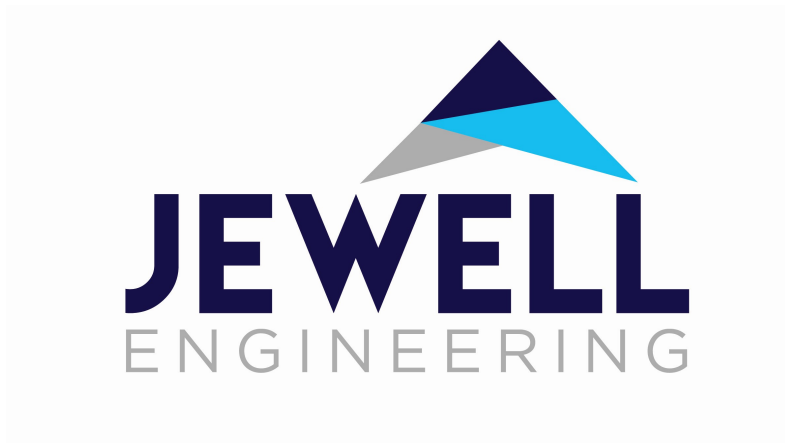




**13 ISLAND LAKE DAM CULVERT REPLACEMENT
CONTRACT NO. R.22.039**



Quinte Conservation Authority

Belleville, Ontario

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QUINTE CONSERVATION AUTHORITY
13 ISLAND LAKE DAM CULVERT REPLACEMENT
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CONTRACTOR	TOTAL PROJECT COST (Including HST)

QUINTE CONSERVATION AUTHORITY

CONTRACT NO. R.22.039

13 ISLAND LAKE DAM CULVERT REPLACEMENT

Tender Closing – 2:00:00 p.m., local time, June 1, 2022

TENDERS RECEIVED BY: Mike Smith
Electronically via email to msmith@quinteconservation.ca

Questions Contact: Mike Smith – msmith@quinteconservation.ca

Site Visit: 10:00:00 a.m., on May 18, 2022

Deadline for Questions: 2:00:00 p.m., on May 24, 2022

Tender Closing Date: 2:00:00 p.m., on June 1, 2022

Work Completion Date: Oct 7, 2022

BIDS TO BE RECEIVED ELECTRONICALLY ONLY VIA EMAIL AS NOTED ABOVE

Quinte Conservation Authority reserves the right to reject any Tender if it is deemed advisable to do so.

The Tender is called by Quinte Conservation Authority. The Contract shall be administered by Quinte Conservation Authority and/or Jewell Engineering Inc.

This project is dictated by budget allocation by Quinte Conservation Authority.

The Owners reserve the right to delete parts of items, items, sections or parts of sections if it is deemed to be advantageous to the Owner. The lowest or any tender may not be awarded, however, bids considered in the award of this Tender shall be “Inclusive of deletions from the Contract for budget purposes” prior to award considerations.

SUMMARY OF TENDERER INFORMATION

Name			
Address (including Postal Code)			
Telephone Number:		Facsimile Number:	
Name of Person Signing			
Position of Person Signing			
Tenderer's H.S.T. Registration No.			
Total Tender Price (Total Project Cost) Including H.S.T.			

THE SUBMISSION OF THIS SHEET IS REQUIRED AT THE TIME OF BID CLOSING

GENERAL DESCRIPTION OF WORK

The proposed project involves the replacement of the existing culvert and dam structure located in the Township of South Frontenacs, on Hamilton Lane, just north of the laneway's intersection with Desert Lake Road. Also located at google coordinates 44.525992, -76.639009.

The project includes: complete removal of the existing four (4) round CSP culverts and backfill, dam components, and a portion of the existing concrete cut-off walls, as well as the preparation for and installation of new precast concrete box culverts (3 total) with new cut-of walls, clay seal, rock protection and guide rail components. The new culvert units will include openings and provisions for water control stop logs, as well as a pedestrian safety railing.

The contractor is responsible for control of water and dewatering method and scheme needed to complete the replacement in the dry, as well as obtaining required environmental permits and approvals.

Construction will be completed with the road closed to traffic, including provisions for transportation of landowners located beyond the dam site.

TO: The CAO and Members of the Council of QUINTE CONSERVATION AUTHORITY
RE: Tender for Contract No. R.22.039, 13 ISLAND LAKE DAM CULVERT REPLACEMENT

Dear CAO and Members of Council:

The Contractor has carefully examined the Plans, Provisions, Specifications and Conditions described herein, and Addenda No.'s _ to _ * attached hereto as part of this tender and has carefully examined the site and location of the work, as part of the work to be done under this Contract. The Contractor understands and accepts the said Plans, Provisions, Specifications and Conditions, and, for the prices set forth in this tender, hereby offers to furnish all machinery, tools, apparatus and other means of construction, furnish all materials, except as otherwise specified in the Contract, and to complete the work in strict accordance with the said Plans, Specifications and Conditions. The Contractor understands and accepts that the quantities shown are approximate only, and are subject to increase, decrease or deletion entirely if found not to be required.

The Contractor agrees to begin work upon notice of award and complete all work prior to Oct 7, 2022

Notification of acceptance may be given, and delivery of the CCDC 4 Form of Agreement made by prepaid post, addressed to the Contractor at the address contained in this Tender.

*** The Tenderer will insert the numbers of the Addenda received by him during the tendering period and taken account by him in his tender.**

ITEMIZED BID

In accordance with the first paragraph of Page 4 of this Form of Tender, the Contractor hereby offers to complete the work specified for Contract No. R.22.

039 for the following Unit Prices.

QUINTE CONSERVATION AUTHORITY

CONTRACT No. R.22.039

- “Spec. No.” refers to the applicable most recent issue of the Ontario Provincial Standard Specifications (OPSS) or Ontario Provincial Standard Drawings (OPSD).
- “SP” refers to Special Provisions
- “LS” refers to a Lump Sum bid
- “t” refers to a tonne
- “m” refers to a linear metre
- “m²” refers to a square metre
- “m³” refers to a cubic metre

PART A – GENERAL

ITEM NO.	OPSS SPEC. NO.	DESCRIPTION	ESTIMATED QUANTITY (UNIT)	UNIT PRICE	AMOUNT
A1	SP#A1	Mobilization / Demobilization	L.S.		
A2	MUNI 805, SP#A2	Stream Protection	L.S.		
A3	SP#A3	Quality Control Testing	L.S.		
A4	MUNI 706, SP#A4	Traffic Control	L.S.		
A5	SP#A5	Landowner Access/Transport	L.S.		
SUBTOTAL PART A					

PART B – ROADWORKS

ITEM NO.	OPSS SPEC. NO.	DESCRIPTION	ESTIMATED QUANTITY (UNIT)	UNIT PRICE	AMOUNT
B1	MUNI 180, MUNI 510, SP#B1	Site Preparation	L.S.		
B2	MUNI 206, MUNI 501, MUNI 510, SP#B2	Roadway Earth Excavation, Grading	L.S.		
B3	MUNI 314, MUNI 501, MUNI 1010, SP#B3	Granular A (Roadway)	150 tonnes		
B4	MUNI 314, MUNI 501, MUNI 1010, SP#B4	Granular B Type I (Platform Widening, Provisional)	20 tonnes		
B5	MUNI 721, SP #B5	Single Rail Steel Beam Guide Rail	31 m		
B6	MUNI 721	Leaving Ends and Markers as per Details in OPSD 912.235	4 each		
B7	MUNI 511, SP #B6	Rock Protection	80 m ²		
SUBTOTAL PART B					

PART C – STRUCTURE WORKS

ITEM NO.	OPSS SPEC. NO.	DESCRIPTION	ESTIMATED QUANTITY (UNIT)	UNIT PRICE	AMOUNT
C1	MUNI 510, SP#C1	Removal of Culvert and Dam	L.S.		
C2	MUNI 902, SP#C2	Earth Excavation for Structure	L.S.		
C3	MUNI 902, SP#C2	Rock Excavation (Provisional)	20 m ³		
C4	MUNI 902, SP#C3	Dewatering Structure Excavations	L.S.		
C5	MUNI 902, SP#C4	Granular Backfill to Structure	L.S.		
C6	SP#C5	Granular A Bedding for Culvert	50 Tonne		
C7	MUNI 904, MUNI 905, SP#C6	Concrete in Cut-Off Walls	L.S.		
C8	MUNI 905	Reinforcing Steel	L.S.		
C9	MUNI 904, SP#C7	Dowels into Concrete – 25M	24 Each		
C10	MUNI 1205 SP#C8	Clay Seal	L.S.		
C11	MUNI 1821 SP #C9	Precast Box Culverts Fabrication	L.S.		
C12	MUNI 1821 SP #C9	Precast Box Culverts Delivery	L.S.		
C13	MUNI 1821 SP #C9	Precast Box Culverts Installation	L.S.		

ITEM NO.	OPSS SPEC. NO.	DESCRIPTION	ESTIMATED QUANTITY (UNIT)	UNIT PRICE	AMOUNT
C14	SP#C10	Dam Stop Logs and Access Steel Plates	L.S.		
C15	MUNI 1005, SP#C11	River Stone Rock	20 m ²		
C16	MUNI 908, SP#C12	Pedestrian Guard	13 m		
SUBTOTAL PART C					
COST INCREASE OR CREDIT FOR THE SUBSTITUTION OF AN ALL-ALUMINUM PEDESTRIAN GUARD FOR ITEM C17					

SUBMISSION OF DETAILED ITEMIZED BID NOT REQUIRED AT THE TIME OF BID CLOSING, BUT MUST BE SUBMITTED BY ALL CONTRACTORS VIA EMAIL NO LATER THAN 24 HOURS AFTER BID CLOSING TIME

QUINTE CONSERVATION AUTHORITY
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SUMMARY OF ITEMIZED BID	
Sub-Total Part A	
Sub-Total Part B	
Sub-Total Part C	
Total All Parts	
Add 13% HST	
*TOTAL COST	
Accumulated Total shall be entered on Cover Page, Page 2 and Page 10	

THE SUBMISSION OF THIS SHEET IS REQUIRED AT THE TIME OF BID CLOSING

**SUBMISSION OF DETAILED ITEMIZED BID NOT REQUIRED AT THE TIME OF
 BID CLOSING, BUT MUST BE SUBMITTED VIA EMAIL NO LATER THAN 24
 HOURS AFTER BID CLOSING TIME**

QUINTE CONSERVATION AUTHORITY
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SUMMARY	
CONTRACTOR	TOTAL COST
<p>NOTE: * This total shall agree with that amount which is supplied on the cover page of the Form of Tender.</p> <p>The Owner reserves the right to delete any item or part of item without cost to the Owner when it is deemed in the best interest of the Owner to do so. The Owner reserves the right to select the lowest Total Cost after deletion of items or parts when the Owner’s budget does not allow completion of all work tendered. Lowest or any tender not necessarily accepted.</p>	

REFERENCES

The Contractor shall submit a minimum of three (3) similar municipal project references, on which they acted as the General Contractor, which have been completed within the last five (5) years and with a comparable budget.

Owner of Project & Contact Information

Description of Work

Contract Value	
Year in which the Contract Was Completed	

Owner of Project & Contact Information

Description of Work

Contract Value	
Year in which the Contract Was Completed	

Owner of Project & Contact Information

Description of Work

Contract Value

Year in which the Contract Was Completed

Owner of Project & Contact Information

Description of Work

Contract Value

Year in which the Contract Was Completed

CONTRACTOR’S PROJECT TEAM

The Contractor shall submit a list of key staff to utilized on this project. The supervisory staff proposed to be utilized on the project shall have a minimum of (10) years’ work experience in municipal works of similar nature. **The project foreman and other supervisory staff shall be on site every day, all day during working hours throughout the project. The Contractor shall not be permitted to change proposed staffing unless approved by the Contract Administrator.**

Any key staff changes shall be submitted in writing and approved by the Owner.

Separate CV’s / resumes of the below key staff may be included as additional information. Specify if additional information is attached.

STAFF MEMBER	POSITION	PREVIOUS WORK EXPERIENCE

SUBCONTRACTORS / SUPPLIERS LIST

All proposed subcontractors/material suppliers to be utilized under this Contract shall be identified below;

SUBCONTRACTOR / SUPPLIER	WORK SCOPE / MATERIALS SUPPLIED

AGREEMENT TO BOND (to be completed by Bonding Company)

WE, the undersigned, HEREBY AGREE to become bound as Surety for

In a Performance Bond totaling ONE HUNDRED PERCENT (100%) of the Total Tender Amount, and a Labour and Material Payment Bond totaling ONE HUNDRED PERCENT (100%) of the Total Tender Amount, and conforming to the Instruments of Contract attached hereto, for the full and due performance of the works shown or described herein, if the Tender for Contract No.R.22.039 is accepted by the Owner.

IT IS A CONDITION of this Agreement that if the above-mentioned Tender is accepted, application for a Performance Bond and a Labour and Material Payment Bond must be made to the Undersigned within TEN (10) DAYS of Notice of Contract Award, otherwise the Agreement shall be null and void.

DATED AT _____ this _____ day of _____, 2022.

(Name of Bonding Company)

(Signature of Authorized Person Signing for Bonding Company)

(BONDING COMPANY SEAL)

(Position)

(This Form shall be completed and attached to the Tender Submitted.)

SCHEDULE OF TENDER DATA

The Work Specified in the Contract shall be performed in strict accordance with the following Schedule:

TENDER FORM:	Tender Closing Information	Page 1
	Summary of Tenderer Information	Page 2
	General Description of Work	Page 3
	General	Page 4
	Itemized Bid	Page 5 to 8
	Summary of Itemized Bids	Page 9 and 10
	References	Page 11 and 12
	Contractors Project Team	Page 13
	Subcontractors / Suppliers List	Page 14
	Agreement to Bond	Page 15
	Schedule of Tender Data	Page 16

FORM OF AGREEMENT AND GENERAL CONDIITONS – CCDC 4, UNIT PRICE CONTRACT

SUPPLEMENTAL GENERAL CONDITIONS Pages 1 to 7

SPECIAL PROVISIONS – TENDER ITEMS Pages 1 to 17

STANDARD SPECIFICATIONS

It shall be the Contractor’s responsibility to obtain those editions, current at the date of tendering, of the Ontario Provincial Standard Specifications listed with the tender items and the current editions of OPSS No. 127.

STANDARD DRAWINGS As indexed

DRAWINGS C1, S1 – S3

The Contractor, by this Tender, offers to complete the work of this Contract in strict accordance with the terms contained herein.

By my/our signature hereunder, I/we hereby identify this as the Schedule of Tender Data, Plans and Specifications, for Contract No.R.22..039, executed by me/us bearing the date the _____ day of _____, 2022.

(Signature)

(Position)

(Name of Firm)

(COMPANY SEAL)

QUINTE CONSERVATION AUTHORITY

CONTRACT NO. R.22.039

13 ISLAND LAKE DAM CULVERT REPLACEMENT

CCDC 4 AGREEMENT TO BE INSERTED

QUINTE CONSERVATION AUTHORITY

**13 ISLAND LAKE DAM CULVERT REPLACEMENT
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**CCDC 4 GENERAL CONDITIONS
OF CONTRACT WILL APPLY
&
ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT
(2005)**

**The CCDC 4 General Conditions and AODA Act have not been reproduced as part
of these Contract Documents.**

It will be the Contractor's responsibility to obtain current copies of these documents.

QUINTE CONSERVATION AUTHORITY

**13 ISLAND LAKE DAM CULVERT REPLACEMENT
CONTRACT NO. R.22.039**

SUPPLEMENTAL GENERAL CONDITIONS

SUPPLEMENTAL GENERAL CONDITIONS

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SUPPLEMENTAL GENERAL CONDITIONS**Contract No. R.22.039****1. GENERAL**

Bids submissions via email to Mike Smith (msmith@quinteconservation.ca) accepted until:

Jun 1, 2022 @ 2pm

2. TENDERING REQUIREMENTS

- i. All inquiries concerning this tender shall be directed to the office of the Owner - E-mail: msmith@quinteconservation.ca, Attention: Mike Smith.
- ii. Bids must be signed or authorized by an official of the firm.
- iii. The successful bidder must have Worker's Safety and Insurance Board coverage and provide a Worker's Safety and Insurance Board Clearance Certificate in advance of undertaking any of the work required by the Contract.
- iv. Individual item unit prices and accumulated a sub-total must be exclusive of the Harmonized Sales Tax. These taxes are to be identified separately in all of the Contractor's progress draws to the QCA.
- v. The QCA reserves the right to reject any or all tenders or to accept any tender should it be deemed to be in its best interest to do so.
- vi. Neither the Contract Administrator or any officer or employee of the Owner has authority to make or accept an offer or to enter into a Contract on behalf of the Owner or to create any right against or to impose any obligations on the Owner. Recommendation of a tender to the Owner for acceptance does not constitute acceptance of the Tender by the Owner.
- vii. The QCA reserves the right to delete entire items, sections or subsections from the Contract should it be deemed to be in its best interest to do so. (Budget Constraints). The lowest tender submitted after deletion of section(s) or subsection(s) will be considered for acceptance subject to 10 above. The Bidder is hereby advised that the basis of award shall be subject to review and evaluation and scoring of all bids, as identified under Clause 50.

3. UNACCEPTABLE TENDERS

Each item in the Form of Tender shall include a reasonable price for such item. An unbalanced tender may be rejected at the discretion of the Owner. Wherever in the tender the amount tendered for an item does not agree with the extension of the estimated quantity and the unit price, the unit price shall govern and the amount shall be corrected accordingly. The Owner reserves the right to waive informalities at its discretion.

4. BONDS

The successful Tenderer is required to provide a Performance Bond, and a Labour and Material Payment Bond, each in the amount equal to one hundred percent (100%) of the Total Tender Price, including Harmonized Sales Tax, to guarantee his/her faithful performance of this Contract and his/her fulfillment of all obligations in respect of maintenance and payment for labour and materials used on this work.

Each Bond shall be with a satisfactory Guarantee Surety Company, resident in Canada or authorized to carry on business in Canada.

Only Bonds issued by insurers licensed in Canada will be accepted as per the terms and conditions of these tender documents.

5. ABILITY AND EXPERIENCE OF TENDERER

The Owner reserves the right to reject any tender where satisfactory evidence of sufficient capital, plant and experience to successfully execute and complete the work in the specified time, is not furnished by the Tenderer as requested hererin.

6. HARMONIZED SALES TAX

The Tenderer shall NOT include any amount in his/her tender unit prices for the Harmonized Sales Tax (H.S.T.). The H.S.T. will be shown on each payment certificate and will be paid to the Contractor in addition to the amount certified for payment and will therefore not affect the Contract unit prices.

7. CHANGES TO GOVERNMENT TAXES

Where a change in Canadian federal or provincial taxes occurs after the tender closing date for this Contract, the QCA will increase or decrease Contract payments to account for the exact amount of tax change involved.

Claims for compensation for additional tax cost shall be submitted by the Contractor to the Engineer. Such claims for additional tax costs shall be submitted no later than 30 days after the date of acceptance of the work.

Where the Owner benefits from a change in Canadian federal or provincial taxes, the Contractor shall submit to the Contract Administrator a statement for such benefits. This statement shall be submitted no later than 30 days after the date of acceptance of the work.

The Contract Administrator reserves the right to make deductions from regular progress payments to compensate for the estimated benefit from decreased tax costs. Such deductions will be withheld from Contract payments pending receipt of the statement itemizing the benefits, which have resulted from a decrease in tax costs, at which time the final payment adjustment payment will be determined.

The Harmonized Sales Tax shall be included as indicated in the Form of Tender.

Tenderers shall include all other applicable taxes and duties in their tender prices.

8. EXECUTE CONTRACT

Tenders shall be open for acceptance for a period of sixty (60) days after the closing date. After this time the tender may only be accepted with the consent of the successful Tenderer.

The successful Tenderer shall execute the Contract Documents and furnish the required bonds within ten (10) calendar days of receipt of notification of Acceptance of Tender.

Failure by the successful Tenderer to meet the above requirements will entitle the Owner to cancel the award of the Contract and to retain the tender deposit as compensation for damages sustained due to the successful Tenderer's default. The Owner may then award the Contract to one of the other Tenderers or take such action as it chooses.

9. LOCATION

The site is located on Hamilton Lane at the Thirteen Island Lake outlet, in the Township of South Frontenac.

10. SOILS INFORMATION

A subsurface investigation and report was completed by Greer Galloway Consulting Engineers to support the design and is amended to this document.

11. TENDERERS TO INVESTIGATE

Tenderers must satisfy themselves by personal examination of the site and by such other means as they may prefer as to the actual conditions and requirements of the work.

The Tenderer shall carefully examine all available information so that the unit prices tendered are commensurate with the nature of the work.

It shall be the Tenderer's responsibility to thoroughly inspect the site of the proposed works, determine the location of any buried or obstructing services and make satisfactory arrangements for interference with such service with the proper jurisdictional agency.

12. DEFINITIONS

Wherever the word "Owner" or "Corporation" appears in this Contract, it shall be interpreted as meaning Quinte Conservation Authority.

Wherever the word "QCA" appears in this Contract, it shall be interpreted as meaning Quinte Conservation Authority.

Wherever the word "Ministry" or "MTC" or "MTO" appears it shall be deemed to mean the "Ministry of Transportation, Ontario".

Wherever the word "Contract Administrator" or "Engineer" appears in the Contract it shall be deemed to mean Jewell Engineering Inc. or such other officers of the Corporation or agents acting on behalf of the Corporation in respect of this Contract as may be authorized by the Owner to act in any particular capacity.

Wherever the word "Contractor" appears in the Contract, it shall be deemed to apply to the successful Tenderer, which has been awarded this Contract by the Owner and has executed all necessary documentation.

13. ADDENDA

The Tenderer shall ensure that all addenda issued during the tendering period are attached and identified on the Form of Tender Page 4 as part of the submitted bid. Failure to do so may result in disqualification of the bid.

14. CONTRACT TIME AND LIQUIDATED DAMAGES

i. Time

Time shall be of the essence for this Contract.

ii. Liquidated Damages

It is agreed by the parties to the Contract that in the case all the work called for under the Contract is not completed by the Contractor and by the date specified, or as extended in accordance with the General Conditions, a loss or damage will be sustained by the Owner. Since it is and will be

impracticable and extremely difficult to ascertain and determine the actual loss or damage which the Owner will suffer in the event of and by reason of such delay, the parties hereto agree that the Contractor will pay to the Owner the sum of \$2,000.00 as liquidated damages for each and every calendar days' delay in achieving completion and interim completion, respectively, as defined under 17 (2) above, of the work beyond the dates prescribed. It is agreed that this amount is an estimate of the actual loss or damage to the Owner, which will accrue during the period more than the prescribed dates for completion.

The Owner will deduct any amount under this paragraph from any monies that are due or payable to the Contractor on any account whatsoever. The liquidated damages payable under this paragraph are in addition to and without prejudice to any other remedy, action or other alternative that may be available to the Owner.

15. CONTRACTOR'S AUTHORIZED REPRESENTATIVE

Authorized representative as referenced in GC7.01.07 is defined as an employee of the Contractor and is further detailed as follows.

The Contractor's Representative shall provide all workers with the proper facilities i.e. portable washroom facilities as per Quinte Conservation Authority's Health and Safety Memorandum Agreement.

The Contractor's Representative shall work in a professional manner showing due respect to the Owner, Contract Administrator, Property Owners affected by the Contract and the General Public.

The Contractor's Representative shall have the knowledge and ability to follow all conditions of the Contract.

The Contractor's Representative shall have the ability to provide direction and guidance to all of the Contractors employees which fall under his/her Supervision.

Be advised that all conditions of GC7.01.07 and the above will be enforced at the discretion of the Owner or Contract Administrator.

16. LAYOUT

All layout shall be completed by the Contractor, with site reference to be provided by the Engineer or Owner.

17. HOURS OF WORK

The Contractor's operations under this Contract will be restricted to the local Municipality's Hours of Work By-Law. Written authorization from the client will be required prior to commencing work in the intersection. No work will be permitted on weekends or statutory holidays without written authorization from the Owner.

The Contractor shall be responsible for the utilization of additional personal and equipment, including a second shift for nighttime work, as required to satisfy the project timelines. Certain components of the work may require nighttime and/or weekend operations. Such work shall be considered by the Contractor during the preparation of his submission and no additional payment shall be made for such operations.

18. HAUL ROADS

When so required by the Owner or Contract Administrator, payment for maintenance and restoration of haul roads will be made for the materials provided and the work performed as specified, at tender prices, or at negotiated prices. Restoration of areas unnecessarily damaged by the Contractor's operation shall be at the Contractor's expense.

19. NOTIFICATION OF RESIDENTS / BUSINESSES

Where construction will inconvenience the residents and businesses in the area of the proposed work, the Contractor will be responsible for contacting the affected residents / businesses by written communication. The Contractor should include notification to affected area property owners as to when a disruption to their property access will occur and for how long. Disruptions shall be kept to a minimum, and in certain instances the Contractor shall give consideration and provide alternate access, by means of temporary entrances, parking areas etc. shall be given.

The Contractor shall be required to proceed in such a manner as to eliminate interruptions to local businesses. Pedestrian access to all businesses shall be maintained at all times during construction. Contractor shall make whatever arrangements are necessary to ensure businesses receive all scheduled deliveries.

20. EMERGENCY AND MAINTENANCE MEASURES

The name and telephone number of a responsible official of the Contracting firm, shall be given to the Owner and Contract Administrator for times when the construction site is unattended by the Contractor. This official shall be available at all times and have the necessary authority to mobilize workmen and machinery and to take any action as directed by the Engineer in case of emergency or maintenance measures are required regardless of whether the emergency or requirement for maintenance was caused by the Contractor's negligence, an act of God, or any cause whatsoever.

21. STORAGE AREAS

The Contractor shall not use the road allowance for storage of his/her equipment and materials or housing other than within the permitted road closure or with written authorization of the Contract Administrator. If additional property outside the site is required for such purposes, the Contractor shall make his/her own arrangements at no additional cost to the Owner.

If the property used is under private ownership a Property Owner Release form will be required as per Clause No. 25

22. PROTECTION OF WATER QUALITY

At all times, the Contractor shall maintain existing stream flows and shall control all construction work so as not to allow sediment or other deleterious materials to enter the stream.

No waste or surplus organic material including topsoil is to be stored or disposed of within 30 m of any watercourses. Run-off from excavation piles will not be permitted to drain directly into watercourses but shall be diffused onto vegetative areas a minimum of 30 m from the watercourse. Where this measure is not sufficient or feasible to control sediment entering the watercourses, sedimentation traps or geotextile coverage will be required.

If dewatering is required, the water shall be pumped into a sedimentation pond or diffused onto vegetated areas a minimum of 30 m from the watercourses and not pumped directly into the watercourses.

No machinery shall enter the creek bed of any watercourse. Movement of construction equipment in the vicinity of any creeks shall be limited to the minimum required for construction.

The Contractor shall not carry out equipment maintenance or refueling or store fuel containers within 100 m of any watercourse. The Contractor shall not stockpile construction debris or empty fuel/pesticide containers within the Contract limits.

23. APPLICABLE STANDARD SPECIFICATIONS

Ontario Provincial Standard Specifications (OPSS) governing the work of this Contract shall be as referred to herein with the issue current at the time of tendering being applicable.

With the exception of OPSS 127, these Specifications shall remain in effect throughout the duration of this Contract, whether or not they are modified or re-issued by the responsible agency subsequent to the tender advertising date.

The issues of OPSS 127, which are current at the time the work is performed or material furnished, shall govern.

24. INSURANCE

Insurance requirements shall be as per CCDC 14 – INSURANCE REQUIREMENTS.

25. CANADA POST

The Contractor will be responsible to notify Canada Post a minimum of five (5) business days prior to Commencement of Work on any Section of this Contract as to the possible disruption in service. Should the work areas affect the delivery of mail service the Contractor shall provide, in consultation with Canada Post, a community mail box system whereby the residences / businesses may collect their mail.

26. SUPPLY OF WATER

It shall be the Contractor's responsibility to supply and apply all water required for dust control and compaction under any item of this Contract including dust control through the construction zones and on all roads at no additional cost to the Owner i.e. all cost(s) deemed relevant shall be included in the respective items.

27. TESTING REQUIREMENTS

The Owner shall engage an independent Certified Laboratory to complete all testing of materials in accordance with OPSS in excess of the Contractor's requirements for process control, under the Contract.

28. AWARD OF CONTRACT

Quinte Conservation Authority reserve the right to delete parts of items, items, sections or parts of sections if it is deemed to be advantageous to the Owner. The lowest or any tender may not be awarded, however, bids considered in the award of this Tender shall be "Inclusive of deletions from the Contract for budget purposes" prior to award considerations, and shall be subject to review and scoring as outlined under Special Provisions, General – Clause 49.

The Bidder is hereby advised that the award of tender shall be subject to the approval and acceptance of Quinte Conservation Authority.

29. CONTRACTOR'S ASSISTANCE WITH PUBLIC

The Contractor is hereby advised that they shall take all steps necessary as to work and assist the public (walking and vehicular) during the construction. In instances, whereby sidewalks are being removed and reconstructed, proper signing, barricading, and directional markers shall be utilized to notify the public. When required and at the discretion of the Contract Administrator, the Contractor may have to assist the public directly by leading the persons along the route to their destination out of the work zone.

All interim granular conditions shall be graded such to allow smooth surfaces, free of potholes, and abrupt changes in elevation. This shall be monitored and all interim restoration shall be completed throughout the work zone and duration of the Contract, at no additional cost to the Owner.

30. PROPERTY BARS

Throughout completion of the works, the Contractor shall, to the best of his abilities, protect and maintain all found/identified survey monuments or marks set by an Ontario Land Surveyor. The Owner shall have the right to charge the Contractor for the reinstatement of legal survey monuments or marks which have been lost, damaged, buried, or destroyed as a result of carelessness on behalf of the Contractor.

The Contractor shall not be held responsible if, in the opinion of the Contract Administrator, any monument or mark was located in an area in which its removal, loss, or destruction could not be avoided.

31. REFERENCES

When the Contract Documents indicate that municipal-oriented specifications are to be used and there is a municipal-oriented specification of the same number, references within this specification to an OPSS shall be deemed to mean OPSS.MUNI, unless use of a provincial-oriented specification is specified in the Contract Documents. When there is not a corresponding municipal-oriented specification, the references below shall be considered to be the OPSS listed, unless use of a provincial-oriented specification is specified in the Contract Documents.

It shall be the Contractor's responsibility to ensure he secures all proper and relevant specifications.

32. DISPOSAL OF SURPLUS MATERIAL

All remaining excess or unacceptable materials shall be disposed of off-site at an approved location provided by the Contractor at his expense. All excess material shall be managed in accordance with OPSS 180, and shall be removed from the working area and properly transported and re-used, or disposed of off-site, in accordance with all applicable legislation, at the Contractor's sole expense.

QUINTE CONSERVATION AUTHORITY

CONTRACT NO. R.22.039
13 ISLAND LAKE DAM CULVERT REPLACEMENT

SPECIAL PROVISIONS – TENDER ITEMS

SPECIAL PROVISIONS – TENDER ITEMS

Special Provision No A1	
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ITEM A1 **MOBILIZATION / DEMOBILIZATION**

Scope

Payment at the Contract Price for the above tender item shall be full compensation for all labour, equipment, and material required to do the following work:

- Mobilization including set up of appropriate sanitary facilities and secure work areas, transportation of equipment;
- Provision of bonds and insurance;
- Providing an initial construction schedule and updating it on a bi-weekly basis;
- Site security;
- Stakeout of existing utilities and services;
- Communications with property owners;
- Attendance at preconstruction site meetings;
- Demobilization removal of equipment, materials etc.

Partial payments will be made on the following basis:

- 60% of the tender amount will be paid upon providing satisfactory proof of bonds and insurance, mobilization and providing an initial construction schedule.

The remaining 40% will be prorated over the length of the construction period and shall be subject to providing updated Construction Schedule to the satisfaction of the Consultant.

Special Provision No. A2	
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ITEM A2 **STREAM PROTECTION**

Scope

Under this item the Contractor is required to supply and install all labour, equipment, and materials for the protection of the watercourse, its water quality and fish habitat during the project. Installation, maintenance and removal of the mitigation measures listed below, as necessary to achieve this protection, are required:

- Heavy Duty Silt Fence Barriers as per OPSD 219.130
- Straw Bale Flow Checks as per OPSD 219.180
- Temporary Rock Flow Checks as per OPSD 219.210
- Turbidity Curtains as per OPSD 219.260 and 219.261

In addition, this item shall include, but is not limited to:

- Restoration of the water body and water body banks to conditions existing at commencement of construction or as otherwise specified on the drawings;
- Provide all protection measures to ensure that no deleterious material from any operation enters the water course with particular concern for demolition debris and sediment from runoff;
- No refuelling of vehicles, equipment, etc. or storage of fuel is to take place within 30m of a watercourse;
- Stationary equipment operating within 30m of the watercourse shall have hydrocarbon spill containment measures in place;
- Disturbed areas at the construction site are to be stabilized and re-vegetated after completion of the project and the site is to be restored to a pre-construction state or better

The Contractor will be required to contain all debris from entering the water. No in-water work is permitted between March 15th to July 15th of any given year.

Included under this item shall be the installation of siltation fence on the creek-banks to reduce the risk of sediment being washed into the river during operations.

The Contractor shall obtain a permit from Quinte Conservation (QC), or their required agents, and submit an environmental protection plan subject to the approval of the Consultant prior to commencing work. The Contractor shall be responsible for the cost of the QC permit, which shall be included under this item.

All costs incurred by the Contractor associated with the compliance with the above shall be borne by the Contractor. The Contractor shall not make any claim for additional compensation due to delays in commencing the work due to compliance with the above.

Basis of Payment

Payment at the contract price for the above tender item shall be full compensation for all labour, equipment, and material required to do the work:

Payment for this item shall be made as follows:

- a. 50% for upon installation of water course protection measures;
- b. 30% for maintenance prorated over construction period;
- c. 20% for removal of all water course protection measures and restoration of site to pre-construction state or better

Special Provision No. A3	
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ITEM A3 **QUALITY CONTROL TESTING**

Basis of Payment

Payment at the contract price for the above tender item shall be full compensation for all labour, equipment, and materials required to perform all inspection and testing as specified in the Contract Documents. This includes, but is not necessarily limited to the following:

- Testing of granular materials and on-site materials to be used as fill;
- Compaction testing of granular material and asphalt, placed in the Work;
- Testing as required to ensure that cement and aggregates used in concrete production meet the specifications;
- Required testing to ensure concrete can be produced by the concrete supplier as specified;
- Testing of concrete placed in the structure for Compressive Strength, Air Content and Slump in accordance with OPSS 904.
- All Certificates of Conformance sealed by a P.Eng. licensed in the Province of Ontario as detailed

Special Provision No. A4	
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ITEM A4 **TRAFFIC CONTROL**

Scope

Under this item, the Contractor shall supply and maintain all temporary signing, flagging, traffic and pedestrian protection as per the Ontario Traffic Manual Book 7 for the project including the signage required for the road closure for the replacement of the structure.

The signing of a detour is not required as Hamilton Lane has a dead end.

Access is to be always provided to the properties near the limits of the Work with all signage provided by the Contractor.

The Contractor shall be required to install a minimum of (1) Contractor identification signs (TC-67), as directed by the Consultant or Owner. Each sign shall include the Contractor’s name and phone number, and shall be approved by the Consultant or Owner, for wording and placement location.

The removal and restoration of all traffic control devices forms part of this item.

The Contractor’s signage scheme must be submitted to the Consultant for review and approval a minimum of thirty (30) days prior to commencement of the project.

Included under this item shall be all necessary fencing, signage, etc, to close off the road to traffic and pedestrians. Contractor must remain on call during evenings, weekends, holidays, etc, to maintain fences, signage etc.

The Contractor shall notify each property owner, and/or business establishment located on Hamilton Lane, on their intended work and road closure schedule. The letter, complete in every detail and written on

letterhead paper, shall be delivered by the Contractor to each house and/or business establishment prior to commencement of the work and the Contract Administrator shall be notified in writing when such notification has been served.

A road closure duration of 10 days is permitted for this project.

Special Provision No. A5	
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ITEM A5 **LANDOWNER ACCESS/TRANSPORT**

Scope

Under this item, the Contractor is required to provide safe access/transportation for landowners who reside and visit property located north of the site, through the construction site. The transportation effort shall include taxiing from the construction site to cottage properties on the lake, as well as transportation from the site to a community muster location south of the site, where landowner vehicles will be parked.

Construction of a detour route onsite over the waterway is not permitted due to environmental and property limit constraints.

In addition, the Contractor will be required to communicate and coordinate with the local Fire Department, EMS, and police, to ensure acceptable emergency measures are in place while Hamilton Road is closed to traffic.

Full payment for this item shall be by the Lump Sum.

Special Provision No. B1	
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ITEM B1 **SITE PREPARATION**

Scope

Payment at the contract price for this tender item shall be full compensation for all labour equipment and materials to remove and dispose of the following components as required to install the new roadway, or any component of this contract:

- Removal of all trees, brush and stumps located within the areas of new construction;
- Trimming of any trees that encroach within the right of way at the discretion of the Contract Administrator;
- Miscellaneous debris and concrete;

All surfaces disturbed during the execution of the Work shall be restored to a condition as existed prior to commencement of the Work. The removal and reinstallation or relocation of all signs, mailboxes, etc. shall also be included under this item.

Special Provision No. B2	
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ITEM B2 ROADWAY EARTH EXCAVATION/GRADING

Scope

Under this item the Contractor shall supply all labour, materials, and equipment required to complete all earth excavation/grading to allow for the installation of the new roadway structure and culvert approach modifications, as per the Contract Drawings, including the salvaging, re-use and compaction of existing excavated granular materials for roadway widening and backfill construction.

This shall include the benching of slopes as per OPSD 208.01 for proper construction of embankments as required.

All surplus material shall be disposed of off-site by the contractor at his expense.

Special Provision No. B3	
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ITEM B3 GRANULAR A (ROADWAY)

Scope

Under this item the Contractor will be required to supply, place and compact a minimum compacted depth of 150mm of Granular "A" material for component base construction, as necessary to provide the final roadway platform to the designated profile grades as detailed on the Contract Drawings. All water required for compaction and dust control shall be included under this item.

This shall include the installation of compacted Granular A material as required along the entire length of new steel beam guide rail, following the removal of the built up materials as necessary to install this new material along the road shoulders.

It shall be the Contractor's responsibility to engage an independent certified laboratory to complete all testing of materials in accordance with OPSS and as directed by the engineer. The engineer must be supplied with certification and compaction test results from the designated geotechnical firm that the compaction of Granular "A" meets OPS Specifications prior to the placement of the base course asphalt.

Compaction testing of Granular "A" shall be paid under the item Quality Control Testing.

Special Provision No. B4	
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ITEM B4 GRANULAR B TYPE I (ROADWAY PLATFORM WIDENING, PROVISIONAL)

Scope

Under this item the Contractor will be required to supply, place and compact Granular "B" Type I material for roadway platform widening if required and determined by the Contract Administrator or Owner.

The depth of Granular B Type I shall be as follows:

- Variable depth as required for the widening of the roadway platform in the culvert approach roadway sections.

Granular “B” Type II used for the frost tapers for the new culverts to the underside of the 300mm depth of Granular “B” Type II will be paid under the item *Granular Backfill to Structure*.

It shall be the Contractor's responsibility to engage an independent certified laboratory to complete all testing of materials in accordance with OPSS and as directed by the engineer. The engineer must be supplied with certification and compaction test results from the designated geotechnical firm that the compaction of Granular "B" Type II meets OPS Specifications prior to the placement of the Granular "A" base. Granular B Type II material shall be compacted to atleast 98% SPMDD in all areas.

Compaction testing of Granular “B” Type II shall be paid under the item *Quality Control Testing*.

Special Provision No. B5	
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ITEM B5 SINGLE RAIL STEEL BEAM GUIDE RAIL

Scope

Included under this item shall be the installation of steel beam guide rail as per OPSD 912.130. Also included under this item shall be the supply and installation of the concrete to base plate anchorage for posts located over the boxes, as per the Contract Drawings.

Payment for under this item shall be by the meter.

Special Provision No. B6	
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ITEM B7 ROCK PROTECTION

Scope

Under this item the Contractor shall supply and install a minimum depth of 500mm of rock protection on Class II geotextile. The supply and installation of geotextile shall be included under this item. The rock shall be placed on the embankments and along the front face of the bridge abutments as directed by the Consultant and as shown in the Contract Drawings.

The rock protection shall have a D₅₀ of 300mm and the following gradation:

Percentage Passing	Diameter (in mm)	Stone Weight (kg)
100%	450	130
80%	350	70
50%	300	40
20%	200	10

The rock shall be a mix of various rock, broken rock, cobbles, and boulders with gradation as specified above. The rock provided shall be clean and free of fine material.

Rock protection shall be placed in a random but stable manner. Where rock protection is to be placed on a slope, the placing shall commence at the lower end of the slope.

The Contractor, at his expense, shall complete all excavation and disposal of material required to complete the work detailed as part of this item.

Special Provision No. C1	
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ITEM C1 **REMOVAL OF CULVERT AND DAM**

Scope

The requirements of OPSS 180 and 510 shall apply to the above item, except as otherwise specified below:

510.07 CONSTRUCTION

510.07.01 General

Section 510.07.01 of OPSS 510 is amended by deletion of the third paragraph and addition of the following:

The Contractor shall carry out his operations under this item in such a manner as to ensure that the existing watercourse is not disturbed. The removal of the existing structure shall be carried out in the dry. The Contractor shall take all necessary precautions to prevent any debris from falling into the stream. Any material which falls into the stream shall be located and removed. The Contractor shall observe all safety laws and regulations in carrying out the work of this Item. The Contractor shall provide details of his proposed method of removing the existing structure for review and approval by the Engineer prior to any removals from the existing bridge.

The Contractor is advised that the existing steel culverts are in a deteriorated state, therefore, working around or on the culverts for removal operations shall be completed in an appropriate manner.

All removals from the existing structure shall remain the property of the Contractor to be disposed of by the Contractor off the limits of the Contract, at a location arranged for by the Contractor at his own expense. When hauling rubble, excavated materials or fill materials from or to the site, the Contractor shall comply with the requirements of the Highway Traffic Act.

Blasting will not be permitted for any work under this Item.

Work under this Item shall not commence without prior approval in writing from the Engineer.

510.07.02 Bridge Work

Section 510.07.02.01 of OPSS 510 is deleted in its entirety and replaced with the following:

510.07.02.01 Removal of Culvert and Dam

The work of the culvert and dam removal shall include the complete removal of all of the existing culvert pipes including the transverse concrete cut-off wall and upstream steel dam components.

The Contractor will be required to provide necessary protection to ensure that no material from this operation enters the watercourse.

510.10 BASIS OF PAYMENT

Section 510.10.01 of OPSS 510 is deleted and replaced with the following:

510.10.01.01 Removal of Culvert and Dam – Item

The work of culvert and dam removal shall be full compensation for all labour, equipment, and material required for the complete removal of the existing culverts and dam, including disposal/transportation as detailed.

Special Provision No. C2	
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ITEM C2	EARTH EXCAVATION FOR STRUCTURE
ITEM C3	ROCK EXCAVATION FOR STRUCTURE

Scope

902.04 SUBMISSION AND DESIGN REQUIREMENTS

Section 902.04 of OPSS 902, December, 1983, is deleted and replaced with the following:

902.04.01 Site Survey

Prior to commencing the work, the Contractor shall submit to the Consultant a condition survey of property and structures that may be affected by the work. The survey shall include, but not be limited to, the locations and conditions of adjacent properties, buildings, underground structures, utility services and structures such as walls abutting the site.

902.04.02 Working Drawings

Working drawings for protection systems shall be according to OPSS 539.

Where unwatering is required, the Contractor shall be responsible for the design of the unwatering scheme for the intended purpose. The design of temporary structures or protection system for unwatering shall be according to OPSS 539.

902.05.04 Protection System

Section 902.05 of OPSS 902, December, 1983, is amended by the addition of the following:

Protection systems shall be according to OPSS 539.

902.07.01 Protection Schemes

Subsection 902.07.01 of OPSS 902, December, 1983, is amended by replacing the word "Engineer" in the last paragraph with the words "Consultant".

902.07.02 Excavation

Subsection 902.07.02 of OPSS 902, December, 1983, is deleted and replaced with the following:

902.07.02.01 General

For excavation, the Contractor shall be responsible for preventing any deterioration of the foundation soil or rock, surface water from entering and eroding the face of the excavation, and build up of hydrostatic pressures which may have harmful effects upon the temporary or permanent structures.

902.07.02.03 Excavation for Backfill and Frost Tapers

Excavation for backfill and frost tapers shall be carried out in accordance with the Contract Drawings. The Contractor shall be responsible for restoring the over excavated portion with backfill and shall be compacted according to OPSS 501.

902.09 MEASUREMENT FOR PAYMENT**902.09.01 Structures**

Subsection 902.09.01 of OPSS 902, is deleted and replaced by the following:

"Earth Excavation for Structure" applies to the specific structure designated and is measured by Lump Sum quantity.

"Rock Excavation for Structure" applies to the specific structure designated and is measured in cubic metres.

902.10 BASIS FOR PAYMENT**902.10.01 Earth Excavation for Structure – Item
Rock Excavation for Structure – Item**

Subsection 902.10.01 of OPSS 902 is deleted and replaced with the following:

Payment at the contract price for the tender item 'Earth Excavation for Structure' and 'Rock Excavation for Structure' shall be full compensation for all labour, equipment and material for all excavation required for the structure excavation, excavation for frost tapers as detailed on the Contract Drawings, protection of adjacent works, placing and compacting material in fill in accordance with OPSS 206 and management of any surplus or unsuitable excavated material, including the cost of disposal areas, all according to the requirements of this specification.

Any over excavation by the Contractor shall be backfilled with granular or other material as approved by the Contract Administrator, with all costs for this at the Contractor's expense.

Any over excavation in bedrock **more than 200mm** beyond the limits of foundation bedding shall be backfilled with 30MPa concrete at the Contractor’s expense.

Special Provision No. C3	
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ITEM C4 **DEWATERING STRUCTURE EXCAVATIONS**

902.07.06 Dewatering Structure Excavation

Subsection 902.07.03 of OPSS 902 is amended by addition of the following:

The Contractor shall be wholly responsible for the adequacy of his method of dewatering. Water from dewatering operations shall be discharged in a manner that will minimize siltation of the watercourse utilizing sediment traps.

The Contractor will be responsible for all costs associated with providing the dewatering scheme and its design and approval. Strategies for dewatering may include the following, or a combination thereof: sheet piling, pea gravel coffer dams, temporary by-pass culvert(s) or an open channel channel bypass.

The Contractor is advised that as per the province’s Water Takings EASR Regulations and Exemptions presentation dated March 2016, this project is not subject to a Permit to Take Water (PTTW) or an EASR, provided that water is controlled by an active in-stream diversion for construction. The proposed dewatering plan must meet the following conditions to comply with the exemption from Section 34 of the Ontario Water Resources Act:

- Water being diverted is being returned directly to the same waterbody;
- The water contains no visible contaminants;
- Erosion and sediment control measures are installed and properly used;
- The water taking and discharge flow rate is controlled to ensure no downstream or upstream impacts relating to quality and quantity of water.

Controlling the water with an approach that does not meet the above-noted criteria is a possibility, however, the Contractor would be responsible with meeting the reporting and submission requirements of the Ontario Water Resources Act.

Prior to commencement of work, the Contractor shall submit a dewatering plan to the Conservation Authority (CA) and Contract Administrator for their review. The design and effectiveness of the dewatering and stream protection plan is the responsibility of the Contractor. The Contractor will be required to contain all debris from entering the water. No in-water work is permitted between March 15th and July 15th. The Contractor will not be permitted to proceed with the installation of the dewatering plan until approved by the Contract Administrator or Owner, and the Contractor has secured the permit for the work.

The Contractor shall carry out all work necessary to prevent disturbance to the founding material. Concrete shall be placed in the dry, unless otherwise specified in the contract.

902.09 MEASUREMENT FOR PAYMENT

Section 902.09 of OPSS 902 is amended by the addition of the following.

902.09.03 Non-Measurement

902.09.03.01 Dewatering Structure Excavations

There will be no measurement for the above item when designated in the tender as Lump Sum.

902.10 BASIS OF PAYMENT

Section 902.10.02 of OPSS 902 is deleted in its entirety and replaced with the following:

902.10.02 Dewatering Structure Excavations

Payment at the contract price for the above tender item shall be full compensation for all labour, equipment, and material required to place the new structure and granular backfill in the dry.

For payment purposes, 50% of the work under this item is completed when the dewatering method is installed and proved effective. A further 25% will be paid upon the installation of the structure. The remaining 25% will be paid upon the removal of the dewatering method and the restoration of the embankments to the conditions that existed prior to construction.

Special Provision No. C4	
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ITEM C5 GRANULAR BACKFILL TO STRUCTURE

Scope

The requirements of OPSS 902 shall apply to the above item, except as otherwise specified below.

902.05 MATERIALS

Section 902.05 of OPSS 902 is modified by the addition of the following:

902.05.04 Backfill

The Contractor shall be responsible for ensuring the quality of the material used for backfill which shall not be frozen and shall be protected from freezing as necessary during backfill operations. The quality of the material shall be verified by test results from a qualified and recognized testing laboratory. The frequency of sampling and testing shall be according to ASTM D 75-87 and D 3665.

902.09 MEASUREMENT FOR PAYMENT

Section 902.09 of OPSS 902 is amended by the addition of the following:

902.09.03 Non-Measurement

902.09.03.01 Granular Backfill to Structure

There will be no measurement for the above item when designated in the tender as Lump Sum.

902.10 BASIS OF PAYMENT

Section 902.10.03 of OPSS 902 is deleted in its entirety and replaced with the following:

902.10.01 Granular Backfill to Structure - Item

Payment at the Contract Price for this item shall be full compensation for all labour and equipment required for the backfilling and compacting of the structure with Granular "B" Type II to the underside of the 300mm depth of Granular "B" Type II below the Granular "A" base.

The structure excavation and backfill shall be completed as per the Contract Drawings, including the installation of the frost tapers.

All costs associated with compaction testing of the Granular "B" Type II at the midpoint of the backfill and at the final grade of the Granular "B" Type II, prior to the placement of Granular "B" Type II shall be included under the item *Quality Control Testing*.

Granular "B" Type II must be compacted to 95% of its maximum dry density.

Special Provision No. C5	
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ITEM C6 GRANULAR CULVERT BEDDING

Scope

Included under this item shall be the supply and installation of quarried Granular A bedding material to be installed below the precast box culvert units, as shown in the Contract Drawings.

The Granular A bedding shall be placed in lifts not exceeding 200mm and shall be compacted to 100% SPMDD. The Contractor will be required to place all bedding materials in the dry.

Be advised the excavation for foundation shall be inspected and approved by the Quality Verification Engineer prior to the installation of precast footings and granular bedding. Immediately after the inspection and prior to commencement of subsequent activity, a certificate of conformance stating that the work is in general conformance with the contract documents shall be issued by the Quality Verification Engineer and shall be submitted to the Contract Administrator. The certificate of conformance shall bear the seal of the Quality Verification Engineer. All costs associated with the Certificate of Conformance shall be included under the item, *Quality Control Testing*.

Special Provision No. C6	
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ITEM C7 CONCRETE IN CUT OFF WALLS

904.07 CONSTRUCTION

904.07.03.15 Field Sampling and Testing of Concrete

904.07.03.15.01 General

Section 904.07.03.15.01 of OPSS 904 is amended by addition of the following:

All costs related to on-site sampling and subsequent testing of concrete in accordance with the requirements of this specification shall be included under the item *Quality Control Testing*. The Contractor shall provide the Contract Administrator with original copies of all test reports.

The Contractor shall be responsible for ensuring only concrete that is in accordance with the submitted mix design, and which meets the specification requirements for air content, slump, temperature and delivery time, is included in the work.

904.08 QUALITY ASSURANCE

Section 904.08 of OPSS 904 is deleted and replaced by the following:

904.08.01 General

The Contractor will perform all tests as specified.

Strength testing of field or laboratory cured cylinders and all other tests shall be in conformance with OPSS 1350.

904.08.02 Acceptance

The determination of strength, yield, uniformity, slump, temperature and air content of the concrete shall be in conformance with OPSS 1350.

904.10 BASIS OF PAYMENT

Section 904.10 of OPSS 904 is deleted in its entirety and replaced with the following:

904.10.01 Concrete in Cut-Off Walls

Payment at the contract price for this tender item shall be full compensation for all labour, equipment, and material required to do the following work:

- Construct the cast in place cut-off walls as detailed in the Contract Drawings;
- Provide any hot or cold weather concrete protective measures as required.

Special Provision No. C7	
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ITEM C9 DOWELS INTO CONCRETE – 25M

904.07.10 Dowels into Concrete and into Rock

Section 904.07.10 of OPSS 904 is modified by addition of the following.

Dowels into concrete shall be anchored using HILTI HIT HY200 MAX adhesive. Holes shall be hammer drilled holes using carbide bits, to the depth, diameters and spacing as specified on the contract drawings.

After installation, anchors are to be left undisturbed for the curing time as recommended by the manufacturer of the adhesive. The holes cored through the base of culvert units shall be filled with non-shrink grout.

Section 904.10.02 of OPSS 904 is deleted in its entirety and replaced with the following:

904.10.02 Dowels into Concrete and into Rock

Payment at the contract price for the above tender item shall be full compensation for all labour, equipment, and material to do the following work:

- Drill and place dowels as detailed on the Contract Drawings.

Supply of the dowels is not included in this but is to be included as part of the supply of reinforcing steel.

Special Provision No. C8	
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ITEM C10 CLAY SEAL

Under this item the Contractor shall supply all labour, equipment and materials required to install the clay seal in the upstream culvert embankment, as per OPSD 802.095, and as shown in the Contract Drawings. The clay source must be reviewed and approved by the Contract Administrator or Owner before installation.

Special Provision No. C9	
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ITEM C11	FABRICATION OF PRECAST CULVERT UNITS
ITEM C12	DELIVERY OF PRECAST CULVERT UNITS
ITEM C13	ERECTION OF PRECAST CULVERT UNITS

1.0 Scope

The work shall consist of the design, fabrication, supply and erection of Precast Concrete Box Culvert Units, including the special upstream end units that allow for dam operation (embedded steel for stop log channels and headed concrete anchors and bars for access hatches), as detailed in the Contract Drawings. Restrictions on the precast items are: All items must be fabricated to meet the dimensions and elevations shown in the Contract Drawings.

2.0 References

The precast items shall be designed, fabricated and installed in accordance with OPSS 909 except as otherwise specified herein.

The precast units are not to be prestressed and Section 909.07.02.03 of OPSS 909 is deleted.

Design of the structure sections shall conform to the Canadian Highway Bridge Design Code.

3.0 Submission Requirements

At least four weeks before the commencement of fabrication, the Contractor shall submit to the Contract Administrator four (4) complete sets of shop drawings. These drawings shall include member details, reinforcing steel details, complete specifications, lifting point locations, details of all temporary supports, and all other pertinent details. Two sets of these drawings will be returned to the Contractor marked to indicate required changes. The Contractor shall return six sets of these drawings revised where necessary. Two sets of the stamped shop drawings will be returned to the Contractor. All submissions shall bear the seal and signature of a Professional Engineer licensed to practice in Ontario.

At least two weeks prior to the commencement of erection, the Contractor shall submit to the Contract Administrator three sets of erection procedures including lifting point locations and details of all temporary supports. One set of the erection procedures will be returned to the Contractor. Erection procedures shall bear the seal and signature of a Professional Engineer licensed to practice in Ontario.

4.0 Prequalification

The Precast Concrete Bridge Units shall be fabricated by a manufacturer certified in conformance to the "Prequalification Requirements for Manufacturers of Precast Concrete Drainage Products – May 1998", by the MTO/MEA/OCPA/OPS Prequalification Advisory Committee.

5.0 Submission of Certificates of Conformance

5.1 Certificate of Conformance of Fabricated Component

Upon completion of fabrication and prior to shipment from the fabrication facility, the Contractor shall submit to the Contract Administrator a Certificate of Conformance sealed and signed by a Professional Engineer. The Certificate shall state that the fabrication of the Precast Concrete Bridge Units and headwalls has been carried out in general conformance with the stamped shop drawings and contract documents.

5.2 Certificate of Conformance of Erected Component

Upon completion of delivery and erection, the Contractor shall submit to the Contract Administrator a Certificate of Conformance sealed and signed by a Professional Engineer. The Certificate shall state that the delivery and erection of the Precast Concrete Bridge Units and headwalls has been carried out in general conformance with the stamped shop drawings, erection procedures and contract documents.

6.0 Materials

All required precast items shall consist of reinforced precast concrete as shown on the drawings. The concrete shall have a minimum design compressive strength of 35MPa. Units are to have a span and rise and outer dimensions as detailed on the Contract Drawings. The box culvert units shall be designed in accordance with Canadian Highway Bridge Design Code as noted on the drawings for highway loading and earth cover as noted on the drawings.

7.0 Construction

After erection of all precast units, the void between the units and the existing rock is to be filled solid with non-shrink grout. The supply and installation of the following items/works as shown in the Contract Drawings is also included as part of this item:

- Filling space between box culvert and cut-off wall with non-shrink grout;

- Non-shrink grout required for cut-off wall dowels;
- Non-woven Geotextile;
- 10mm thick steel connection plates for culvert tops, including all connection hardware;
- Embedded steel stoplog channels;
- Embedded steel concrete anchors and stop bar all sides for access hatch;

All joints shall be wrapped with geotextile. Geotextile is required to be placed on the exterior surface only.

8.0 Overhead Wires

The Contractor is cautioned that overhead wires are present near the replacement site and over Hamilton Lane. The Contractor shall take all measures necessary to ensure that the installation of the precast units is performed in accordance with all Safety Regulations and requirements of the regulatory authority having jurisdiction of the overhead wires.

The Contractor shall take all necessary precautions to prevent spills, overspray, splatter and rundown spills. Overspray and splatter shall be removed at the Contractor’s expense. Rundown shall be brushed or rolled down.

Special Provision No. C10	
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ITEM C14 WOOD STOP LOGS AND STEEL ACCESS PLATES

Scope

Under this item the Contractor shall include all labour, equipment, and material to provide and install the following additional items as part of the dam structure, as shown in the Contract Drawings:

- Three (3) hinged steel grating access plates, to be connected to the upstream culvert units tops;
- Twelve (12) rough cut, douglas fir 152mm x 152mm stop logs, each ±1925mm long;
- Stop logs to be fitted with slots and 19mm diameter bars for easy water level operation.

Payment for this item shall be by the Lump Sum.

Special Provision No. C11	
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ITEM C15 RIVER STONE ROCK

Scope

Under this item the Contractor shall supply and install a minimum depth of 300mm of river run stone (WB-100) as per OPSS.MUNI 1005, on Class II geotextile. The supply and installation of geotextile shall be included under this item. The stone shall be placed between the top of retaining wall and concrete curb as shown in the Contract Drawings.

Payment for this item shall be by the square meter.

Special Provision No. C12	
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ITEM C16

PEDESTRIAN GUARD

Scope

Work under this item shall include all labour, equipment and material required to provide and install the galvanized steel pedestrian guard on top of the precast concrete culvert ends, as per the Contract Drawing details. This effort shall include the installation of the railing anchors plates to the culvert top with steel threaded rods and epoxy adhesive, as also shown in the details.

A working drawing from the Contractor’s proposed manufacturer shall be submitted and approved prior to fabrication.

Payment for this item shall be by the meter.

An additional credit/cost increase line has been included in the bid table to provide the cost difference for an aluminum railing, in lieu of galvanized steel.

APPENDIX A

ENGINEERING GEOLOGY REPORT