - 3 mm ed on previo Middle cra	(+/-) cracks fro ous assessme ick continues i	om footi nt). Sou into foot	ng to nev uth: 3 - 3 ting. Nort	w cond mm (+ th wall	crete at be -/-) cracks has a mo	aring loca from foot derately s	ated ing t scou	in the m to new c red surf	hiddle concr ace a	e and rete at at the	on the v t bearing bottom	west g eve of th	side enly ne wa	of the spaced all.	vall across
Recommended W	ork:		Reh	ab:	Re	eplace:]		Mainter	nance	e Nee	ds:				
Urgent:	1-	-5 Years:	6-1(0 Years:		١	lone: X		Urgent:]	1 Year:]	2 Year	:
Elelment Phot	o:															

Description of Photo: Photo 16 - North Abutment



Element Data:							
Element Group:	Abutments		Length:	6.6	5		
Element Name:	Wingwalls		Width:	n/a	n/a		
Location:	All Quadrant	S	Height:	4.3	4.3		
Material:	CIP Concrete	9	Count:	4			
Element Type:	Reinforced (Concrete	Total Quant	ity: 114	4.38		
Environment:	Moderate		Limited Insp	pection:			
Protection System:	None					Performance	
Condition Data	Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:	sq.m		50	60	4.38		
Comments: North	nwest and northeast nav	e many moderate transver		ater stanning. So	uth wingwans are	In better condition.	
Recommended Wo	ork:	Rehab: Repla	ace:	Maintenanc	e Needs:		
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:	
Elelment Photo							



Description of Photo: Photo 21 - Southwest Wingwall

Element Data:						
Element Group:	Foundations		Length:		n/a	
Element Name:	Foundation (below g	round level)	Width:		n/a	
Location:	North and South		Height:			
Material:	Concrete		Count:		n/a	
Element Type:	Spread footing		Total Quanti	ty:	n/a	
Environment:	Moderate		Limited Inspe	ection:	Х	
Protection System:			•			Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	N/A		1	1		
Comments: North foundatio cracks. Partially	n has a very scoured s visible.	surface with several	minor vertical	cracks. Sou	th foundation has sev	reral minor vertical
Recommended work.	Kei			Wanten		
Urgent: 1	-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:
Elelment Photo:						
Pescription of Photo:	Photo 22 - North Four	dation				



Element Data:								
Element Group:		Embankments & Stre	eams	Length:				
Element Name:		Streams & Waterway	IS	Width:				
Location:		East and West		Height:				
Material:		Bedrock		Count:				
Element Type:				Total Quant	ity:	All		
Environment:		Severe		Limited Insp	ection:			
Protection System	:							Performance
Canditian Data		Units	Excellent	Good	Fair		Poor*	Deficiencies
Condition Data:		all		Х				
Comments: Very	v minor erosi	ion at north abutment	t wall and on west	side of pier.				
Recommended W	ork:	Reh	nab: Repla		Mainte	enance N	leeds:	
Urgent:	1-	5 Years: 6-1	U Years:	None: X	Urgent		T Year:	2 Year:
Elelment Phot	0:							
Description of	Photo:	Photo 25 - Waterway						

Element Data:	:													
Element Group:		Embankmen	ts & Stre	ams		Le	Length:							
Element Name:		Embankmen	ts			W	Width							
Location:		SW, SE, and	NW Qua	drants		He	Height:							
Material:		Trees, Shrub	s, Earth			Co	ount:			3				
Flement Type:		Vegetation				Tc	tal Quant	itv:		3				
Environment ⁻		Benian					nited Insp	ng. Dectio	n.	-				
Protection System	יי	Donigh				 11	inted insp		511.				Performanc	۵.
Trotection System		Linits		Evo	ollont	G	and		Fair		Do	٦r*	Doficioncio	
Condition Data:		UTIIIS			ellent	G	JUU		Fall	_	FU	JI	Deliciencie	.3
		each					2		1					
Comments: All t nort	hree emban heast	kments are he	eavily ve	getated.	Some	noderate	erosion	on n	orthwest	quadr	rant. No	o embar	ikment present	on
Recommended W	/ork:		Reh	iab:	Rep	lace:		_	Maintena	ance N	Veeds:	13 - Ero	sion Control at Bri	idges
Urgent:	1-	5 Years:	6-1	0 Years:]	Ν	one: X		Urgent:		1 Ye	ear:	2 Year: X	<
									Provide	slope	protect	ion		
Elelment Phot	to:								Kon Con					
Description of	f Photo:	Photo 26 - No	orthwest	Embankr	ment									



Element Nume: Approaches Length: 6.85 Decention: Working Surface Width: 6.85 Decention: North and South Height 0.09 Matrixel: Asphalt Count 2 Enerett Type: Severe Linkled linksection: Performance Environment: None Performance Decision: Performance Environment: None None Performance Decision: Performance Environment: None None Count 116.45 Proof Decision: Condition Data: sign: None Maintenance Meeds Decision: Performance Condition Data: Urgent: 1-5 Years 6-10 Years None: X Urgent: 1 Year 2 Year	Element Data:									
Terment Name Wearing Surface Wearing Surface Wearing Surface Wearing Surface Surface Wearing Surface Surface Wearing Surface Surfac	Element Group:	Approaches		Length:	6	6.85				
Lacatine: North and South Height: 0.09 Bateriat: Aphalt Count 114.45 Province of the species in the species	Element Name:	Wearing Surface	е	Width:	8	.5				
Material Asphalt Count 2 Environmente Severe Lindlet Inspection Performance Protection System None Performance Performance Condition Date sq.m 100 16.45 Performance Condition Date sq.m 00 16.45 Performance Connects: North approach has 4 transverse cacks, full width and filled with scalant. South approach has 1 transverse joint scaled. Recommended Work: Rehat: Repace: Maintenance Needs Performance Urgent: 1.5 Years: 6-10 Years Nore: X Urgent: 1 Year 2 Year EleInent Photo: Image: Second Seco	Location:	North and South	h	Height:	0	0.09				
Element Type Total Quantity 114.45 Protection System None Portmance Condition Data Sq.m 100 16.45 Connents: North approach has 4 transverse cracks, full width and filled with sealant. South approach has 1 transverse joint sealed. Recommended Work: Rechat: Replace: Maintenance Needs: Urgent: 1.5 Years 6-10 Years: None: X Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: Protection Size Protection Protection Element Photo: Recommended Work: Rechat: Replace: Maintenance Needs: Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: Protection Photo: Recommended Work: Rechat: Replace: Maintenance Needs: Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: None: X Urgent: 1 S Year: 1 Year: 1 Year: 2 Year: 2 Year: 1 Year: 1 Year: 2 Year: <	Material:	Asphalt		Count:	2					
Environment Dividecion System: None Condition Data sq.m 100 16.45 Condition Data sq.m 100 16.45 Condition Data sq.m 100 16.45 Condition Data sq.m Condition Photo: Elefment Photo: Condition Photo: Elefment Photo: Condition Photo: Distribution Photo: Distribution Photo: Distribution Photo: Distribution Photo: Distribution Photo: Distribution Photo: Distribution Photo: Distribution Photo: Distribution Photo:	Element Type:			Total Quantit	y: 1	16.45				
Protection System: None Performance Condition Date: s.g.m 100 16.45 Deliciencies Comments: North approach has 4 transverse cracks, tull width and filled with sealant. South approach has 1 transverse joint sealed. Recomments: North approach has 4 transverse cracks, tull width and filled with sealant. South approach has 1 transverse joint sealed. Recomments: North approach has 4 transverse cracks, tull width and filled with sealant. South approach has 1 transverse joint sealed. Recommented Work: Rehat: Replace: Maintenance Needs Urgent: 1.5 Years: 6.10 Years: None: X Urgent: 1 Year: 2 Year: Element Photo: Year: 2 Year: Element Photo: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year: Year:	Environment:	Severe		Limited Inspe	ection:		-			
Condition Date Units Excellent Good Fail Poor Deficiencies Connents: North approach has 4 transverse cracks, full width and filled with sealant. South approach has 1 transverse joint sealed. Recommended Work: Rehat: Replace: Maintenance Needs Urgent: 1-5 Years: 6-10 Years: None: Urgent: 1 Year 2 Year:	Protection System:	None					Performance			
Condition Ualla sq.m 100 16.45 Comments: North approach has 4 transverse cracks, full width and filled with sealant. South approach has 1 transverse joint sealed. Recommented Work: Rehate Replace: Maintenance Needs Urgent: 1.5 Years 6-10 Years: None: X Urgent: 1 Year. 2 Year. Element Photo:		Units	Excellent	Good	Fair	Poor*	Deficiencies			
Comments: North approach has 4 transverse cracks, tull width and filled with sealant. South approach has 1 transverse joint sealed. Recommended Work: Rehat: Replace: Maintenance Needs Urgent: 1.5 Years 6-10 Years. None X Urgent: 1 Year. 2 Year. Elelment Photo: Image: Commended Work: Elelment Photo: Image: Commended Work: Persent Photo: Description of Phote: Photo 2- Approach Wearing Surface Image: Commended Work: Persent Photo:	Condition Data:	sa.m		100	16.45					
<form><form><form></form></form></form>	Comments: North approach	has 4 transverse	e cracks, full width and	filled with sealant	t. South appro	oach has 1 transvers	se joint sealed.			
	Recommended work.		Renad: Repla		Maintena	ice neeus.				
Element Photo:	Urgent: 1-	-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:			
<image/> <image/>										
Description of Photo: Photo 29 - Approach Wearing Surface										
	Description of Photo:	Photo 29 - Appro	pach Wearing Surface							

Description of Photo: Element Photo:	<section-header></section-header>
Element Photo:	Description of Photo: Photo 30 - Approach Wearing Surface
	Element Photo:

Element Data:							
Element Group:	Approaches		Length:		600 mm		
Element Name:	Drainage		Width:		600 mm		
Location:	North and So	uth	Height:				
Material:	Concrete		Count:		4		
Element Type:	600 mm x 600) mm Catchbasin	Total Quant	ity:	4		
Environment:	Severe		Limited Insp	ection:			
Protection System:	Cast Iron Frai	me and Grate					Performance
	Units	Excellent	Good	Fair	Poor	*	Deficiencies
Condition Data:	each		4				
Comments: Debris has colle	cted at the sid	e of the road around the	e catchbasin inlets	s. Asphalt ha	is chipped away	/ aroun	d each catchbasin.
Recommended Work:		Rehab: Rep	blace:	Mainter	nance Needs:	2.	Bridge Cleaning
Urgent: 1-	5 Years:	6-10 Years:	None: X	Urgent:	1 Yea	ar: X	2 Year:
				Clean b	bridge and appro	bach	
Elelment Photo:							
Description of Photo:	Photo 31 - Cat	tchbasin					



pproaches urb/Gutters 'est oncrete evere		Length: Width: Height:		6.85			
urb/Gutters lest oncrete evere		Width: Height:					
lest oncrete		Height:					
oncrete evere				0.14			
evere		Count:		2			
evere		Total Quanti	ty:	13.7			
		Limited Insp	ection:				
one				-	Performance		
Units	Excellent	Good	Fair	Po	or* Deficiencies		
m		13.6	0.1				
tion. 150mm long c	hip in new concret	te at north end.	Minor chippi Mainten	ng in curb at	joint/wingwall connection. 8 - Repair of Bridge Concrete		
Ken			mainten				
lears: 6-10) Years:	None: X	Urgent:	1 Y	ear: X 2 Year:		
			Patch co	oncrete.			
				T.			
	vere Jnits m tion. 150mm long c Reha ears: 6-10 Coto 34 - Northwest <i>J</i>	vere ne Jnits Excellent m tion. 150mm long chip in new concret ears: 6-10 Years:	vere Limited Inspine Inits Excellent Good n 13.6 tion. 150mm long chip in new concrete at north end. ears: 6-10 Years: None: X None: X oto 34 - Northwest Approach Curb	vere Limited Inspection: Initian Excellent Good Fair m 13.6 0.1 tion. 150mm long chip in new concrete at north end. Minor chippi ears: 6-10 Years: None: Year Patch co output Year Patch co	vere United Unspection: Inits Excellent Good Fair Point Inits Excellent Good Fair Point Ition. 150mm long chip in new concrete at north end. Minor chipping in curb at at at at a series Maintenance Needs: ears: 6-10 Years: None: X Urgent: 1 Year Patch concrete. Vargent: 1 Year Patch concrete. Vargent: 1 Year orgen Good Fair Point orgen 6-10 Years: None: X Urgent: 1 Year Patch concrete. Vargent: 1 Year Patch concrete. orgen Good Fair None: X Urgent: 1 Year Patch concrete. Vargent: 1 Year Patch concrete. Vargent: 1 Year orgen Good Good		

Element Data	:							
Element Group:		Approaches		Length:		6.8	5	
Element Name:		Sidewalk		Width:		1.8		
Location:		East Side		Height:		0.1	4	
Material:		Concrete		Count:		2		
Element Type:		Solid Slab		Total Quanti	ity:	26.	578	
Environment:		Severe		Limited Insp	ection:			
Protection System	n:	None		•				Performance
,		Units	Excellent	Good	Fair	•	Poor*	Deficiencies
Condition Data:		sam		15	11 57	75		
		Sy.m		15	11.57			
Recommended W Urgent: Elelment Pho	/ork: /ork: 1- to:	Rel 5 Years: 6-1	hab: Replace 0 Years:	ze:	Maini Urger		e Needs: 1 Year:	2 Year:
Description o	f Photo:	Photo 35 - Northeast	Approach Sidewalk					



Element Data:						
Element Group:	Accessories		Length:			
Element Name:	Utilities		Width:		0.075	
Location:	Overhead/East Side		Height:			
Material:			Count:		2	
Element Type:	Rigid PVC Conduit		Total Quanti	ity:	2	
Environment:	Benign		Limited Insp	ection:	Х	
Protection System:	Conduit		I			Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	each		2			
Comments: Overhead hydro satisfactory. Ut Recommended Work: Urgent: 1	and electical conduit ility coverings have be Reh -5 Years:6-10	along east side of een replaced. ab: Repla 0 Years:	f bridge appear to nce: None: _ X	o be in good Mainter Urgent:	a condition. Light pol nance Needs:	les appear
Description of Photo:	Photo 37 - Utility Cove	r				

Element Data:											
Element Group:		Approaches					Length:		46		
Element Name:		Barriers					Width:				
Location:		NW, SE, and	SW Qua	adrants			Height:				
Material:		Steel					Count:				
Element Type:		Steel Beam (Guide Ra	ail on Steel	Posts		Total Ouant	itv:	46		
Environment:		Severe	/ere								
Protection System):	Galvanized									Performance
		Units		Excell	ent		Good		Fair	Poor*	Deficiencies
Condition Data:				EXOCI	ont		2004		1 dil	24	8 - Pedestrian / vehicular
		m					22			24	hazard
Comments: Non has con	5 dents. The nection has	end terminal deficient heig	has def ht.	ficient heig	ht and	end b	olock is side	way	inwest has is. Southeas	t has 1 end termi	nation and 1
Recommended W	ork:		Reh	nab: X	Repl	ace:			Maintenanc	e Needs:	
Urgent:	X 1-	5 Years:	6-1	0 Years:			None:]	Urgent:	1 Year:	2 Year:
Replace damage approach.	d guide rail s	sections and i	install ei	nd treatme	nts at t	he so	uth				
Elelment Phot	ro:										
Description of	Photo:	Photo 38 - So	outheast	Approach R	Rail						



Description of Photo: Photo 40 - Northwest Approach Rail

Element Data:							
Element Group:	Approaches		Length:	ť	5.85		
Element Name:	Slabs		Width:	8	3.5		
Location:	North and South		Height:	().255		
Material:	Concrete		Count:	2	2		
Element Type:	Solid Slab		Total Quantity:	: 1	116.45		
Environment:	Moderate		Limited Inspec	ction:	Х		
Protection System:	Asphalt Wearing Sur	face					Performance
Condition Data:	Units	Excellent	Good	Fair	Poor	*	Deficiencies
Condition Data:	sq.m		116.45				
Comments: Approach slab asphalt at end	s appear to be in satisf of approach slab.	actory condition with	minimal advers	se effects to	the asphalt w	earing su	ırface. Cacking of
Recommended Work:	Ret	nab: Replace:		Maintena	nce Needs:	15 -	Rout and Seal
Urgent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Yea	ar: X	2 Year:
				Rout and	Seal		
<image/>							

Description of Photo: Photo 41 - Approach Slab

Element Data:	:															
Element Group:		Beams/Main	Longitu	dinal F	Elen	nents		Lei	ngth:			26.4	15			
Element Name:		Girders						Wi	dth:			1.2				
Location:		Below Deck						Не	ight:			0.83	8			
Material:		Concrete						Co	unt:			16				
Element Type		Beam						To	tal Quant	itv:		298	.3			
Environment [.]		Moderate						Lin	nited Insr)ectio	on:		-			
Protection System) [,]	Deck and As	phalt We	aring	Su	rface									Dorf	ormance
		Inite		E E	vcol	llont		G	hod		Fair		D	nor*	Dof	icioncios
Condition Data:		UTIIIS			XCEI	lent		GU	JUU		Fall		F	001	Dei	ICIEI ICIES
		sq.m						29	8.3							
Recommended W	/ork:		Reh	lab:		Re	eplace	:			Mainten	ance	e Needs:	-		
Uraent:	1-	5 Years:	6-10	0 Year	s:		•	N	one: X	1	Uraent:		1	Year:	2 Y	'ear:
													-			
Elelment Phot	to:				Martine And and a second and as second and a											
Description of	f Photo:	Photo 42 - Un	derside	of Gird	lers											



Element Data:									
Element Group:	Piers			Length:					
Element Name:	Bearings			Width:					
Location:	Pier			Height:					
Material:				Count:		8	8		
Element Type:				Total Quanti	ty:	8	8		
Environment:	Moderate			Limited Inspe	ection:		Х		
Protection System:									Performance
Condition Data:	Units	Exceller	nt	Good		Fair		Poor*	Deficiencies
	each			8					
Recommended Work		Rehab:	Replace:		N	Naintena	ance Ne	eeds:	
Urgent:	1-5 Years:	6-10 Years:		None: X	U	rgent:		1 Year:	2 Year:
	<u> </u>		_			- L		L	
Eleiment Photo:			203						
Description of Pl	hoto: Photo 44 - Pie	er Bearings							

Element Data:												
Element Group:		Piers				Length:		1				
Element Name:		Shaft/Colum	n			Width:		9				
Location:		Center of Bri	dge			Height:		6	.15			
Material:		Concrete	5		_	Count:		1				
Element Type:						Total Quanti	itv:	1	23			
Environment:		Moderate				Limited Insp	ecti	on:	-			
Protection System):										P	erformance
		Units		Excellent		Good		Fair	Р	oor*		Deficiencies
Condition Data:		011103		Excellent		100 5				001		Venereneres
		sq.m				122.5		0.5				
Comments: Vert	ical cracks i	n middle of fo	oting ar	nd half way up or	n colur	mn on north	sid	e. 2 vertica	al cracks c	on south	n side, o	ne in center
and	one on west	t starting in fo	oting ar	nd going half way	y up co	olumn. The p	pier	is in good	condition	overall.	Founda	ation has a
SCO	ured surface	but has no da	amage.			-		-				
			5									
Pocommondod W	lork		Dob	Don				Maintonau	aco Noode			
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and the first	And the second second	and the second second	2162 9 13		11 11/20		CAN !!	Ster Ster	all and and a	and the second second		
Description of	f Photo:	Photo 45 - Pie	er									



Element Data:												
Element Group:	Retaining Wa	ll			Lei	ngth:			10			
Element Name:	Wall				Wi	dth:						
Location:	SW Embankn	nent			He	ight:			1.2			
Material:	Gabion Bask	ets			Со	unt:			1			
Element Type:	Rock				To	tal Quant						
Environment:	Moderate				Lin	nited Insp	pection	1:				
Protection System:								10 1.2 1 12 ion: Fair Poor* Maintenance Needs: Urgent: 1 Year:			Performance	
Condition Data:	Units		Exce	ellent	Go	od		Fair		Poor	٢*	Deficiencies
Condition Data.	sq.m				1	2						
Recommended Work:		Rehat	D:	Rep	lace:		_	Mainten	nance I	Needs:		
	5 Voars:	6-10 \	Voars		N		1	Iraont:		1 Vo	ar	2 Voar
		0-10	rears.		TV.	Jine.]	Jigeni.		1 16	di .	
Eleiment Photo:												

Description of Photo: Photo 47 - Gabion Retaining Wall
Repair and Rehabilit	ation Required:		Pric		Estimated Structural	
Element ¹	Repair and Rehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost
Demolition						
Replacement						
Sidewalk	concrete repair		Х			\$5,000.00
Estimated Rehabilitat Total Deck Lengt	ed or Replacement Structure Dimensions ³ h (m) Overall Str. Width (m)			Total Str	uctural Cost	\$5,000.00

1 - Indicate specific costs for structure replacement OR for rehabilitation under the given headings.

 $\ensuremath{\mathbf{2}}$ - Give a very brief description of the rehabilitation work required.

3 - Estimated structure dimensions after completion of the proposed work - if it is expected to change.

Associated Work ⁴	Comments	Estimated Associated
		Work Cost
Approaches	Replace damaged sections, install end treatment	\$10,000.00
Detours		
Traffic Control		\$2,500.00
Utilities		
Other	Engineering and Contingency	\$10,000.00
	Mobilization/Demobilization, General, Insurance	\$10,000.00
	Total Associated Work Cost	\$32,500.00
	Total Construction Cost	\$37,500.00

Justification:

Damaged guide rail sections should be replaced and an end treatment installed. Concrete repair will extend the life of the sidewalk.

Inventory Data:	:		
Structure Name	Cascade Street Bridge No. 2		
Main Hwy/Road #	Cascade Street On X Under	Crossing Navig. Water Type: Rail Roa	Non-Navig. Water X
Road Name	Cascade Street		
Structure Location	0.019 km east of Water Street		
Latitude	45° 21' 02" N	Longitude 80° 01' 35" W	
Owner(s)	Town of Parry Sound	Heritage Not Cons. X Designation: Desig./N	Cons./Not App. List/Not Desig. List/Not Desig.
MTO Region	50 - Northeastern	Road Class: Freeway	Arterial Collector Local X
MTO District	52 - Huntsville	Posted Speed Not Posted	No. of Lanes 2
Old County	44 - Parry Sound	AADT Unknown	% Trucks Unknown
Geographic Twp.	452 - McDougall	Special Routes: Transit	Truck School Bicycle
Structure Type	15 - Rigid Frame - Vertical Legs	Detour Length Around Bridge	2.2 (km)
Total Deck Length	11.5 (m)	Fill on Structure	0 (m)
Overall Str. Width	11.2 (m)	Skew Angle	10.0 (Degrees)
Total Deck Area	128.8 (sq.m)	Direction of Structure	N-S
Roadway Width	8 (m)	No. of Spans	1
Span Lengths	10		(m)
Historical Data			
Year Built	1984	Year of Last Major Rehab.	unknown
Last OSIM Inspection	on 2015	Last Evaluation	
Last Enhanced OSI	M Inspection	Current Load Limit	/ / (tonne
Enhanced Access E (ladder, boat, lift, et	Equipment c.)	Load Limit By-Law #	
Last Underwater Ins	spection	By-Law Expiry Date	
Last Condition Surv	/ey	Min. Vertical Clearance	3.6 (m)
Last Condition Surv Rehab. History: (Da	te/description)	Min. Vertical Clearance	3.6 (m)
Last Condition Surv Rehab. History: (Da	te/description)	Min. Vertical Clearance	3.6 (m)
Last Condition Surv Rehab. History: (Da	te/description)	Min. Vertical Clearance	3.6 (m)
Last Condition Surv Rehab. History: (Da	rey	Min. Vertical Clearance	<u>3.6</u> (m)
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Last Condition Surv Rehab. History: (Da	rey	Min. Vertical Clearance	<u>3.6</u> (m)
Last Condition Surv Rehab. History: (Da	rey	Min. Vertical Clearance	<u>3.6</u> (m)
Last Condition Surv Rehab. History: (Da	te/description)	Min. Vertical Clearance	<u>3.6</u> (m)
Last Condition Surv Rehab. History: (Da	rey	Min. Vertical Clearance	<u>3.6</u> (m)

Field Inspection Informati	on:									
Date of Inspection:	June 28, 2018	Type of Ins	pection:	X 05	SIM	Enhanced OSIM				
Inspector:	Kieran Ferguson	•								
Others in Party:	None	None								
Access Equipment Used:	None	None								
Weather:	Overcast / Sunny									
Temperature:	24 °C									
Additional Investigations		Priority Estimated Cost								
	None	Normal	Urgent	Estimated Cost						
Material Condition Survey										
Detailed Deck Condition Sur	Х									
Non-destructive Delam. Surv	Х									
Concrete Substructure Cond	Х									
Detailed Coating Condition S	burvey:		Х							
Detailed Timber Investigation	ו:		Х							
Post-Tensioned Strand Inves	stigation:		Х							
Underwater Investigation			Х							
Fatigue Investigation			Х							
Seismic Investigation			Х							
Structure Evaluation:			Х							
Monitoring (deformations, settlem	ents, movements, crack widths)		Х							
Load Posting - Estimated Load				I	Total Cost	\$0.00				
Investigation Notes:										

Overall Structure Notes:		
Overall Comments:	The bridge is gen sealing. The exp asphalt surface i surface, catchba	nerally in good condition. Footings and wingwalls have cracks that require posed foundation should be protected against further erosion. Repairs to n future, guide rail requires upgrades to satisfy MTO standards. The deck sins and gutters should be cleaned to improve drainage.
Date of Next inspection:	2020	

Overall Bridge Co	ondition				
% Poor in Deck	% Poor in Beams	% Poor in Substructure	% Poor in Barrier	Bridge Condition I	ndex (BCI or BCIp)
0%	0%	3%	2%	BClp 99.29	BCI 71.72

Overal Bridge Su	fficiency					
Traffic	Economic	Width	Alignment	Bridge Sufficiency Index (BSI)		
0	3	0	0	68.72		

omont Croup	Docks		Longth	11.2				
ement Name [,]	Wearing Surfac		Width:			8.5		
cation [.]	Entire Deck Are	a	Height [.]	0.09	0.09			
aterial:	Asphalt	u	Count	1				
ement Type [.]	Asphan		Total Quant	tv [.] 95.2				
vironment:	Severe		Limited Insp	ection:				
otection System:	None					Performance		
	Units	Excellent	Good	Fair	Poor*	Deficiencies		
ondition Data:	sq.m		68	16	11.2	9 - Rough riding surfa		
crack and	3 minor transverse cra	icks.	-		-			
ecommended Work:		Rehab: Re	place:	Maintenance N	leeds:	15 - Rout and Seal		
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	X 2 Year:		
				Rout and seal deck.	asphalt cra	cks. Clean off bridge		
				4	11 81 804			



Element Data:							
Element Group:	Decks		Length:	Length: 11.2			
Element Name:	Deck Top		Width:		8.5		
Location:	Entire Deck Top		Height:		varies		
Material:	Concrete		Count: 1				
Element Type:	Solid Slab		Total Quantity: 95.2				
Environment:	Moderate		Limited Inspec	ction:	X		
Protection System:	Asphalt						Performance
	Units	Excellent		Fair		Poor*	Deficiencies
Condition Data:	sam		05.2				
Comments: Not visible. Dec	k appears to be in goo	d condition based of	n asphalt condi	tion			
Recommended Work:	Reh	nab: Replace:		Mainten	ance Ne	eds:	
Urgent: 1	-5 Years: 6-1	0 Years:	None: X	Urgent:		1 Year:	2 Year:
Elelment Photo:							
	2						
Description of Photo:	Photo 4 - Deck Top						

Element Data:																	
Element Group:		Decks			_			Lei	ngth:			10.15					
Element Name:		Soffit - Thick	Slab					Wi	dth:			11.2	2				
Location:		Entire Deck S	Soffit					He	ight:			Vari	ies				
Material:		Concrete						Со	unt:			1					
Element Type:		Solid Slab						To	al Quant	ity:		113.	.68				
Environment:		Moderate						Lin	nited Insp	ecti	on:						
Protection System	1:	None														Performance	ce
		Units		Ex	xcell	lent		Go	od		Fair			Poor*		Deficiencie	S
Condition Data:		sa m						103	68		10						
Comments: Five in g	e minor crack ood conditio	sq s on west fas n overall.	scia. Fou	I ır minc	or cr	racks	on ea	st fas	scia. Five	l lor	ngitudina	l and	d two	transver	rse on	n soffit. Concr	ete Is
Recommended W	'ork:		Reh	nab:		Re	eplace:				Mainter	ance	e Nee	ds:			
Urgent:	1-	5 Years:	6-1	0 Years	s:			N	one: X	1	Urgent:]	1 Year:		2 Year:	
Elelment Phot	io:	A	and the state of the second se	The second and the second s	and the second of the second o	the state of the s	S. M. W. M. W. W.	· / · · · · · · · · · · · · · · · · · ·				a way have a start of the	The second				
Description of	f Photo:	Photo 5 - Soff	fit														



Element Data:						
Element Group:	Decks		Length:			
Element Name:	Drainage System		Width:			
Location:	Entire Deck Area		Height:			
Material:			Count:	1		
Element Type:			Total Quantity	y: 1		
Environment:	Severe		Limited Inspe	ction:		
Protection System:			•			Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	الد		Y			
			^			
Recommended Work:	Reh	nab: Replace		Maintenance	Needs: 2	- Bridge Cleaning
Urgent: 1-5	5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year: X	2 Year:
				Clean bridge	surfaces.	
Elelment Photo:						
Description of Photo:	Photo 8 - Sand Buildu	р				

Element Data:										
Element Group:	Sidewalks and Cu	rbs	Length:	11.2						
Element Name:	Sidewalks		Width:	1.35						
Location:	East and West Sid	le of Deck	Height:	0.14						
Material:	Concrete		Count:	2						
Element Type:	Solid Slab		Total Quantity	33.38	}					
Environment:	Severe		Limited Inspec	Limited Inspection:						
Protection System:						Performance				
	Units	Excellent	Good	Fair	Fair Poor* De					
Condition Data:	sam		30	3 38						
Comments: West sidewalk has lots of sand, a full width crack 2 m south of north joint. Generally excellent/good condition. East sidewalk has minor scraping at edge along entire length and 2 half sidewalk width cracks. Some moderate scouring on vertical curb surface. Some light rebar staining throughout the east side.										
Recommended Work:	F	Rehab: Replace	9:	Maintenance	Needs: 2	- Bridge Cleaning				
Uraent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year: X	2 Year:				
				Clean sidewa	lks.					
Elelment Photo:										
Description of Photo:	Photo 9 - West Sid	e - Wide Curb								



Description of Photo: Photo 11 - East Sidewalk

Element Data:						
Element Group:	Barriers		Length:		2.4	
Element Name:	Railing Systems		Width:			
Location:	East and West Side of	of Deck	Height:		1.12	
Material:	Aluminum		Count:		12	
Element Type:	4 Rail Metal Railing -	Aluminum	Total Quantit	y:	28.8	
Environment:	Severe		Limited Inspe	ection:		
Protection System:						Performance
Canalities Date	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	m		25.8	2.5	0.5	8 - Pedestrian / vehicular hazard
on second low	est rail. 1 damaged cap	0. 1 dent on east side		Mainton	anna Naada, 2 Brid	na Handrail Maintananaa
Recommended work:	Ren			wantena	ance Needs: 3 - Bridg	
Urgent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year: X	2 Year:
				Replace	missing end cap.	

Description of Photo: Photo 12 - Barrier



Element Data:	:													
Element Group:		Abutments					L	enath:						
Element Name:		Abutment W	alls				V	/idth:			11.3	3		
Location:		North and Sc	outh				Н	eiaht:			5.1	-		
Material [.]		Concrete					C	ount [,]			2			
Flement Type							Т	otal Quant	itv∙		115	57		
Environment [,]		Moderate						mited Insr	nectio	nn [.]				
Protection System	<u>ו</u> י	None					_ L	militou map		511.				Performance
Trotection System		Units		F	vcoll	∩nt		ood		Fair		Po	٦r*	Doficioncios
Condition Data:		UTIIIS		L	NUCII	CIII				I dii		FU	JI	ביוונוכוונוכז
		sq.m					10	9.57		6				
Comments: Three	ee vertical cr	acks on the n	orth abu	utment	wal	l and s	seven ve	rtical cra	cks o	on the so	outh a	abutment	wall. M	inor scour and minor
exp	osed aggreg	ate throughou	ut. Lowe	r sout	h wa	III has	a large	diagonal	crac	k at foot	ing, a	a 25 mm v	wide cra	ick at center of
foot	ting with sev	ere scour and	expose	d addi	reaa	te at b	oth ends	s of the fo	otin	as. Mois	sture	staining	of the s	urface above the
wat	erline.			99	- 9-					<u>j</u> -				
ind.														
Recommended W	/ork·		Dob	ah.		Don	laco	٦		Mainter	nance	Needs		
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Description of	f Photo:	Photo 15 - So	uth Abut	ment										



Element Data:							
Element Group:	Abutments			Length:		6.7	
Element Name:	Wingwalls			Width:			
Location:	All Quadrant	S		Height:		4.94	
Material:	Concrete			Count:		4	
Element Type:	Wall			Total Qua	ntity:	132.39	
Environment:	Moderate			Limited Ins	spection:		
Protection System:	None						Performance
Condition Data:	Units	Exce	ellent	Good	Fair	Poor	Deficiencies
Condition Data.	sq.m			113.39	15	4	
botto scou beari	om of the wall and a diagonal of the bottom. All wing an an angle of the bottom and a diagonal of the bottom. All wing angle seat. The concrete of	n all walls is gene	east has r e horizont erally in go	minor cracking al crack the w bod condition.	for the entire idth of the ab	e height at the country will be the country of the country wall at the country wall at the country wall at the country wall be	enter of the wall and minor top of wingwall and
Recommended Wo	ork:	Rehab: X	Replac	ce:	Mainter	nance Needs:	
Urgent:	1-5 Years: X	6-10 Years:		None:	Urgent:	1 Yea	ır: 2 Year:
Repair horizontal	crack at wingwall and be	aring seat and in	stall joint	sealant.			

Description of Photo:	Photo 17 - Northwest Wingwall
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Element Data:							
Element Group:	Foundations			Length:			
Element Name:	Foundation (below gr	round level)	Width:			
Location:	South and N	orth		Height:			
Material:	Concrete			Count:			
Element Type:	Spread Footi	ing		Total Quant	ity:		
Environment:	Severe			Limited Insp	ection:	Х	
Protection System:							Performance
Condition Data:	Units		Excellent	Good	Fair	Poor*	Deficiencies
	N/A						
Recommended Work: Urgent:	1-5 Years: X	Reha 6-10 gainst th	ab: X Repl) Years: he footing at the s	ace: None: south abutment	Maintenar	nce Needs: 1 Year:	2 Year:
and wingwalls to mi	nimize scour rate.	5	5				
EleIment Photo:							
Description of Ph	noto: Photo 20 - No	orth Found	dation				



Element Group: Embankments & Streams Length: Element Name: Streams & Waterways Width: Location: East and West Height: Material: Exposed Bedrock Count: Element Type: Environment: Protection System: Protection System: Imited Inspection: Poor* Condition Data: ail X Imited Inspection: Connents: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Element Data:						
Element Name: Streams & Waterways Width: Location: East and West Height: Image: Connormal Streams & Waterways Material: Exposed Bedrock Count Exposed Bedrock Count Element Type: Benign United Inspection: Performanc Protection System:	Element Group:	Embankmer	its & Streams	Length:			
Location: East and West Holght: Material: Exposed Bedrock Count: Element Type: Total Quantity: Endomment: Protection System: Imited Inspection: Performanc Condition Data: all X A Condition Data: all X A Continents: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: W Urgent: 1 Year: 2 Year: Element Photo: Element Photo: Element Photo: Element Photo: Element Photo: Element Photo:	Element Name:	Streams & V	Vaterways	Width:			
Material: Exposed Bedrock Count: Element Type: Total Quantity: Performance Protection System: Imited Inspection: Performance Condition Data: all X Imited Inspection: Comment:: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Location:	East and We	est	Height:			
Element Type: If or all Quantity: Environment: Benign Condition System: It inits Condition Data: Units att X Comments: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehab: Replace Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Material:	Exposed Be	drock	Count			
Environment Benign Limited Inspection. Protection System: Imited Inspection. Condition Data: Initial all X Comments: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehate: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year: Elelment Photo: Elelment Photo: Imited Inspection Imited Inspection Imited Inspection	Flement Type			Total Quan	titv		
Protection System: Derryn Derryn Performant Condition Data: Condition Data: all X Performant Performant Conments: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year. 2 Year.	Environment	Benjan			nection:		
Internet procession Performance of the perf	Drotoction System	. Donign					Dorformanco
Condition Data: Utility Excellent Good rait Poor Delicience Comments: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Replace: Maintenance Needs: Image: Comments: Virgent: 1 Year: 2 Year: Recommended Work: Rehab: Replace: Maintenance Needs: Image: Comments: 1 Year: 2 Year: Urgent: 1-5 Years: 6-10 Years: None: X If year: 2 Year: Elelment Photo: Image: Comments: Feeder to the set of the	FIDIECTION SYSTEM		E verallant	Card	E alia	D*	Periormance
all x Comments: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehab: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: Urgent: 1 Year. 2 Year. Elelment Photo:	Condition Data	Units	Excellent	Good	Fair	Poor	Deficiencies
Comments: Channel consists of exposed bedrock and appears to be used as an overflow for an upstream dam. Minimal flow most of time. Recommended Work: Rehab: Replace: Maintenance Needs Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Condition Data.	all		Х			
Recommended Work: Rehab: Replace: Maintenance Needs: Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Comments: Chai time	nnel consists of exposed	bedrock and appears to	be used as an ov	erflow for an ups	tream dam. Minir	nal flow most of the
	Recommended W	ork:	Rehab: Rep	blace:	Maintenanc	e Needs:	
Elelment Photo:	Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:
<section-header></section-header>							
	Elelment Phot	<image/>					

Element Data:	:														
Element Group:		Embankmen	ts & Stre	eams			Lei	ngth:							
Element Name:		Embankmen	ts				Wi	dth:							
Location:		NE and NW (Quadrant	ts			He	ight:							
Material:		Vegetation, s	shrubs, e	earth			Со	unt:			2				
Element Type:							То	tal Quan	titv:		2				
Environment:		Moderate		-			Lin	nited Insr	pecti	on:				-	
Protection System	1:	Stone Protec	ction							-				Perfor	mance
		Units		Exc	rellent		G	bod		Fair		Pr	∩∩r*	Defici	encies
Condition Data:		onito			2		00	ou		1 dii		1	501	Dener	5110105
		eacn			2										
Recommended W	′ork:		Reh	iab:	F	Replace	:			Mainte	enance	e Needs:			
Urgent:	1-	5 Years:	6-10	0 Years:			N	one: X	1	Urgen	t:	1	/ear:	2 Yea	ar:
Description of	f Photo:	Photo 23 - No	orthwest I	Embank	ment										

Element Data:						
Element Group:	Embankments &	Streams	Length:			
Element Name:	Slope Protection)	Width:			
Location:	NE and NW Qua	drants	Height:			
Material:	150mm - 300mm	Rip Rap	Count:	2		
Element Type:	Hand Laid Rip R	ар	Total Quant	ity: 2		
Environment:	Benign		Limited Insp	pection:		
Protection System:						Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data.	each	2				
Comments: Excent						
Recommended Work	:	Rehab: Repla	ace:	Maintenanc	e Needs:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:
Elelment Photo:	17	and a second second second	oo addace waxaya iyot	and the second		
		-				

Description of Photo: Photo 24 - Northeast Slope Protection

Element Data	:											
Element Group:		Retaining Wa	all		_	Length:			15			
Element Name:		Wall				Width:						
Location:		SW Quadran	t			Height:			1.8			
Material:		Mortar and S	tone			Count:			1			
Element Type:						Total Quant	tity:		27			
Environment:		Benign				Limited Insp	pectio	on:		Х		
Protection System	n:					· 1						Performance
Condition Data:		Units		Excelle	nt	Good		Fair		Poor*		Deficiencies
Condition Data		each				20		7				
Comments: Ret pur effle	aining wall pa pose and doe orescence.	art of hydro fa es not appear	acility. <i>F</i> to be sl	Appears to b iding or mo	be abar ving. S	Idoned without Some significant	any t los	maintena s of mort	ince. ar bei	Wall appears tween stone	s to b units	e serving its and moderate
Recommended W	Vork:		Reh	ab:	Repla	ce:		Mainten	ance l	Needs:		
Urgent:	1-	5 Years:	6-1	0 Years:		None: X		Urgent:		1 Year:		2 Year:
Elelment Pho	to:											
Description o	f Photo:	Photo 25 - So	uthwest	Retaining W	all							





Element Data:						
Element Group:	Accessories		Length:			
Element Name:	Signs		Width:			
Location:	Northwest Approach	<u></u> ו	Height:			
Material:	Steel		Count:	1		
Element Type:			Total Quantity	y: 1		
Environment:	Benign		Limited Inspe	ection:		
Protection System:	Galvanized	-				Performance
	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	each			1		
Comments: Bridge Freezes s	sign appears to be in	a satisfactory condi	ition. Tab portion	n has minor ma Maintenanc	ap cracking.	
			Nono		1 Voor	2 Voor
Urgent: 1-	5 Years: 6-1	U Years:	None: X	Urgent:	T Year:	2 Year:
Elelment Photo:						
		BRIDG FREEZE	ES			
Description of Photo:	Photo 28 - Sign					

Element Group:AppElement Name:WeaLocation:Nor	proaches aring Surface		Lenath:		F 2	
Element Name: Wea Location: Nor	aring Surface				5.3	
Location: Nor	5		Width:		8.5	
	th and South		Height:		0.09	
Material: Asp	ohalt		Count:		2	
Element Type:			Total Quant	tity:	90	
Environment: Sev	/ere		Limited Insp	pection:		
Protection System: Nor	ne					Performance
, Ur	nits	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	n m	Execution	40	1 41	2	Deneronales
Comments: North Side west gutt pot hole. South Side	er asphalt is +/- 50 has minor transve) mm higher than erse cracks in no	gutter and north rthbound lane.	bound lane o	contains transve	erse cracks and a small
Recommended Work:	Reha	ab: X Repla	ice:	Mainten	ance Needs:	15 - Rout and Seal
Urgent: 1-5 Ye	ears: 6-10) Years: X	None:	Urgent:	1 Year	r: X 2 Year:
Resurface asphalt pavement.				Rout an	d seal asphalt c	racks.
<image/>						
Description of Photo: Pho	oto 29 - South Appro	oach Surface				

Element Photo:
Description of Photo: Photo 30 - North Approach Surface
Element Photo:
Description of Photo:

Element Data	:										
Element Group:	Element Group: Approaches Length:									-	
Element Name:		Drainage				Width:					
Location:		North and Sc	Juth			Height:					
Material:		600mm x 600	Jmm Ca	tch Basin		Count:		3			
Element Type:						Total Quant	ity:	3			
Environment:		Severe				Limited Insp	ectio	on:			
Protection System	ו:	Cast Iron Gra	ate			I					Performance
<u> </u>		Units		Exceller	nt	Good		Fair	Po	or*	Deficiencies
Condition Data:		aaab				2000		1 4			Donoronoro
Comments: Cat as i	L chbasins loc ntended.	ated at northe	ast, sou	Lutheast and s	l southwes	st approaches	s. Th	ney appear to	be in go	od condi	ition and performing
Recommended W	/ork:		Reh	nab:	Replace:			Maintenanc	e Needs:	2 -	Bridge Cleaning
Urgent:	1-	5 Years:	6-1	0 Years:		None: X		Urgent:	1 Y	ear: X	2 Year:
								Clean appro	aches		
Eleiment Pho	Io:										
Description o	f Photo:	Photo 31 - Ca	itchbasir	1							

Element Data:	:											
Element Group:		Approaches				Le	ength:			5.3		
Element Name:		Curb/Gutters	5			N	/idth:					
Location:		All Quadrant	IS			Н	eight:			0.15		
Material:		Concrete				С	ount:			4		
Element Type:						Т	otal Quant	tity:		23.2		
Environment:		Severe				Li	mited Insp	oecti	on:			
Protection System	ו:	None										Performance
		Units		Exc	ellent	G	iood		Fair	Po	or*	Deficiencies
Condition Data:		m				2	32					
Comments: Gen Recommended W	herally good of the second sec	conditon. Del	bris fron	n the roa	d has co Rep	llected i	in the gut	ters	. Rust sta Mainten	ining along t ance Needs:	he top of 2 -	curb. No damage. Bridge Cleaning
Urgent:	1-	5 Years:	6-1	0 Years:		ſ	None: X		Urgent:	1 Y	ear: X	2 Year:
									Clean ou	ut gutters.		
Description of	f Photo:	Photo 32 - Ap	oproach (Curb								

Element Photo:
Description of Photo: Photo 33 - Approach Curb
Element Photo:
Description of Photo:

Element Group: P Element Name: S Location: N	Approaches Sidewalks VE and SE Quadrants		Length:		5.3			
Element Name: S	Sidewalks VE and SE Quadrants		1.4.6					
Location:	VE and SE Quadrants		Width:		1.35			
Location		6	Height:		0.14			
Material:	Concrete		Count:		2			
Element Type:			Total Quanti	ity:	15.8			
Environment: S	Severe		Limited Insp	ection:				
Protection System:	Vone					Performance		
	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:	sam		15.8					
Comments: Northeast concret embankments has	le sidewalk was prev s collected at the edg	iously replaced. R je of the sidewalk.	emaining old sid	dewalk is in ç	good condition. Deb	is from the road and		
Recommended Work:	Reha	ab: Replac	:e:	Mainten	ance Needs: 2	- Bridge Cleaning		
Urgent: 1-5	Years: 6-10) Years:	None: X	Urgent:	1 Year: X	2 Year:		
				Clean of	ff sidewalk.			
Elelment Photo:								
Description of Photo: F	Photo 34 - Southeast A	Approach Sidewalk						

Element Photo:
Description of Photo: Photo 35 - Northeast Approach Sidewalk
Element Photo:
Description of Photo:

Element Data:								
Element Group:	Accessories		Length:					
Element Name:	Utilities		Width:					
Location:	Overhead and Besid	e Deck	Height:					
Material:	PVC		Count:					
Element Type:	Rigid Conduit		Total Quantity:	2uantity: 2				
Environment:	Benign		Limited Inspec	pection: X				
Protection System:						Performance		
	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:	each			2				
Comments: 75 mm diameter	conduit duct not obs	erved. Overhead hy	dro appears satis	factory.	Nacda			
Recommended Work:	Reh	nab: Replac		Maintenance	Needs:			
Urgent: 1-	5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:		
Elelment Photo:								
Description of Photo:	Photo 36 - Overhead	Wires						

Element Data:							
Element Group:	Approaches		46				
Element Name:	Barriers		Width:				
Location:	NW, NE, SE, and SW	Quadrants	Height:				
Material:	Steel		Count:				
Flement Type	Steel Beam Guiderail		Total Quanti				
Environment [.]	Severe		Limited Inspection:				
Protection System:	Galvanized		Linited insp	000011	l	Performance	
		Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:	m	Excellent	40	i ali	6	Denciencies	
Comments: Northeast rail scraping. Nort Southest rail is terminations a	has a substandard conr thwest rail has a block tv s in good condition. Sou and are not likely needec	nection to bridge, n wisted and medium uthwest rail is in go I due to the presen	nissing bolt, no n rust at end terr pod condition. I nce of barrier cu	deflection, 2 mination and No end treatr rb.	damaged posts, sev l a substandard conr nents are provided o	veral dents and minor nection to bridge. on guiderail	
Recommended Work:	Reh	ab: Replac	ce: X	Mainten	ance Needs:		
Urgent: X	1-5 Years: 6-10) Years:	None:	Urgent:	1 Year:	2 Year:	
Upgrade structure barrier c	connections.						
Elelment Photo:							

Description of Photo:	Photo 37 - Northeast Approach Barrier
-----------------------	---------------------------------------



Repair and Rehabilit		Pric	Estimated Structural					
Element ¹	Repair and Reh	abilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost	
Demolition								
Replacement								
Wingwalls	Rehab. = Re	epair Concrete		X			\$12,000.00	
Foundation	Rehab. = In:	stall Protection		X			\$16,500.00	
			<u> </u>	1				
			<u> </u>	+				
	-			-		<u> </u>		
			<u> </u>					
			<u> </u>					
	1		<u> </u>	+				
Estimated Rehabilitat	ed or Replaceme	nt Structure Dimensions ³	<u> </u>		<u> </u>			
Total Deck Lengt	h (m) 0	verall Str. Width (m)	1		Total Str	ructu <u>ral Co</u>	st \$28,500.00	
 Indicate specific costs for structure re Give a very brief description of the re Estimated structure dimensions after 	applacement OR for rehabi habilitation work required completion of the propos	litation under the given headings. I. sed work - if it is expected to change.						
Associated Work ⁴			Comme	ents			Estimated Associated	
Approaches		Upgrade Barrier Connect	\$10,000.00					
Detours								
Traffic Control			\$2,500.00					
Utilities							+	
Other		Engineering and Conting	Jency				\$30,000.00	
		MODIIIZATION and Demotion	Ilization; Gen	ieral; insurand	\$30,000.00 ¢25,000,00			
						\rightarrow	φ23,000.00	
		+						
				Total A	Associated Wo	ork Cost	\$97,500.00	
				Ta		- Orat	¢10/ 000 00	
				10	ital Construction	on Cosi	\$120,000.00	
Justification:								
The wingwalls and found	dation all have n	noderate to severe cracks t	hat require re	ehabilitation.	Steel armou	ring shoul	d be installed around	
the footing to prevent fu connections at the north work be completed imm	Irther erosion. R n approach are s rediately to impro	Recommended time to carry ubstandard and should be ove safety.	out the work upgraded to	k is within the meet the curr	enext 1-5 yea rent standard	irs. The si I. It is reco	ructure barrier ommended that this	
Inventory Data:								
---	---------------------------------------	------------------	---------	--------------------------	-----------------------	--------------------------	-------------------------------	-----------
Structure Name	Waubuno Stree	et Bridge						
Main Hwy/Road #		On 📃 l	Under X	Crossing Type:	Navig. Wate Rail 🚺	er Non-Nav Road Ped.	vig. Water]
Road Name	Waubuno Stree	et						-
Structure Location	Waubuno Stree	et at Georgian E	Bay					
Latitude	45° 20' 34" N			Longitude	80° 02' 27"	' W		
Owner(s)	Town of Parry	Sound		Heritage Designation:	Not Cons. Desi	X Cons./Not ig./Not List	App. List/No Desig. & List	ot Desig.
MTO Region	50 - Northeaste	rn		Road Class:	Freeway	Arterial	Collector L	ocal X
MTO District	52 - Huntsville			Posted Speed	50	No. of La	anes 1	
Old County	44 - Parry Sour	d		AADT un	known	% Tr	ucks unknown	
Geographic Twp.	452 - McDouga	I		Special Routes:	Transit	Truck	School Bic	ycle X
Structure Type	6 - Timber Gird	er Bridge		Detour Length A	round Bridge	N/A	(km)	
Total Deck Length	12.81	(m)	Fill on Structure		0	(m)	
Overall Str. Width	3.57	(m)	Skew Angle		0.0	(Degre	es)
Total Deck Area	45.7	((sq.m)	Direction of Strue	cture	N-S		
Roadway Width	3.17	(m)	No. of Spans		3		
Span Lengths	3.73, 4.18, 3.53						(m)	
Historical Data:	:							
Year Built		1920		Year of Last Maj	or Rehab.	unknown		
Last OSIM Inspection	on	2015		Last Evaluation				
Last Enhanced OSI	M Inspection			Current Load Lir	nit		/ / 10	(tonnes)
Enhanced Access E (ladder, boat, lift, etc	Equipment c.)			Load Limit By-La	IW #			
Last Underwater Ins	spection			By-Law Expiry D	ate			
Last Condition Surv	еу			Min. Vertical Cle	arance	2.96		(m)
Rehab. History: (Da 2012 - New Deck Bo	te/description) oards Installed ir	a few location	S.					

Field Inspection Information:				
Date of Inspection:	June 27, 2018	Type of Inspection:	X OSIM	Enhanced OSIM
Inspector:	Kieran Ferguson			
Others in Party:	None			
Access Equipment Used:	None			
Weather:	Light Rain / Overcast			
Temperature:	21 °C			

Additional Investigations Required:		Priority		Estimated Cost	
	None	Normal	Urgent	E SIIII I I I I I I I I I I I I I I I I	
Material Condition Survey					
Detailed Deck Condition Survey:	х				
Non-destructive Delam. Survey of Asphalt-Covered Deck:	X				
Concrete Substructure Condition Survey:	x				
Detailed Coating Condition Survey:	X				
Detailed Timber Investigation:	x				
Post-Tensioned Strand Investigation:	Х				
Underwater Investigation	x				
Fatigue Investigation	x				
Seismic Investigation	Х				
Structure Evaluation:	X				
Monitoring (deformations, settlements, movements, crack widths)	Х				
Load Posting - Estimated Load		<u>.</u>	Total Cost	\$0.00	
Investigation Notes:					

Overall Structure Notes.	
Overall Comments:	Overall the bridge is in good condition. Bridge components such as the ballast walls, barriers, signage, piles and curbs require repair or replacement.
Date of Next inspection:	2020

Overall Bridge Co	ondition								
% Poor in Deck	% Poor in Beams	% Poor in Substructure	% Poor in Barrier	Bridge Condition Index (BCI or BCIp)					
0%	0%	4%	2%	BClp 99.00	BCI 68.29				
Overal Bridge Su	fficiency								

3	,			
Traffic	Economic	Width	Alignment	Bridge Sufficiency Index (BSI)
2	0	0	0	66.29

Element Data:								
Element Group:	Decks		Length:	1	12.81			
Element Name:	Deck Top		Width:	3	3.57			
Location:			Height:	leight: 0.038				
Material:	Wood		Count:	1	1			
Element Type:	Wood Planks		Total Quanti	ty: Z	45.73			
Environment:	Moderate		Limited Inspe	ection:				
Protection System:	None				_	Performance		
Condition Data:	Units	Excellent	Good	Fair	Pool	r* Deficiencies		
Condition Data.	sq.m		45.23	0.5				
Recommended Work:	Reh 5 Years: 6-1	ab: Replace 0 Years:	e: None: X	Maintena Urgent: [Clean bri	nce Needs: 1 Ye dge deck surf	2 - Bridge Cleaning ear: X 2 Year: rface.		
Element Photo:								
Description of Photo:	Photo 1 - Deck Top	n perman		Aller .				



Element Data:									
Element Group:	Sidewalks / Curbs		Length:	12.81					
Element Name:	Curb		Width:	0.2					
Location:			Height:						
Material:	Wood		Count:	2					
Element Type:			Total Quantity	/: 25.6	52				
Environment:	Moderate		Limited Inspec	ction:					
Protection System:							Performance		
	Units	Excellent	Good	Fair	Poo	r*	Deficiencies		
Condition Data:	m			24.42	1.2	2			
Comments: General weath long) is rotter	and should be replace	d. Old wood in fair t	to poor condition	. Wood is soft n	ear board	ends.	est section (1.2 m		
Recommended work:	Re	nab: Replac		Maintenance	e Needs:	9 - кер	air of Bridge Timber		
Urgent:	1-5 Years: 6-7	10 Years:	None: X	Urgent:	1 Ye	ar: X	2 Year:		
				Replace one	e section o	of curb at	southwest corner.		
Element Photo:					1	1			

Description of Photo: P	oto 4 - Curb
--	--------------



Element Data	:													
Element Group:		Barriers					Length:	.: 12.81						
Element Name:		Railing Syste	ems				Width:							
Location:		East and We	st				Height:		1	.3				
Material:		Wood					Count:		2					
Element Type:		Wood rail > 8	33 mm th	nick			Total Quant	tity:	2	5.62				
Environment:		Moderate					Limited Insp	pecti	ion:					
Protection System	n:	None										Performance		
3		Units		Exce	ellent		Good		Fair	Po	or*	Deficiencies		
Condition Data:		m							25.62 1. Load carrying capacity					
Comments: Moo Rail of w	l derate weath ling system c vood.	ering of the ti loes not meel	mber ha t require	l ndrails a ments fo	nd picke r height	ets. 9 p or loa	ickets at th d capacity f	ne so for s	outheast co	orner are da e use. No m	maged a issing o	and/or rotated. r deteriorated areas		
Recommended W	/ork:		Reh	iab:	Rep	lace:	Х		Maintena	nce Needs:	3 - Brido	e Handrail Maintenance		
Urgent:	1-	5 Years: X	6-1	0 Years:			None:]	Urgent:	1 Y	'ear: X	2 Year:		
Replace harrier		code-complia	nt harrig	r that m	ets star	ndards	for	-	Replace	amaged pi	ckets			
pedestrian and s	snowmohile i	ise Extend h	arrier ale	ong ann	oaches t		/ide			amagea pr	shots.			
protection at embankments														
Element Phot														
Description o	f Photo:	Photo 7 - Rai	ling											



Description of Photo: Photo 9 - Railing

Element Data:										
Element Group:	Barriers		Length:							
Element Name:	Posts		Width:		0.089x0.089					
Location:			Height:		0.99					
Material:	Wood		Count:		18					
Element Type:			Total Quant	ity:	18					
Environment:	Moderate		Limited Insp	Limited Inspection:						
Protection System:	None					Performance				
Condition Data	Units	Excellent	Good	Fair	Poor*	Deficiencies				
	each		15	2	1	1 - Load carrying capacity				
severely dama	aged. Railing system c	loes not meet require	ments for heigh	ht or load cap	pacity for snowmob	ile use.				
Recommended Work:	R	ehab: Replac	e: X	Maintena	ance Needs:					
Urgent:	1-5 Years: X 6	-10 Years:	None:	Urgent:	1 Year:	2 Year:				
Replace barrier with code of provide protection at emba	compliant barrier. Extension	end barrier along app	roaches to							
Element Photo:										

Description of Photo: Photo 10 - Post



Element Data:												
Element Group:	Beams				Le	ength:			3.73 m	, 4.18 m, 3.53	3 m	
Element Name:	Floor Beams				W	/idth:			0.25			
Location:	Under Stringe	ers			H	eight:			0.45			
Material:	Wood				С	ount:			18			
Element Type:	Rectangular S	Solid			T	otal Quant	ity:		36.04			
Environment:	Severe				Li	mited Insp	ectio	on:				
Protection System:	Creosote Trea	atment										Performance
	Units		Exce	llent	G	ood		Fair		Poor*		Deficiencies
Condition Data:	sam				2	5.54		0.5				
Comments: General overall exterior beam an Recommended Work:	weathering was	s noted, eams. We	but they est side a	appear and eas	r to be ir t sides s	i good coi show mind	nditi or co	on. Over ollision d	rhead li amage. ance Ne	ght collision	ı dan	hage on the east
	E Voorei	4 10					1	Urgont		1 Voor		
Element Photo:												

Description of Photo: Photo 13 - Floor Beams



Element Data:								
Element Group:	Beams		Length:	3.	57			
Element Name:	Stringers		Width:	0.2	2			
Location:	Under deck		Height:	0.2	0.2			
Material:	Wood		Count:	42				
Element Type:	Rectangular Solid		Total Quanti	ity: 42	<u>.</u>			
Environment:	Severe		Limited Insp	ection:				
Protection System:	Creosote Treatment					Performance		
Condition Data	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data.	each		22	20				
Recommended Work:	Reh	ab: Repl	ace:	Maintenan	ce Needs:			
Urgent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:		
Element Photo:								

Description of Photo: Photo 16 - Stringers

Element Photo:
Description of Photo: Photo 17 - Stringers
Element Photo:

Element Data:							
Element Group:	Abutments		Length:				
Element Name:	Abutment Walls		Width:		3.36		
Location:			Height:		0.685		
Material:	Wood		Count:		2		
Element Type:	Crib		Total Quant	ity:	4.3		
Environment:	Severe		Limited Insp	ection:	X		
Protection System:	None					Performance	
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies	
	sq.m		2.8	0.5	1		
side. 3 timber m side. Ballast wa	embers on the north en li is severely deteriora	nd has splitting and ted on north end.	1 has rot form	ning. 1 timbe	r member has rot fo	rming on the south	
Recommended Work:	Reh	ab: X Replace	e:	Mainter	nance Needs:		
Urgent: 1	-5 Years: X 6-10) Years:	None:	Urgent:	1 Year:	2 Year:	
Replace ballast wall timbers	both ends.						
<image/>							

Description of Photo: Photo 18 - Abutment



Description of Photo: Photo 20 - Abutment

Element Data:													
Element Group:		Piers				Length:			4.35				
Element Name:		Shafts/Colun	nns/Pile	Bents		Width:			0.3				
Location:						Height:			2.52				
Material:		Wood				Count:			2				
Element Type:		Timber Piles	with Ca	pping Be	am	Total Quar	ntity:		45.62				
Environment:		Severe				Limited Ins	specti	on:					
Protection System	1:	Creosote Tre	atment									Performance	е
		Units		Exce	ellent	Good		Fair		Poor*		Deficiencies	S
Condition Data:	Condition Data:					38.62		5		2			
Comments: Ove wea very and	rall in good thered. Sout weathered all other pile	condition. Ne thwest pile has surface overal es besides the	wer timt s 50% di II. Minor southw	per pile c sintegrat vehicle c vest pile s	ap. Spli tion due collision show nc	ts in ends of new to white rot whi marks on outer signs of soft or	v pile ch w piles dete	cap. Bra as visible s. All piles riorated w	icing is ir in the in recieved vood.	n good c terior of d a soun	ondil the v ding	tion but appears vood. Piles have and penetratior	s e a n test
Recommended W	ork:		Reh	ab:	Rep	lace: X		Mainten	ance Nee	eds:			
Urgent:	1-	5 Years: X	6-10) Years:		None:		Urgent:		1 Year:		2 Year:	
Replace southwe	est pile.						_						
Element Photo	p:										ないまたいかいいいいでいたい		

Description of Photo: Photo 21 - Timber Pile



Description of Photo: Photo 23 - Timber Pile



Element Name Embankments & Steams Lorgith	Element Data:													
Element Name: Embankments Width: Markelat: Count: 6 Element Type: Count: 6 Environment: Imited inspection: Performance Condition Data: each 6 Comments: section: 6 Condition Data: each 6 Comments: Some encision at the northwest comer and below north abutment timbers, resulting in some loss of material. Appear to be stable. Recommended Work: Rehatr: Replace: Maintenance Medix: 1 - Encience Counteral at Bridges Urgent: 1 5 Years: 6 10 Years: Name: Yugent: 1 Year: 2 Year. Element Photo: Element Photo: Element Photo: Install slope protection in croded areas on embanding of the photo in the	Element Group:		Embankmen	ts & Stre	eams		Le	ength:						
Location: Height: 6 Lement Type: 1obl Quantity: 6 Protoction System: Performance Deficiencies Condition Data: each 6 Deficiencies Connents: Some erosion at the northwest comer and below north abutment timbers, resulting in some loss of material. Appear to be stable. Recommended Work: Rehat: Replace: Mainfanance Nedis: 1- Encodem Control of Bridges Urgent: 1-5 Years: 6-10 Years: None: Yugent 1 Year. 2 Year. Install slope protection in eroded areas on embandment. Install slope protection in eroded areas on embandment. Element Photo:	Element Name:		Embankmen	ts			W	idth:						
Material Count is 6 Environment: Inited Inspection: Performance Protection System: each 6 Inited Inspection: Condition Date: Some encoden at the northwest corner and below north abutment limbers, resulting in some loss of material. Appear to be stable: Recommended Work: Recommended Work: Replace: Material: Igen: 1.5 Years: 0.10 Years: None: Urgent: 1.5 Years: 0.10 Years: None: Vigen: 1.7 Year: 0.10 Years: None: Vigen:	Location:						H	eight:						
Element Type: Initial Calculative of Linking Inspection. Performance Deficiencies Condition Data units Excellent Good Fair Poor Deficiencies Comments: Some ensoion at the northwest corner and below north abutment timbers, resulting in some loss of material. Appear to be stable. Image: Comments in the northwest corner and below north abutment timbers, resulting in some loss of material. Appear to be stable. Recommended Work: Rehab: Replace: Maintenance Needs 13-Erosion Control at Bridges Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1 Year: X 2 Year; Install slope protection in eroded areas on embankment. Install slope protection in eroded areas on embankment. Element Photo: Image: Comment in eroded areas on embankment. Image: Comment in eroded areas on embankment.	Material:						С	ount:		6)			
Initial inspection: Performance Contributor Date: each 6 each 6 each 10 Contributor Date: each 6 each 6 each eac	Element Type:						Тс	otal Quant	ity:	6	1			
Protocioni System Performance Cundion Data: each 6 each Belicipnics Comments: Some erosion at the northwest corner and below north abutment timbers, resulting in some loss of material. Appear to be stable. Appear to be Recommended Work: Rehab: Replace Maintenance Needs 13-Erosion Control at Brieges Urgent: 1-5 Years: 6-10 Years: None X Urgent: 1 Year 2 Year Install Stope protection in eroded areas on ombankment. Install Stope protection in eroded areas on ombankment. Install Stope protection in eroded areas on ombankment.	Environment:						Li	mited Insp	pectio	on:				
Condition Data Units Excellent Good Fair Poor* Deficiencies Comments: Some erosion at the northwest corner and below north abutment timbers, resulting in some loss of material. Appear to be stable. 6 Image: Comments of the northwest corner and below north abutment timbers, resulting in some loss of material. Appear to be stable. Recommended Work: Rehat: Replace: Maintenance Meeds 13-Eresion Control at Bridges Urgent: 1-5 Years: 6-10 Years: Nonc:X Urgent: 1 Year: X 2 Year: Install slope protection in eroded areas on embankment. Imstall slope protection in eroded areas on embankment. Element Photo: Imstall slope intervent at the northwest corner and below north abutment intervent at the northwest corner and below north abutment intervent at the northwest corner at the northwest	Protection System	1:									_		Per	formance
continuenteal each Continuents: Some erosion at the northwest corner and below north abutment timbers, resulting in some loss of material. Appear to be stable. Recommended Work: Rehat: Replace: Maintonance Needs: 13 - Eresion Control at Bringes Urgent: 15 Years: 6-10 Years: None: X Urgent: 15 Years: 6-10 Years: None: X Urgent: 15 Years: 6-10 Years: None: X Install stope protection in eroded areas on embankment. Element Photo:	Condition Data:		Units		Exce	ellent	G	ood		Fair	Po	or*	Det	iciencies
Comments: Some erosion at the northwest corner and below north abutment timbers, resulting in some loss of material. Appear to be stable. Recommended Work: Rehat: Replace Maintenance Needs. 13-Erosion Control at Bridges Urgent: 1.5 Years: 6-10 Years: None: X Urgent: 1 Year: X 2 Year: Install slope protection in eroded areas on embankment.	Condition Data.		each					6						
Iteration in the register in the registere in the register in the register in the register in t	Comments: Son stab	ie erosion at	the northwes	Dob	and bei			nt umber	S, IE	Maintenar		or mater	Idi. App	rol at Bridges
Urgent 1-5 Years: 6-10 Years: None: X Install slope protection in eroded areas on embankment. Element Photo:	Recommended w	UIK.		Ren		кер	ace:		-	wantena	nce neeus.	13- 210		
Element Photo:	Urgent:	1-	5 Years:	6-10	0 Years:		Ν	lone: X		Urgent:	1 Y	'ear: X	2 \	/ear:
<section-header></section-header>									-	Install slo embankm	pe protectionent.	on in ero	oded area	3S ON
	Element Photo	0:							and the second se					
												4		

Element Photo:
<image/>
Description of Photo: Photo 27 - Embankment
Element Photo:

Liement Data	:						
Element Group:	Embankmer	its & Streams	Length:				
Element Name:	Slope Prote	ction	Width:				
Location:			Height:				
Material:			Count:	2			
Element Type:	Rock Protect	tion	Total Quanti	ty: 2			
Environment:			Limited Insp	ection:			
Protection System	n:				_		Performance
Condition Data:	Units	Excellent	Good	Fair	Po	or*	Deficiencies
Condition Data.	each		1	1		l	
Comments: Sou rem	Ith end rock protection in haining rocks appear to ha	good condition no loss o ve fallen to the base of th	f material. North e	end rock protec	tion appea	ars to be	minimal, and
Recommended W	/ork:	Rehab: Repl	lace:	Maintenan	ce Needs:	13 - Ero	sion Control at Bridges
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Y	/ear: X	2 Year:
		·		Install slop face.	e protectio	on on no	orth abutment interio
Element Photo							

Description of Photo: Photo 28 - Slope Protection



Element Data:								
Element Group:	Approaches		Length:	6				
Element Name:	Wearing Surface		Width:	3.6	5			
Location:	North and South of B	Bridge	Height:					
Material:	Earth	-	Count:	2				
Element Type:			Total Quantity	y: 43	.2			
Environment:	Severe		Limited Inspe	ection:				
Protection System:	None		-			Performance		
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data.	sq.m		43.2					
Comments: Overall good o	condition.							
Recommended Work:	Reh	ab: Replace		Maintenand	ce Needs:			
Urgent:	1-5 Years: 6-10) Years:	None: X	Urgent:	1 Year:	2 Year:		
Element Photo:					# (1.27)			

Description of Photo: Photo 31 - Approach

Element Photo:	
Description of Photo:	Photo 32 - Approach
Element Photo:	
	Picture 045 - Overhead Clearance Sign

Element Data:	:									
Element Group:		Accessories		Length:						
Element Name:		Signs		Width:						
Location:		North and South o	f Bridge	Height:						
Material:		Steel		Count:		7				
Element Type:				Total Quant	ity:					
Environment:		Severe		Limited Insp	Limited Inspection:					
Protection System	ו:	None		•			Performance			
		Units	Excellent	Good	Fair	Poor*	Deficiencies			
Condition Data:		su m		3	4		8 - Pedestrian / vehicular			
Comments: Two Fou Recommended W	0 10-tonne lo r OFSC trail /ork:	ad limit signs are in signs are no longer	ehab: Repla	approaches. Cle	earance sign	ance Needs:	Still in good condition.			
Urgent:	1.	·5 Years: 6	-10 Years:	None: X	Urgent: Reorient	1 Year: t signs. Replace 4	X 2 Year:			
Element Phote										
Description of	f Photo:	Photo 33 - Sign								



Element Data:						
Element Group:	Accessories		Length:			
Element Name:	Utilities		Width:			
Location:	North and South of E	Bridge	Height:			
Material:	Steel	-	Count:	2		
Element Type:			Total Quantity	y: 2		
Environment:	Severe		Limited Inspe	ction:	Х	
Protection System:						Performance
	Units	Excellent		Fair	Poor*	Deficiencies
Condition Data:	oach		2			
	edch		Z			
Recommended Work:	Reh	ab: Replac	e:	Maintenance	Needs:	
Uraent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:
Element Photo:						
Description of Photo:	Photo 36 - Utility					

Repair and Rehabili	Repair and Rehabilitation Required:				Priority				
Element ¹	Repair and R	ehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost		
Barrier	Rehab. =	Replace Barrier		х			\$27,500.00		
Abutment	Rehab. =	Replace Ballast Walls		Х			\$15,000.00		
	Rehab. =	Replace Pile		х			\$5,000.00		
			1	1					
	1		1	1			1		
			1	1			1		
			1				1		
			1	1					
			1	1 1			1		
			1				1		
Estimated Rehabilitat	ted or Replacer	nent Structure Dimensions ³	<u> </u>	<u>. </u>					
Total Deck Lengt	h (m)	Overall Str. Width (m)			Total Str	uctural Cost	\$47,500.00		
 Give a very brief description of the r Estimated structure dimensions after 	ehabilitation work rec er completion of the p	juired. roposed work - if it is expected to change.							
Associated Work			Comm	ents		Estimated Associated Work Cost			
Approaches									
Detours		Closure Signage, Barrica	ades, Etc			\$1,000.00			
Traffic Control		<u> </u>				<u> </u>			
Other		Engineering & Continge	ncy				\$25,000.00		
		Mobilization / Demobiliza	ation; Genera	ıl; Insurance			\$15,000.00		
						<u> </u>			
				Total A	ssociated Wc	ork Cost	\$41.000.00		
				10.001			Ψ Π,		
	on Cost	\$88,500.00							
Justification:									
Barrier system is substa	andard for snc	wmobile use and should be r	eplaced imm	ediately. The	rotten ballas	t wall timbe	rs are not likely to		

continue performing adequately into the future. They should be replaced to ensure that backfill is retained behind the abutment. The southwest timber pile is severely damaged and needs to be replaced in the next 1 year.