

CONTRACT DOCUMENTS

CONTRACT PWC-2021-15

REHABILITATION OF COUNTY STRUCTURE B240 FOURTH CHUTE BRIDGE

LOCATED ON FOURTH CHUTE ROAD
APPROXIMATELY 2.7KM NORTH OF COUNTY ROAD 22 (GRATTAN ROAD)

IN THE TOWNSHIPS OF NORTH ALGONA WILBERFORCE AND BONNECHERE VALLEY



MAY 2021

CONTRACT REVIEW CHECKLIST
MUNICIPAL CORPORATION OF THE COUNTY OF RENFREW

Guidelines for Tenderers – This is NOT a Contract Document

Tenderers are solely responsible for the regularity of their own bids. However, to assist Tenderers, the Corporation advises all Tenderers to review their bids with the following questions in mind:

Form of Tender – Part III of the Tender

1. Has your firm's name and address been completed on Page A-9?
2. Has your firm's total Tender price been filled in, in Section FT-4.3 on Page A-10?
 - is it in words?
 - is it in numbers?
 - do the words and the numbers agree?
3. Has the Tender been signed properly?
 - corporation – sign and seal
 - partnership – two partners sign and witness signs
 - sole proprietorship – owner signs and witness signs
4. Has EACH ITEM in the Schedule of Prices been completed?
5. Have the subtotals been entered?
6. Has the total been entered?
7. Does the total in the Schedule of Prices agree with the total in Section FT-4.3?
8. Have any strikeouts or changes been made to the Schedule of Prices?
If so, have they been initialled?

Tender – General

9. Have all the documents been completed in ink or in type?
10. Has your firm checked to see that it has received all Addenda?
11. Have all Addenda been submitted with the Tender documents?
12. Has your firm used the Corporations forms to bid?
13. Has your firm obtained and reviewed all Tender Documents?

CONTRACT REVIEW CHECKLIST
MUNICIPAL CORPORATION OF THE COUNTY OF RENFREW

- 14. Has your firm ensured that the bid is NOT QUALIFIED by any restrictive statements written in the documents by your firm?
- 15. Have any changes (overwritings, strikeouts, erasures, etc.) been initialled by the Tenderer?
- 16. Has the tenderer registered with the County of Renfrew?

Tender – Submission

- 17. Has the Tender deposit been included?
- 18. Is the Tender deposit for the correct amount?
- 19. If the Tender deposit is a cheque, has it been certified?
- 20. Has an Agreement to Bond been inserted with the Tender?
- 21. Has the Agreement to Bond been completed by the bonding company?
Has it been signed and sealed?
- 22. Has a detailed work schedule been included?
- 23. Does the envelope/email subject line have the Tender Information clearly identified?
Does the label identify your firm's name, address and phone number?
- 24. Is the envelope sealed?

**THE CORPORATION OF THE
COUNTY OF RENFREW
DEPARTMENT OF PUBLIC WORKS & ENGINEERING**

**REHABILITATION OF
COUNTY STRUCTURE B240 FOURTH CHUTE BRIDGE**

LOCATED ON FOURTH CHUTE ROAD

**IN THE TOWNSHIPS OF NORTH ALGONA WILBERFORCE AND BONNECHERE
VALLEY**

CONTRACTOR	TENDER
	\$ Includes 13% HST

CONTRACT # PWC-2021-15



REQUEST FOR TENDER

CONTRACT NO. PWC-2021-15

REHABILITATION OF COUNTY STRUCTURE B240 FOURTH CHUTE BRIDGE

As a precaution, due to COVID-19, the County of Renfrew has made arrangements to facilitate the delivery of sealed tenders.

Sealed Tenders for the **Rehabilitation of County Structure B240 Fourth Chute Bridge located on Fourth Chute Road**, in the Townships of North Algona Wilberforce and Bonnechere Valley, on forms supplied by the County of Renfrew Public Works & Engineering (the “Department”) must be received by the County of Renfrew by **2:00 p.m.** local time on **Thursday, May 20, 2021** in one of the following three ways:

- (i) by email to the Public Works & Engineering Department’s designated email account for tenders/quotations/proposals: pwtenders@countyofrenfrew.on.ca. The subject line of the email shall clearly indicate the contract number and project.
- (ii) to a secured, locked Drop Box located at the Provincial Offences Administration Office at 7 International Drive, Pembroke, Ontario. The Drop Box is checked by the County of Renfrew on a daily basis and all sealed tenders will be date stamped as they are removed from the Drop Box by the County of Renfrew; or
- (iii) by courier addressed to Lee Perkins, C.E.T., MBA, Director of Public Works and Engineering, Corporation of the County of Renfrew, 7 International Drive, Pembroke, Ontario, K8A 6W5, between 8:00 a.m. and 4:00 p.m., Monday to Friday save that any courier deliveries on the date of the close of tender, being **May 20, 2021**, must be delivered to the aforementioned address by 2:00 p.m. On arrival the courier must call the Main Reception at 613-735-7288. The courier will be met at the front door by a representative of the County of Renfrew who will accept and date stamp the tender package. It is recommended that the sender obtain delivery confirmation of couriered documents. The County of Renfrew will not be responsible for any lost, late, or undelivered tenders.

If a requirement of the tender, a Bid Bond, certified cheque, or bank draft, in favour of and, or payable to the Corporation of the County of Renfrew, in an amount not less than the amount specified in the tender requirements must accompany each tender and the successful bidder will be required to provide a 100% Performance Bond and 50% Materials and Labour Payment Bond, as specified in the tender documents, upon execution of the contract agreement.

Bidders that wish to submit a tender for this contract must register with the Department in order to receive the tender documents and to be eligible to submit a tender. Tenders submitted by unregistered bidders will not be accepted.

Electronic PDF files of the plans, specifications and tender form are free of charge for registered bidders. Hard copy plans, Specifications and Tender forms may be obtained from the Department for a non-refundable fee of **One Hundred (\$100) Dollars**.

A public tender opening will not be held. A video of the opening will be available upon request. Bidders will be notified of the results by e-mail.

Faxed submissions will not be accepted. The lowest or any tender will not necessarily be accepted and the County of Renfrew reserves the right to award any portion of the work or none of the work.

For further information please contact:

Evelyn VanStarkenburg

Administrative Assistant

pwtenders@countyofrenfrew.on.ca

Taylor Hanrath

Acting Manager of Infrastructure

thanrath@countyofrenfrew.on.ca

9 International Drive
Pembroke, ON K8A 6W5
Phone: 613-732-4353 Toll Free: 800-273-0183

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TENDER

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PART I TENDER CALL

Sealed Tenders are invited for the execution of the works described herein.

Contract Number **PWC-2021-15**

Described as **Rehabilitation of**
County Structure B240 Fourth Chute Bridge
located on Fourth Chute Road
In the Townships of North Algona Wilberforce and
Bonnechere Valley

Tenders shall be addressed to:

**Lee Perkins, MBA, C.E.T.
Director of Public Works & Engineering
Corporation of the County of Renfrew
9 International Drive
Pembroke, ON K8A 6W5**

(Hereinafter the Corporation)

Tenders shall be received until **2:00 p.m. local time, May 20, 2021**, in the office of the Director of Public Works & Engineering, at the address given above.

Tenders received by the time, date and at the location specified above shall be opened and read in public as soon as possible after that time. Public reading of a Tender does not imply any decision by the Corporation on whether a Tender is or is not irregular.

PART II **TENDER CONDITIONS****TC-1** **Completion and Submission of Tenders**

- 1.1 The Tenderer shall complete all documents pertaining to this Contract in ink or in type.
- 1.2 If the Tenderer is a corporation, an authorized officer of the corporation shall sign the Form of Tender and shall affix the corporate seal and shall sign the Schedule of Prices attached as Schedule "A".
- 1.3 If the Tenderer is a partnership, a minimum of two partners shall sign the Form of Tender and the signatures shall be witnessed.
- 1.4 If the Tenderer is a sole proprietorship, the sole proprietor shall sign the Form of Tender and the signature shall be witnessed.
- 1.5 The Tenderer shall submit its Tender by the date and time specified in Part I of the Tender.
- 1.6 The Tenderer shall submit to the Corporation:
- (a) the Tender, comprised of the completed tender document; completed schedule of prices and tender information form;
 - (b) the Tender deposit;
 - (c) the Agreement to Bond;
 - (d) all Addenda issued by the Corporation with respect to this; Tender/Contract; and
 - (e) the project schedule.
- 1.7 This document is a Public Tender. The Tenderer is hereby advised that financial and all other pertinent information related to this Contract may be made publicly available by the Corporation.

TC-2 **Tender Information Form**

- 2.1 Tenderer shall submit the Tender on the forms supplied by the Corporation in a sealed envelope or to the Public Works and Engineering designated email account with the contract number and subject clearly indicated. A tender submission without the required tender information form may not be accepted.
- 2.2 All pages of a tender/quotation that require the signature of the bidder or agent of the bidder must be signed in ink by the bidder or agent where the tender/quotation is to be submitted in hard copy paper form, including by fax, where submission by fax is specifically permitted. Where the quotation may be submitted electronically, and the bidder chooses to submit the quotation

electronically, the signature of the bidder or agent of the bidder must be either a hand-written signature in ink or an electronic signature.

TC-3 **Tender Deposit**

3.1 The Tender must be accompanied by a bid bond (see FT-10), certified cheque or bank draft in the amount of Twenty Five Thousand Dollars (\$25,000) made payable to the Corporation and must be enclosed in the same envelope as the Tender/or submitted as part of the email submission. The original cheque or bid bond shall be submitted within five (5) business days from the two (2) lowest compliant bidders.

3.2 The Corporation shall not pay interest on Tender deposits.

3.3 The Corporation shall retain the Tender deposit of the two lowest bidders until:

- (a) the successful Tenderer has executed the Form of Agreement in accordance with Sections TC-17 and TC-21 of the Tender; and
- (b) the successful Tenderer has provided all bonding in accordance with Sections TC-14 and TC-21 of the Tender.

3.4 The Corporation shall return the deposit of unsuccessful Tenderers.

3.5 The Corporation reserves the right, at its discretion, to retain the deposit of the successful tenderer, should the successful tenderer fail to execute or complete the contract.

TC-4 **Agreement to Bond**

4.1 At the time of tendering, the Tenderer shall submit, with its Tender, an Agreement to Bond completed and executed by the Tenderer's surety. The Agreement to Bond and the Tenderer's surety shall be in the form shown on FT-5.

TC-5 **Addenda**

5.1 The Tenderer shall ensure that its name and address for receipt of addenda are included on the Corporation's list of firms to whom addenda to this Contract, if any, are to be sent. Inclusion on the Corporation's list does not absolve the Tenderer of its responsibilities set out in Section TC-11 of the Tender.

TC-6 **Work Schedule**

6.1 At the time of tendering, the Tenderer shall submit with its tender, a detailed work schedule outlining the progression and completion of the work within the time for

completion and schedule specified in this document. The detailed work schedule shall meet the requirements of GC 7.01.

The award of this tender may be subject to the adequacy of the information provided under this tender condition at the discretion of the Corporation.

TC-7 **Irregular Tenders**

7.1 The Corporation shall be the sole judge of whether or not a Tender is irregular.

TC-8 **Unbalanced Tenders**

8.1 The Tenderer shall not submit an unbalanced Tender.

8.2 The Corporation shall have the right to:

- (a) deem a Tender to be unbalanced; and
- (b) reject a Tender which it deems to be unbalanced.

TC-9 **Collusion**

9.1 The Tenderer shall not engage in collusion of any sort and, in particular, shall:

- (a) ensure that no person or other legal entity, other than the Tenderer has any interest in the Tenderer's Tender; and
- (b) prepare its Tender without any knowledge of, comparison of figures with or arrangement with any other person or firm preparing a Tender for the same work.

TC-10 **Right to Accept or Reject Tenders**

10.1 Notwithstanding any other provision in this Contract, the Corporation shall have the right to:

- (a) accept any Tender;
- (b) reject any Tender; and
- (c) reject all Tenders.

10.2 Without limiting the generality of Section TC-10.1 the Corporation shall have the right to:

- (a) accept an irregular Tender;
- (b) accept a Tender which is not the lowest Tender; and
- (c) reject a Tender even if it is the only Tender received by the Corporation.

10.3 Acceptance of the Tender shall occur at the time the Corporation awards the Tender and not necessarily at the time the award is communicated to the successful Tenderer.

TC-11 Contract Documents

11.1 The Tenderer shall obtain and review all Contract Documents listed in the Form of Tender, and all addenda issued by the Corporation pertaining to the Contract.

TC-12 Errors, Omissions and Discrepancies in the Contract Documents

12.1 If the Tenderer finds any errors or omissions in or discrepancies among the Contract Documents, it shall immediately notify the Corporation at the address specified in Part I of the Tender.

12.2 No oral explanation or interpretation by any person shall modify any of the Contract Documents.

TC-13 Irrevocability of Offer

13.1 The Tenderer shall not revoke its offer until after the expiration of ninety (90) days after the opening of Tenders by the Corporation.

13.2 If the Tenderer revokes its offer prior to the expiration of ninety (90) days after the Tender opening, the Tenderer shall forfeit its Tender deposit but this shall not prohibit the Corporation from pursuing any other legal remedy which it may have.

TC-14 Successful Tenderer - Bonds

14.1 The successful Tenderer and its surety shall provide:

- (a) a performance bond in the amount of 100% of the total Tender amount; and
- (b) a labour and material payment bond in the amount of 50% of the Total Tender amount.

14.2 The surety of the successful Tenderer and the bonds shall be to the satisfaction of the Corporation. The performance bond is to be maintained in good standing until the expiration of the warranty period.

TC-15 **Successful Tenderer - Workplace Safety & Insurance Board Certificate of Clearance**

15.1 The successful Tenderer shall provide the Corporation with a valid Workplace Safety and Insurance Board Certificate of Clearance to the satisfaction of the Corporation.

TC-16 **Successful Tenderer - Occupational Health and Safety**

16.1 The successful Tenderer will submit a statement of work and worker safety procedures to be implemented to fulfil the requirements of the Occupational Health and Safety Act (OHSa) including, but not limited to:

- (a) a copy of the corporate safety policy and manual;
- (b) safety risk assessment including specific worker safety training required for this project;
- (c) procedure for responding to and reporting of accidents (personal or traffic);
- (d) workplace safety and insurance record;
- (e) safety association affiliations; and
- (f) summary of how conformance with OHSa will be applied to employees and subcontractors.

The award of contract to the successful Tenderer is dependent on the sufficiency of the information provided.

TC-17 **Successful Tenderer - Execution of Form of Agreement**

17.1 The successful Tenderer shall execute, in duplicate, the Form of Agreement provided in the Contract Documents.

17.2 The successful Tenderer shall forward the executed Form of Agreement to the Corporation.

TC-18 **Successful Tenderer - Insurance**

18.1 The successful Tenderer shall provide the Corporation with an original Certificate of Insurance pursuant to Section OPS GC 6.03 of the General Conditions in a format satisfactory to the Corporation.

18.2 The Contractor shall carry insurance pursuant to Section OPS GC 6.03 of the General Conditions as modified herein in the amount of at least:

FIVE MILLION DOLLARS----- (\$5,000,000)

18.3 The Contractor shall carry insurance, pursuant to Section OPS GC 6.03 of the General Conditions as modified herein, which names the following as additional named insured:

The Corporation:

County of Renfrew
Department of Public Works & Engineering
9 International Drive
Pembroke, ON K8A 6W5

The Corporation is herein deemed to include the local Municipalities, Consultants and Project Managers designated to act as Agent of the County for this project.

TC-19 Successful Tenderer - Time for Completion

19.1 The successful Tenderer shall complete the work in accordance with the schedule provided by the County of Renfrew in the Notice to Commence Work. The time allowed for completion of the work shall be October 22, 2021.

19.2 The successful Tenderer shall provide an updated detailed work schedule in accordance with section GC 7.01 and the Supplemental General Conditions of Contract showing completion of all works in accordance with 19.1.

TC-20 Successful Tenderer –Liquidated Damages

20.1 If the Contractor is obliged to pay damages pursuant to the Supplemental General Conditions, the liquidated damages shall be in the amount of:

One Thousand Dollars (\$1,000) per day.

TC-21 Successful Tenderer - Submission of Documentation

21.1 The successful Tenderer shall submit the documentation required by Section TC-14, TC-15, TC-16, TC-17 and TC-18, within seven working days of the day the Corporation notifies the successful Tenderer that the documentation should be sent to the Corporation.

21.2 If the successful Tenderer fails to comply with Section TC-21.1 the Corporation may, in its sole discretion, withdraw its acceptance of the Tender and the Tenderer shall have no recourse whatsoever against the Corporation.

TC-22 **Successful Tenderer - Commencement of the Work**

- 22.1 The successful Tenderer shall not commence the work until it has received a Commence Work Order issued by the Corporation.
- 22.2 The successful Tenderer shall commence the work within seven (7) working days of the issuance of the Commence Work Order by the Corporation.

TC-23 **Statutory Holdback**

- 23.1 The Corporation will retain a Statutory Holdback in accordance with the Construction Act.
- 23.2 Subject to the requirements of the Construction Act, the Statutory Holdback due to the contractor will be released by the Corporation upon the receipt of all documents and records stipulated within the Contract Documents.

The documents may include but are not limited to:

- Release of Holdback Payment Certificate
- WSIB Clearance Certificate
- Statutory Declaration regarding payment of accounts
- Quality control records as listed in D-100-050
- Water taking records as listed in F-501C-001
- "Property Owner's Release" and "Site Selection Notification for material managed as disposable fill" as listed in OPSS 180
- Property Owner's Release Form D-100-006

TC-24 **Subcontracting by the Contractor**

- 24.1 The contractor may subcontract any part of the work in accordance with **Section GC 3.09, Subcontracting by the Contractor**, of the OPS General Conditions of the Contract. The successful tenderer must submit a list of subcontractors 10 days before the start of construction.
- 24.2 The owner reserves the right to accept or reject the subcontractor at their discretion.

TC-25 **Registering to Tender**

- 25.1 The Tenderer must register with the County of Renfrew Department of Public Works & Engineering to be eligible to receive the tender package and addenda and to submit a tender for this project.

PART III **FORM OF TENDER**

Tender by:

NAME OF TENDERER

ADDRESS OF TENDERER

after this called the Tenderer.

FT-1 **Contract Documents**

1.1 The Contract Documents for Contract Number **PWC-2021-15** are:

- (a) Tender:
 - (i) Part I - Tender Call;
 - (ii) Part II - Tender Conditions; and
 - (iii) Part III - Form of Tender

- (b) Form of Agreement

- (c) General Conditions – Ontario Provincial Standard – General Conditions of Contract OPSS.MUNI 100 Nov. 2019.

- (d) General Specifications – Ontario Provincial Standard General Specifications – Only the common standards in OPS Volumes 1 to 4 and the Municipal oriented specifications in OPS Volumes 7 and 8 shall apply to this Contract unless specified elsewhere in the Contract Documents.

- (e) Supplementary General Conditions

- (f) Special Provisions – General

- (g) Special Provisions - Item

- (h) Sketches, Drawings and appendices including agency letters of approval where applicable.

- (i) All Addenda issued pertaining to the Contract.

FT-2 **Tenderer's Declarations**

- 2.1 The Tenderer declares that it has obtained and read the Contract Documents.
- 2.2 The Tenderer declares that it understands and agrees to be bound by the Contract Documents.
- 2.3 Without limiting the generality of Section FT-2.2, the Tenderer declares that it has, at the time of tendering, fulfilled all of those obligations under the Contract which are required to be fulfilled by the time of tendering.
- 2.4 The Tenderer declares that all information which it has provided or will provide to the Corporation is true.

FT-3 **Schedule of Prices**

- 3.1 The Schedule of Prices attached as Schedule "A" is deemed to be Section FT-3.2 of the Tender and is composed of 4 pages.

FT-4 **Tenderer's Offer**

- 4.1 The Tenderer offers to do the work in accordance with the Contract Documents.
- 4.2 The Tenderer offers to do the work and to accept payment at the unit prices specified in the Schedule of Prices in Section FT-3 of the Tender, in accordance with the Contract Documents.
- 4.3 The Tenderer's total Tender price, based on the estimated quantities in the Schedule of Prices including HST, is:

_____ **DOLLARS**

(\$ _____).

This offer is made this _____ day of _____, 2021.

Signature of Witness
(Only if required by TC-1)

Signature of Tenderer

(Print name in full)

**PWC-2021-15
Rehabilitation of
County Structure B240 Fourth Chute Bridge
Townships of North Algona Wilberforce and Bonnechere Valley**

FT-5 Agreement to Bond

TO: The Municipal Corporation of the County of Renfrew
 9 International Drive
 Pembroke, ON K8A 6W5

Hereinafter the Corporation:

We, the undersigned, hereby agree to become bound as Surety for _____

for a Performance Surety totalling One Hundred Percent 100% of the Contract value and 50% of the Contract amount for payment of all labour and conforming to the Instruments of the Contract attached thereto, for the full and due performance of the works shown as described herein, if the Tender for: PWC-2021-15 - Rehabilitation of County Structure B240 Fourth Chute Bridge located on Fourth Chute Road, in the Townships of North Algona Wilberforce and Bonnechere Valley

is accepted by the Corporation.

It is a condition to this Agreement that if the above-mentioned Tender is accepted, a Performance Surety must be completed with the undersigned within seven (7) days of acceptance of the Tender related thereto, otherwise this agreement shall be null and void.

DATED this _____ day of _____, 2021.

Name of Bonding Company

Signature of Authorized Person
Signing for Bonding Company

(Company Seal)

Position

FT-6 Occupational Health and Safety Statutory Declaration

WSIB Firm Number _____

In submitting this tender/quotation, I/we, on behalf of _____
certify the following: (legal name of company)

- a) I/We have a health and safety policy and will maintain a program to implement such policy as required by clause 25 the *Occupational Health and Safety Act*, R.S.O. 1990, c.O.1, as amended (the "OHSA").
- b) For this Contract, as Constructor, I/we will fulfil the specific requirements of O.Reg. 213/91, Construction Projects, as amended.
- c) With respect to the services being offered in this tender/quotation, I/we and our proposed subcontractors, acknowledge the responsibility to, and shall:
- (i) fulfil all of the "employer" obligations under the OHSA and ensure that all work is carried out in accordance with the OHSA and its regulations;
 - (ii) ensure that adequate and competent supervision is provided as per the OHSA to protect the health and safety of workers;
 - (iii) provide information and instruction to all employees to ensure they are informed of the hazards inherent to the work and understand the procedures for minimizing the risk of injury or illness; and
 - (iv) ensure all work is carried out in accordance with the Occupational Health and Safety legislation.
- d) As employer and as Constructor for this project, I/we agree to take every precaution reasonable in the circumstances for the protection of worker health and safety, as required under the OHSA.

Dated at _____ this day of _____, 2021.

(Authorized Signing Officer)_____
(Title)

FT-7 **Accessibility Declaration**

In submitting this tender/quotation, I/we, on behalf of _____
certify the following: (legal name of company)

- a) As employer and as Constructor for this project, I/we agree to remain in compliance with the requirements of the “Accessibility For Ontarians With Disabilities Act, 2005”, including Ontario Regulation 191/11 and Ontario Regulation 429/07.
- b) I/We have viewed the County of Renfrew Multi-year Accessibility Plan located at: <https://www.countyofrenfrew.on.ca/en/county-government/resources/Documents/accessibility-plan.pdf>

Dated at _____ this day of _____, 2021.

(Authorized Signing Officer)

(Title)

FT-8 **Photograph/Video Declaration**

The County of Renfrew or its designate will be taking photos, video, and recordings throughout the construction site, which may be used for contract administration, documentation, and may be used in any and all media produced by the County of Renfrew, including the County of Renfrew’s future advertising, publications, and social media feeds.

By submitting this tender/quotation, I/we, on behalf of _____
(legal name of company)

agree that I/we grant the County of Renfrew the right to use our name, photographs, video, and recordings for such purposes as may be deemed appropriate by the Corporation or required by the Municipal Freedom of Information and Protection of Privacy Act. (MFIPPA).

Dated at _____ this day of _____, 2021.

(Authorized Signing Officer)

(Title)

FT-9 **List of Subcontractors**

The following is a list of Subcontractors which we propose to employ for this work.

SUBCONTRACTED WORK	NAME AND ADDRESS	VALUE OF WORK
1.		
2.		
3.		
4.		
5.		
6.		

FT-10 **Bid Bond**

KNOW ALL MEN BY THESE PRESENTS THAT

as Principal hereinafter called the Principal, and

a corporation created and existing under the laws of Canada and duly authorized to transact the business of Suretyship in Canada as Surety, hereinafter called the Surety, are held and firmly bound unto _____

as Obligee hereinafter called Obligee, in the amount of

_____ Dollars

(\$ _____) lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the surety bind themselves, their heirs, executors, administrators, successors and assigned, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a written tender to the Obligee, this _____ day of _____ 2021, for _____

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the aforesaid Principal shall have the tender accepted within sixty (60) days from the closing date of tender and the said Principal will, within the time required enter into a formal contract and give the specified security to secure the performance of the terms and conditions of the Contract, then his obligation shall be null and void; otherwise the Principal and the Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be excess of the former.

The Principal and the Surety shall not be liable for a greater sum than the specified penalty of this Bond. Any suit under this Bond must be instituted before expiration of six months from the date of this Bond.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond this _____ day of _____, 2021.

SIGNED AND SEALED

In the presence of

(_____)

Witness to Principal

Principal

(_____)

Surety Company

**Company Name
Return Address
Phone Number**

**Lee Perkins, MBA, C.E.T.
Director of Public Works & Engineering
Corporation of the County of Renfrew
9 International Drive
Pembroke, ON K8A 6W5**

Contract #:	PWC-2021-15 Rehabilitation of County Structure B240 Fourth Chute Bridge
Closing Date:	Thursday, May 20, 2021 at 2:00 p.m.

**REHABILITATION OF COUNTY STRUCTURE B240 FOURTH CHUTE BRIDGE
 SCHEDULE "A" OF TENDER
 FT-3.2 SCHEDULE OF PRICES**

CONTRACT NUMBER PWC-2021-15

ITEM NO.	SPEC NO.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
Rehabilitation of County Structure B240 Fourth Chute Bridge						
1	F-100C-001-PWC-2021-15	Field Office For Contract Administrator (Floor Area 20-34 m ²)	week	16.0		
2	F-100C-003 F-506C-001	Sitework	LS	1.0		
3	MUNI 182 MUNI 518 MUNI 805 F-182C-001-PWC-2021-15	Environmental Protection-ESC Plan	lump sum	1.0		
4	MUNI 182 MUNI 805 F-182C-002-PWC-2021-15	Fish and Wildlife Exclusion, Monitoring and Removal During In-Water Works	lump sum	1.0		
5	MUNI 182 MUNI 518 MUNI 539 F-518C-001	Install/Remove Cofferdam including dewatering	lump sum	1.0		
6	MUNI 491 F-491C-001-PWC-2021-15	Protection of Existing Utilities	lump sum	1.0		
7	MUNI 706 F-706C-001 F-706C-001-PWC-2021-15	Traffic Control Plan	lump sum	1.0		
STRUCTURE						
8	MUNI 203	Concrete Buttress	cubic metre	19.0		
9	MUNI 203 F-203C-001-PWC-2021-15	Rock Bolting	each	14.0		
10	MUNI 510	Removal of Asphalt Pavement from Concrete Surfaces on Structures	square metre	343.0		
11	MUNI 510 F-510C-003-PWC-2021-15	Removal, Salvage and Reinstatement of Bridge Plaque	LS	1.0		
12	PROV 740 MUNI 904	Concrete in Barrier Walls	cubic metre	1.1		
13	MUNI 904 MUNI 928 MUNI 929 MUNI 930 F-904C-001-PWC-2021-15	Repair Girder Ends	each	2.0		

REHABILITATION OF COUNTY STRUCTURE B240 FOURTH CHUTE BRIDGE
SCHEDULE "A" OF TENDER
FT-3.2 SCHEDULE OF PRICES

CONTRACT NUMBER PWC-2021-15

ITEM NO.	SPEC NO.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
14	F-904C-002-PWC-2021-15	Form and Grout Voids in Bedrock	cubic metre	5.0		
15	F-904C-003-PWC-2021-15	Seal Concrete Barrier Walls	square metre	55.0		
16	MUNI 904 F-904C-004-PWC-2021-15	Dowels into Bedrock - 15M	each	165.0		
17	MUNI 904 F-904C-004-PWC-2021-15	Dowels into Concrete - 15M	each	6.0		
18	MUNI 905	Reinforcing Steel Bar	tonne	0.030		
19	MUNI 905	Stainless Reinforcing Steel Bar	tonne	0.045		
20	MUNI 905 F-905C-001-PWC-2021-15	Galvanized Reinforcing Steel Bar	tonne	1.4		
21	MUNI 510 MUNI 908 F-908C-001-PWC-2021-15	Removal, Salvage and Reinstatement of Barrier Wall Railing End Posts	lump sum	1.0		
22	MUNI 914	Deck Surface Preparation	square metre	226.8		
23	MUNI 914	Bridge Deck Waterproofing	square metre	226.8		
24	MUNI 920 F-920C-001-PWC-2021-15	Replace Preformed Seals	metre	19.9		
25	MUNI 928	Concrete Removal-Partial Depth Type A	cubic metre	5.8		
26	MUNI 928	Concrete Removal-Partial Depth Type C	cubic metre	0.1		
27	MUNI 928 F-928C-001-PWC-2021-15	Concrete Removal Full Depth	cubic metre	1.1		
28	MUNI 930	Concrete Patch Repairs Unformed	cubic metre	5.8		
29	MUNI 930	Concrete Patch Repairs Formed	cubic metre	0.1		
30	MUNI 930 F-930C-001-PWC-2021-15	Modification to under asphalt drainage	LS	1.0		
31	MUNI 930 F-930C-002-PWC-2021-15	Concrete Refacing	cubic metre	28.0		
ROADWAY						
32	MUNI 305 F-305C-002 F-305C-004	Granular Sealing	m2	228.0		
33	MUNI 308	Tack Coat	square metre	479.0		

REHABILITATION OF COUNTY STRUCTURE B240 FOURTH CHUTE BRIDGE
SCHEDULE "A" OF TENDER
FT-3.2 SCHEDULE OF PRICES

CONTRACT NUMBER PWC-2021-15

ITEM NO.	SPEC NO.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
34	MUNI 310 F-310C-005 F-310C-010 F-310C-013 F-310C-015 F-310C-001-PWC-2021-15	FC1 Superpave 12.5mm Level C (PG 58-34)	tonne	53.1		
35	MUNI 312	Asphalt Spillways	metre	8.0		
36	MUNI 314 F-314C-015 F-314C-001-PWC-2021-15 F-1010C-001-PWC-2021-15	Granular A	tonne	404.1		
37	MUNI 353	Concrete Curb and Gutter	metre	32.0		
38	MUNI 510	Cutting Existing Pavement	metre	52.0		
39	MUNI 510 F-510C-006 F-510C-030	Remove of Asphalt Pavement - Partial Depth	square metre	15.6		
40	MUNI 206 MUNI 510 F-510C-001-PWC-2021-15	Earth Excavation Grading (Including Removals)	LS	1.0		
41	MUNI 510 F-510C-002-PWC-2021-15	Removal of Steel Beam Guide Rail	metre	47.0		
42	PROV 710 F-710C-001-PWC-2021-15	Pavement Marking Reinstatement	lump sum	1.0		
43	MUNI 721	Steel Beam Guiderail Structural Connections	each	4.0		
44	MUNI 721 F-721C-001-PWC-2021-15	Single Rail Steel Beam Guide Rail, including private entrance treatment	metre	83.5		
45	MUNI 721 F-721C-001-PWC-2021-15	Single Rail Steel Beam Guide Rail with Channel	metre	30.5		
LANDSCAPING						
46	MUNI 511 F511C-008	Rip-Rap over Geotextile	square metre	22.4		
47	PROV 802	Topsoil Imported (100mm thick)	cubic metre	8.0		
48	PROV 804	Seed and Mulch	square metre	785.0		

Total of Above

13% HST:

Total Tender Amount:

REHABILITATION OF COUNTY STRUCTURE B240 FOURTH CHUTE BRIDGE
SCHEDULE "A" OF TENDER
FT-3.2 SCHEDULE OF PRICES

CONTRACT NUMBER PWC-2021-15

This offer is made this _____ day of _____, 2021

Contractor

Signature of Tenderer

(Print name in full)

SECTION B
FORM OF AGREEMENT

This Form of Agreement witnesses that a Contract was made as of the _____ day of _____, 2021.

BETWEEN:

(after this called the "Contractor")

AND:

**The Municipal Corporation of the County of Renfrew
9 International Drive
Pembroke, ON K8A 6W5**

(after this called the "Corporation")

AND WITNESSES that the Contractor and the Corporation agree as follows:

FA-1 The Contractor shall perform the following work:

Contract Number **PWC-2021-15**

Described as **Rehabilitation of**

County Structure B240 Fourth Chute Bridge

located on Fourth Chute Road

In the Townships of North Algona Wilberforce and

Bonnechere Valley

FA-2 The Contractor shall perform the work in accordance with the Contract Documents listed in the Tender including the following Addenda:

Addendum No. _____ dated _____, 2021.

Addendum No. _____ dated _____, 2021.

Addendum No. _____ dated _____, 2021.

Addendum No. _____ dated _____, 2021.

FA-3 The Corporation shall pay the Contractor in accordance with the unit prices in the Schedule of Prices in the Tender pursuant to the Contract Documents.

FA-4 The provisions of the Contract Documents shall attribute to the benefit of and be binding upon the Contractor and the Corporation and their respective heirs, legal representatives, successors and assigns.

FA-5 Acceptance of the Contractor's offer by the Corporation and execution of this agreement by the Contractor, shall constitute a legally binding agreement between both parties.

IN WITNESS WHEREOF the Contractor has executed this Form of Agreement in the manner required by the Tender.

Signature of Witness
(Only if required by TC-1)

CONTRACTOR

Municipal Corporation of the County of Renfrew

DEBBIE ROBINSON, WARDEN

PAUL MOREAU, CAO/CLERK

SECTION C
SUPPLEMENTAL
GENERAL CONDITIONS

INDEX FOR SECTION 'C' – SUPPLEMENTAL GENERAL CONDITIONS

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SECTION GC 1.0 – INTERPRETATION

Section GC 1.0 – Interpretation is hereby amended and / or extended as follows:

GC 1.02 Abbreviations

Subsection GC 1.02 is hereby extended by the addition of the following:

OHBDC - Ontario Highway Bridge Design Code. Latest revision and amendments thereto.
CHBDC – Canadian Highway Bridge Design Code.

GC 1.04 Definitions

Subsection GC 1.04 is hereby extended by the addition of the following:

Contract Award – The Contract shall be interpreted to be awarded on the date the Contract has been executed by the Warden and Clerk of the County.

Corporation – The Municipal Corporation of the County of Renfrew.

County – The Municipal Corporation of the County of Renfrew.

Council – The Council of the County of Renfrew.

Director – The duly appointed Director of Public Works & Engineering of the County or his designate.

Municipality – The Municipal Corporation of the County of Renfrew.

Operations Committee – The Committee of County Council appointed to oversee the operations of the County of Renfrew Department of Public Works & Engineering.

Sewer – A conduit which has been designed to carry storm waste, sanitary waste or both and which is designated as a sewer in the drawings or Contract documents.

SECTION GC 2.0 – CONTRACT DOCUMENTS

Section GC 2.0 – Contract Documents is hereby amended and / or extended as follows:

GC 2.01 Reliance on Contract Documents

Subsection GC 2.01 is hereby deleted in its entirety and replaced by the following:

- .01 The Contractor also declares that in tendering for the work and in entering into the Contract it did not and does not rely on the accuracy of any geo-technical information provided by the Corporation. The Tenderer acknowledges that all geo-technical information provided by the Corporation is for information only and the Corporation makes no representation or warranty as to the accuracy of the information.
- .02 The Contractor also declares that in tendering for the work and in entering into the Contract it did not and does not rely upon information furnished by the Corporation or any of its servants or agents respecting the location or depth of underground utilities or services or the location of aerial utilities. The Contractor shall not make claim against the Corporation for damages or extra work resulting from the Contractor's reliance upon information furnished by the Corporation or any of its servants or agents respecting the location or depth of underground utilities or services or the location of aerial utilities.
- .03 The Contractor shall review all information provided by the Corporation or any of its servants or agents and shall immediately contact the Director if any of the information provided is not or does not appear to be complete.

SECTION GC 3.0 – ADMINISTRATION OF THE CONTRACT

Section GC 3.0 – Administration of the Contract is hereby amended and / or extended as follows:

GC 3.01 Contract Administrator's Authority

Subsection GC 3.01 is hereby extended by the addition of the following:

- .18 The Director of Public Works & Engineering shall have overall authority over the Contract and shall be the ultimate owner's representative. Notwithstanding any other provisions of the General Conditions, the Director shall be final authority in the event of a dispute between the Contractor and the Contract Administrator and his decisions shall be final.

GC 3.02 Working Drawings

Subsection GC 3.02 is hereby extended by the addition of the following:

- .08 Where shop drawings, design calculations or working drawings are required by the specifications, the Contractor shall, in all cases, submit two copies for review of which one copy shall be returned to the Contractor. The drawings shall conform in size to the Corporation's Contract drawings. Subsequent to the final review by the Corporation and prior to the final acceptance of the work, the Contractor shall provide to the Corporation one chronoflex of all drawings for components permanently incorporated into the work. These chronoflex drawings shall include all revisions and shall reflect the as-built condition.

SECTION GC 4.0 – OWNER’S RESPONSIBILITIES AND RIGHTS

Section GC 4.0 – Owner’s Responsibilities and Rights is hereby amended and / or extended as follows:

GC 4.01 Working Area

Subsection GC 4.01 is hereby extended by the addition of the following:

- .03 The Contractor shall not designate areas within the limits of the work or the road allowance for storage of its equipment and materials or the erection of offices or sheds or both without the prior approval of the Contract Administrator. Neither equipment nor materials shall be stored within four metres of the travelled portion of any roadway. Notwithstanding the foregoing, the Contractor shall at his own expense remove any equipment or materials, which in the Contract Administrator's opinion constitutes a traffic hazard. The Contractor shall not make any claim for extra compensation if it makes arrangements to store equipment or materials outside the limits of the work or the road allowance. The Contractor cannot close any road without the approval of the Director of Public Works & Engineering.

The Corporation shall be responsible for informing police, fire, and public transportation departments of any work which will cause disruption in routes or schedules. The Contractor must provide the Corporation 48 hours minimum advance notice of any scheduled disruption.

The Contractor shall not operate or place unlicensed vehicles or construction equipment within 3.5 metres of a lane carrying traffic. If, in the sole discretion of the Contract Administrator, it is necessary to operate or place unlicensed vehicles or construction equipment closer than 3.5 metres to a lane carrying traffic, the Contractor shall erect delineators along the edge of the travelled lane in accordance with the Ontario Traffic Manual Book 7.

The Contractor shall not operate tracked vehicles on bridge decks without the prior written approval of the Director of Public Works & Engineering.

GC 4.05 Default by the Contractor

Subsection GC 4.05 is hereby deleted in its entirety and replaced by the following:

- .01 The Corporation may find the Contractor in default of the Contract if the Corporation certifies that sufficient cause exists to justify such action. Such termination of employment may be made:
- a) If the Contractor should be adjudged as bankrupt, or

- b) If he should make a general assignment for the benefit of his creditors, or
- c) If a receiver should be appointed on account of his insolvency, or
- d) If he should take the benefit of any Act relating to insolvent debtors, or
- e) If a winding up order be made against the Contractor, or
- f) If he should refuse or fail to supply enough plant, properly skilled labour or proper materials after having received seven (7) days notice in writing from the Corporation to so do, or
- g) If he should fail to make prompt payment to subcontractors and suppliers, or
- h) If he should persistently disregard laws, ordinances or the instructions of the Corporation, or
- i) If he should otherwise be guilty of substantial violation of the provisions of the Contract.

GC 4.10 Termination of the Contract

Subsection GC 4.10 is hereby extended by the addition of the following:

- .03 Should the Corporation terminate the employment of the Contractor, as provided in Subsection (a) he shall give the Contractor seven (7) days written notice of such termination of employment.

Notwithstanding the general requirements of GC 4.0, the following additional requirements shall apply:

GC 4.14 Prosecution of the Contract

- .01 Notwithstanding the time allowed for completion of the work, if, in the opinion of the Director of Public Works & Engineering, the rate of progress of any part or parts of the work, or the rate of progress during any periods during which the work is being carried on or is required to be carried on is unsatisfactory, and if amounts are payable by the Corporation in respect of site supervision of the work, traffic control, compensation for damages by reason, in the opinion of the Director, of such unsatisfactory rate of progress, the Contractor shall be liable to the Corporation for the payment of such amounts and such amounts may be deducted by the Corporation from any money due or that may become due to the Contractor under the Contract.

GC 4.15 Relocation of Utilities

- .01 Except as otherwise provided in this Contract, the removal, realignment or change of the location or position of any utility or service, or component part of either, shall not be at the Contractor's expense.
- .02 The Contractor shall strip or uncover and support or sustain any utility or service, or component part of either, before removal or during realignment or change at the Contractor's expense.
- .03 Should the location or position of any gas or water pipe public or private sewer or drain, subway, conduit, railway or other structure be such as, in the opinion of the Director, to require its removal, realignment or change; such removal, realignment or change shall, subject to the provisions of **Subsection GC 7.12**, be without cost to the Contractor for the work of removal, realignment or change only. However, such structure shall be stripped or uncovered and supported or sustained by the Contractor at his own cost and expense before such removal or before and after such realignment or change as constituting part of the Contract. The Contractor shall not become entitled to claim any damage or extra compensation from or on account of any delay due to removal or rearrangement. The Contractor shall be entitled to an extension of the time for the equivalent time that the work has been delayed by any delay in the removal, realignment or change of any such obstruction.

SECTION GC 5.0 – MATERIAL

Section GC 5.0 – Material is hereby amended and / or extended as follows:

GC 5.01 Supply of Material

Subsection GC 5.01 is hereby extended by the addition of the following:

.02 Receipt of Contractor Supplied Materials

Upon the request of the Contract Administrator, the Contractor shall give the Contract Administrator a copy of delivery notes regarding all materials supplied by the Contractor delivered to the site. The delivery notes shall state:

- a) the exact quantity and quality of the materials delivered;
- b) the date and time of departure from source of supply;
- c) the date and time of delivery;
- d) the truck identification number; and
- e) work site.

The Contractor shall give the delivery notes to the Contract Administrator at the time of delivery. If the Contractor fails to give the delivery notes to the Contract Administrator, the Corporation may refuse to accept delivery of the material.

The Contractor shall be responsible for the acceptance of materials at the work site. If any representative of the Corporation accepts the material delivered to the work site, such acceptance shall not be proof of the quality or quantity of materials delivered.

.03 Testing

The Contractor is hereby advised that all costs associated with Quality Control (QC) including testing of all material shall be borne by the Contractor.

All costs associated with Quality Assurance (QA) by the Contract Administrator including testing of all materials shall be borne by the Corporation.

.04 Design of Asphalt and Concrete Mixes

The Contractor shall, at its own expense, design concrete and asphaltic mixes. The Contractor's design shall conform to the requirements for the class of concrete and type of asphalt mix specified in the Contract and the design shall be subject to the approval of the Director. Such approval by the Director shall not release the Contractor from any responsibilities for the adequacy or soundness of the concrete or asphalt mix.

GC 5.03 Rejected Material

Subsection GC 5.03 is hereby extended by the addition of the following:

- .02 The Contractor shall at any time during the progress of the work or during the period of guaranteed maintenance, make such opening through any part of the work to such an extent as directed by the Contract Administrator for the purposes of inspection of the whole or part of the work. Should the work so opened be found to be faulty in respect of the requirements of the Contract, the whole expense of opening, inspection, replacement and restoration shall be borne by the Contractor. Should the work so opened to inspection be found by the Contract Administrator to be in satisfactory condition and in full compliance with the requirements of the Contract, then the said expenses shall be borne by the Corporation.

SECTION GC 6.0 – INSURANCE, PROTECTION, AND DAMAGE

Section GC 6.0 Insurance, Protection, and Damage is hereby amended and / or extended as follows:

GC 6.01 Protection of Work, Persons, and Property

Subsection GC 6.01 is hereby extended by the addition of the following:

.06 Dust Control

Without limiting the generality of **Subsection GC 6.01**, the Contractor shall prevent excessive amounts of dust from entering the air as a result of the work. The amount of dust which is excessive shall be in the sole discretion of the Contract Administrator. The Contractor shall use wet type blades and grinders with sufficient water to control dust when the work requires the Contractor to saw or grind asphalt or concrete. The Contractor shall pay for all measures taken to control dust except as otherwise provided in the Contract.

.07 Protection of Underground Installations

Without limiting the generality of **Subsection GC 6.01**, the Contractor shall protect all sewers, water mains, service pipes and other utilities from freezing and from any damage whatsoever. The Contractor shall immediately report any leak in or damage to sewer, water mains, service pipes, or other underground utilities or services, however caused to the Department or utility having jurisdiction and the Contract Administrator. The Contractor shall protect and insulate sewer, water mains, service pipes, repair water and service pipes and utilities which it damages, and thaw frozen water, service pipes at its own expense. The Contractor shall perform all work related to water and service pipes and utilities to the satisfaction of the Contract Administrator and the organization having jurisdiction and at his cost.

.08 Traffic and Directional Signage

Any damage to existing permanent or temporary signage by the Contractor shall be rectified to the satisfaction of the Contract Administrator and at the Contractor's expense.

.09 Trees and Vegetation

Any trees damaged on private property, shall be removed and replaced to the Corporation's satisfaction, at the Contractor's expense. Any trees within 6 metres of any trenching, which, in the opinion of the Contract Administrator, should be removed, will be removed and disposed of including stumps and roots, by the Contractor at his expense, to the satisfaction of the Ministry of the Environment.

All trees, shrubs, and other vegetation, as designated by the Contract Administrator to be saved, shall be carefully protected from danger or injury during all phases of the construction operations. The Contractor may be required to cut only certain selected trees on certain areas leaving the rest of the trees in the indicated areas unharmed.

GC 6.03.02 General Liability Insurance

Subsection GC 6.03.02 is hereby extended by the addition of the following:

.08 Approval of Insurance

The Corporation's receipt and acceptance of a Certificate of Insurance is in no way an approval of the Contractor's policy or policies of insurance, and does not affect the obligations to insure set out in this section.

.09 Blasting Endorsement

If the Contractor is to engage in blasting operations, it shall ensure that it obtains an endorsement to its general liability insurance which overrides the blasting exclusion in that general liability insurance so that the Contractor is insured for its blasting operations until the date of acceptance of the entire work by the Director of Public Works & Engineering.

SECTION GC 7.0 – CONTRACTOR'S RESPONSIBILITIES AND CONTROL OF THE WORK

Section GC 7.0 – Contractor's Responsibilities and Control of the Work is hereby amended and / or extended as follows:

GC 7.01 General

Subsection GC 7.01, Item .13, is hereby extended by the addition of the following:

.13 The Contractor shall prepare the Detailed Work Schedule in bar chart form. The Detailed Work Schedule shall display the following items against a weekly time scale representing the total time period for completion of the work:

- a) The dates of, and time periods required for, all major construction activities included in the Work;
- b) The dates of critical activities and events; and
- c) The dates of important milestones in the completion of the Work.

The Contractor shall update both the Detailed Work Schedule on a monthly basis or, if directed to do so by the Contract Administrator, at more frequent intervals.

The submission and updating of the Detailed Work Schedule form an integral part of the Work. Should the Contractor fail to meet its obligations to submit and update the Detailed Work Schedule, the Corporation, in its sole discretion, may withhold monthly payments under the Contract until the obligations are met.

GC 7.12 Notices by the Contractor

Subsection GC 7.12 is hereby extended by the addition of the following:

- .03 The Corporation may notify householders likely to be affected by the work of the name and telephone number of the Contractor and the expected duration of construction. The Corporation may advise these householders to contact the Contractor directly with respect to any inquiries related to the work. The Contractor shall respond to these inquiries or problems promptly, courteously and truthfully.

GC 7.16 Warranty

Subsection GC 7.16 is hereby removed in its entirety and replaced by the following:

- .01 The Contractor warrants that the work shall, for a period of one (1) year from the date of total performance of the Contract, be free of any defects or deficiencies or both to the satisfaction of the Director of Public Works & Engineering.
- .02 The Contractor shall correct promptly, at its own expense and to the satisfaction of the Director, any defects or deficiencies in the work which appear prior to and during the period of one (1) year from the date of total performance of the work or such longer periods as may be specified for certain products or work. The determination of the existence of a defect or deficiency in the work shall be in the sole discretion of the Director.
- .03 If the Contractor fails to correct the defect or deficiency or both, or fails to correct it promptly, as determined by the Director, the Corporation may correct the defect or deficiency or both. All monies payable to the Corporation by the Contractor under any stipulation herein may be retained out of any monies then due, or which may become due, from the Corporation to the Contractor under this or any other Contract with the Corporation, or otherwise howsoever, or may be recovered from the Contractor or his surety, in any court of competent jurisdiction, as a debt due to the Corporation and the Director shall have full power to withhold any estimate or certificate, if circumstances arise which may indicate to them the advisability of so doing though the sum to be retained may be unascertained.

- .04 The Corporation shall give the Contractor twenty-four (24) hours written notice of its intention to correct the defect or deficiency or both itself prior to the start of the corrective work.

Section GC 7.0 – Contractor's Responsibilities and Control of the Work is hereby further extended by the inclusion of the following additional requirements:

GC 7.19 Inspection

"No work shall commence without on-site inspection by the Contract Administrator or his designate."

GC 7.20 Spills and Discharge of Deleterious Materials

- .01 The Contractor shall forthwith report to the Contract Administrator:
- a) spills or discharges of pollutants or contaminants under the control of the Contractor; and
 - b) spills or discharges of pollutants or contaminants that are as a result of the Contractor's operation that cause or are likely to cause adverse affects. Such spills or discharges and their adverse affects shall be as defined in the Environmental Protection Act, R.S.O. 1990, as amended and all regulations thereto.
- .02 The Contractor shall report forthwith to the Contract Administrator any spill or discharge of liquid, other than accumulated rain water, from luminaries, internally illuminated signs, lamps, and liquid-type transformers, which are under the control of the Contractor.
- .03 The Contractor shall assume, unless otherwise directed by the Contract Administrator, that all spills or discharges from luminaries, internally illuminated signs, lamps, and liquid-type transformers contain PCBs.
- .04 The reporting requirements of this section shall not relieve the Contractor of his legal responsibilities with respect to any municipal, provincial or federal legislation.
- .05 The Contractor shall ensure that no contamination, waste or other substances which may be detrimental to marine life or quality of water shall enter any water course as either a direct or indirect result of construction and the Contractor shall meet all requirements of Government authorities or agencies with respect to environmental protection.
- .06 The Contractor shall be prepared to immediately clean up any spills of contamination, waste or other substances which may be either detrimental to marine life or quality of water. In the event of a spill, the Contractor shall immediately commence a clean up

operation. The Contractor shall be liable for all damages and/or charges laid which result, either directly or indirectly, from the spill, or contamination of any kind which results from his construction operations.

- .07 The Contractor shall exercise reasonable care to ensure that sediment run-off does not enter any watercourse. Berms, silt screens and other works shall be constructed as required and at appropriate locations to ensure that turbidity shall be kept to a minimum as determined by the Government authorities and agencies.
- .08 The Contractor shall submit a proposed plan indicating how he intends to provide for securing the site against erosion and river siltation problems for the full duration of the construction period, i.e., from start of construction to final completion.
- .09 The Contractor shall immediately clean up and dispose of any floating debris which accumulates on the water course bed or banks as a result of construction.
- .10 The Contractor shall not make any claim for extra compensation for the cost of fulfilling the obligations set out herein.

GC 7.21 Disposal of Surplus Materials

- .01 Where the Contractor is responsible for the removal and/or disposal of any material from the site; he shall do so in an environmentally acceptable manner to the satisfaction of the Contract Administrator and the regulatory authorities having jurisdiction. Payment under the Contract shall be full compensation for doing the work and shall include the costs of all fees for disposal and regulatory approvals.

GC 7.22 Site Meetings

- .01 The Contractor shall attend meetings with respect to the work as may be directed by the Contract Administrator. The Contractor shall not claim any extra compensation for attendance at these meetings.

GC 7.23 Contamination of Sub-base

- .01 The Contractor shall be held responsible for contamination of sub-base material and damage to subgrade by his forces once work commences on this project. All such contamination or damage shall be rectified by the Contractor at its expense to the satisfaction of the Contract Administrator.

GC 7.24 Traffic Control

- .01 The Contractor shall be responsible for the maintenance of signs, delineators, barricades, lanterns and flashing lights at all times. This maintenance shall include a minimum of two

inspections per day of all signs, delineators, barricades, lanterns and flashing lights. These inspections shall occur at least once in the morning and once in the evening.

- .02 The Contractor's responsibility for signs, delineators, barricades, lanterns and flashing lights includes signs, delineators, barricades, lanterns and flashing lights which may, in the discretion of the Contract Administrator, be required beyond the limits of the work site.
- .03 If any portion of the work requires signs to be provided by the Corporation or changes to existing signs of the Corporation, or the municipal organization having jurisdiction, the Contractor shall give the Corporation at least eight (8) hours notice prior to the start of that portion of the work. This notice shall be given on a working day. The Contractor shall not make any claim for extra compensation for delays or costs arising from its failure to comply with this eight (8) hour notice requirement.

GC 7.25 Cooperation with Utilities and Municipal Authorities

- .01 Without limiting the generality of this section, the Contractor shall:
 - a) co-operate with municipal authorities and utility companies in the relocating or altering of utilities or services;
 - b) if directed to do so by the Contract Administrator, modify its method of construction to protect utilities or services;
 - c) if directed to do so by the Contract Administrator, remove, realign or change the location or position of any utility or service, or component part of either; and
 - d) strip or uncover and support or sustain any utility or service, or component part of either, to safeguard the utility or service from damage before removal or during realignment or change.

GC 7.26 Work Outside Normal Working Hours

- .01 The Contractor shall not work at night, except:
 - a) if the Contractor requests and receives the prior written approval of the Director of Public Works & Engineering to work at night; or
 - b) if the Director directs the Contractor to work at night.
- .02 The term "night" shall be defined as any time between the hours of 7:00 p.m. and 7:00 a.m. for the purposes of the Contract. The Contractor shall not make any claim for extra compensation for work done at night.
- .03 The Contractor shall, as far as is practicable, refrain from working on a day which is not a working day. If the Contractor intends to work on a day which is not a working day the Contractor shall give the Contract Administrator written request of this intention at least four (4) working days before that day. The notice shall state the date and place of the

work to be done. If the Contract Administrator grants permission to the Contractor to work on Saturdays, Sundays, or Statutory Holidays, the Contractor shall compensate the owner for the actual wages of the Contract Administrator and the OPSS 127 rates for the vehicle used.

- .04 If the Contractor fails to notify the Contract Administrator as set out in this section, this failure shall be deemed to be notice that no work requiring the presence of any representative of the Corporation is to be done on that day. The Contractor shall not make any claim for extra compensation for work done on a day which is not a working day.

SECTION GC 8.0 – MEASUREMENT AND PAYMENT

Section GC 8.0 – Measurement and Payment is hereby amended and / or extended as follows:

GC 8.02.03.01 Progress Payment Certificate

Subsection GC 8.02.03.01.04 is amended by the addition of the following:

Subject to the submission of testing and commissioning results to the improvement or of services or materials supplied under the contract.

GC 8.02.09 Liquidated Damages

Subsection GC 8.02.09 is hereby extended by the addition of the following:

- .02 The Contractor shall complete the work by the time specified in the Tender unless an extension of time is granted pursuant to **Subsection GC 3.06**. If an extension of time is not granted, and the Contractor does not complete the work by the specified time, the Contractor shall pay the Corporation, as liquidated damages, the per diem amount set out in the Tender.
- .03 If the Director grants the Contractor an extension of time pursuant to **Subsection GC 3.06**, the Contractor shall complete the work by the revised specified time for completion. If the Contractor fails to complete the work by the revised specified time, the Contractor shall, from the day after the revised specified time, pay the Corporation, as liquidated damages, the per diem amount set out in the Tender.
- .04 The Corporation, following notice in writing to the Contractor of its intention to do so, may withhold the amount due as liquidated damages from any monies due to the Contractor under this or any Contract.
- .05 The Corporation has made a reasonable effort to estimate the amount of damages sustained by the Corporation as a result of the Contractor's failure to complete the works

within the specified time or by the specified date. In executing the Contract, the Contractor agrees that the amount is fair and reasonable.

GC 8.02.10 Workplace Safety & Insurance Board Certificate of Clearance.

.01 The Contractor shall ensure that the Contract Administrator has a valid Workplace Safety & Insurance Board Certificate of Clearance on file as a condition of any payment.

In addition to the requirements of the General Conditions as amended or extended by these Supplemental General Conditions, the following requirements shall apply:

LANGUAGE OF THE CONTRACT

The language of the Contract shall be English.

OWNERSHIP OF DOCUMENTS

All designs and documents, including all drawings, specifications models and similar items supplied by the Corporation are its property. Such documents are not to be used on other work, and shall be returned by the Contractor to the Contract Administrator on completion of the works.

SECTION D
SPECIAL PROVISIONS GENERAL

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The Contractor is to schedule his operation in such a manner as to cause the least interference to vehicular and pedestrian traffic.

Traffic Management Plan

The Contractor shall provide a Traffic Management Plan to the Contract Administrator a minimum of two weeks prior to construction showing proposed traffic controls at various stages of his operation based on the following minimum requirements:

- Access to all private residences and commercial businesses shall be maintained for the duration of the Contract.

Restriction on the Use of Construction Equipment and Unlicensed Vehicles

Unlicensed vehicles and construction equipment shall not travel, work or stop within 4 m of a lane carrying traffic except where construction operations necessitate the working area be less than 4 m from traffic, in which case the Contractor shall erect delineators along the edge of the travelled lane, in accordance with GC 7.07 Maintaining Roads and Detours, of the OPS General Conditions of Contract. In no case shall the distance between traffic and working area be less than 3.5 m.

Open Excavation

The Contractor shall schedule his work so that there will be no open excavation adjacent to or crossing a lane carrying traffic overnight and on non-working days. Excavations within 4 m of lanes carrying traffic shall be backfilled with the specified material up to profile grade and compacted prior to closing down operations or protected with concrete barriers and delineations to the satisfaction of the Contract Administrator.

Traffic Signing

The Contractor shall supply and maintain signs, delineators, barricades, flashing lights to mark approaches to the work site to the satisfaction of the Contract Administrator. All traffic control signs and associated operations shall conform to the requirements set out in the Ontario Traffic Manual (OTM).

Site Maintenance

The construction site access to the private residence and commercial businesses and temporary lanes shall be maintained in a satisfactory condition. The Contract Administrator may direct that the construction site access to commercial businesses and temporary lanes be graded a minimum

of once daily including weekends. Additional grading may be required during inclement weather or heavy traffic conditions.

All costs associated with the maintenance of the temporary lanes, access to the private residence and commercial businesses including supply and placement of additional granular materials as directed by the Contract Administrator shall be paid for under the Contract Unit Price for the granular 'A' item.

Location and Storage of Material and Equipment

Materials shall not be stored within 4 m of the travelled portion of any roadway. Equipment shall not be stored within 4 m of the travelled portion of any roadway.

Notwithstanding the foregoing, the Contractor shall, at the Contractor's expense, remove any equipment or material which, in the opinion of the Contract Administrator, constitutes a traffic hazard.

Section GC 7.07.07 Amendment

Section GC 7.07.07 Maintaining Roads and Detours of the OPS General Conditions is deleted. All Contractors' costs associated with protection of public traffic and maintaining the work site are deemed to be included in the tender prices unless a specific item is set up in the Tender Form.

D-100-002

IDENTIFICATION OF LOCAL MOE OFFICE

March 2019

Notification to the Ministry of the Environment, Conservation and Parks (MOECP) that is required elsewhere in this Contract shall be provided to the MOECP Office in Ottawa at the following address:

Ministry of the Environment, Conservation and Parks
 Ottawa District Office
 Unit 103, 2430 Don Reid Drive
 Ottawa, Ontario
 K1H 1E1

Telephone: (613) 521-3450 ext 224
 (800) 860-2195

Attn: Tara M. MacDonald, District Manager

D-100-003**DUST SUPPRESSION**January 2014

The Contractor shall take such steps as may be required to prevent dust nuisance resulting from the Contractor's operations either within the right-of-way or elsewhere or by public traffic where it is the Contractor's responsibility to maintain a roadway through the work.

Where the work requires the sawing of asphalt or the sawing or grinding of concrete, blades and grinders of the wet type shall be used together with sufficient water to prevent the incidence of dust, wherever dust would affect traffic or wherever dust would be a nuisance to residents of the area where the work is being carried out. The cost of all such preventative measure shall be borne by the Contractor.

The cost of supplying and placing water to reduce the dust caused by traffic on a roadway which is the Contractor's responsibility to maintain for public traffic, shall be included in the Contract prices for the items for which dust suppression is required.

Payment for all labour, equipment, and materials to do the work for dust control and water for compaction shall be included in the applicable Tender Item(s).

D-100-004**WORK SCHEDULE**December 2015

The Contractor shall submit a Detailed Work Schedule as part of their submission when tendering. This submission schedule is to be dated and signed.

The Contractor shall prepare the Detailed Work Schedule in a bar chart format, which shall display the following items on a weekly time scale representing the total time period for the completion of the Work:

- i) the dates of, and time periods required for, all major individual construction activities included in the Work;
- ii) the dates of critical activities and events; and
- iii) the dates of important milestones in the completion of the Work.

The successful Contractor shall update the Detailed Work Schedule on a monthly basis, or if directed to do so by the Contract Administrator, at more frequent intervals.

The submission and updating of the Detailed Work Schedule form an integral part of the Work. Should the Contractor fail to meet its obligations to submit and update the Detailed Work Schedule, the Contract Administrator, at its sole discretion, may withhold monthly payments under the Contract until the obligations are met.

D-100-005**MEASUREMENT & PAYMENT – LUMP SUM ITEMS**March 2017

The Measurement and Payment provisions of all applicable Ontario Provincial Standard Specifications are hereby deleted for lump sum items. No separate measurement of payment will be made for work covered by these specifications. Payment for all labour equipment and materials required to do the work shall be included in the lump sum price bid for the work.

D-100-006

PROPERTY OWNER'S RELEASE FORM

April 2021

Property Owner's Release of Privately-owned Land Used by the Contractor

Upon completion of the Contract, the Contractor shall provide the Municipal Corporation of the County of Renfrew with a copy of this form of release signed by the Owner of each privately owned land used by the Contractor as follows:

Date: _____

TO: Director of Public Works & Engineering
County of Renfrew
Department of Public Works & Engineering
9 International Drive
Pembroke, ON K8A 6W5

Subject: Contract No. : **PWC-2021-15**

Contract Description: **Rehabilitation of County Structure B240 Fourth Chute Bridge**

Dear Sir:

I hereby certify that _____ have fulfilled the terms of our agreement and have left my property in satisfactory condition.

I have accepted their final payment and release the County of Renfrew.

Yours very truly,

(Print Name)

(Signature)

(Address of used land)

Final payment will not be paid to the Contractor until all the applicable forms of release have been signed by the Owner of each property used by the Contractor, and have been received by the County of Renfrew.

D-100-007**MAILBOXES AND SIGNS**

March 2010

After the completion of the new asphalt and shoulders, existing mailboxes will be reset to a position in agreement with Canada Post and County of Renfrew Guidelines.

All directional signage and civic address signage is to be maintained and/or temporarily relocated as necessary for the duration of the project.

Any signs that are removed during the construction period are to be reset as soon as possible. All costs borne by these requirements are to be included in the various associated Tender Items.

D-100C-010-PWC-2021-15**ROAD CLOSURE**

April 2021

The road may be closed to traffic for no more than one hundred and twenty (120) consecutive days. The Contractor shall install, maintain, and remove upon completion all required detour signage. The Contractor must submit the proposed detour route to the County fourteen (14) days prior to the start of this contract. The Contractor shall be responsible to obtain the approval of the various road authorities for the detour route and all relevant signage required to be erected. The Contractor will be required to develop and submit to the County a traffic control communications plan which includes the notification of emergency services and but is not limited to the following:

Townships of North Algona Wilberforce and Bonnehchere Valley	OPP
Local Fire Department	School Boards
Local Residents and Businesses	Media Outlets
Canada Post	Waste Management Companies.

D-100-011-PWC-2021-15**OCCUPATIONAL HEALTH AND SAFETY ACT COMPLIANCE**

April 2021

In accordance with the Occupational Health and Safety Act, R.S.O. 1990, C.S.30, the Contractor is advised of the presence of the following Designated Substances.

Substance (Ontario Regulation Number)	Location
Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05)	N/A
Benzene (O. Reg. 490/09)	Vehicle Emission
Mercury (O. Reg. 490/09)	Vehicle Emission
Vinyl Chloride (O. Reg. 490/09) Coke Oven Emissions (O. Reg. 490/09) Ethylene Oxide (O. Reg. 490/09)	Vehicle Emission

Substance (Ontario Regulation Number)	Location
Acrylonitrile (O. Reg. 490/09) Isocyanates (O. Reg. 490/09)	
Silica (O. Reg. 490/09)	Concrete, Granular, Blasting Medium, Throughout site
Arsenic (O. Reg. 490/09)	Vehicle Emission, Throughout site
Lead (O. Reg. 490/09)	Vehicle Emission
Bats and Bird droppings	Throughout site

The Contractor is advised that the Designated Substances silica (O. Reg. 490/09), lead (O. Reg. 490/09) and arsenic (O. Reg. 490/09) are generally present throughout the Working Area, occurring naturally or as a result of vehicle emissions. Exposure to these substances may occur as a result of activities by the Contractor such as sweeping, grinding, crushing, drilling, blasting, cutting, and abrasive blasting.

D-100-015

EXISTING UTILITIES AND OPERATIONAL CONSTRAINTS

 February 2015

The location of the underground utilities shown on the Contract Drawings is based on the information provided to the Contract Administrator. It is, however, the Contractor's responsibility to contract the Municipal Authorities or Utility Companies for further information with regard to the exact location of these utilities, to exercise the necessary care in construction operations and to take such other precautions as are necessary to safeguard the utilities from damage.

Prior to construction, the Contractor shall excavate such test pits as may be required to accurately locate all existing sewers, watermains, gas lines, communication lines, and other underground utilities which may cross or be in conflict with the proposed underground works within this Contract to permit the Contract Administrator to determine and implement any required adjustments due to grade conflicts. The Contractor shall have no claim against the Owner for any delays or costs to replace underground works already installed which may result from failure to accurately locate any underground facility as requested in advance.

The Contractor shall devise methodology of work and carry out the work in a manner as not to affect utility and shall be fully responsible for adequate protection of utilities from damage during construction.

The Contractor shall cooperate with utility companies which may need to carry out work on utilities during work on this Contract.

No responsibilities will be assumed by the Owner for the correctness or completeness of the plans with respect to the existing utilities, pipes, catch basins, chambers, or other objects, either underground or on the surface, and should the plots of such be found incorrect or incomplete, the Contractor shall have no claim on the account. The Owner does not ensure the accuracy of

such information and the Contractor shall not make any claim against the Owner for damages or extra work caused or occasioned by his relying upon such records, reports or information either as a whole or in part.

D-100-017 -PWC-2021-15
SCHEDULING OF WORKS

 April 2021

For the information of the Contractor the works are proposed to commence on or about June 28, 2021. The actual commencement date will depend on the availability of inspection staff and the progress of the Corporation's other works. As the above date approaches, the Contractor will be contacted to advise of any changes in the above date and to agree upon a mutually acceptable commencement date. When the actual commencement date is known, a commence work order will be issued in accordance with the terms of the contract.

A change in the date of commencement of the works shall not be grounds for any claim by the Contractor for additional payment.

D-100-018
CONTRACT LIMITS

 March 2002

The Corporation reserves the right to alter the contract limits or extent of construction to coincide with the funds available.

Any change in the contract limits or extent of the work shall be considered as relating solely to quantities and payment for the work shall be made at the appropriate contract unit price. In the case of an extension of the contract limits, the Contractor will be eligible for a pro rata extension of time based on the value of the additional work when the contract unit prices are applied to the additional quantities.

The application of Subsection GC 8.01.02 of General Conditions of Contract shall be based on the adjusted tender quantities subsequent to the change in the contract limits.

D-100-019
EROSION AND SEDIMENT CONTROL MEASURES

 February 2011

The Contractor must provide the necessary protection measures to ensure that all waterways, swamps, ditches, and private property are protected from contamination during construction.

OPSS 182 provides general specifications for environmental protection for construction in water bodies and on water body banks, including temporary watercourse relocations and temporary waterbody crossings. These requirements apply to all Contractors operations related to this contract including those operations not specifically within the contract limits or described in the contract documents.

All environmental protection measures required under this contract shall be at the expense of the Contractor unless otherwise specifically identified in the contract documents.

OPSS 805 details the various methods of erosion and sediment control which the Contractor should be prepared to utilize as the need arises during construction. These methods are intended as prevention and should be installed prior to construction in anticipated sensitive areas not after the damage is done. All erosion and sediment control measures shall be at the expense of the Contractor.

D-100-020
SURPLUS MATERIAL

 May 2008

Excavated material surplus to the fill/grading requirements of this Contract shall be available to the Corporation prior to disposal by the Contractor.

Should the Corporation desire a portion or all of the surplus material, it shall be hauled to a designated site or sites within an eight (8) km radius of the Contract and stockpiled or spread as instructed by the Contract Administrator.

All costs associated with hauling, stockpiling and spreading shall be included within the tender unit price.

Material surplus to the above requirements shall be disposed of by the Contractor in accordance with OPSS.MUNI 180. Payment shall also be in accordance with OPSS.MUNI 180.

D-100-022– PWC-2021-15
SCOPE OF WORK

 April 2021

The scope of work for the rehabilitation of the Forth Chute Bridge includes but is not limited to:

- Partial depth concrete repairs in areas of spalls cracks and delaminations;
- Sealing interior surfaces of concrete barrier walls;
- Replace expansion joint seals;
- Replace asphalt and waterproofing system on bridge deck;
- Replace asphalt full depth on approaches (limited to approach slabs);
- Replace end panels on concrete barrier walls at all 4 quadrants and salvage and reinstate barrier wall railing end posts on new end panels;
- Remove steel beam guiderail and replace with steel beam guiderail and steel beam guiderail with channel, including private end treatments and connections to new barrier end panels;
- Repair bedrock under north abutment by filling voids with non-shrink grout and installing concrete buttress;
- Construct new reinforced concrete wall covering bonded to existing concrete wall below the south abutment; and

- Extend four (4) existing deck drain leads to match OPSD 3349.101.

The work listed above shall be completed in accordance with the Contract Documents to the satisfaction of the Contract Administrator.

The tasks mentioned above are not necessarily ordered in accordance with the sequence of work.

It is the Contractor's responsibility to determine the sequence of work and coordinate the work schedule with the Contract Administrator and the County of Renfrew.

D-100-023

LAYOUT BY THE CONTRACTOR

January 2014

Amendment to OPS General Conditions of Contract, November 2006

Subsection GC 7.02, Layout is deleted and replaced by the following:

Lines and Grades

The Contractor shall be responsible for the true and proper setting out of the work and for the correctness of the position, elevation and alignment of all parts of the work in accordance with accepted survey procedures. Using qualified personnel and following accepted engineering practice, the Contractor shall calculate, layout, establish and maintain all lines and grades necessary for the construction and verification of the work. The Contractor shall provide such information on the calculations, layout, lines and grades as the Contract Administrator may at any time require.

The Contract Administrator will provide basic horizontal and vertical control from which the location of the work may be determined. Horizontal control will consist of either survey reference points sufficient to locate the centerline or coordinated control points and their values, sufficient to layout the work. Vertical control will consist of benchmarks at intervals through the work. The Contract Administrator will provide a Grading Template Report to establish the grading cross sections. During the progress of the work, the Contractor shall notify the Contract Administrator forthwith of any errors, omissions or inconsistencies in the geometric information and the controls provided by the County of Renfrew.

Grading Layout

Stakes 25 x 50 x 600 mm minimum shall be installed either left or right of centerline at or near the right-of-way limits and in the areas where additional staking is required, such as intersections, and on horizontal and vertical curves. Staking intervals shall be as specified under the Layout Interval Tables.

The only data to be shown on these stakes shall consist of top of pavement grade, offset distance from centerline and the station location.

The Contractor may erect batter boards at grade stake locations.

Grading Templates

The Contractor will be supplied with the Grading Template Reports. These reports contain all necessary information relating to distance and elevation for each station necessary for the construction of the work.

Miscellaneous Layout

In addition to the layout for grading, complete offset stakes, finished grades and sections as required shall be set for the following:

Drainage Items-	sewers, roads, culverts, storm sewers, entrance culverts, maintenance holes, and similar items.
Pavement-	fine grading stakes shall be utilized for this work when pavement structure forms part of grading or granular contract.
Miscellaneous-	sidewalk, curb and gutter, slope paving, riprap, concrete headwall, and similar items.

Fine Grading Layout Including Paving

Fine grading stakes 25 x 50 x 600 mm shall be installed either left or right of centerline at or near the subgrade shoulder break. These stakes shall be installed at a minimum interval of 20 m or less where the Contract Administrator deems appropriate, on horizontal and vertical curves, widening of intersections and similar locations. The only data to be shown on the stake shall consist of top of pavement grade, offset distance from centerline and the station.

Completed Sub Grade and Granular Base

Prior to placing any granular material, the Contractor shall notify the Contract Administrator when the subgrade is completed. The subgrade and granular base cross section will be checked by the Contract Administrator and the grade accepted if construction is within the allowable tolerances.

No granular material shall be placed until the grade is accepted.

TABLE 1
Layout Intervals and Measurement Accuracy for Construction Survey – Layout

Activity	Interval	Measurement Accuracy	Remarks
Layout			
- Rock	10 m		with the exception of plus sections, layout is normally at the same interval as the cross-section/grade calculations. This may be varied when extreme changes in horizontal and vertical alignment are encountered.
- Earth – radius less than 300m	15 m		
- Earth – radius greater than 300 m	20 m		
- Maximum for setting structure footing grades	10 m		
- Structure grades to be set to		1 mm	
- Adjustment to slope stake distances to allow for grubbing losses		300 mm	
- Set grades for earth grading to the nearest		10 mm	
- Set grades for granular to the nearest		5 mm	
- Layout stake offset for curb and gutter			2 m but may be varied to suit conditions
- Stake layout for curb and gutter	10 m		may be necessary to reduce for very sharp curves
- Set curb and gutter grades to the nearest		1 mm	
- Staking maximum for layout of a radius (intersections)	3 m		
- Layout stake offset for concrete pavement			2 m offset
- Concrete pavement grades to be set to		1 mm	

TABLE 2
Layout Intervals and Measurement Accuracy for Construction Survey – Cross-Sections

Activity	Interval	Measurement Accuracy	Remarks
CROSS SECTIONS			
- Backsight and foresight readings to be taken to the nearest		1 mm	
- Maximum allowable error between adjacent Bench Marks		20 mm	
- Intermediate road readings to be taken to the nearest		10 mm	
earth cut	25 m		
rock cut	10 m		
rock cut with overburden	10 m		
muskeg excavation	25 m		
fills with stripping, sub-excavation or ditching	25 m		
transition from cut to fill	25 m		
fills	25 m		
earth or rock fills	25 m		
borrow pits			
- Maximum transverse interval for cross-section elevations			
earth	25 m		
rock	10 m		
borrow	25 m		
- Offset distances to be measured to the closest		100 mm	

D-100-024**TREE PROTECTION**August 2003

Protection from the Contractor's operations of trees not designated for removal shall be ensured by, but not restricted to the following:

The Contractor shall ensure that his operations do not cause flooding or sediment deposition on areas where trees not designated for removal are located.

Unless the Contract requires work within the dripline of trees not designated from removal, equipment shall not be operated within the dripline area. When the Contract requires work within the dripline of trees not designated for removal, operation of equipment within the dripline area shall be kept to the minimum necessary to perform the work required.

Equipment and vehicles shall not be parked, repaired or refuelled, nor shall construction materials be stored, or earth materials be stockpiled within the dripline areas of any tree not designated for removal.

The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outmost branches.

D-100C-025**WORK PERMITS**February 2011

The Contractor is responsible for obtaining all necessary work permit(s) from the local municipality, if required.

D-100-029**MATERIAL DESIGN, TESTING AND DOCUMENTATION**February 2008

General

Upon official notification of award of tender, the Contractor shall submit for the Contract Administrator's review and approval, the following documentation as it applies to the Contract:

- Hot mix and cold mix asphalt design mixes including gradation and physical properties
- Concrete design mixes
- Aggregate gradation and physical properties test results
- Topsoil organic test results
- Traffic Control Plan according to Ontario Traffic Control Manual, Book 7

Hot mix, cold mix, and concrete designs shall identify the granular sources they are based upon and which shall be in effect for this Contract.

The test results for aggregates shall be current and shall conform to the pit source in effect for this Contract.

Imported topsoil sources shall be identified for this Contract.

Granular sampling and testing is to be completed by a Geotechnical firm.

Payment for Items Requiring Compliance Testing

For those items which require testing to confirm compliance with specifications after materials have been incorporated into the works, the Contract Administrator will withhold 30% of the Contract Price until satisfactory compliance with the contract requirements has been confirmed.

D-100-030

WORKING HOURS

December 2015

The Contractor shall comply with the Municipal by-laws regulating hours of work in the Municipality.

The Contractor shall not work on statutory holidays recognized by the Municipality (i.e. holidays that the Municipal employees do not work) unless special permission is granted by the Contract Administrator, which shall not be unreasonably withheld.

No Sunday work will be permitted except in case of emergency and then only with written permission of the Contract Administrator and to such an extent as he deems necessary.

If the Contractor wants to work on a Saturday, Sunday, or Statutory Holiday, they must request permission from the Contract Administrator. If permission is granted and work is performed, that day will be counted as a working day.

D-100-031

OVERHEAD UTILITIES

May 2014

The Contractor shall protect all traffic signal poles, utility poles and lines in accordance with the Utility company requirements. Payment for protection, temporary bracing, standby and associated work shall be deemed to be included in the Contract Price for the Item associated with the protection requirements.

D-100-034**DESIGNATED SOURCES**

July 2005

All materials shall be from MTO Designated Sources where Designated Sources Lists are available. No exceptions shall be made.

D-100-035**QUALITY CONTROL PROGRAM**

February 2011

1. Concrete – no adjustment to concrete load on site will be allowed except as per CSA A23.1. All concrete not conforming to Specification will be immediately rejected.
2. Concrete Curing – no substitution to method specified will be considered.
3. Rebar Placement – all reinforcing placement on this Contract must be inspected by a Professional Engineer, licensed to practice in the province of Ontario, and retained by the Contractor. Certification shall be filed with Contract Administrator.
4. Structural Steel – certificate of conformance signed and sealed by a Professional Engineer, licensed to practice in the province of Ontario, and retained by the Contractor, certifying that all work has been done in accordance with the Contract Documents.
5. Bearings – certificate of conformance signed and sealed by a Professional Engineer, licensed to practice in the province of Ontario, and retained by the Contractor, certifying that the bearings have been supplied and installed in accordance with the Contract Documents.

D-100-036**AGGREGATE FOR CONCRETE**

July 2005

Aggregates for Concrete

OPSS 1002, Material Specification for Aggregates - Concrete, is modified by the following:

Subsection 1002.04.01 Submission of Test Data is deleted and replaced by:

1002.04.01 Submission of Test Data

The Contractor shall provide test results, from a QC laboratory meeting the requirements of clause 1002.07.01.02, showing complete conformance of the aggregates with this specification. All individual test results shall be submitted to the Contract Administrator the forms found in Appendix 1002-B or Appendix 1002-C, at the time of submission of the mix design. All test data forms must be legible. Faxed copies are acceptable provided that the original form is submitted

to the Contract Administrator within seven (7) days following receipt of the fax. Test results shall be submitted by either the stockpile or control chart method.

Subsection 1002.08.03 Sampling is deleted and replaced by:

1002.08.03 Sampling

Sampling shall be according to CSA A23.2-1A and LS-625. At least one QA sample of each aggregate shall be randomly obtained for each lot of 5,000 m³ of concrete during concrete production.

QA samples shall be taken from stockpiles at the concrete plant, or in the absence of a stockpile at the plant, from stockpiles at the aggregate source that contain a minimum quantity of 500 tonnes of each aggregate for each concrete mix unless otherwise specified by the Contract Administrator. Duplicate samples shall be obtained and sealed by the Contractor in the presence of the Contract Administrator. In the event that the Contractor is unavailable to take the sample, no further materials shall be placed in the work until the QA sample has been taken.

QA samples shall be obtained by the Contractor in the presence of the Contract Administrator (or a designated representative). The Contract Administrator shall have access to all sampling locations at any time without notice. All samples shall be delivered by the Contractor to a laboratory designated by the Owner within 100 km radius of the contract limits no later than three (3) business days from the date of sampling.

The Contractor shall provide new or clean sample bags or containers that are constructed to prevent the loss of any part of the material or contamination or damage to the contents during shipment. The containers shall be sufficiently strong and shall be securely fastened. Metal or cardboard containers are unacceptable. Each container shall hold no more than 35 kg of material. The sample shall be identified both inside and outside of the sample container. Data to be included with the sample shall conform to the requirements of MTO form PH-D-10, Sample Data Sheet, as shown in Figure 2 of LS-625.

D-100-039

ACCEPTANCE OF SUBGRADE AND SUBBASE

April 2012

The contractor is to satisfy themselves as to the adequacy of the existing subgrade and/or subbase prior to applying granulars and/or surface materials. At the request of the contractor, the county will provide copies of any available test results for the contractors review prior to placing the materials required under this contract.

If the contractor has specific concerns regarding the condition of the subgrade or subbase, or the prevailing conditions within the project limits that may affect the performance or warranty requirements stipulated in this contract, the contractor must inform the County, by written letter of the concerns. The letter will identify the specific concern, how it may affect the results of the

project and any recommended remedial works, which in the opinion of the contractor is required to rectify these concerns. The letter must be received 72 (seventy-two) hours before the scheduled commencement of work.

The County will provide a written response to the contractors concerns, within 48 hours. The County reserves the right to amend the contract requirements or work program to address the stated concerns, or to proceed with the work in accordance with the original contract documents.

D-100-049

ADMINISTRATION OF PITS AND QUARRIES

December 2008

The Contractor shall ensure that all pits and quarries operated for extraction of aggregate, earth or rock borrow are operated in accordance with current legislation. On request the Contractor shall provide the Contract Administrator with a copy of all permits, approvals, and agreements. The cost of complying with legislative requirements shall be deemed to be included in the prices bid for the various items and no additional payment will be made.

D-100-050

QUALITY CONTROL BY CONTRACTOR

February 2015

The Contractor is responsible for all sampling, testing, reporting, and costing of quality control (QC) work. The Contractor shall supply the Contract Administrator with a report copy of all results.

The Contractor must notify the Contract Administrator 48 hours in advance of any QC sampling or testing to allow the owner to perform parallel Quality Assurance (QA) work.

All quality control testing shall be completed in a certified laboratory that is CCIL Type B and C, or AMRL accredited or equivalent. Sampling or testing shall be conducted by a technician certified to perform sampling or testing.

The Ministry of Transportation (MTO) specifications referred to in this contract have specific requirements for quality control.

The following lists the minimum required tests and frequency for submitted reports:

Physical Property Test

- One test for each aggregate material incorporated into the work, including those used for; Granular A, B, or M; hot, cold or warm mix paving; surface treatments; chip seals or concrete.
- If the aggregates are from multiple sources, a test is required from each source.

Gradation Testing

- Asphalt mixes shall have one test for each 500 tonnes placed.
- Granular A & M shall have one test for each 2,000 tonnes of production (see Note).

- Granular B shall have one test for each 5,000 tonnes of production (see Note).

Marshall Testing

- Asphalt mixes shall have one test for each 1,000 tonnes of production.

Asphalt Cement Content

- Asphalt mixes shall have one test for each 500 tonnes of production.

Compaction Testing

- Asphalt and granulars shall be tested for each 100 lane metres of placement.
- Asphalt mixes may be tested with a nuclear density test gauge.
- Bedding and backfill shall be tested for each installation.

Concrete Testing

- One air content and slump test for each load of concrete.
- One compression strength test per Thirty Cubic metres with a minimum of one per day.

Note: A summary report shall be provided from a certified laboratory confirming that the granular materials to be incorporated into this project have met this requirement.

D-100-051

SPECIES AT RISK MITIGATION

May 2012

The contractor is advised that numerous Species at Risk (SAR) and species of concern are located throughout Renfrew County. Information on SAR and species of concern in Renfrew County is available the Ministry of Natural Resources website and by contacting the local office of the Ministry of Natural Resources.

The contractor shall be responsible to ensure that all environmental mitigation works that are installed as part of the project are inspected and properly maintained, and that the overall strategy for environmental mitigation and protection of SAR is implemented. This shall include the following:

1. Ensure that all of the Contractor's personnel and subcontractors are familiar and aware of environmental mitigation works and SAR concerns that relate to the project areas, including both plant and animal varieties of SAR.
2. Prior to commencing work on a project, conduct a general reconnaissance of the project area to confirm the presence or possible occurrence of SAR. Consult with the Contract Administrator regarding additional mitigation works or protective measures that may be required.
3. Daily, prior to commencing work, inspect all work areas including excavations and any wildlife and/or siltation control fencing that has been placed on the project to ensure that site is free

of any SAR and other animals and confirm that no animals are either trapped or entangled in the fencing. The fencing shall be inspected to ensure that there are no gaps underneath that would allow room for species to enter the work areas.

4. Safely restrain or protect any injured SAR animal and report occurrence immediately to the Contract Administrator for determination of further action and reporting to MNR (Pembroke Office).
5. Inspection of the work area immediately prior to any work taking place to ensure that there are no SAR or other animals present. If such animals are present, they shall be removed to a safe area under the direction of the Contract Administrator.
6. During the late spring/early summer months, excavation piles or other stockpiles shall be reviewed on a regular basis to determine if turtles have used these areas for nesting sites. This would be noted by the presence of freshly excavated holes in the piles as well as trails leading to and from the piles. If nesting areas are found, then these need to be fenced off and the Contract Administrator will provide direction on what additional mitigation measures are required.
7. Should the Contractor observe SAR crossing the roadway or within the construction zone, they shall carefully remove the individual off the roadway in the direction that it was travelling and observe it thereafter to ensure it does not reenter the work area.
8. The Contractor's Site Supervisor shall report all SAR observations to the Contract Administrator so they can periodically inform MNR (Pembroke Office).

D-100-056

CONTRACTOR'S REPRESENTATIVE

December 2008

The Contractor's site representative shall be a competent, English speaking Superintendent or Foreman, fully authorized to act for the Contractor and capable of coordinating the operation in an orderly and progressive manner.

The Contractor's site representative shall maintain on the construction site at all times at least one complete set of Contract Drawings and Contract Documents including copies of all referenced OPSS and OPSD documents.

The site representative shall be capable of reading and interpreting the documentation and shall ensure that all work is in conformance with same.

D-100-061**ROAD AUTHORITY/MUNICIPAL BUSINESS SIGNS**December 2008

The Contractor shall carefully remove and satisfactorily replace all route marker, business advertising, pedestrian, and other identification signs which must be removed in order to carry out the work.

All legal traffic signs must be maintained. If they are to be moved, the local road authority must be consulted and approve.

All costs associated with the removal, protection, and relocation of signs shall be deemed to be included in the contract price for the items associated with this requirement.

D-100-064-PWC-2021-15**DISPOSAL OF REMOVAL ITEM**April 2021

Amendments to OPSS.MUNI 510

OPSS.MUNI 510 shall apply except as amended and extended herein:

510.07 CONSTRUCTION**510.07.01 General**

Subsection 510.07.01 is amended by the addition of the following:

All removals are to be disposed of off-site.

D-100-065-PWC-2021-15**MANAGEMENT OF EFFLUENT FROM CONCRETE
CUTTING /GRINDING**Match 2021

1. SCOPE

This special provision describes the requirements for management of effluent resulting from concrete cutting/grinding, that either:

- (a) Runs off the concrete surfaces that are cut/ground, or off any immediately adjacent road surface, before such runoff can dry/ evaporate on the concrete or immediately adjacent road surface; or
- (b) Accumulates/ponds on the concrete that is cut/ground, on any road surface, or in any

other location.

These requirements are in addition to those specified elsewhere in the contract and do not relieve the Contractor of obligations imposed by the Contractor's Certificate of Approval for a Waste Management System.

2. DEFINITIONS

Construction Area: means the road allowance, right-of-way, and property with a boundary common to the road allowance or right-of-way within the contract limits.

Effluent: means liquid, that is a direct result of concrete cutting or grinding. Effluent includes any stormwater, or surface drainage that becomes mixed with this material. Effluent is classified as liquid industrial waste Class 146 (L).

Manifest: means a Regulation 347 Form 1 manifest.

Receiving Site: means certified waste processing facility, and certified waste disposal site.

3. SUBMISSION AND DESIGN REQUIREMENTS

Where the Contractor's operations will result in effluent from concrete cutting or grinding, that is as specified in Section 1 of this special provision, written agreement of the operator of the receiving site to accept the effluent, shall be submitted to the Contract Administrator a minimum of two weeks prior to commencement of the work.

At the completion of the work, a copy of a release signed by the same receiving site operator or property owner shall be provided to the Contract Administrator.

A copy of the contractor's Certificate of Approval for a Waste Management System shall be provided to the Contract Administrator prior to the commencement of the work.

4. CONSTRUCTION

4.1 General

Effluent from concrete cutting and grinding operations, that is as specified in Section 1 of this special provision, shall be captured and contained for management in compliance with this special provision.

It is the Contractor's responsibility to obtain any approvals, releases, and agreements, and conditions of same, that are required to implement the Contractor's strategy for the management of effluent.

Effluent resulting from concrete cutting and grinding operations shall be transported to one of the following receiving sites:

- (a) a waste disposal site with a Certificate of Approval for a Waste Disposal Site valid for liquid industrial waste Class 146 (L);
- (b) a waste processing facility with Certificate of Approval for a Waste Disposal Site (Processing) valid for liquid industrial waste Class 146 (L).

For each shipment of effluent from the construction area to any certified receiving site:

- (a) the carrier shall have a Certificate of Approval for a Waste Management System valid for liquid industrial waste Class 146 (L), and shall comply with Sections 4.2 and 4.3 of this special provision; and
- (b) the shipment shall be manifested as specified in Section 4.4 of this special provision.

4.2 Carrier Certification

The carrier shall have a Certificate of Approval as specified in Sections 4.1 of this special provision. Responsibilities of certified carriers shall include, but not be limited to, the following:

- a) transportation of waste materials produced by the work in accordance with the Certificate of Approval;
- b) carrier responsibilities for waste materials including, but not restricted to, manifesting of liquid industrial waste.

4.3 Certificate of Approval

The contractors Certificate of Approval for a Waste Management System and the receivers Certificate of Approval for a Waste Disposal Site shall be valid for all of the following:

- (a) the entire period of the work;
- (b) the entire area within the limits of the work and the entire haul route; and
- (c) the equipment to be utilized; and
- (d) waste classification 146 (L).

4.4 Manifesting

Manifesting shall be as specified in Section 4.1 of this special provision. The carrier shall present a Regulation 347 Form 1 manifest for "Part A" completion by the Contract Administrator. The

Contract Administrator shall be notified a minimum of two weeks prior to the first shipment requiring manifesting, and a minimum of 24 hours notice prior to each subsequent shipment requiring manifesting.

SECTION E
STANDARD SPECIFICATIONS
AND DRAWINGS

SS-1 Standard Drawings

- 1.1 The Contractor acknowledges that certain standard drawings that are provisions of this Contract have not been reproduced for inclusion in the Contract Documents. These standard drawings are listed in the Tender.
- 1.2 The Contractor acknowledges that the standard drawings referred to in subsection SS-1.1 are Ontario Provincial Standard Drawings (OPSD) as produced and amended by the government of the Province of Ontario.

<u>OPSD</u>	<u>DATE</u>	<u>OPSD</u>	<u>DATE</u>
211.010	Rev#3 (November 2018)	909.020	Rev#0 (September 1993)
202.032	Rev#2 (November 2016)	912.430	Rev#3 (November 2010)
219.110	Rev#2 (November 2015)	3349.101	Rev#2 (November 2012)
600.110	Rev#2 (November 2012)	3370.100	Rev#2 (November 2008)
601.010	Rev#2 (November 2013)	3370.101	Rev#2 (November 2008)
604.020	Rev#2 (November 2013)	3419.100	Rev#1 (November 2010)
605.040	Rev#2 (November 2013)	3419.150	Rev#1 (November 2010)
810.010	Rev#3 (November 2018)	3349.101	Rev#2 (November 2012)
902.090	Rev#4 (December 1992)	3950.100	Rev#1 (November 2011)

<u>SSD</u>	<u>DATE</u>
SS 110-21	Mar-16
SS 110-54	Sep-16

SS-2 Standard Specification

- 2.1 The Contractor acknowledges that certain standard specifications that are provisions of this Contract have not been reproduced for inclusion in the Contract Documents. These standard specifications are listed in subsection SS-2.3, and in the Schedule of Prices.
- 2.2 The Contractor acknowledges that the standard specifications referred to in subsection SS-2.1 and SS-2.3 are Ontario Provincial Standard Specifications (OPSS) and all specifications referred to therein, as produced and amended by the government of the Province of Ontario.
- 2.3 The OPSS standard specifications that are provisions of this Contract are:

<u>OPSS</u>	<u>LATEST VERSION</u>	<u>OPSS</u>	<u>LATEST VERSION</u>
PROV 180	Nov-11	PROV 710	Nov-10
MUNI 182	Nov-12	MUNI 721	Nov-18
MUNI 203	Nov-19	PROV 802	Nov-10
MUNI 206	Apr-19	PROV 804	Nov-14
MUNI 305	Nov-16	MUNI 805	Nov-18

PROV 308	Apr-12	MUNI 904	Nov-12
MUNI 310	Nov-17	MUNI 905	Nov-17
MUNI 312	Nov-18	MUNI 908	Nov-14
MUNI 314	Nov-16	MUNI 914	Nov-14
MUNI 353	Nov-19	PROV 919	Nov-11
MUNI 491	Nov-17	MUNI 920	Nov-12
MUNI 501	Nov-17	MUNI 928	Apr-19
MUNI 506	Nov-17	MUNI 929	Nov-18
MUNI 510	Nov-18	MUNI 930	Nov-14
MUNI 511	Nov-18	MUNI 1504	Nov-16
MUNI 518	Apr-17	MUNI 1505	Nov-16
MUNI 539	Nov-14		
MUNI 706	Apr-18		

- 2.4 The Contractor acknowledges that the standard specifications referred to in subsections SS-2.1 and SS-2.3 are Ontario Provincial Standard Specifications (OPSS) for construction only and that all material specifications referred to therein, as produced and amended by the government of the Province of Ontario are also applicable to the Contract. The Contractor shall be responsible for obtaining his own copy of the Ontario Provincial Standard Specifications (OPSS) which are applicable to this Contract.

SS-3 Availability of Standards

- 3.1 It shall be the responsibility of the Contractor to obtain any Ontario Provincial Standard Specifications (OPSS), Ontario Provincial Standard Drawings (OPSD), or Ontario Provincial Standard General Conditions of Contract (OPSS-MUNI 100), referred to in the quotation form. The Ontario Provincial Standards can be found on the internet at <https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx>

SS-4 Drawings

- 4.1 The following is list of drawings that are included as part of the contract:

11 Drawings numbered 240D2101-S01 to 240D2111-C03

SECTION F
SPECIAL PROVISIONS

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F-100C-001-PWC-2021-15
**FIELD OFFICE FOR CONTRACT ADMINISTRATOR
FLOOR AREA 20 – 34m² INCLUDING TELEPHONE & INTERNET**

 April 2021

Scope

Under this tender time, the Contractor shall supply and maintain a field office and its associated items for the sole use of the Contract Administrator or his representatives. The field office shall have a floor area between 20 – 34 m² and shall be supplied with power, telephone and internet services.

Location

Prior to the commencement of work on this Tender Item, the Contractor shall receive approval from the Contract Administrator for the location of the field office.

Field Office Dimensions and Condition

All doors shall be solid and capable of being locked with a 25 mm throw dead bolt lock.

The inside of the field office shall be moisture tight and capable of being lit to a level that is satisfactory to the Contract Administrator. It shall have adequate windows, heating and ventilating equipment capable of maintaining the working area at 21°C during both summer and winter weather conditions.

Field Office Equipment

The Contractor shall supply for the sole use of the Contract Administrator the following furnishings for the appropriate trailer size:

Floor Area 20-34 m²

1 desk	2 stools
1 drafting tables (2 m ² ea)	2 chairs
1 lockable filing cabinet (3 drawer)	1 electric adding machine

The Contractor shall supply or arrange to supply a water cooler capable of maintaining a water supply at 7°C. Water shall be potable and supplied at a rate of 18 L/week.

Utilities and Sanitary Facilities

The field office is to be equipped with a minimum of 3-120 volt duplex receptacles, in working order.

It is the responsibility of the Contractor to provide and maintain adequate facilities in accordance with the current requirements of the Occupational Health and Safety Act (Part II General Construction O.Reg 145/00, s.15, 527/00, S.1)

Measurement for Payment

Measurement for the supply of a field office, its utilities, services and associated equipment shall be by the week. The Contractor shall also be paid for any portion of a week as one week. Measurement for payment will be made commencing from the time when all utilities and services have been provided.

Basis of Payment

Payment at the Contract Price for the Tender Item "Field Office for Contract Administrator" shall be full compensation for all labour, equipment and materials required to supply and maintain a field office.

The Contractor shall bear all expenses in connection with the above facilities, including but not limited to:

- a) Service and connection charges for utilities and services.
- b) Heating and ventilating costs.
- c) Supply & maintenance of sanitary facilities.
- d) The supply of bottled water.
- e) All land and rental costs for the field office.
- f) Supply of steps or stairs so as to provide proper access to field office.
- g) The provision of at least five (5) parking spaces adjacent to field office, with at least a gravel surface.
- h) Winter maintenance (snow removal, sanding).

F-100C-003**SITWORK**
March 2017

Scope of Work

Payment at the Contract Lump Sum Price for the Item "Sitework" shall be full compensation for all labour, materials, and equipment required to complete the work as outlined herein.

The following work, activities, and cost shall be included under this Item:

- Bonds, administration, and supervisory costs.
- Mobilization and demobilization of equipment, material, and Contractor's forces.
- Schedules.
- Site preparation for work.
- Costs of all necessary approvals and permits as applicable.
- Cost of constructing lay down area in location acceptable to Owner.
- All costs associated with locates, protection or temporary relocation and reinstallation of utilities, as applicable and not specified in other areas of the Contract.
- Installation and removal of temporary barricades, hoarding, snow fencing, and other protection required.
- Layout of Work.
- Contractor's office.
- Cost of supplying and maintaining adequate sanitary facilities.
- Costs associated with the submission of shop drawings, rebar schedules, product submissions, etc.
- Costs associated with access to private properties as required and obtaining written release from the affected property owners. Copy to be submitted to Contract Administrator.
- Cost of maintaining and reinstating existing road signs, mailboxes, etc.
- Cost of advertising Substantial Completion in the Daily Commercial News.
- Cost of reinstating the Contractor's lay down area and office sites to their original conditions.
- All costs of any incidental work not specifically mentioned in the Contract Documents but required by virtue of the work.
- All costs associated with environmental protection or species at risk mitigation measures except as specifically mentioned for other Items of work.
- The County of Renfrew will undertake normal winter maintenance within the Contract area. The Contractor will be required to undertake any additional winter sanding, salting, and snow removal to allow passage of Contractor's own vehicles, affected residents, Hydro, and business operators within stretch of roadway on which the construction zone is located, either between Contract Limits during staged construction or between points of road closure for the detour option. Contractor to fully, solely, and unequivocally establish the amount of effort and costs required. Winter Sanding, salting, and snow removal will be fully executed by Contractor at all times, including also times when the site is temporarily abandoned during winter, should occurrences as such happen. Snow removals to be carried out to minimum standard of cleanliness and responsiveness as attained by County of Renfrew maintenance snow removal crews.
- Quality Control testing and reporting.
- Submission of required reports, releases, and documentation for the release of holdback.
- The dust control by watering.
- Careful removal and reinstallation of mail boxes, municipal address/number markings, Highway Signs and commercial and information signs within limits of roadway reconstruction. This work needs to be coordinated with Contractor's own traffic management plan.

Following completion of work all existing signs need to be reinstalled in new locations as necessary for compliance with Ontario Traffic Manual (OTM) and Traffic Highway Act.

- Protection of private properties and fences. All fences to remain and are not to be disturbed. All fences disturbed to be repaired to match original by Contractor at own cost.
- All work is to be carried within right of way without encroachment onto private properties.
- Advise Contract Administrator, where construction of work is to interfere with private property and seek direction prior to the work being undertaken.

The Contractor shall submit an up to date detailed Work Schedule to the Contract Administrator at the Pre-Construction Meeting.

The Detailed Work Schedule shall be in a bar chart form at indicating the following items against a weekly time scale:

- Dates and time periods of all major construction activities.
- Dates of critical activities (long delivery items, traffic shifts, protection measures, etc.).
- Dates of important milestones.

The Contractor is advised that no additional payment will be made for repeated mobilization and demobilization for any of the construction activities covered by this Contract, interrupted by weather, or by any other construction activity within this Contract.

Basis of Payment

Payment for this Item shall be full compensation for all labour, materials and equipment required to carry out the work. A 30% portion shall be paid in first progress payment. Remainder will be prorated over the scheduled duration of the Contract per the approved schedule.

Contractor shall bear all immediate, subsequent and consequential costs associated with change in the schedule, staging, and methodology of the work, unless Contract Administrator requested such change.

F-182C-001-PWC-2021-15

ENVIRONMENTAL PROTECTION – ESC PLAN

April 2021

OPSS.MUNI 182, OPSS.MUNI 518, and OPSS.MUNI 805 shall govern this work except as amended or extended herein.

SCOPE

The work under this item includes the preparation, implementation and monitoring of an Erosion and Sediment Control Plan that applies to construction that involves work within watercourses and watercourse banks required for the construction of the specified works. The Contractor shall

coordinate this special provision with requirements of the Fish and Wildlife Exclusion, Monitoring and Removal Plan.

General

The Contractor acknowledges that sediment runoff resulting from construction operations will have a detrimental impact on the watercourse, and that all construction operations that may impact upon water quality and fish habitat shall be carried out in a manner that strictly meets the requirements of all applicable legislation and regulations.

The Contractor shall be responsible for determining and conforming to the requirements of the Ontario Ministry of Environment, Conservation and Parks (MECP), the Ontario Ministry of Natural Resources and Forestry (MNR), the Ministry of Environment, Climate and Parks (MECP), the County of Renfrew, Transport Canada and any other Governmental Regulatory Agencies (collectively "Regulatory Agencies") having jurisdiction within the Contract limits or within the watercourse.

The Contractor acknowledges that no one measure is likely to be 100% effective for erosion protection and controlling sediment runoff. Therefore, where necessary the Contractor shall implement sequential measures arranged so as to achieve the required level of sediment and runoff control. The Contractor shall be required to submit their Erosion and Sediment Control Monitoring Plan for In-Water Works, construction methods and sequence of installation and removals to the Contract Administrator and Regulatory Agencies as specified herein. The Contractor's Erosion and Sediment Control Plan and Monitoring Plan for In-Water Works shall be in general conformance to the requirements stipulated on the Contract Drawings, Regulatory Agency requirements and other requirements as specified in this Special Provision.

The Contractor's Engineer of Record (EOR), as defined herein, shall be responsible for the design, implementation and monitoring of the Contractor's Erosion and Sediment Control and Monitoring Plan for In-Water Works.

Where, in the opinion of the Contract Administrator, any Regulatory Agency or the Contractor's EOR, the installed control measures fail to perform adequately, the Contractor shall immediately supply and install additional or alternative measures as directed by the EOR or the Regulatory Agency to the satisfaction of the Contract Administrator. As such, the Contractor shall establish a contingency plan in the event of a failure of the control measures and have additional control materials on site at all times which are easily accessible and may be implemented by the Contractor on short notice. The contingency plan shall also be submitted to the Regulatory Agencies for review.

All references in OPSS.MUNI 182 to OPSF181-1 are deleted.

Design and Submission Requirements

OPSS. MUNI 182.04 is deleted and replaced with the following:

Contractor's Engineer of Record:

The Contractor shall submit supporting documentation to the Contract Administrator indicating that the Contractor's Engineer of Record (EOR) is a Professional Engineer (licensed in the Province of Ontario) has a minimum of 10 years of experience or has completed 5 successful projects of similar scope, complexity and site conditions, who is an environmental specialist with the necessary experience and expertise to design and direct the installation of erosion and sediment control systems and undertake the monitoring requirements specified herein. References asserting this documentation shall be provided upon request.

Submission Requirements:

Prior to implementation of the erosion and sediment control measures and monitoring required for in-water works the Contractor shall submit to the Contract Administrator for review, one (1) electronic copy of the of a detailed Erosion and Sediment Control Plan and Monitoring Plan for In-Water Works (Plan). The submission shall be signed and sealed by the Contractor's EOR. The Contractor shall also be responsible to submit the Plan to the Regulatory Agencies having jurisdiction for review and approval prior to initiating any installations. The Contractor shall not proceed with the works associated with the Plan until the Regulatory Agencies and Contract Administrator have completed their review. The review of the Plan shall not constitute acceptance of the technical adequacy of the strategy. Written notification shall be submitted to the Contract Administrator at least 2 days prior to the actual date of installation or removal of the measures and/or initiating or completing other work related to this special provision. The Contractor shall provide copies of all submissions and correspondence between the Contractor and the Regulatory Agencies to the Contract Administrator.

The Contractor's Plan shall fully describe the sequence of the work, the associated waterbody and fish habitat protection and the related contingency measures associated with each stage of the work. The construction schedule shall include approximate dates of installation, removal and site restoration. Such information shall be provided at a level of detail, which addresses materials, equipment, methods employed and procedures to be followed to provide effective watercourse and fish habitat protection and to comply with statutory requirements, authorizations, approvals and permits. The submission shall also include a schedule of checking and monitoring the work to ensure compliance with the Plan.

As specified herein, a turbidity curtain shall be maintained throughout the duration of work within the watercourse. The turbidity curtain serves a dual purpose as it provides sediment control, as well as, safely excluding fish and wildlife from entering the construction zones. The turbidity curtain shall be monitored each calendar day. The Contractor shall coordinate the requirements of this specification with the requirements of the Fish and Wildlife Monitoring and Removal Plan.

The Contractor's submission shall include but not be limited to the following:

- Detailed drawings indicating the Contractor's erosion and sediment control measures including materials, installations and layout. The design shall ensure that requirements for both erosion and sediment control and exclusion of fish and wildlife from the in-water construction zone are accommodated;
- Detailed drawings of the Contractor's methods and materials for construction required within the watercourse including but limited to the erosion and sediment control measures, temporary access, cofferdams, etc.;
- Detailed sequence and schedule for installation and removal of the erosion and sediment controls, materials for temporary works, construction of specified works. The schedule shall include the approximate date of installations, removals and site restoration. The sequence and schedule shall account for all phases of the work and transitions between phases of the work;
- Detailed monitoring plan including monitoring and inspections of the erosion and sediment control measures. The monitoring plan shall include coordination with the environmental monitoring requirements related to daily inspections for potentially trapped wildlife and fish within the turbidity curtain;
- Detailed water quality monitoring plan - daily quality monitoring of water during active dewatering operations and during installation and removal of the temporary works within the watercourse (i.e. causeway, cofferdams, etc.) that shall include turbidity monitoring of total suspended solids (TSS) to ensure that the Contractor is not exceeding Regulatory Agency requirements;
- Detailed plan outlining the containment or stabilization of disturbed and/or exposed earth material including any shutdown periods and, as required, during construction of the specified reinstatement works to prevent entry of material, etc. into the waterbody;
- Detailed contingency plan in the event of failure of the erosion and sediment control system including provision of labour, equipment or materials to install additional control measures and details of the Contractor's emergency response in case of an accidental or unexpected event. The contingency plan shall include measures to: a) stop work, contain sediment-laden water and other deleterious substances and prevent their further migration into the watercourse, b) notification to the Regulatory Agencies, c) prompt clean-up and appropriate disposal of the sediment-laden water and deleterious substances, d) ensure clean-up measures are suitably applied so as not to result in further alteration of the bed and/or banks of the watercourse; and

Inspection and Monitoring Reports:

The Contractor shall submit to the Contract Administrator, within 24 hours after completing daily inspections, the inspection reports detailing and demonstrating the performance of the installed measures, identifying deficiencies and maintenance issues and identifying recommended immediate corrective actions and recording the follow-up inspections to ensure that the Contractor has undertaken the action to correct the deficiencies to the satisfaction of the EOR. These reports shall be prepared and signed by the EOR. The following are the minimum

requirements for the EOR monitoring reports:

- The date and time of the inspection and monitoring;
- Existing weather conditions;
- General description of the Erosion and Sediment Control (ESC) measures being inspected;
- Date stamped photographs of conditions upstream, downstream and within the work area;
- Condition of the measures being inspected and confirmation of the effectiveness of the ESC measures;
- Description of any observed deficiency or maintenance issues which require repair, improvement or additional maintenance to the ESC measures. Timeline required for the Contractor's corrective action;
- Identification of any inspections completed by any Regulatory Agency, a summary of measures that have been identified to be rectified and the Contractor's follow-up. A copy of any written direction received shall be provided; and
- Follow-up inspection of ESC measures after corrective action undertaken.

Contractor's Responsibilities

The Contractor shall ensure that all workers, including sub-contractors, in the Working Area are aware of the importance of the erosion and sediment control measures and informed of the consequences of the failure to comply with the requirements of all Regulatory Agencies and the specifications detailed herein.

The Contractor shall notify the Contract Administrator in all situations where a Regulatory Agency has identified deficiencies in the erosion and sediment control measures or to the quality of the water discharging from any dewatering operation.

The Contractor shall be solely responsible for daily inspections, monitoring, maintenance and the effectiveness of the Erosion and Sediment Control Plan upon implementation. The Contractor shall submit to the Contract Administrator the specified daily ESC monitoring and inspection reports within 24 hours of the inspection by the Contractor's EOR.

The Contractor shall periodically, or when requested by the Contract Administrator or the Contractor's EOR, clean out accumulated sediment deposits as required at the sediment control devices, including those deposits that may originate from outside the construction area. Accumulated sediment shall be removed in such a manner that prevents the deposition of this material into the watercourse and avoids damage to the control measure. The sediment shall be removed from the site at the Contractor's expense and managed in compliance with the requirements for excess earth material, as specified elsewhere in the Contract.

The Contractor shall immediately report to the Contract Administrator any accidental discharges of sediment material into the watercourse. Failure to report will be constitute a breach of this specification and the Contractor may also be subject to the penalties imposed by any applicable Regulatory Agency. Appropriate response measures, including any repairs to existing control

measures or the implementation of additional control measures, shall be carried out by the Contractor without delay.

The erosion and sediment control measures shall be removed only after specified reinstatement measures have been completed and only when, in the opinion of the EOR, the measure(s) is no longer required. No control measure may be permanently removed without prior written authorization from the EOR. All sediment and erosion control measures shall be removed in a manner that avoids the entry of sediment or debris into the watercourse within or downstream of the Working Area. All accumulated sediment shall be removed from the Working Area at the Contractor's expense and managed in compliance with the requirements for excess earth material, as specified elsewhere in the Contract. Any seeding and mulching, temporary cover, sodding or original turf cover that is disturbed by the removal of the control measures and accumulated sediment, shall be brought to final grade and restored. Payment for the supply and placing of ground cover at these locations shall be made under the applicable items listed elsewhere in the Contract.

When, in the opinion of either the Contract Administrator or a Regulatory Agency, any of the terms specified herein have either not been complied with or not performed in a suitable manner, the Contract Administrator or Regulatory Agency has the right to immediately withdraw its permission to continue the work. Permission to continue the works may be renewed upon the Contract Administrator and the Regulatory Agency being satisfied that the defaults and/or deficiencies in the performance of this specification by the Contractor have been remedied. No compensation will be made to the Contractor for the withdrawal of permission to do the work resulting from non-compliance with the requirements of this specification and the Regulatory Agencies.

In addition to any other remedy and/or penalty provided by law, where there has been default or non-compliance with any of the terms specified herein and the Contractor refuses to perform or rectify same within twenty-four (24) hours of the receipt of a written notice from the Contract Administrator to do so, the Owner is hereby entitled to enter upon the Working Area and either complete the work in conformity with the Contract or have the work done that it considers necessary to complete the Work to its intended condition, whichever, in the Owner's judgement, is the most reasonable course of action. The Contractor acknowledges that any and all costs incurred for any such work shall be retained by the Owner from monies otherwise due to the Contractor.

Operational Constraints

The Contractor shall be aware that construction activities in or adjacent to the watercourses from the period of October 1 to July 14 inclusive are not permitted to protect both spring and fall spawning species. Any work on-site which will cause or be the cause of discharge to the watercourse, particularly during the aforementioned dates, is strictly prohibited. Further, the Contractor shall be aware that all temporary installations shall be removed from the watercourse on or prior to October 1. As such, depending on the Contractor's method of construction and schedule, the temporary in-water access and the in-water erosion and sediment control measures may need to be re-installed and removed in a second construction season which would

require continued implementation of the Fish and Wildlife Exclusion, Monitoring and Removal Plan specified herein.

The Contractor acknowledges that river levels may vary significantly throughout the construction period and that monitoring of water levels is essential as required in the Erosion and Sediment Control and Monitoring Plan for In-Water Works”.

Measurement and Basis of Payment

Payment for the lump sum tender item “Environmental Protection-ESC Plan” shall be full compensation for all labour, equipment and material to do the work as specified herein, including the supply and installation of all measures including silt fence, turbidity curtain, etc.

Payment will be based upon the following schedule:

- 20% upon satisfactory submission of the requirements listed under “Design and Submission Requirements”
- 60% pro-rated into equal monthly payments during the months in the Contractor’s overall construction schedule that the In-Water Erosion and Sediment Control Measures are required for construction of the works. Release of monthly payments are subject to receipt of all Engineer of Record monitoring reports as stipulated herein.
- 20% upon successful completion and **final** removal of ESC Plan protection measures to the satisfaction of the Contract Administrator (Note: final removal means that in the event that the Contractor’s construction methods require works within the watercourse during more than one construction season this payment will not be made until final completion of all works requiring in-water access).

This payment schedule may only be modified as agreed upon in writing between the Contractor and the Contract Administrator.

F-182C-002-PWC-2021-15

FISH AND WILDLIFE EXCLUSION

April 2021

OPSS.MUNI 182 and OPSS 805 shall apply except as may be amended or extended herein.

Scope

The work under this item includes the preparation and implementation of a Fish and Wildlife Exclusion, Monitoring and Removal Plan during all construction activities required within the watercourse.

Background

Special consideration with respect to aquatic and terrestrial Species at Risk (SAR) and associated habitat was given during the surveys within the assessment area during the Natural Environmental Assessment conducted for this project. SAR were not observed during the surveys; however, two barn swallow nests were observed under the bridge which confirms the site is used as breeding habitat for Barn Swallow, and potential turtle nesting sites were observed on the gravel shoulders within the Fourth Chute Road ROW and the gravel parking lots to the north east and south west of Fourth Chute Bridge. The Bonnechere River is also considered a migration corridor for turtles, as well as potential habitat for American Eel.

The Contractor's responsibilities for the mitigation involving exclusion, monitoring and removal of fish and wildlife are prescribed in this Special Provision.

General

The Contractor shall be responsible for determining and conforming to the requirements of the MNRF, MECP and any other Governmental Regulatory Agencies (collectively "Regulatory Agencies") having jurisdiction in the Working Area or over the potentially affected watercourse.

The Contractor's Biologist (qualified fish and wildlife specialist) shall prepare a Fish and Wildlife Exclusion, Monitoring and Removal Plan (Plan) in order to monitor and safely remove/relocate fish and wildlife downstream of the construction zone after installation of the erosion and sediment control measures within the watercourse. No in-water works will be permitted until the Fish and Wildlife Exclusion, Monitoring and Removal Plan has been submitted and reviewed by the Regulatory Agencies. The Contractor shall implement the fish and wildlife exclusion measures of the Plan. The Contractor's Biologist shall be responsible to confirm that exclusion measures conform to agency permitting requirements, if present, as well as the Plan and shall undertake the fish and wildlife monitoring and removal elements of the Plan.

Project Specific Exclusion Measures, Monitoring and Mitigation Protocol:

- All construction zones in, or adjacent, to the Bonnechere River shall be surrounded by sediment and erosion control including a turbidity curtain that shall be designed to ensure fish and wildlife do not enter into the construction area. The erosion and sediment control therefore serves a dual purpose as it traps migrating sediments from exiting the construction zones and safely excludes fish and wildlife from entering the construction zones. The Contractor shall coordinate the requirements of this Special Provision with the design and implementation of the Environmental Protection-ESC Plan.
- Prior to each day's construction activities, a sweep and search of the immediate area within the exclusion zones will be conducted to identify and remove any fish and wildlife that may have entered the area. Any observation of SAR will require an immediate stoppage of construction work and the Contractor's Biologist shall be contacted and a record should be taken of the SAR occurrence. The Contractor's Biologists shall be required to follow standard

SAR protocols. Construction work shall only be restarted upon receipt of a written clearance from the Contractor's Biologist.

- All construction personnel shall be made aware of the key identification features of species at risk and shall advise the Contractor's Site Superintendent should any SAR be observed within the construction work area. The Contractor shall immediately contact the Contractor's Biologist for further action as outlined herein. The Contract Administrator shall also be notified.
- The Contractor's Biologist shall conduct a fish rescue of fish observed within the exclusion area in accordance with the permit under the provincial Fish and Wildlife Conservation Act, 1997 obtained from the MNRF's Pembroke district.
- Prior to any construction the following general mitigation measures should be implemented to protect SAR:
 - Implement a worker awareness program for construction staff that includes SAR identification and habitat characteristics.
 - Inform construction personnel to not threaten, harass or injure wildlife.
 - Conduct a daily pre-construction search of the work area to identify presence of SAR.
 - If threatened or endangered species are seen in or near the work area, stop work immediately and contact the MECP for further direction.
 - Take photographs if possible, but do not interact with the animal.
 - Construction equipment and vehicles are to yield to wildlife.
 - If wildlife species are encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site.
- Specific requirements relating to turtles include the following:
 - The Contractor shall review and implement the recommendations provided in the "Turtle Mitigation of Road and Highway Projects" by MNR (version 1.0, April 2014)
 - Erect exclusion fencing (e.g., silt fence) prior to activities occurring in areas of suitable habitat (e.g., Bonnechere River and turtle nesting area) to minimize the risk of turtles entering the work area
 - Install exclusion fencing prior to the sensitive nesting season if activities are anticipated to occur throughout this period to prevent turtles from entering and/or nesting
 - Prior to 15 March if activities are occurring within or adjacent to overwintering habitat (not applicable at the Site)
 - Prior to 1 June if activities are occurring within or adjacent to nesting habitat
 - If erecting exclusion fencing, use a type that will last the duration of the project. Check that stakes are securely driven into the ground on the inside of the working area. Place stakes 2 m apart and drive them to a depth of 30 cm, with the fabric pulled tight to reduce sagging, and the bottom of the fabric buried 10-20 cm down within an additional fabric lip extending outwards 90 degrees.
 - Backfill and compact the fabric lip
 - Inspect any fenced off areas daily to identify compromises in the fence and to remove any turtles that may be trapped in the fence
 - Install fencing so that it prevents construction sediment from entering into wetlands
 - Have a qualified person conduct a pre-construction sweep and monitor the work area for active turtle nests during the turtle nesting season (June-August).

- Implement a worker awareness program for construction staff that includes species at risk identification and habitat characteristics
- Conduct a daily pre-construction search of the work area to identify presence of species at risk
- If threatened or endangered species are seen in or near the work area, stop work immediately
- Take photographs if possible, but do not interact with the animal
- Contact Ministry of Environment, Climate and Parks
- If turtles have established nests within the Site, stop work immediately and notify the MECP of the occurrence and for further direction. The nests are to be protected from disturbance until the nestlings have hatched and dispersed, approximately in late September, and a permit with the MECP under the ESA, 2007 will most likely be required.
- Specific requirements relating to Barn Swallow's include the following:
 - Do not perform work under the bridge between May 1 – August 31.
- Specific requirements relating to Fish and Fish habitat include the following:
 - Avoid in-water work during the timing windows for the Bonnechere River for spring and fall spawning species (October 1 to July 15).
 - Implement project-specific temporary erosion and sediment control (ESC) measures per the Ontario Provincial Standard Specification OPSS 805 for Construction Specification for Temporary Erosion and Sediment Control Measures prior to starting work.
 - Install a turbidity curtain to isolate the proposed dredging (construction) area as per the Ontario Provincial Standard Specification OPSS 805 for Construction Specification for Temporary Erosion and Sediment Control Measures prior to starting work.
 - Develop and implement a project-specific fish rescue/salvage program to remove entrapped fish within the dredging (construction) area isolated by the turbidity curtain
 - Do not stockpile soil in areas that allow sediment to enter the watercourses.
 - Develop and implement a containment and spill management plan to prevent deleterious substances from entering the watercourse.
 - Ensure machinery is clean and free of leaks.
 - Keep an emergency spill kit on site.
 - Stabilize disturbed soil upon completion of work.
- Specific requirements relating to SAR bats include the following:
 - To reduce the likelihood of harm to SAR bats, it is recommended that trees ≥ 10 cm DBH be removed outside the bat maternity roost season which is between April 1 to October 1.
 - If tree clearing is required within this window, maternity exit surveys may be required by the MECP prior to tree removal to determine if bats are using the trees.
- Maternity exit surveys are conducted during evening hours following industry standard, accepted protocols as outlined by MNRF.
 - If work is anticipated to impact SAR Myotis bats, ESA authorization may be required and is discussed further below.
- Specific requirements relating to tree and vegetation include the following:
 - Erect a fence at the critical root zone (CRZ) of trees
 - Do not place any material or equipment within the CRZ of the tree
 - Do not attach any signs, notices or posters to any tree

- Do not raise or lower the existing grade within the CRZ of a tree without approval of Forestry Services
- Tunnel or bore when digging within the CRZ of any tree
- Do not damage the root system, trunk or branches of any tree
- Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy

Design and Submission Requirements

Contractor's Biologist:

The Contractor shall submit supporting documentation to the Contract Administrator that the Biologist has a minimum of 10 years of experience or 5 recent projects, who is a fish and wildlife specialist with the necessary experience and expertise to undertake the requirements of the Fish and Wildlife Exclusion, Monitoring and Removal Plan specified herein. References asserting this documentation shall be provided upon request.

Submission Requirements:

Prior to implementation of the sediment and erosion control plan and in-water works the Contractor shall submit to Contract Administrator for review, one (1) electronic a detailed Fish and Wildlife Exclusion, Monitoring and Removal Plan for in-water works. The submission shall be prepared by the Contractor's Biologist.

The Contractor's Fish and Wildlife Exclusion, Monitoring and Removal Plan shall include, but not be limited to, the following:

- Requirements to establish an exclusion zone to prevent entry of fish and wildlife into the construction zones in, or adjacent, to the Bonnechere River. The requirements shall be coordinated and integrated into the design of the Erosion and Sediment Control Plan required for In-water Works;
- A daily monitoring plan throughout the duration of the in-water works;
- A methodology for removal of fish and wildlife from within the erosion and sediment control measures including a protocol for ensuring relocation to an area of similar habitat;
- A protocol shall be developed for communication and measures required when fish and wildlife are observed by workers within the erosion and sediment control measures; and
- The Plan shall prescribe the reporting protocols which shall conform to the Plan as approved by the Ministry of Natural Resources and any prescribed conditions of the Regulatory Authorities.

Regulatory Agency Approvals, Permits and Authorizations:

No in-water works will be permitted until the Fish and Wildlife Exclusion, Monitoring and Removal Plan has been submitted and reviewed by the Regulatory Agencies.

The Contractor shall be responsible to submit the Fish and Wildlife Exclusion, Monitoring and Removal Plan to the Ministry of Natural Resources for review and approval. The Contractor shall provide copies of all submissions and correspondence between the Contractor and the Regulatory Agencies to the Contract Administrator.

The Contractor shall be responsible to make the submission to the Ministry of Natural Resources and Forestry (MNRF) and obtain the required authorizations and permits for the Wildlife Scientific Collector's Authorization and the License to Collect Fish for Scientific Purposes under the provincial Fish and Wildlife Conservation Act, 1997. The Contractor shall submit written verification from the MNRF to the Contract Administrator of the permit authorizations and conditions.

Inspection and Monitoring Reports:

The Contractor shall submit to the Contract Administrator within 24 hours of each inspection, the inspection reports prepared and signed by the Contractor's Biologist as prescribed by the Fish and Wildlife Exclusion, Monitoring and Removal Plan. The following are the minimum requirements for the monitoring reports:

- The date and time of the inspection and monitoring;
- Observations during the inspections;
- Description of any observed wildlife and removal measures;
- Record of contact with MECP in event that SAR is observed and action/follow-up.

Contractor's Responsibilities

The Contractor shall ensure that all workers, including sub-contractors, in the Working Area are aware of the importance of reporting any observations of fish/wildlife and SAR within the erosion and sediment control measures to the Contractor's Site Supervisor who immediately shall advise the Contractor's Biologist for follow-up and action as specified herein. The Contract Administrator shall also be advised.

The Contractor shall be solely responsible to ensure daily monitoring for wildlife is undertaken and shall submit to the Contract Administrator the specified daily monitoring within 24 hours of the inspection being completed.

The Contractor shall immediately report to the MECP any observation of SARS. Failure to report may result in penalties being imposed by Regulatory Agency.

Operational Constraints

The Contractor shall be aware that construction activities in or adjacent to the watercourses from the period of October 1 to July 14 inclusive are not permitted to protect both spring and fall spawning species. Any work on-site which will cause or be the cause of discharge to the watercourse, particularly during the aforementioned dates, is strictly prohibited. Further, the Contractor shall be aware that all temporary installations such as causeways, cofferdams, etc. shall be removed from the watercourse on or prior to October 1. As such, depending on the

Contractor's method of construction and schedule, the temporary in-water access and the in-water erosion and sediment control measures may need to be re-installed and removed in a second construction season which would require continued implementation of the Fish and Wildlife Exclusion, Monitoring and Removal Plan specified herein.

Works under the bridge shall occur between May 1st and August 31st due to potential Barn Swallow nesting.

Measurement and Basis of Payment

Payment for the lump sum tender item "Fish and Wildlife Exclusion, Monitoring and Removal During In-Water Works" shall be full compensation for all labour, equipment and material to do the work as specified herein.

Payment will be based upon the following schedule:

- 20% upon satisfactory submission of the "Fish and Wildlife Exclusion, Monitoring and Removal Plan" and receipt of the Regulatory Agency permits and authorizations.
- 80% pro-rated into equal monthly payments over the entire duration in the Contractor's overall construction schedule that the in-water access and in-water sediment and erosion control measures are required for construction of the works and during which "Fish and Wildlife Exclusion, Monitoring and Removal during In-Water Works" shall be conducted. Release of monthly payments are subject to receipt of all monitoring reports stipulated herein.

This payment schedule may only be modified as agreed upon in writing between the Contractor and the Contract Administrator.

F-203C-001-PWC-2021-15

ROCK BOLTS
April 2021

OPSS.MUNI 203, November 2019 shall govern this work except as amended or extended herein.

SCOPE

This special provision covers the requirements for supply and installation of rock anchors for the new concrete refacing on the existing concrete wall below the south abutment, as shown on the Contract drawings.

203.05 MATERIALS

203.05.01 Rock Bolts

Section 203.05.01 is deleted in its entirety and replaced with the following:

Rock Bolts shall be 25mm diameter 690 MPa (150 ksi) all thread bars, steel to ASTM A615 or CSA G30.18, or approved equivalent to the lengths specified in the Contract Drawings. The Rock Bolts shall have corrosion protection installed in the factory. Rock bolts shall be fully threaded and provided with a face plate, as specified in the Contract Drawings with a nut and washer. All rock bolt components shall be hot-dip galvanized according to ASTM A123.

203.05.01.01 Anchoring Agent for Rock Bolts

Section 203.05.01.01 is deleted in its entirety.

203.05.01.02 Grout

Section 203.05.01.02 is deleted in its entirety and replaced with the following:

Grout used to fill the annular space between the drilled hole and the rock anchor shall be non-shrink and have a strength of 20 MPa at seven days and 30 MPa at 28 days. The type of cement used shall be suitable for the required use of the grout. Accelerators shall not be used. The grout shall bleed less than 2% when allowed to stand for one hour.

203.0 CONSTRUCTION

203.07.01 Rock Bolting

Section 203.07.01 shall be amended by the addition of the following:

Holes for rock bolts shall be drilled to a diameter of 1.7 times the anchor and corrosion protection diameter.

The entire length of the Rock Bolt shall be grouted. Care shall be taken that the grouting pressure is sufficient to bond the entire length of the grout area with a minimum of voids.

The anchor holes shall be thoroughly flushed with water to remove all debris and rock flour to ensure an adequate bond between the grout and rock.

203.07.01.01 Testing of Rock Bolts

Section 203.07.01.01 shall be amended the addition of the following:

Proof tests shall be conducted on all anchors installed as detailed below.

203.07.01.01.01 Proof Test

Proof test shall be conducted by incrementally loading the anchor according to the following schedule or until the anchorage fails, as determined by the Contract Administrator.

Load Schedule: 15 kN, 30 kN

At the test load, the load shall be maintained for 10 minutes and the total movement readings shall then be recorded at 1, 2, 3, 4, 5, 6 and 10 minutes after reaching the test load. If the total creep movement between 1 and 10 minutes exceeds 1mm, the test load then shall be maintained for an additional 50 minutes and the movement readings shall be recorded at 20, 30, 40, 50, and 60 minutes,

During the load hold period, the anchor load shall not be allowed to deviate from the test pressure more than 0.35 MPa. The load shall always be returned to the specified test load prior to taking the movement reading at the specified interval. The test load shall not be exceeded during the period of observation.

If the acceptance criteria as specified herein are met, the anchorage shall be unstressed, and the nut can be applied wrench tight.

If the acceptance criteria as specified herein are not met in the 30-minute period the test shall be extended as required, with readings at 30-minute increments, up to 180 minutes.

If the acceptance criteria as specified herein are not met, the provisions of the Unacceptable Stressing Results clause shall apply.

203.07.01.01.02 Acceptance Criteria

- a) The total creep amount shall not exceed 1mm at test load during the period of 1 to 10 minutes.
- b) If (a) is exceeded, then the total creep movement within the period of 6 to 60 minutes shall not exceed 2mm.

203.07.01.01.03 Unacceptable Stressing Results

For the anchorages that do not meet the acceptance criteria for the performance test or the proof test, the Contractor shall submit one of the following alternatives as a proposal to the Contract Administrator for approval:

- a) Abandon the deficient anchor and install a new anchor.
- b) Reduce the anchor design load by increasing the number of anchors provided.
- c) Increase the specified bond length of the anchors.
- d) Change the anchor type and/or modify installation techniques.

F-305C-002
GRANULAR SEALING, LIMITS

March 2017

Amendments to OPSS MUNI.305

OPSS.MUNI 305 shall apply except as may be amended and extended herein.

305.07 CONSTRUCTION**305.07.03 Application**

Subsection 305.07.03 is amended by the addition of the following:

The area to be sealed is from the edge of pavement to one (1) metre beyond all guide rails.

Sealer applied to an adjacent pavement surface shall be overlapped 100 mm onto the pavement surface.

F-305C-004
**GRANULAR SEALING, GRADING AND COMPACTION
AROUND GUIDERAIL**

March 2017

Amendments to OPSS MUNI.305

OPSS.MUNI 305 shall apply except as may be amended and extended herein.

305.07 CONSTRUCTION**305.07.02 Surface Preparation**

Subsection 305.07.02 is amended by the addition of the following:

The contractor shall grade and compact the granulars around the guiderail system at the proper crossfall prior to the application of granular sealant.

F-310C-001-PWC-2021-15
HOT MIX ASPHALT

April 2021

Amendments to OPSS.MUNI 310

OPSS.MUNI 310 shall apply except as may be amended and extended herein.

310.07. 06.01 General

Subsection 310.07.06.01 is amended by the addition of the following:

Placement of asphalt for Widening and Irregular sections: to be placed with mix as specified in contract items (consistent mix as at other locations); and the maximum compacted thickness of each lift is not to exceed 50mm unless approved is given by the Contract Administrator.

F-310C-005

HOT MIX ASPHALT – LIQUID ASPHALT CEMENT PRICE INDEX

February 2018

Amendments to OPSS.MUNI 310 and OPSS 1150

OPSS.MUNI 310 and OPSS 1150 shall apply except as may be amended and extended herein.

Asphalt Cement

The County of Renfrew will adjust the payment to the Contractor based on changes to the Ministry of Transportation's performance graded asphalt cement price index. The price index will be published monthly in the MTO Contract Bulletin and displayed on the MTO web site: <http://raqs.merx.com/public/bulletin/bulletin.jsf>. The price index will be used to calculate the amount of the payment adjustment per tonne of new asphalt cement accepted into the work.

A payment adjustment per tonne of new asphalt cement will be established for the month in which paving is placed when the price index for the month differs from the price index for the prior month in which the tender was opened. Payment adjustments due to changes in the price index are independent of any other payment adjustments made to the hot mix tender items.

The payment adjustment per tonne will apply to the quantity of new asphalt cement in the hot mix accepted into the work during the month for which it is established. The quantity of asphalt cement used on the project shall be determined from the Quality Assurance test results conducted by the County of Renfrew. If End Result Specifications (ERS) are used, these results will be used to determine the quantity used. Otherwise the Contract Administrator shall determine the amount used. The payment adjustment for the month will be calculated by the following means:

1. **When AC Prices are Rising:** the payment adjustment to be paid to the Contractor is the result of subtracting the price index for the prior month in which the tender was opened from the price index in effect when paving took place multiplied by the number of tonnes of AC incorporated in the mix(es) as determined by the Contract Administrator.
2. **When AC Prices are Falling:** the payment adjustment made in favour of the Owner is the result of subtracting the price index for the prior month in which the tender was opened from the price index when the tender was awarded multiplied by the number of tonnes of AC incorporated in the mix(es) as determined by the Contract Administrator.

3. On completion of the Contract, an adjustment shall be made on the final payment certificate to adjust for the Liquid Asphalt Cement price variation. The adjustment shall be either positive or negative. Should the Contract span multiple years, this adjustment shall be made at the end of the calendar year(s) and again upon completion of the contract.

Example 1 – AC Prices Increasing:

- 3,000 tonnes of HL3 @ 5.20% AC (156.0 tonnes AC)
- Tender opened May 15, 2000
- Price Index for month of April 2000 - \$290/tonne
- Hot Mix Paving placed on August 17-24, 2000
- Price Index for month of August 2000 - \$325/tonne
- Payment adjustment to be paid to the Contractor:
 $(\$325 - \$290) \times 156 \text{ tonnes AC} = \$35 \times 156 \text{ tonnes AC} = \$5,460.00$

Example 2 – AC Prices Decreasing:

- 4,500 tonnes of HL8 @ 4.6% AC (207.0 tonnes AC)
- Tender opened May 15, 2000
- Price Index for month of April 2000 - \$290/tonne
- Hot Mix paving placed on October 1-8, 2000
- Price Index for month of October 2000 - \$245/tonne
- Payment adjustment for hot mix items reduced by:
 $(\$290 - \$245) \times 207 \text{ tonnes of AC} = \$45 \times 207 \text{ tonnes AC} = \$9,315.00$

Payment at the Contract Price shall be full compensation for all labour, equipment, material, sampling, design, testing, and associated work necessary to supply and place the material as specified. The above adjustment is solely to compensate for market variations in the price of liquid asphalt cement.

F-310C-010

HOT MIX ASPHALT – MIX DESIGNS AND QUALITY CONTROL

February 2018

Amendments to OPSS.MUNI 310

OPSS.MUNI 310 shall apply except as may be amended and extended herein.

310.04 SUBMISSION AND DESIGN REQUIREMENTS

Subsection 310.04 is amended by the addition of the following:

310.04.01 Submissions

The successful Tenderer will submit a mix design and aggregate test results at the award of the Tender. The mix design must have been produced in the previous twelve (12) months prior to submission. The mix design must conform to the requirements as listed in OPSS 1150. The physical property test results of the aggregates must meet the requirements as listed in OPSS.MUNI 1003.

The Contractor will submit a copy of the Contractor's Quality Control Plan to the Contract Administrator for review a minimum of two weeks prior to paving. The Quality Control Plan must include such quality control procedures, including sampling and testing, as is necessary to ensure that all hot mix aggregates and all hot mix asphalt to be used in the work conform to the requirements of the Contract. The Contractor shall determine the type and amount of quality control sampling and testing to be completed so as to ensure the contract requirements are met.

The Contractor shall be responsible for the interpretation of the test results and the determination of any action to be taken to ensure that all materials and work conform to the requirements of the Contract.

The Quality Control Plan will identify the names and responsibilities of the Contractor's representatives and will identify the certified laboratory that will be responsible for the quality control testing.

310.04.02 Quality Control Plan

The Quality Control Plan will address the following:

1. Quality control and quality assurance material sampling, preparation, handling, delivery, and storage;
2. Quality control testing and the timing for the testing; and
3. Timing for the submission of results for all quality control testing.

The Contractor shall through the Quality Control Plan ensure:

1. Each of the following complies with and is supplied in accordance with the Contract Documents:
 - (a) materials from approved/designated sources;
 - (b) the mix design submission, including all supporting documentation;
 - (c) materials from sources identified in the accepted mix design submission; and
 - (d) submission of certification for all materials that require certification.
2. Each of the following is performed in accordance with the Contract Documents:
 - (a) the mix design;
 - (b) materials testing and/or inspection prior to incorporation into the work, and checking that materials meet the accepted mix designs;

- (c) materials handling and/or storage; and
- (d) addition and/or mixing of materials identified in the accepted mix design.

3. That no materials are used that are identified as deficient prior to incorporation into the work. The Contractor shall ensure that no materials are used that would have been identified as deficient prior to incorporation into the work if quality control test results had been available when specified.

310.04.03 Assessment of Compliance

The Contract Administrator’s assessment of compliance may consist of random or milestone inspections, continuous inspection, sampling, and testing for quality assurance purposes, audits of the quality control documentation specified in the Contract Documents or any combination of the preceding actions at the discretion of the County.

310.04.04 Payment

Quality Control Activities

Full compensation for carrying out quality control activities and for meeting the requirements of this Special Provision shall be included in the Contract Price for each of the appropriate Tender Items.

F-310C-013	ASPHALT REPAIRS
	February 2018

Amendments to OPSS.MUNI 310

OPSS.MUNI 310 shall apply except as may amended and extended herein.

310.07 CONSTRUCTION

Subsection 310.07 is amended by the addition of the following;

310.07.18 Asphalt Repairs

Any asphalt deficiencies that are deemed rejectable are to be removed and replaced a minimum of one lane width. Replacement asphalt must be placed with the use of a mechanical self-propelled paver.

F-310C-015**PERFORMANCE GRADED ASPHALT CEMENT - QUALITY ASSURANCE**March 2018

Amendments to OPSS.MUNI 310

OPSS.MUNI 310 shall apply except as may be amended and extended herein.

310.08.01 General

Subsection 310.08 is amended by the addition of the following to the end of the second paragraph:

The Performance Graded Asphalt Cement (PGAC) shall meet the additional requirements shown in Table 1 of OPSS.MUNI 1101. The Corporation may be performing Quality Assurance testing of the PGAC.

F-314C-001-PWC-2021-15**GRANULAR A**April 2021

OPSS.MUNI 314 shall govern this work except as amended or extended herein.

SCOPE

The Contractor shall supply Granular A as shown in the Contract Documents. Granular A shall be placed, graded, and compacted as directed by the Contract Administrator at entrances parking areas and along the shoulders of the roadway to accommodate the new guard rails.

314.07.01 Granular Subbase, Base, and Surface

This item shall also be used for grading of driveways and parking areas. For parking areas and entrances granular shall be of similar appearance.

Placement of granular material shall provide positive drainage unless specified or directed by the Contract Administrator.

F-314C-015**GRANULAR ENTRANCE MATERIAL**March 2017

Amendments to OPSS.MUNI 314

OPSS.MUNI 314 shall apply except as may be amended and extended herein.

314.07 CONSTRUCTION

Section 314.07.01 is amended with the addition of the following:

314.07.01 Granular Sub-Base, Base, and Surface

Existing granular entrances that require additional granular shall have the new material be similar in type.

F-491C-001-PWC-2021-15

PROTECTION OF EXISTING UTILITIES

April 2021

Amendments to OPSS.MUNI 491

OPSS.MUNI 491 shall govern this work except as amended or extended herein.

Section 491.01 shall be amended by the addition of the following:

491.01 SCOPE

This special provision covers the requirements for the protection of the overhead utility cables/lines supported on poles to the east and west of the structure and crossing the roadway north of the approach, and any other utilities encountered.

491.07 CONSTRUCTION

Section 491.07.01 shall be amended by the addition of the following:

491.07.01 General

The Contactor shall be responsible for undertaking his own locates prior to commencement of the work for the utilities to include but not limited to the overhead utility cables/lines on the north side of the structure within the Contract limits. For any existing utilities that require relocation, modification, and reconstruction, it is the Contractor's responsibility to coordinate with utility companies and to bear all costs for such work. The Contractor shall be fully responsible for scheduling any utility work so as to not negatively impact the completion date of the Contract.

The Contractor shall be responsible for any damage to utilities resulting from his work at no cost to the Owner or the Contract Administrator.

491.10 BASIS OF PAYMENT

Section 491.10 is deleted in its entirety and replaced with the following:

491.10.01 Protection of Existing Utilities

Payment at the Contract Lump Sum price for the above item includes all labour, Equipment and Material to do the work of the locates, protection, relocation, modification and reconstruction of existing utilities and reinstatement to their existing conditions.

F-506C-001
WATER FOR DUST SUPPRESSION

 February 2018

Amendments to OPSS.MUNI 506

OPSS.MUNI 506 shall apply except as may amended and extended herein.

All references to calcium chloride and magnesium chloride are deleted from this specification. Only water shall be used for dust suppression.

506.07 CONSTRUCTION**506.07.01 General**

Subsection 506.07.01 is amended by the addition of the following;

Calcium chloride cannot be used as a dust suppressant. Water is to be used as a dust suppressant for the duration of the contract, including all calendar days.

506.09 MEASUREMENT FOR PAYMENT**506.09.01 Water for Dust Suppression**

Subsection 506.09.01 is completely deleted and replaced with the following;

No measurement will be made for using water only for dust suppression.

506.10 BASIS OF PAYMENT

Subsection 506.10 is completely deleted and replaced with the following;

Payment for all labour, equipment, and materials required to do the work shall be considered to be included in the Contract Prices for the applicable items requiring dust suppression.

Amendments to OPSS.MUNI 510

OPSS.MUNI 510 shall apply except as may be amended and extended herein.

This specification includes the required removal of backfill for the stump located at station 1+030Rt.

510.09 MEASUREMENT FOR PAYMENT

510.09.01 is removed in its entirety and replaced with the following.

Measurement of this item shall be based on the measured earth (topsoil and granular material) removed, measured in cubic metres. All other items indicated within this specification will not be measured unless there is a separate measurable item in the form of tender.

510.10 BASIS OF PAYMENT

510.10.01 is removed in its entirety and replaced with the following.

Payment at the Contract price for the above tender items shall be full compensation for all labour, Equipment, and Material to do the work.

Imported backfill shall be paid for separately according to the tender item of the material specified in the Contract Documents. November 2018 Page 17 of 19 OPSS.MUNI 510

Material designated for salvage but damaged by Contractor operations or lost by the Contractor shall be replaced with new material at no additional cost to the Owner.

If the Contractor elects to remove maintenance holes, catch basins, ditch inlets, and valve chambers in their entirety rather than as a partial removal, the removal shall be at no additional cost to the Owner.

Disturbed or damaged portions not designated for removal or salvage that result from the Contractor's operations shall be corrected or repaired at no additional cost to the Owner.

All costs associated with temporary ramping, including ramping material, shall be included in the item price for Removal of Asphalt Pavement - Partial Depth.

F-510C-002-PWC-2021-15
REMOVAL OF STEEL BEAM GUIDE RAIL

 April 2021

Amendments to OPSS.MUNI 510

OPSS.MUNI 510 shall govern this work except as amended or extended herein.

510.07 CONSTRUCTION
510.07.05.02 Removal of Guide Rail Systems

Section 510.07.05.02 is amended by the addition of the following.

The work shall include the removal of the buried end treatments attached to the steel beam guide rail and all ancillary foundations and anchorages for the end treatments.

F-510C-003-PWC-2021-15
BRIDGE PLAQUE

 April 2021

OPSS.MUNI 510, November 2018 and OPSS.MUNI 904, November 2012 shall govern this work except as amended or extended herein.

SCOPE

This special provision covers the requirements for salvaging the existing bridge plaque located in the north west quadrant of the bridge during demolition of the concrete end block and for the reinstatement of the plaque while pouring the end block of the bridge barrier.

CONSTRUCTION

The Contractor shall record the vertical and horizontal off set of the plaque prior to demolition of the concrete barrier wall.

When reinstated the plaque shall be installed in the same location as the current plaque. Chamfers shall be installed around the plaque to ensure there are no sharp edges. It is noted that the plaque will interfere with clear cover requirements.

BASIS OF PAYMENT

Payment at the contract price for the item "Removal, Salvage and Reinstatement of Bridge Plaque" shall be full compensation for all labour, equipment and material to do the work.

F-510C-006
REMOVE ASPHALT PAVEMENT – PARTIAL DEPTH

 March 2017

Amendments to OPSS.MUNI 510

OPSS.MUNI 510 shall apply except as may be amended and extended herein.

510.07 CONSTRUCTION
510.07.06.04 Removal of Asphalt Pavement Partial Depth

Clause 510.07.06.04 is amended by the addition of the following:

The asphalt pavement shall be removed to an average depth of 40 mm. The maximum depth of removal in any specific location will be determined at the time of construction.

F-510C-030
REMOVE ASPHALT PAVEMENT PARTIAL DEPTH – STEP JOINT

 March 2017

Amendments to OPSS.MUNI 510

OPSS.MUNI 510 shall apply except as may be amended and extended herein.

510.07 CONSTRUCTION
510.07.06.04 Removal of Asphalt Pavement Partial Depth

Clause 510.07.06.04 is amended by the addition of the following:

The asphalt pavement shall be removed to a depth of 50 mm and a width of 300 mm to provide a step joint. The contractor shall spread the reclaimed asphalt pavement (RAP) on the existing granular shoulder or side slope.

510.09 MEASUREMENT FOR PAYMENT
510.09.01.18 Removal of Asphalt Pavement, Partial Depth

Measurement will be the horizontal length in metres along the edge of the existing pavement.

510.10 BASIS OF PAYMENT
510.10.01 Removal Items – Removal of Asphalt Pavement, Step Joint Item

Subsection 510.10.01 is amended in that payment at the Contract Price per metre shall include all labour, equipment, and materials for the removal, placement, spreading, grading, and compaction of the RAP on the shoulders or side slope.

F-518C-001**DEWATERING DURING CONSTRUCTION**March 2017

OPSS 902 and OPSS.MUNI 518 shall govern except as amended and extended herein:

Scope of Work

Under this Item the Contractor will design, erect, maintain, and remove upon completion of works a dewatering scheme as necessary for carrying the entire construction in the dry.

Control of Water Plan

General

Anticipated Water Flows and Local Conditions

The Contractor must satisfy himself with the local conditions and anticipated water flows, levels, and flow velocity to be met with during construction. He shall make his own estimate of the facilities required and difficulties to be encountered including the nature of subsurface materials and conditions. The Contractor shall make his own estimate of the anticipated flows during construction and construct his work so that the flows are not restricted. Under no circumstances shall the proposed method of construction indicated on Contract Drawings be construed by Contractor as an indication that a dewatering scheme may not be necessary.

Owners of Affected Properties

It is the Contractors full responsibility to obtain approval from owners of affected properties and provide any financial compensation to owners of affected properties. A release form from affected property Owner must be filed with the Contract Administrator prior to Contract completion.

Construction

1. Cofferdams should not block more than one third of the waterway at a time.
2. A sufficient waterway size shall be provided for a diversion channel and temporary openings. Use erosion-resistant material, i.e. gravel fill with rip-rap or geotextile lining in order to prevent the entry of sediment to the watercourse. All work to construct the diversion channel shall be in accordance with OPSS.MUNI 206 and surplus earth excavated materials shall be disposed of in accordance with OPSS.MUNI 180.
3. Construction affecting water must not take place during spawning/incubation periods or major fish migration periods, as determined by the Ministry of Natural Resources.

4. Equipment and materials should be stored well back from the water's edge.
5. Pump water should outlet into vegetated areas for filtering during dewatering operations.
6. Control materials on the job so that loose boards, nails, and other debris will not enter the waterway and flow downstream.
7. Do not clean concrete buckets, wheelbarrows, or shovels in water body. Instead wash them with hoses so that run-off is filtered through vegetation. Prevent the entry of lime, cement, or fresh concrete into waterways.
8. The material used for earth cofferdams should be clean granular without a significant content of silt or clay.
9. Cofferdam should be removed as carefully as possible to minimize sedimentation.
10. The Contractor shall ensure that no contamination, waste, or other substances which may be detrimental to marine life or quality of water shall enter the watercourse as either a direct or indirect result of construction and the Contractor shall meet all requirements of Government authorities and agencies with respect to environmental protection.
11. The Contractor shall immediately clean up and dispose of any floating debris, or debris which accumulates on the watercourse bed or banks as a result of construction.
12. The Contractor shall be prepared to immediately clean up any spills or contamination, waste or other substances which may be either detrimental to marine life or quality of water. In the event of a spill, the Contractor shall immediately commence a clean-up operation. The Contractor shall be liable for all damages and/or charges laid which result, either directly or indirectly, from the spill, or contamination of any kind, which result from its construction operations.
13. (a) screening shall be provided at the water intake to prevent the entry or damage to fish; and
(b) discharge of the water shall be directed in a manner that will prevent erosion of the watercourse bed and watercourse banks at the water outlet.
14. During the closure of the permanent watercourse channel or the temporary water passage system the Contractor shall release any stranded fish to the open portion of the watercourse without harm.

Submissions to Contract Administrator

The Contractor shall submit for review to the Contract Administrator six (6) copies of a detailed dewatering plan in writing a minimum of 14 calendar days prior to commencing any work. The submission shall be comprehensive and shall provide descriptions, working drawings, and schedules that detail the sequence of this work and the provision of temporary protection systems associated with each stage of the work, as well as for the removal of trapped fish and crustaceans from the area to be dewatered.

Ineffectiveness of Installed System

- Wherever the Contractor's dewatering scheme is found to be inadequate by the Contract Administrator or regulatory authorities the Contractor shall make immediate changes to ensure watercourse and / or fisheries protection at no extra cost to the Owner.

- Wherever the Contractor’s dewatering scheme is found to be ineffective by the Contract Administrator with respect to protecting excavations from water infiltration due to water level fluctuation, soil conditions, or any other reason, the Contractor shall make immediate changes to ensure construction in the dry at no extra cost to the Owner.

Control of Water

OPSS.MUNI 518 applies.

Basis of Payment

Subsection **518.10** of OPSS.MUNI 518 is amended by the addition of the following:

Payment for this item shall be made on the following basis:

Implementation of the complete dewatering scheme:	30%
Removal of dewatering scheme:	15%

The balance (55%) will be prorated over the balance of the working period.

F-706C-001-PWC-2021-15	Traffic Control Plan
	April 2021

Amendments to OPSS.MUNI 706 and OPSS.MUNI 708

OPSS.MUNI 706 shall govern this work except as amended or extended herein.

1.0 SCOPE

The Scope of the work addressed in this specification “Traffic Control Plan” shall include the preparation and submission of a Traffic Control Plan (TCP) as outlined in this specification and in Special Provision – General D-100-001.

Where construction pursuant to this Contract is being carried out on or adjacent to a County roadway, the supply, placement, monitoring, and disassembly of all traffic control devices shall be performed under the direction of the Contractor in accordance with the Ontario Traffic Manual Book 7 latest edition.

As part of the “Traffic Control Plan”, the Contractor shall also consider small watercraft (canoes, kayaks, stand up paddle boards, aluminum boats, etc.) operating on the Bonnechere River for recreational purposes. The Contractor shall ensure that small watercraft can always continue to safely operate through the construction area.

The Contractor shall be responsible for construction means, methods, techniques, sequences, and procedures and for coordinating the various parts of the traffic control. The Contractor shall

be responsible for the supply, placement, installation, removal and reinstatement of any granular material, all temporary asphalt, removal of existing and short term line painting, short term line painting or other temporary facilities required in order to implement the works.

The Contractor shall prepare and submit a Traffic Control Plan (TCP) that details the specific traffic control layout(s), necessary for the completion of the works. The Traffic Control Plan shall be in the form of drawing(s) and written description(s) of how the Contractor intends to control traffic through and around the work zone. The TCP shall include, and not necessarily be limited to:

- Monitoring and Repair (24-hour contact number is required);
- Reference to Applicable OTM Book 7 Typical Layouts;
- Traffic control signs (regulatory, warning and temporary);
- Detour Signs;
- Traffic control delineation;
- Traffic Control vehicles and devices (TC-12, Crash Trucks, Temporary Lighting etc.);
- Contract-specific operational requirements;
- Night time requirements;
- Traffic staging and scheduling;
- Construction vehicle access/egress;
- Public access/egress for all existing entrances and side roads;
- Pedestrian safety; barriers and barricades;
- Emergency Vehicle access;
- Locations for removal of existing line painting and proposed temporary pavement markings;
- Parking for Contract Administrator;
- Any other traffic control measures;

The Contractor shall refer to the D-100-001 and other Special Provision-General for general and contract specific requirements of traffic operations, and definition of terms. A suggested detour plan has been provided as part of the Tender Package for the project which was reviewed with the County of Renfrew. This suggested plan shall be considered minimal requirements when the contractor develops their own detour plan for the project considering their approach, they will take during construction.

In addition to the Traffic Control Plan (TCP), the Contractor is advised that a Traffic Management Plan (TMP) is required and outlined in the Special Provision-General D-100-001. The Traffic Management Plan is not part of the scope of this Special Provision.

2.0 SUBMISSIONS, MONITORING, AND REPAIR

Two (2) weeks prior to commencing construction, the Contractor shall submit the Traffic Control Plan to the Contract Administrator for review. Subsequent revisions require one week for review. The Contractor acknowledges that revisions to the Traffic Control Plan may be necessary, in consultation with the County of Renfrew, where it concerns public safety and mobility. The Contractor is required to resubmit revised versions of the TCP if changes are made.

After submission/resubmission of the TCP, the Contract Administrator will review it to identify any errors, omissions, or improvements related to maintaining public safety and mobility, and contract-specific requirements. The Contract Administrator will also circulate the TCP to the County of Renfrew for review.

The acceptance and review of the TCP by the Contract Administrator and the County of Renfrew will make no representation and/or warranty that the document is accurate, complete, or compliant with all applicable legislation. Any errors, omissions or deficiencies within the TCP will remain the sole responsibility of the Contractor. The Contract shall not commence, until the Contractor has addressed all comments. The Contract Administrator reserves the right to ask for revisions to the Traffic Control Plan at submission time or reject it if the Plan does not meet the Contract language.

The Contractor shall be required to continuously review and modify the TCP for errors, omissions, deficiencies, or if new hazards are identified and not previously addressed within the document.

The Contract Administrator reserves the right to instruct the Contractor to revise the TCP at any time during the Contractor's execution of the Contract, when the Contract Administrator finds that the Contractor is not providing the commitments shown in the original Traffic Control Plan submission, or the Contractor's Traffic Control Plan proves to be insufficient to address the field conditions.

The Contractor shall ensure that all workers, including sub-contractors, in the Working Area are aware of the importance of the Traffic Control Plan measures.

The condition of all traffic control devices and short term line painting shall be maintained, if required for the duration of the Contract, in accordance with the OTM.

The Contractor shall immediately repair, replace or otherwise make good the practice(s) deemed unsafe or non-compliant when the owner (or his delegated authority) makes the Contractor aware of any violation of the TCP (or applicable regulations). Should the Contractor disagree, the Ministry of Labour will be consulted to provide clarification of the observed deficiency.

It is the responsibility of the Contractor to ensure that all necessary training has been provided prior to commencement of the work.

The Contractor shall:

- Be responsible for construction means, methods, techniques, sequences, and procedures and for coordinating the various parts of the traffic control.
- Maintain safe passage through the work area at all times for small watercraft.
- Restore the road following the completion of the work to the satisfaction of the Contract Administrator.

The suggested detour plan as shown on the Contract drawings may be used by the Contractor as the basis for the development of the Traffic Control Plan in accordance with Ontario Traffic Manual Temporary Condition – Book 7.

3.0 MEASUREMENT FOR PAYMENT

No measurement for payment shall be made for the Traffic Control Plan.

4.0 BASIS FOR PAYMENT

Payment at the Contract Lump Sum price for the item “Traffic Control Plan” shall be full compensation for the research, preparation and implementation of TCP and shall include all labour, equipment and material to supply, and maintain all traffic control measures detailed therein, including the small watercraft provisions. This payment includes supply, installation, monitoring, operation, repair, maintenance and removal of all required traffic control devices.

Traffic Control Persons (TCP’s) shall be included for payment under this item. The Contractor shall include any costs associated with TCP’s in this item where TCP’s are required.

Payment shall be based upon the following schedule:

- a) 25% upon satisfactory submission of the TCP and installation of the control measures in-place and fully operational; and,
- b) 75% pro-rated into equal payments over the term of the contract.

This payment schedule may only be modified as agreed upon in writing between the Contractor and the Contract Administrator.

All costs associated with traffic control including but not limited to TC-54 barrels, detour signage, local road and pedestrian signing, temporary hoarding fence, initial road conditioning, temporary asphalt, granular materials, obliteration of existing line painting, and installation and obliteration of short term line painting, maintenance, and local road restoration, will be considered incidental to the work and no separate or additional payment will be made.

F-710C-001-PWC-2021-15

PAVEMENT MARKINGS REINSTATEMENT

April 2021

Amendments to OPSS 710

OPSS 710 shall apply except as may be amended and extended herein.

710.07 CONSTRUCTION

710.07.01 General

Subsection 710.07.01 is amended by the addition of the following:

All existing pavement markings are to be reinstated. The Contractor shall document the location and nature of all existing pavement markings.

710.09 MEASUREMENT FOR PAYMENT

Section 710.09.01 is deleted in its entirety and replaced with the following:

710.09.01 Pavement Marking Reinstatement

Measurement for payment will be by Lump Sum.

710.09 Measurement for Payment

Subsection 710.09 of OPSS 710 is deleted in its entirety.

710.10 BASIS OF PAYMENT

Subsection 710.10.01 is amended with the addition of the following:

Pavement Marking Reinstatement – Item

F-721C-001-PWC-2021-15

STEEL BEAM GUIDE RAIL

April 2021

Amendments to OPSS.MUNI 721

OPSS.MUNI 721 shall apply except as may be amended and extended herein.

721-A Commentary

It is noted a non-current standard (OPSD 909.020) has been used for this project at the Request of the County of Renfrew due to allow for entrances to remain at their current location.

It is noted at the private entrance design length has been reduced from 7.62m to length to allow to fit in ROW at the request of the County of Renfrew. Offset distances from the ROW to the termination of the private entrance treatment is shown on the drawings (typically 0.5m with one location with a 1.5m offset from ROW).

721.09 MEASUREMENT FOR PAYMENT

721.09.01.03 is removed in its entirety and replaced with the following.

There will be no separate measurement for anchor blocks installed. Anchor blocks are to be included in the linear meter of guide rail items installed.

721.09.01.04 is removed in its entirety and replaced with the following.

Measurement of steel beam guide rail shall be by length in metres along the centreline of the system from end to end of each steel beam guide rail installation including the treatment at entrances and all associated components.

F-904C-001-PWC-2021-15

REPAIR GIRDER ENDS

April 2021

OPSS.MUNI 904, November 2012; OPSS.MUNI 928, April 2019; OPSS 929, November 2018; and OPSS.MUNI 930, November 2014 shall govern this work except as amended or extended herein.

SCOPE

This special provision covers the requirements for the repair of girder ends as shown on the Contract drawings.

DESIGN AND SUBMISSION REQUIREMENTS

The Contractor shall submit 5 sets of Working Drawings to the Contract Administrator at least 2 weeks prior to the commencement of the work for girder ends repair, for information purposes only. Prior to making a submission, the seals and signatures of a design Engineer and a design-checking Engineer shall be affixed on the Working Drawings verifying that the drawings are consistent with the Contract Documents. Two professional engineers shall be licensed in the province of Ontario. The Working Drawings shall specify procedures and materials including concrete removal, surface preparation, blast cleaning, protection of existing prestressed strands and bearings, and patches with formed and pumped repair.

MATERIAL

The material for girder end repair shall be SikaTop 111 PLUS (or approved equal).

CONSTRUCTION

The actual repair area of each girder end shall be confirmed on site as directed by the Contract Administrator. The existing prestressed strands, diaphragms and bearing pads shall be carefully protected during concrete removals and abrasive blast cleanings. All debris and dust from removal and cleaning operation shall be collected and disposed of at an approved site.

MEASUREMENT FOR PAYMENT

Measurement for payment shall be made by each girder end to be repaired.

BASIS OF PAYMENT

Payment at the Contract price for the above tender item shall be full compensation for all Labour, Equipment, and Material to do the work.

F-904C-002-PWC-2021-15

FORM AND GROUT VOIDS IN BEDROCK

April 2021

SCOPE

This specification covers requirements for forming and placing of dry pack non-shrinkable grout in voids in the bedrock face below the north abutment wall, as specified in the Contract Drawings.

REFERENCES

Ontario provincial Standard Specification, Construction

OPSS 904 Construction Specification for Concrete Structures
 OPSS 919 Formwork and Falsework

Ontario provincial Standard Specification, Material

OPSS 1301 Cementing Materials
 OPSS 1302 Water

Reference Standards:

CSA A23.1/A23.2, Concrete Materials and Methods of Concrete Construction/Test Methods and Standard Practices for Concrete.

CAN/CSA-A179, Mortar and Grout for Unit Masonry.

CSA-A3000, Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).

Definitions

Grout means a cementitious or epoxy mixture of liquid consistency suitable for pouring or pumping, to fill voids between masonry elements or concrete.

DESIGN AND SUBMISSION REQUIREMENTS

Submission Requirements

Product Data

Submit manufacturer's instructions, printed product literature and data sheets for grout and include product characteristics, performance criteria, physical size, finish and limitations.

Samples

Submit grout samples to CAN/CSA-A179 to independent testing agency, Contractor to pay for testing.

Source Quality Control Submittals

Submit purchase orders, invoices, supplier's test certificates and documents to prove materials used in contract meet requirements of specification.

Allow free access to source where materials procured.

Field Quality Control Submittals

Submit a copy of field log daily to Contract Administrator.

Submit written description of methodology and equipment list, at least fourteen (14) days before beginning of grout work.

Submit results of grout testing results.

MATERIALS

Use of premium grade pulverized fly ash, type non-metallic is not permitted.

Cement

Portland cement to CSA-A3000 and OPSS 1301.

Water

Water shall be clean and free from contaminants and organic material in accordance to CSA A23.1/A23.2.

Sand

Sand shall be in accordance to CSA A23.1/A23.2.

Premium grade pulverized fly ash type non-metallic is not permitted.

Cementitious Grout

Grout to meet requirements of CAN/CSA-A179 – Table 7, Coarse grout.

EQUIPMENT**Mechanical Mixer**

A mechanical mixer with a size compatible with the volume of grout prepared is required.

Mechanical Regulator

A mechanical regulator is required to prevent segregation of ingredients after mixing and ensure injection continuity.

CONSTRUCTION**Delivery Storage and Handling**

Deliver, store and handle materials in accordance with manufacturer's written instructions.

Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

Store materials off ground, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

Replace defective or damaged materials with new.

Site Conditions

Maintain temperature of elements to be grouted above 5 degrees C throughout their thickness, during and 48 hours after grouting.

Provide and maintain temporary enclosure and heating/cooling equipment to maintain specified temperatures.

Examination

Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for grout installation in accordance with manufacturer's written instructions.

Visually inspect substrate in presence of Contract Administrator. Report to the Contract Administrator any possible structural problems and conditions that do not conform with the Contract Documents, including existing voids or possible openings which risk being compromised when grout will flow, before the start of work.

Inform Contract Administrator of unacceptable conditions immediately upon discovery. Proceed with installation only after unacceptable conditions have been remedied and after receipt of approval to proceed from Contract Administrator.

Inspection

Mixing operations shall be continuously inspected by the Contract Administrator.

Provide required assistance to facilitate taking of grout samples and inspection work.

Inspect surfaces of structure before commencing grout injection work.

Measurement and Mixing

Make volume measurement using suitably gauged hopper of size compatible with volume of grout prepared.

Keep volume measures clean and free from crusting.

Use manufacturer's mass density information in making mass measurement to proportion mortar grout.

Mix cementitious materials, admixtures, aggregates in mechanical mixer for period of not less than 5 minutes nor more than 10 minutes with specified amount of water.

Field Log

Maintain log of grouting work. Containing collection of information, including:

- Course of pumping data including calibration of equipment used.
- Grout components (products, additions, admixtures and water) and quantity pumped.
- Pumping mode.
- Injection site.
- Pumping pressure at injection sites.
- Readings of pressure and flow injection taken, either by data loggers or manually.

- Equipment used.
- Staff on site.
- Drilling Plan.

Surface Preparation

- Ensure substrate is free from loose material.
- Prepare voids to control flow of grout.
- Install formwork as required to control flow of grout, in accordance with OPSS 919.
- Wet surfaces, deep into substrate.

Installation

Insert tube(s) to bleed out air and for installation of grout and seal leaks with quick-setting cement.

Field Quality Control

Take 3 samples of grout and submit to independent testing organization for testing in accordance with "Action and Information Submittals".

Submit results of testing.

QUALITY ASSURANCE

Preconstruction Testing

Submit test results indicating cementitious grout compression strength minimum 7.5 MPa, cured for 7 days.

MEASUREMENT FOR PAYMENT

Actual Measurement

Measurement for payment shall for grout shall be in cubic metres.

BASIS OF PAYMENT

Payment at the Contract price for the above tender item shall be full compensation for all Labour, Equipment, and Material to do the work.

SCOPE

This special provision covers the requirements for the sealing concrete surfaces exposed to salt laden water including the inside faces of the concrete barrier walls including required surface preparation.

SUBMISSIONS

Three weeks prior to the commencement of concrete sealing operations, the Contractor shall prepare and submit to the Contract Administrator for review six copies of manufacturer's product information specifying concrete surface preparation, sealer application instructions, MSDS sheets, and curing.

MATERIALS

Sealer shall be a clear, breathable, low VOC, VOC-compliant, greater than 40 percent alkylalkoxysilane penetrating sealer (40% silane).

The sealer shall be compatible with the surface over which it is to be applied. The resultant coating shall have the ability to breathe, be water resistant, durable, non-yellowing and resistant to ultraviolet light and weathering.

The concrete sealer shall comply with the following:

Active ingredient: monomeric silane or alkylalkoxysilane

Carrier: alcohol or mineral spirits

Active ingredient Content: minimum 40% by weight

Appearance: clear

Products shall be composed of constituent materials as specified and shall be fully compatible with other repair products specified or substituted.

Acceptable products include:

- MasterProtect H 400 by BASF;
- MasterProtect H1000 by BASF;
- Sikagard SN-100 by Sika; and
- Sikagard SN40- lo-VOC by Sika.

CONSTRUCTION**Material Handling**

The Contractor shall take precautions to ensure that workmen and work areas are adequately protected from fire and health hazards resulting from handling, mixing and application of material, observing all necessary safety precautions required by regulating authorities.

All materials shall be delivered in original sealed containers, clearly marked with the manufacturer's name, brand name, type of materials, batch number and date of manufacture.

Delivery, storage, handling, applicable temperature range, and environmental restrictions on use shall be in accordance with manufacturer's recommendations.

The Contractor shall dispose of all excess material, waste material and debris in conformance with environmental regulations specified elsewhere in the contract.

Surface Preparation

The Contractor shall take precautions to ensure that workmen and work areas are adequately protected from fire and health hazards resulting from handling, mixing and application of material, observing all necessary safety precautions required by regulating authorities.

All materials shall be delivered in original sealed containers, clearly marked with the manufacturer's name, brand name, type of materials, batch number and date of manufacture.

Delivery, storage, handling, applicable temperature range, and environmental restrictions on use shall be in accordance with manufacturer's recommendations.

The Contractor shall dispose of all excess material, waste material and debris in conformance with environmental regulations specified elsewhere in the contract.

Sealant Application

Apply in strict conformance with manufacturer's written instructions and provisions contained herein including the minimum curing time for concrete. The concrete sealer shall not be applied until the concrete has cured for a minimum period of 28 days unless recommended otherwise by the manufacturer.

Do not apply below temperature of +5°C or when ambient temperature is expected to fall below +5°C within 12 hours upon application.

Do not apply when it rains or when rain is forecast within 12 hours following application.

Apply to completely dry, power washed surface by saturation to a point of rejection obtaining minimum coverage specified in manufacturer's written recommendations. If puddles remain on surface of concrete upon 10 minutes redistribute the sealer to another area.

Do not apply in direct sunlight when substrate temperature exceeds 32°C.

MEASURE FOR PAYMENT

Measurement for Payment for this item shall be made by the Plan Quantity, measured in square metre, of surface area prepared and sealed as defined in the scope of work.

BASIS OF PAYMENT

Payment at the Contract unit price for the item shall be full compensation for all Labour, Equipment and Materials to do the work including surface preparation, application and curing.

F-904C-004-PWC-2021-15
DOWELS INTO CONCRETE AND BEDROCK

 April 2021

OPSS.MUNI 904, November 2012 shall govern this work except as amended or extended herein.

SCOPE

This special provision covers the requirements for construction of dowels into concrete and dowels into bedrock.

MATERIALS**Dowels into Bedrock**

An epoxy adhesive shall be used to secure the dowel into the bedrock. The product basis will be HIT-RE 500 V3 Epoxy Anchor, by Hilti, or approved equivalent.

CONSTRUCTION**Dowels into Concrete and Dowels into Bedrock****General**

The Contractor shall carry out pull testing of dowels in the trial installations and during production. Pull test loads shall be according to Table 1. The Contractor shall notify the Contract Administrator in writing when the trial installation or a lot, as defined in the Lot Size clause, is ready for testing. The Contractor shall allow 3 Business Days for the Contract Administrator to witness the testing.

The Contractor shall provide documentation of equipment calibration to the Contract Administrator a minimum of 14 Days prior to any pull testing of the dowels.

Trial Installation

Prior to installing each dowel type specified in the Contract Documents, the Contractor shall carry out a trial installation of that dowel type at locations selected by the Contract Administrator. Each trial installation shall consist of a set of three dowels. If the Contractor changes the installation procedure for a dowel type from that used in the associated trial installation, the Contractor shall repeat the trial installation prior to incorporating dowels installed using the changed installation procedure into the work.

Each of the three dowels in the set shall be capable of achieving the specified test load and times, without any movement of the dowels, for the trial installation to be considered acceptable. If the trial installation is not acceptable, installation of that dowel type in the work shall not be permitted until the following have been carried out by the Contractor to the satisfaction of the Contract Administrator:

- a) A written explanation for the failure has been submitted.
- b) Corrective action to be taken has been identified.
- c) The trial installation has been repeated with acceptable results.

If a dowel is not capable of achieving the test load and time due to failure of the surrounding concrete, the Contractor shall not be permitted to install any additional dowels of that type in the work until further advised by the Contract Administrator.

Installation

The Contractor shall drill holes to the required dimensions, clean holes, place dowel adhesive, and properly position the dowels as specified in the Contract Documents. Core drilling of the dowel holes shall not be permitted.

Steel reinforcement and other existing embedments shall not be cut or damaged by the drilling process. Prior to drilling holes, the Contractor shall locate existing steel reinforcement using a covermeter, Utility ducts, post tensioning hardware, and any unsound concrete in the vicinity of the dowel locations. If any of the above is encountered during drilling operations, the Contract Administrator shall be notified immediately.

The Contractor's operations shall not cause spalling, cracking, or other damage to the surrounding concrete. Concrete spalled or otherwise damaged by the Contractor's operations shall be repaired in a manner acceptable to the Contract Administrator.

The Contractor shall clean the holes using compressed air to remove all deleterious material, including dust and debris, and shall dry them prior to placing the dowel adhesive. Holes that are started but not completed shall be cleaned and filled with a proprietary patching material.

The handling and placement of the dowel adhesive shall conform to the manufacturer's written instructions. All excess dowel adhesive shall be struck-off flush with the concrete surface and removed from the surrounding concrete surface area.

Dowels shall be clean and free of deleterious material.

The Contractor shall maintain dowels in the proper position during the setting of the dowel adhesive and shall prevent the loss of dowel adhesive from the holes.

Pull Test

General

The Contractor shall not install formwork or attach anything to the dowels such as steel reinforcement and Utility ducts until the pull tests have been completed and the dowels are accepted into the work.

Lot Size

A lot shall consist of dowels of the same dowel type installed on a given day, in a single stage. Where a given day's production is less than 50 dowels, the day's work may be combined with the next day's production to form a single lot.

Pull Test Procedure

The Contractor shall conduct pull testing for the trial installation and each lot within 3 Business Days of installation. The Contract Administrator shall be present during the testing procedure. The Contract Administrator shall randomly select 5% of the dowels in each lot or 10 dowels, whichever is greater, for testing. The applicable pull test load shown in Table 1 must be sustained by the dowel, without displacement, for a time period of no less than one minute.

Replacement of Failed Dowels

All dowels failing the pull test requirement, including trial installation dowels, shall be replaced by the Contractor by installing a new dowel in an adjacent location approved by the Contract Administrator.

Dowels failing the pull test requirement, including trial installation dowels, shall be removed and the hole filled with proprietary patching material.

QUALITY ASSURANCE

Dowels into Concrete and Dowels into Bedrock

Acceptance of Dowels into Concrete and Dowels into Bedrock

If more than one dowel fails, the lot of dowels shall be considered unacceptable and the Contractor shall complete the following:

- a) Conduct pull tests on all remaining untested dowels of the lot.

- b) On the subsequent lot, conduct pull tests on 10% of dowels or 20 dowels, whichever is greater. If more than one dowel fails, all remaining untested dowels of that lot shall be tested.
- c) The subsequent lot shall be tested at the higher frequency until no more than one tested dowel fails.

The Contractor shall pull test all replacement dowels in the presence of the Contract Administrator. Each replacement dowel shall be accepted individually. Dowels shall not be subjected to more than one pull test.

MEASUREMENT FOR PAYMENT

Dowels into Concrete and Dowels into Bedrock

For measurement purposes, a count shall be made of the number of dowels installed.

BASIS OF PAYMENT

Dowels into Bedrock - Item

Payment at the Contract price for the tender items shall be full compensation for all labour, Equipment, and Material to do the work, except that payment for the reinforcing steel bars or stainless steel reinforcing bars used as the dowels shall be according to OPSS 905.

No payment shall be made for dowels that fail the pull test, except where the failure is due to concrete breakout.

Repair to the concrete required due to Contractor's operations shall be made at no cost to the Owner.

For any dowels that fail the pull test as a result of concrete breakout failure and not by bond failure, payment for repairs to concrete resulting from concrete breakout failure during the pull test and the cost of the replacement dowel shall be made as Extra Work.

F-905C-001-PWC-2021-15

GALVANIZED REINFORCING STEEL BAR

April 2021

OPSS.MUNI 905, November 2017 shall govern this work except as amended or extended herein.

SCOPE

This special provision covers the requirements for the supply of galvanized reinforcing steel.

905.05.05 Associated Hardware

Section 905.05.05 of OPSS 905 is amended by the addition of the following:

f) Tie wire for use with galvanized reinforcing steel shall have a minimum diameter of 1.2mm and be galvanized. Bar chairs for supporting galvanized rebar shall be non-metallic, concrete chairs shall not be used.

MATERIALS

Galvanizing of reinforcing steel bars where required, shall conform to:

- CAN/CSA-G164-M
- ASTM A767M Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement
- ASTM A123M - 15 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

Only Type W reinforcing bars shall be galvanized.

PROCESS

For fabricated reinforcing steel bar assemblies, the minimum average coating thickness of the galvanizing shall be 0.10 mm. For separate reinforcing steel bars, the mass (weight) of zinc coating shall be Class 1.

Prior to galvanizing, the material shall have all grease, dirt, mortar, mill scale, injurious rust (rust which is difficult to remove) or any other foreign substance removed.

Materials galvanized in accordance with these specifications shall be free from any build-up of unadhered wet storage stains (white rust). These corrosion deposits, if present shall be removed in a manner satisfactory to the Contract Administrator prior to incorporation of the material in the work. After removal of these deposits, the coating shall have a uniform appearance free from uncoated spots, lumps, blisters, gritty areas, acid flux and black spots. Materials with these defects, or not meeting the finish and adherence of coating requirements as defined in the above ASTM specification, will be rejected and immediately removed from the work site. Acceptable material will be provided to replace the rejected material at no additional cost to the Owner.

FIELD REPAIR

Zinc-rich paint used for the field repair of galvanized coating shall meet the following requirements:

1. One application of the material shall provide a dry coating thickness of at least 0.051mm.
2. The applied coating shall provide barrier protection and shall preferably be anodic to steel.
3. Application of the coating material shall be possible under shop or field conditions.
4. The dried film shall have a minimum zinc dust content equal to 94% (by weight).
5. The brand of material used shall be approved by the galvanizer, and shall be compatible with the galvanizing, and inert in concrete.

The Contractor shall be required to field repair any damage to the galvanized coating done during shipping and handling, and to replace bars exhibiting severely damaged coatings. Repairable damage is defined as any bare or loose spots, or breaks in the coating, which affect an area smaller than 2500mm square.

Field repairs shall be allowed only when the total number of repairable damaged areas in any 3000mm length of bar is less than 6. Any material with a total number of damaged areas greater than the amount specified above, or material with any damaged area greater than 2500mm square, shall be rejected, immediately removed from the work site, and replaced by the Contractor at no cost to the Owner.

The galvanized coating is to be repaired with a zinc-rich paint by the following method:

1. Clean the damaged area by power disk, wire brushing, sand or grit blasting, or any other suitable method approved by the Engineer to a near-white metal condition in accordance with SSPC-SP10 (0.025 to 0.050mm anchor pattern), as a minimum. The surface shall also be clean, dry and free of oil, grease, flux residue, corrosion products, and any other foreign substance.
2. Using a minimum of two coats, and the methods recommended by the manufacturer of the zinc-rich paint, spray or brush apply the zinc-rich paint to the area in a manner to achieve the applicable ASTM adherence and quality requirements of the original coating, and a minimum dry film thickness of 0.100mm.

These repair procedures are allowed only for those field repairs directed by the Contract Administrator. This method shall not be allowed for shop repairs. All repairs shall be made at no cost to the Owner.

PLACEMENT

Galvanized bars or galvanized wire fabric shall not be bent in the field more than 10 degrees, regardless of the diameter of the bend.

BASIS OF PAYMENT

Payment at the contract price shall be full compensation for all labour, equipment and material to do the work. When the Contractor is required to supply placing drawings and/or reinforcing steel bar schedules, payment at the contract price shall include providing these drawings.

F-908C-001-PWC-2021-15
RAILING
 April 2021

OPSS.MUNI 510, November 2018 and OPSS.MUNI 908, November 2014 shall govern this work except as amended or extended herein.

SCOPE

This special provision covers the requirements for salvaging the bridge railings and support posts at all four quadrants to allow for the removal of the end blocks, as shown on the Contract Documents. The existing rails and posts shall be removed, salvaged and reinstated as required in order to accommodate the proposed works.

The Contractor shall supply and install new cast in place railing anchorage assemblies, per the Contract Documents, and shall cast the anchorages into the barrier pour.

The Contractor will be required to ensure the precise layout of the new anchorages to accommodate the existing holes in the barrier wall railing.

MEASUREMENT FOR PAYMENT

Payment for the item "Removal, Salvage and Reinstatement of Barrier Wall Railing End Posts" shall be by Lump Sum.

BASIS OF PAYMENT

Payment at the contract price for the item "Removal, Salvage and Reinstatement of Barrier Wall Railing End Posts" shall be full compensation for all labour, equipment and material to do the work.

F-920C-001-PWC-2021-15
REPLACE PREFORMED SEALS
 April 2021

OPSS.MUNI 920, November 2012 shall govern this work except as amended or extended herein.

920.01 SCOPE

Subsection 920.01 is modified by the addition of the following:

This special provision covers the requirements for the removal and replacement of the Preformed seals in the expansion joints across the roadway and the parapet. The work shall also include the removal, salvage and reinstatement of the parapet cover plates and the supply and installation of new anchor bolts for the parapet cover plate.

920.04 DESIGN AND SUBMISSION REQUIREMENTS

Section 920.04.01 shall be modified by the addition of the following:

920.04.01.01 Preformed Seals

The Contactor is responsible for design of expansion joint seal replacement and the design shall be in according to CSA-S6:19, MTO Structural Manual, and the requirements of this specification.

Subsection 920.04.02.02 shall be deleted and replaced with the following section:

920.04.02.02 Submissions of Drawings

One electronic copy of the shop drawings including plan, section and procedures of removal and installation of expansion joint seals, steel plates c/w bolts signed and sealed by two engineers licensed in Ontario, shall be submitted to the Contract Administrator two (2) weeks prior to commencing the work.

920.05 MATERIALS

Subsection 920.05.01 shall be modified by the addition of the following:

920.05.01 Preformed Seals

The Contractor shall confirm the type of expansion joint seal (Type A or Type C) prior to preparing shop drawings. The expansion joint seal to be used for the replacement in this Contract shall be listed on the MTO Pre-Qualified Products, DSM 9.40 – Joints.

920.07 CONSTRUCTION

Section 920.07.03 is amended by the addition of the following:

920.07.030.01 Replacement of Joint Seal

Existing expansion joint seals shall be removed as shown on the Contract drawings. Joint assemblies on parapet including floor plates c/w bolts shall be removed and salvaged to facilitate removal of existing expansion joint seals and installation of new seals.

The Contractor shall grind smooth any burs, retaining clips, or other metal projections preventing the installation of the new seal into the joint.

Any damage to the components of the deck joint assembly during removal of existing expansion joint seals including armoring angles, cover plates and bolts shall be repaired according to OPSS 920 at the expense of the Contractor.

Joint assembly components shall be reinstated to its original condition. Reinstatement shall be made in accordance with the manufacturer's recommendations.

920.09 MEASURE FOR PAYMENT

Section 920.09 is modified by the addition of the following:

920.09 MEASURE FOR PAYMENT

Measurement for payment for this item shall be made by Lump Sum for completion of work including removal, salvage and reinstallation of joint assemblies on the roadway, safety curbs and parapet.

920.10 BASIS OF PAYMENT

Section 920.10 is modified by the addition of the following:

920.10.04 Replace Preformed Seals

Payment at the Contract price for the above tender item shall be full compensation for all labour, Equipment, and Material to do the work.

F-928C-001-PWC-2021-15

CONCRETE REMOVALS FULL DEPTH

April 2021

Amendments to OPSS.MUNI 928

OPSS.MUNI 928 shall govern this work except as amended or extended herein.

928.01 SCOPE

This specification covers the requirements for the removal of concrete full depth from existing structures, except by means of pressurized water, hydrodemolition, in order to facilitate structure rehabilitation. The scope of work included in this tender item shall apply to partial length removals of entire thickness of concrete barrier end panel walls including removing or maintaining existing reinforcing steel as specified in the Contract Documents.

928.09.01.03 Concrete Removal - Full Depth

Measurement of the full depth concrete removal shall be by volume in cubic metres. The total volume shall be calculated to the nearest 0.1 m³.

928.10 BASIS OF PAYMENT

Section 928.10.02 is amended by the addition of the following:

Payment at the Contract price for the item "Concrete Removal-Full Depth" shall include full compensation for the all labour, Equipment and Material to do the work.

F-930C-001-PWC-2021-15

DRAIN TUBES

April 2021

OPSS.MUNI 930 November 2014 shall govern this work except as amended or extended herein.

930.01 SCOPE

Section 930.01 is amended as follows:

This specification covers the modification of the drainage tubes at all four quadrants of the bridge. The Contractor shall extend all drainage tubes, to ensure that water exiting the tubes does not fall on the bedrock in front of the abutments. The proposed extension procedure shall be approved by the Contract Administrator.

In general the work shall conform to OPSD 3349.100, except that the tubes shall be extended so as not to discharge on the bedrock in front of the abutment. Positive drainage of the tubes shall be maintained at all times.

930.05.11 Drain Tubes

Section 930.05.11 is added as follows:

The new drain tube material and type shall match the existing.

930.09 MEASUREMENT FOR PAYMENT

Section 930.09 is amended as follows:

930.09.02.01 Modification to Under Asphalt Drainage

Measurement of this item shall be made by Lump Sum for completion of asphalt drain tube extension.

930.10 BASIS OF PAYMENT

Section 930.10 is amended as follows:

930.10.01 Modification to Under Asphalt Drainage

Payment at the Contract price for the above tender item shall be full compensation for all labour, Equipment, and Material to do the work.

F-930C-002-PWC-2021-15**CONCRETE REFACING**April 2021

OPSS.MUNI 930 November 2014, and OPSS.MUNI 929 November 2018 shall govern this work except as amended or extended herein.

930.01 SCOPE

Section 930.01 is amended by the addition of the following:

This specification covers the abrasive blast cleaning of the existing concrete surface, application of bonding agent and placement of a new concrete surface on the existing concrete facing under the south bridge abutment.

930.07 CONSTRUCTION**930.07.05 Concrete Refacing****930.07.06.04 Surface Preparation**

Section 930.07.06.04 is amended by the addition of the following:

A surface profile of 5 mm \pm 2 mm shall be achieved over the entire surface by either abrasive blast cleaning or by scabbling, chipping hammer, or bushhammering.

A cement-sand bonding agent, as defined in 930.05.06.01, shall be applied to all concrete surfaces to receive new concrete.

930.07.06.06 Formwork and Falsework

Section 930.06.06 is amended by the addition of the following:

Control joints shall be formed into the surface at \pm 6 m intervals. The joints shall be formed by utilizing back-to-back 20 mm chamfer strips.

930.10 BASIS OF PAYMENT

Section 930.10.04 is deleted in its entirety and replaced with the following:

930.10.01 Concrete Refacing - Item

Payment at the Contract price for the above tender item shall be full compensation for all labour, Equipment, and Material to do the work, including but not limited to providing site access,

surface preparation requirements, application of a bonding agent, formwork, placing of the concrete, and curing the concrete.

F-1010C-001-PWC-2021-15**GRANULAR MATERIALS TESTING**April 2021

Amendments to OPSS.MUNI 1010

OPSS.MUNI 1010 shall apply except as may be amended and extended herein.

1010.04 SUBMISSION AND DESIGN REQUIREMENTS

Section 1010.04 is amended by the addition of the following:

1010.04.01 Testing

The Contractor shall submit test results for all granular material to be used a minimum of two (2) weeks prior to placing the material. All testing is to conform to the requirements of OPSS.MUNI 1010.

The Contractor will submit the gradation test results and the physical property test results for all aggregate materials incorporated into the work, including those used for the production of hot mix paving, surface treatment, or concrete.

SECTION G
APPENDICES

INDEX FOR SECTION 'G' – APPENDICES

Appendix Drawings