

WOL006-2023

**East Main Street Cross
Culvert Replacement**

August 2023



A cultivated experience for the mind, body, and soil

Closing: Thursday, September 7, 2023 at 14:00



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Tender Drawings:

**East Main Street Cross Culvert Replacement prepared by DesignPoint Engineering & Surveying Ltd.,
Revision 2, Issued for Tender**

C-PP01 / Plan & Profile

C-D01 / Construction Notes and Details

END OF SECTION

OVERVIEW

This document is a Supplementary Specification to The Standard Specification for Municipal Services as published by the Joint Committee on Contract Documents in association with the Nova Scotia Roadbuilders Association, Consulting Engineers of Nova Scotia and Landscape Nova Scotia.

The Town of Wolfville has decided to use the Standard Specification in an effort to regulate their specification practices, simplify the review and approval process, and standardize the specifications written by their consultants.

These project documents have been prepared for use with and require being read in conjunction with the Standard Specification for Municipal Services as published by the Joint Committee on Contract Documents in association with Nova Scotia Roadbuilders Association, Consulting Engineers of Nova Scotia and Landscape Nova Scotia. Copies of the Standard Specification are available from Spectech Limited, 18 Laurier Street, Dartmouth, NS, B3A 2G7; telephone: (902) 233-9362; e-mail: nsmunicipalservices@gmail.com; or visit: www.standardspec.ca.

END OF SECTION

East Main Street Cross Culvert Replacement
Wolfville, Nova Scotia
Owner: Town of Wolfville, 359 Main Street, Wolfville NS, B4P 1A1
Engineer: DesignPoint Engineering & Surveying Ltd., 90 Western Parkway Suite 500, Bedford NS B4B 2J3

1.1 Tender Submission

- .1 Submit completed tender form for above project in sealed envelope marked as follows:

TENDER

Tender No. WOL006-2023
East Main Street Cross Culvert Replacement

Closing up to 2:00 p.m. local time on Thursday, September 7, 2023

Town of Wolfville

Attn: Alexander de Sousa, P.Eng., Director of Engineering & Public Works

359 Main Street, Wolfville NS, B4P 1A1

1.2 Safety Certification

- .1 Submit with tender a copy of tenderer's current and valid safety accreditation issued by Nova Scotia Workers' Compensation Board or Certificate of Recognition (COR) issued by Construction Safety Nova Scotia.
- .2 Out-of-province tenderers with a current and valid COR from a Canadian Federation of Construction Safety Associations member shall obtain and submit, with tender, a current and valid Letter of Good Standing from Construction Safety Nova Scotia.

1.3 Workers' Compensation

- .1 Submit with tender a copy of tenderer's current and valid clearance letter issued by the Workers' Compensation Board of Nova Scotia.
- .2 Out-of-province tenderers shall submit, with tender, a current and valid clearance letter from a government workers' compensation board but must register with the Nova Scotia Workers' Compensation Board prior to being awarded the Contract.

1.4 Tender Opening

- .1 Tenders will be opened on Thursday, September 7, 2023 at approximately 2:15 p.m. local time at the Wolfville Town Hall at 359 Main Street, Wolfville. Opening will be public.
- .2 Tender amendments will be disclosed at public openings.

1.5 Accuracy of Referencing

- .1 Indexing and cross-referencing are for convenience only.

1.6 Conditions of Tendering

- .1 Take full cognizance of content of all Contract Documents in preparation of tender. Refer to Section 00 41 43 – Tender Form, Subsection 1.3.8 for a complete list of Contract Documents.

1.7 Tenderers to Investigate

- .1 Tenderers will be deemed to have familiarized themselves with existing site and working conditions and all other conditions which may affect performance of the Contract. No plea of ignorance of such conditions as a result of failure to make all necessary examinations will be accepted as a basis for any claims for extra compensation or an extension of time.

1.8 Clarification and Addenda

- .1 All questions concerning this tender shall be directed to the following:

Alexander de Sousa, P. Eng
(902)-542-3213
adesousa@wolfville.ca
- .2 Notify Engineer not less than two (2) Working Days before tender closing of omissions, errors, or ambiguities found in Contract Documents. If Engineer considers that correction, explanation, or interpretation is necessary, a written addendum will be issued. All addenda will form part of Contract Documents.
- .3 Confirm in the tender form that all addenda have been received. Tenderers are solely responsible to obtain and acknowledge the receipt of addenda at time of tender closing. Addenda are posted first on the Town's website under the project page.

1.9 Preparation of Tender

- .1 Legibly complete tender form provided with Project Documents. Tender all items and fill in all blanks. Have corrections initialed by person signing tender.

1.10 Taxes

- .1 Include all taxes in prices except Harmonized Sales Tax (HST).

1.11 Tender Security

- .1 Provide tender security in the minimum amount of ten percent (10%) of total price including HST. Provide security with tender in the form of a certified cheque or money order payable to the Owner, a bid bond on CCDC Form 220, or other Owner-approved form.

1.12 Contract Security

- .1 Refer to Section 00 72 45 – General Conditions, subsection GC11.2 – CONTRACT SECURITY for form of contract security. Refer to Project Documents for amount of contract security.

1.13 Insurance

- .1 Refer to Section 00 72 45, General Conditions, subsection GC11.1 - INSURANCE, and CCDC 41 for insurance requirements.

1.14 Form of Agreement

- .1 Form of Agreement is attached for information purposes only until execution of the Contract.

1.15 Return of Tender Security

- .1 Tender security will be returned to:
 - .1 All except the three lowest acceptable tenderers within five (5) Working Days of tender opening.
 - .2 Two (2) remaining unsuccessful tenderers within ten (10) Working Days of date of award.
 - .3 Successful tenderer following receipt by Owner of executed agreement, specified contract security, and insurance documents.

1.16 Amendment or Withdrawal of Tender

- .1 Tenders may be amended or withdrawn prior to tender closing.
- .2 Amendment of individual Unit Prices is the only acceptable price amendment. Amendments shall not disclose either original or revised total price.
- .3 Head amendment or withdrawal as follows: "[Amendment/Withdrawal] of tender for East Main Street Cross Culvert Replacement, Tender # WOL006-2023". Sign as required for tender and submit to the address given for receipt of tenders. In order to be considered, submissions shall be received prior to time of tender closing.

1.17 Offer, Acceptance, Rejection

- .1 The Owner reserves the right to accept or reject any tender and to cancel the tendering process and reject all tenders at any time prior to the award of Contract without incurring any liability to affected tenderers.

END OF SECTION



1.1 SALUTATION:

- .1 To: Town of Wolfville
359 Main Street, Wolfville Nova Scotia B4P 1A1

- .2 For: Tender # WOL006-2023
East Main Street Cross Culvert Replacement
Wolfville, Nova Scotia

- .3 From:

1.2 TENDERER DECLARES:

- .1 That this tender was made without collusion or fraud.
- .2 That the proposed work was carefully examined.
- .3 That the tenderer was familiar with local conditions.
- .4 That Contract Documents and Addenda No. __ to __ inclusive were carefully examined.
- .5 That all the above were taken into consideration in preparation of this tender.

1.3 TENDERER AGREES:

- .1 To enter into a contract to supply all labour, material and equipment and to do all work necessary to construct the Work as described and specified herein for the unit prices stated in Subsection 1.4 hereunder, Schedule of Quantities and Unit Prices.
- .2 That the estimated Contract Price shall be the sum of the products of the tendered unit prices multiplied by the estimated quantities in Subsection 1.4 hereunder excluding Harmonized Sales Tax (HST).
- .3 That this tender is valid for acceptance for sixty (60) days from tender closing.
- .4 That measurement and payment for items listed in Subsection 1.4 hereunder shall be in accordance with corresponding items in Section 01 22 00 Measurement and Payment.
- .5 To execute in triplicate the Form of Agreement and forward same together with the specified contract security and insurance documents to the Owner within ten (10) Working Days of written notice of award.
- .6 That failure to enter into a formal contract and provide specified insurance documents and contract security within time required will constitute grounds for forfeiture of tender security.
- .7 That if tender security is forfeited, Owner will retain difference in money between amount of tender and amount for which Owner legally contracts with another party to perform the Work and will refund balance, if any, to tenderer.

- .8 That Contract Documents include:
 - .1 Standard Specification for Municipal Services listed in Table of Contents Page Dated January 2023.
 - .2 Overview
 - .3 Information to Tenderers
 - .4 Tender Form
 - .5 Form of Agreement
 - .6 Supplementary Specifications
 - .1 Section 00 74 00 – Supplementary Specifications
 - .7 Drawings
 - East Main Street Cross Culvert Replacement prepared by DesignPoint Engineering & Surveying Ltd., Revision 2, Issued for Tender**
 - C-PP01 / Plan & Profile
 - C-D01 / Construction Notes and Details
 - .8 All addenda as issued and as confirmed in subsection 1 of this section.



1.4 SCHEDULE OF QUANTITIES AND UNIT PRICES

Item No.	Description	Unit of Measurement	Estimated Quantity	Unit Price	Item Total
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EARTHWORK

8.	Geotechnical Inspection	L.S.	1		
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SUBTOTAL EARTHWORK: \$ _____

WATER MAIN

19.	Existing Water Concrete Encasement	m	3		
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SUBTOTAL WATER MAIN: \$ _____

SANITARY SEWER

28.	Existing Sanitary Concrete Encasement	m	3		
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SUBTOTAL SANITARY SEWER: \$ _____

STORM SEWER

31.	Pipe .1 450 mm PVC DR35	m	3.5		
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33.	Catch Basin Replacement	ea	2		
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36.	Connections of Storm Main To Proposed Culvert	ea	2		
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37.	Culverts .1 2100 x 900 mm Precast Concrete Box Culvert	m	20		
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39.	Cast-in-Place Headwall	m ²	9		
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40.	Boulders	ea	3		
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SUBTOTAL STORM SEWER: \$ _____



Item No.	Description	Unit of Measurement	Estimated Quantity	Unit Price	Item Total
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STREET CONSTRUCTION

53.	Galvanized Steel Handrail	m	13		
54.	Asphalt Walkway Replacement	m ²	34		

SUBTOTAL STREET CONSTRUCTION: \$ _____

ADDITIONAL ITEMS

72.	Trench Excavation - Unsuitable Material (Provisional)	m ³	60		
73.	Replacement of Unsuitable Material with Surge Rock (Provisional)	m ³	60		

SUBTOTAL ADDITIONAL ITEMS: \$ _____

ENVIRONMENTAL PROTECTION

87.	Rock Rip Rap Protection	m ²	24		
90.	Environmental Protection	L.S.	1		

SUBTOTAL ENVIRONMENTAL PROTECTION: \$ _____



SUBTOTAL EARTHWORK	\$ _____
SUBTOTAL WATER MAIN	\$ _____
SUBTOTAL SANITARY SEWER	\$ _____
SUBTOTAL STORM SEWER	\$ _____
SUBTOTAL STREET CONSTRUCTION	\$ _____
SUBTOTAL ADDITIONAL ITEMS	\$ _____
SUBTOTAL ENVIRONMENTAL PROTECTION	\$ _____
ESTIMATED CONTRACT PRICE (EXCLUDING HST)	\$ _____ (A)
ADD HARMONIZED SALES TAX (15% of Estimated Contract Price)	\$ _____ (B)
TOTAL PRICE (A + B)	\$ _____
TENDERER'S HST REGISTRATION NO.	_____

1.5 COMPLETION TIME

- .1 Tenderer agrees to attain Substantial Completion of the work by November 17, 2023.
 - .1 If project schedule does not allow for asphalt reinstatement as per project drawings prior to asphalt plant seasonal closure, temporary asphalt is to be installed to provide unobstructed passage of the travelled way by November 17, 2023. Tenderer agrees to remove temporary asphalt and complete the remainder of the work by May 10, 2024.



1.6 SIGNATURES*

DATED THIS _____ DAY OF _____, 20_____.

Name of Tenderer

Witness

Signature of Signing Officer

Name and Title (Printed)

Witness

Signature of Signing Officer

Name and Title (Printed)

*NOTE: Tenders submitted by or on behalf of any Corporation must be signed in the name of such Corporation by a duly authorized officer(s) or agent(s).

END OF SECTION



This Agreement made on the __ day of ____ in the year__.

BY AND BETWEEN

_____ The Town of Wolfville _____

hereinafter called the "Owner"

and

hereinafter called the "Contractor"

The Owner and the Contractor agree as follows:

ARTICLE A1 - THE WORK

.1 The Contractor shall:

- .1 Perform the Work required by the Contract Documents for
East Main Street Cross Culvert Replacement, Tender # WOL006-2023
located at Main Street, Wolfville, Nova Scotia
for which the Agreement has been signed by the parties, and for which
DesignPoint Engineering & Surveying Ltd.

is acting as and is hereinafter called the "Engineer"

and

- .2 do and fulfill everything indicated by this Agreement, and
- .3 attain Substantial Performance of the work as certified by the Engineer by the 17th day of November in the Year 2023.
 - .1 If project schedule does not allow for asphalt reinstatement as per project drawings prior to asphalt plant seasonal closure, temporary asphalt is to be installed to provide unobstructed passage of the travelled way by the 17th day of November in the Year 2023. The Contractor shall remove temporary asphalt and complete the remainder of the work by the 10th day of May in the Year 2024.

ARTICLE A2 – AGREEMENTS AND AMENDMENTS

- .1 This Contract supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the work, including the bidding documents that are not expressly listed in Article A3 of the Agreement.

ARTICLE A3 - CONTRACT DOCUMENTS

- .1 The following is an exact list of the Contract Documents referred to in Article A1.1 of this Agreement and as defined in subsection 6 of Section 00 71 00 DEFINITIONS. This list is subject to subsequent amendments in accordance with the provisions of the Contract Documents.
 - .1 STANDARD SPECIFICATION FOR MUNICIPAL SERVICES.
Table of Contents Dated January 2023.
 - .2 Overview
 - .3 Information to Tenderers
 - .4 Tender Form
 - .5 Form of Agreement
 - .6 Supplementary Specifications
 - .1 Section 00 74 00 – Supplementary Specifications
 - .7 Drawings:
East Main Street Cross Culvert Replacement prepared by DesignPoint Engineering & Surveying Ltd., Revision 2, Issued for Tender
C-PP01 / Plan & Profile
C-D01 / Construction Notes and Details
 - .8 Addenda

ARTICLE A4 - CONTRACT PRICE

- .1 The estimated Contract Price is the sum of the products of the estimated quantities multiplied by the appropriate Unit Prices in the tender form excluding the amount of Harmonized Sales Tax.
- .2 The estimated Contract Price is \$ _____
- .3 All amounts shall be in Canadian funds.
- .4 The amounts shall be subject to adjustment as provided in the Contract Documents.

ARTICLE A5 - PAYMENT

- .1 The Owner shall pay the Contractor in Canadian funds for the performance of the Contract.
- .2 The Owner shall make monthly payments on account to the Contractor for the Work performed, as certified by the Engineer, subject to a 10% holdback.
- .3 The amount of the monthly payments shall be calculated as follows:
 - .1 The quantity for each pay item on which actual work has been performed shall be measured.
 - .2 For each Unit Price item this quantity shall be multiplied by the applicable Unit Price as provided in the Tender Form.
 - .3 For each lump sum item, multiply the percent complete by the value of the lump sum item.
 - .4 The total value of work completed for the payment period shall be calculated by adding the total of the products for all pay items from 3.2 and 3.3 of this Article.
 - .5 The amount of the monthly payment shall be determined by deducting the 10% holdback and the total of all previous payments from the total value of such completed work as determined under 3.4 of this Article.
 - .6 To the amount calculated above, the Harmonized Tax shall be added.
- .4 The last day of the payment period shall be the last day of the month.



- .5 Upon Substantial Performance of the Work as certified by the Engineer the Owner shall pay to the Contractor the holdback monies then due in accordance with the provisions of Section 00 72 45 - General Conditions, subsection GC5.8 – PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK.
- .6 Upon the issuance of the final certificate for payment as certified by the Engineer, the Owner shall pay to the Contractor the balance of monies then due in accordance with the provision of Section 00 72 45 - General Conditions, subsection GC5.10 – FINAL PAYMENT.
- .7 In the event of loss or damage occurring where payment becomes due under the property and boiler insurance policies, payment shall be made to the Contractor in accordance with the provisions of Section 00 72 45 - General Conditions, subsection GC11.1 - INSURANCE.
- .8 If the Owner fails to make payment to the Contractor as it becomes due under the terms of the Contract, interest shall be payable as follows:
 - .1 The annual interest rate applicable to the contract is 5% compounded monthly.
 - .2 Interest shall be calculated on the overdue balance from the due date.

ARTICLE A6 - RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

- .1 Notices in writing shall be addressed to the recipient at the address set out below.
- .2 The delivery of a notice in writing shall be by hand, courier, prepaid first class mail, facsimile or e-mail.
- .3 A notice in writing delivered by one party in accordance with this Contract shall be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it shall be deemed to have been received five (5) Working Days after the date on which it was mailed.
- .4 A notice in writing sent by facsimile or e-mail shall be deemed to have been received on the date of its transmission provided that if such day is not a Working Day or if it is received after the end of normal business hours at the place of receipt, then it shall be deemed to have been received at the opening of business at the place of receipt on the first Working Day following the transmission thereof.
- .5 An address for a party may be changed by notice in writing setting out the new address delivered to the other party in accordance with this Article.

.1 The Owner at _____ 359 Main Street, Wolfville NS B4P 1A1 _____

.2 The Contractor at _____ _____

.3 The Engineer at _____ 90 Western Parkway Suite 500, Bedford NS B4B 2J3 _____

ARTICLE A7 - QUANTITIES AND MEASUREMENT

- .1 The quantities shown in Section 00 41 43 Tender Form - Schedule of Quantities and Unit Prices are estimated.

- .2 Measurement for the actual quantities used to determine payments and Contract Price shall be in accordance with Section 01 22 00 - Measurement and Payment.

ARTICLE A8 - SUCCESSION

- .1 The aforesaid Contract Documents are to be read into and form part of the Agreement and the whole shall constitute the Contract between the parties and subject to law and the provisions of the Contract Documents shall inure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors and assigns.

ARTICLE A9 - RIGHTS AND REMEDIES

- .1 No action or failure to act by the Owner, Engineer, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

ARTICLE A10 - TIME

- .1 Time shall be construed as being of the essence of the Contract.



In witness whereof the parties hereto have executed this Agreement and by the hands of their duly authorized representatives.

SIGNED AND DELIVERED

In the presence of:

OWNER

Name of Owner

Witness

Signature

Name and Title of Person Signing

Witness

Signature

Name and Title of Person Signing

CONTRACTOR

Name of Contractor

Witness

Signature

Name and Title of Person Signing

Witness

Signature

Name and Title of Person Signing

N.B. Where legal jurisdiction, local practice or Owner or Contractor requirements calls for proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership.

END OF SECTION

PART 1 General

1.1 INTENT

- .1 The *Work* of this *Contract* is to be constructed in accordance with the Standard Specification for Municipal Services (2023 Revision) as developed and published by the Nova Scotia Road Builders Association and the Consulting Engineers of Nova Scotia Joint Committee on Contract Documents, except as modified herein.
- .2 These Supplementary Specifications modify and take precedence over the *Standard Specification* sections to which they refer.
- .3 These Supplementary Specifications replace Standard Specification section 00 73 00 – Supplementary General Conditions, as noted in this section.

SECTION 00 21 00 – INFORMATION TO TENDERERS

Delete Section 00 21 00 in its entirety and replace with new Section 00 21 00 provided in *Project Documents*.

SECTION 00 41 43 – TENDER FORM

Delete Section 00 41 43 in its entirety and replace with new Section 00 41 43 provided in *Project Documents*.

SECTION 00 53 43 – FORM OF AGREEMENT

Delete Section 00 53 43 in its entirety and replace with new Section 00 53 43 provided in *Project Documents*.

SECTION 00 71 00 - DEFINITIONS

Delete definition number four (4), for the term *Consultant*. Where this term is used elsewhere in 00 71 00 - DEFINITIONS, and 00 72 45 - GENERAL CONDITIONS, revise to read "*Engineer*", as defined in this section.

Add the following definitions:

28. Approved or Approval

"Approved" or "Approval" is defined as acceptance by the *Engineer* in accordance with the *Engineer's* responsibilities described in Clause GC 2.2 - ROLE OF THE ENGINEER.

29. Contract Administrator

An individual or corporate entity, when duly appointed as set forth in the *Contract Documents*, will act in the capacity of *Contract Administrator*, having some or all authority given to, and fulfilling some or all obligations of the *Engineer* under 00 72 45 - GENERAL CONDITIONS.

30. Delay Charges

Delay Charges is defined as the sum of all charges incurred by the *Owner*, and payable by the *Contractor* in connection with the *Period of Delay*, as described in GC 6.5 - DELAYS.

31. Engineer

An individual or corporate entity, when duly appointed as set forth in the *Contract Documents*, will act in the capacity of engineer for *the Project*. This individual or entity shall be licensed to practice and carry out business in the province or territory of *the Place of the Work*. The term *Engineer* means the *Engineer* or the *Engineer's* delegate or authorized representative.

32. Period of Delay

Period of Delay is defined as the period of time from the *Substantial Performance of the Work* date stated in Article A1 of the Agreement - THE WORK, and the actual date of *Substantial Performance of the Work*, if any.

33. Project Documents

Project Documents consist of those documents prepared to supplement the *Standard Specification* for the *Work* on a specific *Project*. Where applicable, they consist of the Information for Tenderers, Tender Form, Form of Agreement, Supplementary Specifications, drawings, and addenda.

34. Site

The *Site* is defined as the geographical location(s) of the *Work* identified in the *Contract Documents*.

35. Standard Specification

The *Standard Specification* consists of Definitions, General Conditions, Supplementary General Conditions, Measurement and Payment, General Requirements, other technical specifications and standard details developed by the Nova Scotia Road Builders Association and the Consulting Engineers of Nova Scotia Joint Committee on Contract Documents and published with the title of Standard Specification for Municipal Services.

36. Supplementary Specifications

Supplementary Specifications consist of the specifications for a specific project which amend or add to the *Standard Specification*.

37. Total Amount Payable

Total Amount Payable is defined as the sum of the *Contract Price* in the Tender Form, subject to adjustments made in accordance with the provisions of the *Contract Documents* plus the amount of *Value Added Taxes*.

SECTION 00 72 45 - GENERAL CONDITIONS

GC 2.4 – DEFECTIVE WORK

Within clause 2.4.3, delete the following words in the last sentence at the end of the clause:

"they shall refer the matter to the *Engineer* for a determination."

... and replace with the following:

"then the matter shall be resolved in accordance with the requirements of Part 8 of the General Conditions – DISPUTE RESOLUTION."

GC 3.4 - DOCUMENT REVIEW

Add clause 3.4.2 as follows:

"3.4.2 Each party has had an opportunity to evaluate this *Agreement* with counsel of its choosing and, in the event an ambiguity or question of intent or interpretation arises, this *Agreement* will be enforced and construed as if drafted jointly by the parties and no presumption or burden of proof will arise favouring or disfavouring either party or its construction or interpretation of this *Agreement* by virtue of the authorship of any of the terms of provisions of this *Agreement*."

GC 3.5 - CONSTRUCTION SCHEDULE

Add clause 3.5.2 as follows:

"3.5.2 If, at any time, it should appear to the *Owner* or the *Engineer* that the actual progress of the *Work* is behind the accepted schedule or is likely to become behind schedule, or if the *Contractor* has

given notice of such to the *Owner* or the *Engineer* pursuant to clause 3.5.1.3, the *Contractor* shall take reasonable steps to cause the actual progress of the *Work* to conform to the accepted schedule, or minimize the resulting *Period of Delay*, and shall produce and submit to the *Engineer* a recovery plan based on a good knowledge of the project progress that provides a reasonable and attainable approach for the *Contractor* to regain lost time. If the *Contractor* intends to apply for a change in the *Contract Price* in relation to a schedule recovery plan, then the *Contractor* shall proceed in accordance with General Condition 6.6 – CLAIMS.”

GC 3.6 – SUPERVISION

Delete clause 3.6.1, and replace with the following:

“3.6.1 The *Contractor* shall provide all necessary supervision to effectively direct and supervise the *Work* being performed by the *Contractor’s* own forces, any *Subcontractors* engaged in the *Work*, and during any other activities required by the *Contract Documents*. The appointed representative shall be in attendance at the *Place of the Work* while any *Work* is being performed, and shall not be changed without the written consent of the *Engineer*.”

...and add clause 3.6.3 as follows:

“3.6.3 The *Owner* may, at any time during the course of the *Work*, request immediate replacement of the appointed representative(s), where grounds for the request involve conduct which jeopardizes the safety or security of the *Site* or the *Owner’s* operations. Immediately, upon receipt of the request, the *Contractor* shall make arrangements to appoint a competent replacement representative acceptable to the *Owner* and the *Engineer*.”

GC 3.7 – LAYOUT OF THE WORK

Delete clause 3.7.1 in its entirety, and replace with the following:

“3.7.1 The *Contractor* shall have reference points established at the *Site* by a Professional Engineer or land surveyor licenced to practice in the province of Nova Scotia, at no additional cost to the *Owner*.”

GC 3.11 – SHOP DRAWINGS

Add the following to existing clause 3.11.1:

... “or as requested by the *Owner*.”

Add the following to existing clause 3.11.4:

“The *Contractor’s* schedule shall allow for a minimum review period of two (2) *Working Days* by the *Owners Representative*.”

GC 3.15 - CLOSEOUT SUBMITTALS

Add GC 3.15 - CLOSEOUT SUBMITTALS as follows:

“3.15.1 Fifteen (15) *Working Days* before an application for *Substantial Performance* is made, submit the following closeout documents to the *Engineer* for review:
.1 Any documentation identified as a submittal requirement in Section 01 10 00.

- 3.15.2 Should the *Contractor* fail to submit any of the required closeout documents, this will be considered a contractual deficiency in an amount determined by the *Engineer* and will be subject to finishing holdback procedures granted by the Builders' Lien Act of Nova Scotia."

GC 5.4 – BASIS OF PAYMENT FOR COST PLUS WORK

Delete clause 5.4.1, and replace with the following:

- "5.4.1 Payment for cost plus work shall be based on the cost of such work, as provided in paragraph 5.4.2, plus a fee calculated as a single percentage of the cost of such work, for the *Contractor's* combined overhead and profit. The percentage amount shall be **ten percent (10%)** of the cost plus work, but shall not be applied to the cost of *Construction Equipment* or *Products* when such cost is based on rates which already include overhead and profit. The percentage fee shall be **five percent (5%)** for total *Contractor* markup on work or *Products* provided by *Supplier* and/or *Subcontractor* forces."

After Clause 5.4.6, add the following clause:

- "5.4.7 Any discounts, refunds, or rebates not reflected in the invoice costs, and any salvage value of reusable materials shall be deducted for determining costs."

GC 5.5 - APPLICATIONS FOR PROGRESS PAYMENT

Delete Clause 5.5.2, and replace with the following:

- "5.5.2 Applications for payment shall be dated the last day of the agreed monthly payment period and the amount claimed shall be for the value, proportionate to the amount of the *Contract*, of *Work* performed at that date. Applications for payment shall be accompanied by updated construction schedule per the requirements of the *Project Documents*."

Delete clause 5.5.3, and replace with the following:

- "5.5.3 Where the basis of payment of the *Contract Price* is *Unit Prices*, the *Contractor* shall propose interim quantity measurements in preparation of applications for payment, which shall include any other data requested by the *Engineer* to assist the *Engineer* in evaluating the application and verifying quantity measurements. Prior to submission of progress payment application, all parties must agree to proposed quantities."

GC 5.6 - PROGRESS PAYMENT

In the first line of clause 5.6.1, revise "5 working days" to read "15 working days", and in the second line revise "GC 5.2" to read "GC 5.5".

Delete clause 5.6.2 in its entirety, and replace with the following:

- "5.6.2 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT no later than thirty (30) calendar days after the date of a certificate for payment issued by the *Engineer*."

After clause 5.6.3, add the following new clause:

- "5.6.4 The *Contractor* shall pay promptly any and all accounts for labour, services and materials used for the purpose of the fulfillment of this *Contract* as and when such accounts become due and

payable, and shall furnish the *Engineer* with proof of payment of such accounts in such form and as often as the *Engineer* may request.”

GC 5.8 - PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

Revise all instances of “sworn or affirmed statement” to read “Statutory Declaration on CCDC Form 9A, latest edition”

After clause 5.8.1.2, add the following sub-clauses:

- “5.8.1.3 Submit a certificate by deed search to the *Owner* by a solicitor licensed to practice law in the Province of Nova Scotia, certifying that no lien associated with the *Work* exists against the *Owner’s* property or *Work*;
- 5.8.1.4 Submit a certificate of clearance from the Nova Scotia Worker’s Compensation Board, certifying the *Contractor’s* compliance with the requirements of the applicable act and legislation.
- 5.8.1.5 Submit a valid letter of Good Standing issued by the Nova Scotia Construction Safety Association and the Nova Scotia Department of Labour.
- 5.8.1.6 Submit a statement of all outstanding claims against the *Contract* which precede the date of application for payment of the holdback amount. Any outstanding claims not disclosed shall later be rejected.
- 5.8.1.7 Submit any outstanding closeout submittals per the requirements of GC 3.15 - CLOSEOUT DOCUMENTS, and Section 01 10 00.
- 5.8.1.8 Date all such documents not earlier than the expiry of the lien period as stipulated by the Builders’ Lien Act of Nova Scotia.”

In clause 5.8.4, add the following new sub-clause:

- “5.8.4.1 If, within sixty (60) days after the issue of the *Certificate of Substantial Performance*, the *Contractor* has not corrected all the documented deficiencies, the *Owner* shall retain sufficient monies, as determined by the *Engineer*, to cover the cost of completing said deficiencies. These monies shall be held in addition to holdback monies retained in accordance with the provisions of the *Contract* and subject to the terms of the Builders’ Lien Act of Nova Scotia.”

GC 5.10 – FINAL PAYMENT

Delete clause 5.10.1 in its entirety and replace with the following:

- “5.10.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall make such an attestation in an application for final payment submitted to the *Engineer*. The *Contractor’s* application for final payment will only be accepted by the *Engineer* when the following has occurred:
 - .1 *Work* has been completed and inspected for compliance with the *Contract Documents*, and the *Engineer* has agreed that all the requirements of the *Contract* have been fulfilled by the *Contractor*;
 - .2 Where the basis of payment of the *Contract Price* is *Unit Prices*, all parties must agree to proposed final quantities;
 - .3 Defects have been corrected and deficiencies have been completed;

- .4 Equipment and systems have been tested, adjusted, and balanced and are fully operational, and written reports and manuals as outlined in the *Contract Documents* have been provided to the *Owner*, and are to the *Owner's* satisfaction;
- .5 Certificates required by utilities, authorities having jurisdiction, manufacturers, and inspectors have been submitted and accepted;
- .6 Spare parts, maintenance materials, record drawings, warranties and applicable bonds have been provided."

Add the following new Clauses after 5.10.1:

- "5.10.2 If, in the opinion of the *Engineer*, the above requirements are not complete, then the *Engineer* will not accept the application, and request resubmission.
- 5.10.3 If, in the opinion of the *Engineer*, it is not expedient to correct defective work or *the Work* has not been performed in accordance with the requirements of the *Contract*, the *Owner* may deduct from the *Contract Price* the difference in value between work performed and that called for by the *Contract Documents*, the amount of which shall be determined by the *Engineer*."

... and renumber existing clauses 5.10.2, 5.10.3, and 5.10.4 to 5.10.4, 5.10.5, and 5.10.6 respectively.

In renumbered clause 5.10.6, revise "5 working days" to read "15 working days".

GC 6.2 - CHANGE ORDER

Following clause 6.2.3, add the following:

- "6.2.4 If the method of adjustment of the *Contract Price* presented by the *Contractor* is a lump sum or a unit price quotation as described in 6.2.2.2, the following shall apply:
- .1 Maximum *Contractor* markup for overhead and profit shall be:
 - .1 Ten percent (10%) for *Work* performed by the *Contractor's* own forces, unless rates already include overhead and profit, in which case rates will not be marked up further;
 - .2 Five percent (5%) for *Work* performed by the *Subcontractor*;
 - .3 Five percent (5%) for *Products* provided by the *Supplier*.
 - .2 Upon request by the *Engineer*, the *Contractor* shall prepare a detailed cost summary for proposed lump sum or unit price costs associated with the change which will include at minimum the following breakdown:
 - .1 Labour rates;
 - .2 Equipment rates, including operators;
 - .3 Supervisory staff rates;
 - .4 *Subcontractor* and *Supplier* invoices (where applicable);
- Price will be assessed by the *Engineer* based on the prevailing rates in the locality of the *Place of the Work*.
- .3 All *Subcontractors* and *Suppliers* performing a part or parts of the *Work*, or supplying Labour and/or *Products* (described in GC 3.9) required by the change, shall have a direct contract with the *Contractor*, and upon request, produce a detailed cost summary and/or written quotations as described in 6.2.4.2.
- 6.2.5 No compensation for extra *Work*, *Product*, *Construction Equipment*, or delays shall be allowed unless *such Work*, *Product*, and/or *Construction Equipment* is ordered in writing by the *Engineer*, and any associated delays are evaluated and approved by the same.

- 6.2.6 While executing an approved *Change Order*, the *Contractor* shall, each *Working Day*, report to the *Engineer* in writing and in full detail as described in 6.2.4.2, the amount and costs associated with carrying out such work on the preceding working day. No claim for compensation shall be considered or allowed unless such reports have been made. The *Engineer* shall not allow any compensation for the cost of repairs to *Construction Equipment* or in respect of *Construction Equipment* of any kind idle on the *Site* except as directed and approved by the *Engineer* in writing.
- 6.2.7 The price applicable to any *Work* omitted from the *Contract*, which shall be deducted from the *Contract Price*, will be mutually agreed upon by the *Contractor* and the *Engineer*. The price will be assessed by the *Engineer* based on the prevailing rates in the locality of the *Place of the Work*."

GC 6.3 - CHANGE DIRECTIVE

Within clause 6.3.8, delete the following words at the end of the clause:

"the adjustment shall be referred to the *Engineer* for a determination."

... and replace with the following:

"the matter shall be resolved in accordance with the requirements of Part 8 of the General Conditions – DISPUTE RESOLUTION."

GC 6.5 – DELAYS

Within clause 6.5.2, delete the last sentence of the paragraph, and replace with the following sentence:

"The *Contractor* will not be reimbursed by the *Owner* for costs incurred by the *Contractor* as a result of such delay."

Following Clause 6.5.5, add the following new Clauses:

- "6.5.6 Should the *Contractor* fail to obtain *Substantial Performance* of the *Work* by the date indicated in Article A1, subclause 3, in the AGREEMENT BETWEEN OWNER AND CONTRACTOR, the period of time from this agreed date to the actual date on the certificate of *Substantial Performance* of the *Work* as determined by the *Engineer*, shall be termed the *Period of Delay*.
- 6.5.7 In the event there is a *Period of Delay*, the *Contractor* shall be liable for and shall pay to the *Owner* the cost of continuance of supervision during the *Period of Delay*, and all additional fees, disbursements and costs incurred by the *Owner* as a result of the *Period of Delay*, as determined by the *Engineer*, such charges hereby termed as *Delay Charges*. The *Owner* may deduct the amount of such *Delay Charges* from further payments."

GC 6.6 – CLAIMS

Following clause 6.6.5, add the following new clause:

- "6.6.6 The *Owner* may make claims arising out of the costs incurred for additional services provided by the *Engineer* resulting from the *Contractor's* failure to reasonably perform the *Work* in accordance with the *Contract*, including the *Contractor's* issuance of unnecessary Contemplated/Requested Change Orders (CCOs or RCOs) and Requests for Information (RFIs). The *Engineer* will notify the *Contractor* where it has been determined that additional services will be required or have been provided in order not to cause delay. The *Owner* shall make claims based on the *Engineer's* invoices."

GC 10.1 - TAXES AND DUTIES

Following clause 10.1.2, add the following new clause:

- “10.1.3 In each application for payment, indicate as a separate amount after the subtotal, the appropriate *Value Added Tax* the *Owner* is legally obliged to pay. This amount will be paid to the *Contractor* in addition to the amount certified for payment under the *Contract*.”

GC 10.2 - LAWS, NOTICES, PERMITS AND FEES

Delete clause 10.2.2, and replace with the following:

- “10.2.2 Except for the permits and fees which the *Contract Documents* specify as the responsibility of the *Owner*, the *Contractor* shall obtain all permits, such as those from the Department of Transportation; licenses; letters of approval, and certificates, and pay the fees required for the performance of the *Work* which are in force at the date of tender closing. This shall not include obtaining of permanent easements or rights-of-way.”

For clause 10.2.3, add the following sentence to the end of the clause:

- “Some jurisdictions may require posting refundable and/or non-refundable fees before excavations are carried out within public rights-of-way. The *Contractor* is responsible for the determination of the requirement for each specific project and for the payment of any required deposits.”

GC 11.1 – INSURANCE

In Clauses 11.1.1.1, 11.1.1.2, and 11.1.1.3, change the \$2,000,000 policy limits to \$5,000,000; and in Clauses 11.1.1.1 and 11.1.1.4(1), change the \$2,500 deductible to \$5,000.

GC 11.2 - CONTRACT SECURITY

Delete clause 11.2.1 in its entirety, and replace with the following:

- “11.2.1 Prior to commencement of the *Work*, and on the earlier of either fifteen *Working Days* following notice of award, or at the construction kick-off meeting, provide to the *Owner* original certificates of contract security. The required contract security is a **Performance Bond** and a **Labour & Materials Bond**, each in the amount of 50% of the *Total Amount Payable*. Include the cost of providing this surety in the *Contract Price*.”

Renumber existing clause 11.2.2 to 11.2.3, and insert the following clause:

- “11.2.2 Should it become apparent that the final cost of the *Work* will exceed the *Total Amount Payable* by more than 10%, or if the *Approved Period of Delay* causes the contract surety to expire prior to fulfillment of the *Contract*, the *Contractor* shall arrange to have the required surety extended and reissued based on the projected final *Total Amount Payable* and *Contract* fulfillment date.”

GC 12.1 - INDEMNIFICATION

In clause 12.1.2, change all occurrences of \$2,000,000 indemnification limits to \$5,000,000.

GC 12.3 – WARRANTY

Following clause 12.3.6, add the following clause:

- "12.3.7 All work of repair or replacement carried out during the Warranty Period shall be maintained for a period of one (1) year from the date of the *Engineer's* acceptance of the work of repair or replacement notwithstanding that the Warranty Period expires before the expiration of the said year. This clause shall not apply to normal operational maintenance, which shall be carried out by the *Owner*."

01 10 00 - GENERAL REQUIREMENTS

In Part 1 - General, delete subsection 2 and replace with the following:

"

1.2 Summary of the Work

- .1 Main Street is a street located in Wolfville, Nova Scotia. This *Project* includes the removal and disposal of an existing corrugated steel cross culvert located near 126 Main Street, supply and installation of a concrete box culvert, replacement of existing catch basins including connection to the new culvert, sanitary sewer pipe encasement, cast-in-place headwalls complete with galvanized steel handrails, and street, curb, and asphalt walkway removal and reinstatement. The *Project* includes taking all necessary measures to ensure that the bed of the adjacent watercourse is not excavated or altered. Construction activities cannot take place below the ordinary high water mark. The *Project* also includes a provisional item for water main encasement.
- .2 The *Work* includes obtaining all necessary approvals and permits from the appropriate regulatory bodies as well as any associated costs, and compliance with all approvals and permits.
- .3 The *Work* includes all traffic control and detours as per the Town of Wolfville requirements and Nova Scotia Department of Transportation and Infrastructure Renewal (NSTIR) Temporary Workplace Traffic Control Manual.
- .4 The *Work* includes erosion control, protection and reinstatement of all disturbed areas to pre-construction condition or better.
- .5 The *Work* includes coordination with utilities for location of any existing infrastructure and alteration of this infrastructure.
- .6 The *Work* includes shoring and relocation of utility poles and anchors, as needed.
- .7 The *Work* is subject to approval by Nova Scotia Environment."

Delete subsection 1.3.1, and replace with the following:

- ".1 Submit at the earlier of either within fifteen (15) Working Days of date of award, or at the construction kick-off meeting, a detailed draft schedule for planned operations and performance requirements of the *Work* by completion date. Revise, update, and submit schedule for initial approval by *Engineer*, and maintain schedule by furnishing monthly updates to *Engineer* as the *Work* progresses."

Following 1.3.4, add the following:

- “.5 *Contractor* shall backfill, grade, and clean up the *Work* as the installation proceeds, to limit disruption to affected land owners and users.
- .6 The *Contractor* shall temporarily install factory-made caps to the ends of all pipes included in the *Work* at the end of each *Working Day* to prevent infiltration of water and debris.
- .7 The *Contractor* shall strive to minimize effects of the *Work* on the *Owners*, tenants, or users of *Project* lands and adjacent properties, and shall repair any damage promptly as directed by the *Engineer*.
- .8 Safe access shall be maintained through the *Site* at all times for emergency vehicles and local

- traffic. Any temporary access limitations to private property resulting from the requirements of the *Work* must be disclosed by the *Contractor* to owners of private property (and/or tenants) a minimum of 24 hours prior to the access limitation, and acknowledged by the same. Coordinate communications with *Owner* and utilize Portable Variable Message Signs (PVMS) when the requirements of the *Work* require complete access restrictions, such as during concrete placement.
- .9 Notify *Owner*, appropriate agencies, and inspectors prior to commencing, and during the *Work*. No *Work* is authorized to commence without express written consent from the *Owner* following review and acceptance of the schedule by the *Engineer*.
 - .10 Unless agreed to by the residents and the *Owner*, equipment shall not be operated before 7:00 am and after 7:00 pm. The *Owner* shall be notified if the *Contractor* intends to *Work* on holidays. No *Work* shall take place before 12:00 noon on November 11.
 - .11 Use of private property for *Site* access, staging, laydown areas, disposal of excess materials, etc. shall be negotiated solely by the *Contractor* and confirmed in writing, signed by the affected property owner, and submitted to the *Engineer* for their records. The *Owner* assumes no liability for any claims or costs resulting from the use of private property by the *Contractor*.
 - .12 Notwithstanding the provisions of Section 00 72 45, GC 5.7, *Substantial Performance of the Work* will not be certified until all reinstatement is complete."

Delete Section 1.4 in its entirety and replace with the following:

"

1.4 Setting Out the Work

- .1 The *Contractor* shall maintain and protect reference control points, and is responsible for layout of the *Work*, per 00 72 45 – GC 3.7 – LAYOUT OF THE WORK.
- .2 The *Contractor* shall assist the *Engineer* to check the line and grade of the *Work* to perform measurements for payment by providing casual labour and convenient means of access to all parts of the *Work*.

Add the following to Section 1.5:

"

- .3 Relocate any survey markers, monuments, and survey pins disturbed during construction activities under the direction of a qualified provincial land surveyor. Include costs for these services in *Contract Price*.
- .4 The existence and location of signs is not guaranteed. Document the location and condition of all signs, and reinstall them as near as possible to their original location.
- .5 Maintain the integrity of all ditches, culverts, and flow paths encountered during the execution of the *Work*. Existing ditches, culverts, or flow paths shall not be blocked, filled, or prevented from providing proper discharge, unless indicated otherwise in *Project Documents* and/or *Drawings*.
- .6 Utilities, Existing Structures, and Underground Services:
 - .1 The existence, location, and elevation of underground utilities, utility poles, and guy wires, are not guaranteed, and notwithstanding any provision in the *Contract Documents*, the *Contractor* shall be responsible for confirming the location and elevations of all sewers, water or other mains, services or lines, steam, electrical power or telephone conduits, or other such structures or utilities.
 - .2 Whenever it is necessary to explore and excavate to determine the location of existing underground utilities, services, or structures, make such examination and excavation at no additional cost to the *Contract*.

- .3 The *Contractor* shall be responsible for notifying the appropriate company, department, person or persons, of his intention to carry out his operations. The *Contractor* shall deposit with the *Engineer* a letter or letters from the appropriate authority of the utility or utilities involved stating that the *Contractor* has made satisfactory arrangements with the utility for the location, protection, and inspection of the utility involved.
- .4 Excavation in the vicinity of existing structures and utilities shall be carefully performed. The *Contractor* shall furnish temporary support, and provide adequate protection and maintenance of any underground utilities which cross an excavation, underground and surface structures, drains, sewers, power lines and other existing *Site* items affected by the *Work*. Where trenching is to be done under existing utilities, before excavation commences, such utilities shall be properly shored to prevent settlement. Shoring to be left in place until backfilled. Notify *Engineer* before altering or supporting an existing underground utility or structure.
- .5 Do not operate valves, electrical, or telephone controls on any existing utility systems.
- .6 Apply to the utility having jurisdiction for permission to operate such systems if it becomes necessary, and only operate such system in accordance with and in the presence of a representative of the utility affected.
- .7 The cost of having a utility company representative present when the *Work* passes under or in close proximity to underground cables, structures or utility poles shall be included in the *Contract* price.
- .8 *Contractor* to organize the moving or supporting of any utility poles, or the installation of any spreader bars for guy wires, with the utility having authority. Coordinate with utility for pole replacement, new guy wire installation, or the moving of any wires or services, if required.
- .9 If any services are damaged or disrupted during the *Work*, submit to the *Engineer* a letter from the utility affected stating that services damaged during construction have been repaired to the satisfaction of the utility.
- .10 Restore, upon completion of the *Work*, any utilities or structures that have been disturbed.
- .7 Documentation of Existing Conditions:
 - .1 Prior to the commencement of *Work*, the *Contractor* shall take photographs of the place of *Work* and those properties adjacent to the place of *Work*, and take written notes to document any existing conditions that may affect execution of the *Work* or cause disputes throughout.
 - .2 Prior to commencement of the *Work*, the *Engineer* may take or arrange for photographs and/or scans to be taken of the *Site* and those properties adjacent to the *Site*. The *Contractor* may request to accompany the *Engineer* or *Engineer's* delegate during the taking of photographs and/or scans to make any comments on the conditions of the *Site* or adjacent properties based on his own notes.
 - .3 The *Owner*, or an authorized representative of the *Owner*, may be present during the taking of the photographs/scans and documentation of initial conditions to make comments on the conditions of the *Site*.
 - .4 These photographs and scans, together with any collected by parties retained by the *Owner*, will serve as a record of *Site* conditions prior to the commencement of *Work*. The *Engineer* will retain photographs, together with a written report, on the condition of existing roads, sidewalks, trees, lawns, and adjacent properties as a record of existing conditions prior to the start of the *Work*."

Delete Section 1.7, Subsection 1 in its entirety replace with the following:

1.7 Submittals

.1 Electronic Documents

.1 Submit electronic versions of all required submittals to the *Engineer* in original PDF format. Original PDF files are generated at the source; scans of paper copies will not be accepted for this purpose. Where it is not possible or practical to provide electronic copies as described, submit three (3) paper copies of documents to the *Engineer* with prior approval.

.2 Shop Drawings

.1 Subject to the requirements of 00 72 45 – GC 3.11 – SHOP DRAWINGS, submit shop detail or working drawings and manufacturer's data for all items requiring fabrication, on or off the *Site*, and for all proprietary equipment to the *Engineer* for review before any such items or equipment are commissioned for manufacturing, or are incorporated into the *Work*.

.1 This review of *Shop Drawings* by *Engineer* is for the sole purpose of ascertaining conformance with the general design concept.

.2 This review shall not mean the *Engineer* approves the detailed design depicted in the *Shop Drawings*, the responsibility for which shall remain with the *Contractor* submitting them, and such review shall not relieve the *Contractor* of responsibility for errors and/or omissions in *Shop Drawings*, or of responsibility for meeting all requirements of the *Contract Documents*.

.3 The *Contractor* is responsible for dimensions to be confirmed and correlated at the *Site*, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for co-ordination of the *Work* of all *Subcontractors*.

.2 Submit electronic copies of all relevant *Shop Drawings* per 1.7.1.

.3 Submit *Shop Drawings* with such promptness as not to cause delay in this *Work*, or of the *Works* of any *Sub-Contractors*.

.4 The information submitted shall clearly show the dimensions, materials or construction, performance, finish, service and installation requirements and other characteristics in sufficient detail to permit the *Engineer* to evaluate the suitability of the articles for the use intended.

.5 Make corrections required by the *Engineer* as noted and resubmit corrected copies to the *Engineer* for review before manufacturing or fabrication.

.6 The *Engineer* will mark comments on one (1) copy of each *Drawing* or document submitted and will return this as an electronic copy for the *Contractor's* purposes.

.7 The *Engineer* will not review *Shop Drawings* and other material involving a large amount of information in those instances where it is evident that the *Contractor* has not used all the information contained in, or where such details are obviously not consistent with the *Contract Documents*. In such instances, the *Engineer* may reject the submission, and request removal or redaction of irrelevant information prior to re-submission.

.8 Provide the section number of the specification with each submitted *Shop Drawing* for the purpose of identification.

.3 Samples

- .1 Submit samples where specified in the *Project Documents*, indicating details of sampling methods, date/time, and locations of sources.
- .2 Do not deliver products requiring sample *Approval to Site* prior to receiving written *Approval*.
- .4 Mix Design and Material Verification Reports
 - .1 Submit mix design formula for each discrete mix type of **concrete** to *Engineer* for acceptance prior to incorporating material into the *Work*, and to quality control personnel for in-field verification. Mix design submissions shall incorporate descriptive notes indicating which portion or component of the *Work* each mixture will be supplied for.
 - .2 Submit mix design formula for each discrete mix type of **asphalt** to *Engineer* for acceptance prior to incorporating material into the *Work*, and to quality control laboratory for compliance verification during execution. Submit any revisions or updated mix formulas to *Engineer* and quality control personnel as *Work* progresses.
 - .3 Submit laboratory test reports for each discrete **granular material** to *Engineer* for acceptance prior to incorporating material into the *Work*. Test reports to indicate source of material, the dates sampled and tested, and shall confirm each lot of material conforms to the gradation, fractured particles, and physical properties requirements specified for each material type per the NSTIR Standard Specification for Highway Construction and Maintenance.
 - .4 Submit Standard Proctor test reports for each discrete **granular material** to *Engineer* for acceptance prior to incorporating material into the *Work*, in accordance with the requirements of Section 31 20 00 - EARTHWORK. Laboratory reports to establish control density targets for each granular material to be incorporated into the *Work*. Results also to be shared with quality control personnel for in-field verification during execution.
- .5 Design Verification of Temporary Work
 - .1 Submit plans sealed by a professional engineer licenced to practice in the Province of Nova Scotia for *Temporary Work* as required by governing legislation.
- .6 Operating and Maintenance Data
 - .1 Submit the following prior to application for final payment:
 - .1 General description, list of equipment including nameplate information, installation, operation and maintenance instructions, included parts list, and spare parts recommendations.
 - .2 Names, addresses, and phone numbers of *Subcontractors*, *Suppliers*, and manufacturers.
 - .3 Certificates of guarantees and warranties.
 - .2 Typed lists and notes using drawings, diagrams, and manufacturer's literature.
- .7 Test Results
 - .1 Submit certificates and/or reports of the results of monitoring, testing, and inspections where specified in *Project Documents*."

Delete Section 1.9 in its entirety replace with the following:

1.9 Quality Control

- .1 All costs related to the testing requirements specified in 1.9.3 will be arranged and paid for by the *Owner* and will be conducted by an independent third-party agency. The *Contractor* will be expected to coordinate with the *Engineer* and the agency and provide access to the *Work* for testing and sample collection.
- .2 Within fifteen (15) *Working Days* following notice of award, the *Owner* shall submit to the *Contractor* a Quality Control Testing and Inspection Plan covering all phases of the *Work*. The plan shall include, but not be limited to the following:
 - .1 Identification and description of inspection and required test procedures to be used to fulfil the conditions of the *Contract*;
 - .2 The names and certifications of the individuals or testing firms selected to fulfil the requirements of this section.
- .3 In accordance with the accepted Quality Control Testing and Inspection Plan described above, the *Owner* will appoint and pay for quality control testing and inspection, in coordination and with assistance by the *Contractor* for the following, for verification and acceptance into the *Work*:
 - .1 Ready-mix **Concrete**, as follows:
 - .1 In-field testing of concrete deliveries in accordance with *Specifications* and CSA A23.1-19/A23.2-19 to verify temperature, slump, and air content of each load is within the appropriate ranges specified by the accepted mix design. Verbally report results of each test to *Engineer's* delegate immediately for field acceptance of concrete deliveries and submit written report of test results to *Engineer* for *Project* records.
 - .2 Cast QA and QC compressive strength verification specimens for 7-day and 28-day test results for the first delivery of each *Working Day* and submit laboratory results to *Engineer* for acceptance. The QA specimens shall have descriptive labelling applied to the outside of each specimen after curing and shall be delivered to the *Owner*. The specimens will be retained for independent testing at a qualified laboratory agreed to by all parties, should a dispute arise.
 - .2 **Construction aggregates and engineered fill materials** as follows:
 - .1 Sampling and laboratory testing of construction aggregates per the requirements of 1.7.4.3 and 1.7.4.4 above, if not provided by the *Supplier* of such materials.
 - .2 Full-time, in-field nuclear densometer compaction testing during bedding and backfilling operations, and during installation of road gravels, if specified. The quality control testing personnel shall communicate insufficient compaction results to *Engineer's* delegate and *Contractor* immediately. Corrective measures and the results of any re-tested areas to be verified as having achieved minimum compaction requirements and shall be reported in deliverables.
 - .3 Where laboratory control densities are unable to be achieved, a new control density for the material may be determined by the quality control personnel in accordance with the NSTIR Standard Specification for Highway Construction and Maintenance, Division 3, Section 5, after having received prior written consent from the *Engineer*. Verbally report results to *Engineer's* delegate immediately for field acceptance of new control density and submit results to *Engineer* for *Project* records.

- .4 Submit detailed test location sketches and reports of all results to *Engineer* for acceptance once minimum compaction is achieved in all areas tested.
- .3 **Road asphalt** as follows:
 - .1 Prior to paving, final (fine) grading shall be certified, witnessed, and approved by the *Engineer* ensuring compliance with *Project Drawings* for crown and slope.
 - .2 Bulk sampling, coring, and laboratory testing per the NSTIR Test Methods Manual and the Standard Specification for Highway Construction and Maintenance, Division 4, Section 19, to determine conformance with *Specifications* and parameters established in accepted asphalt mix design formula.
In accordance with TM-3, collect a minimum of two (2) sample sets on each day of paving for each road asphalt mix type for the following tests:
 - .1 Mix testing, per Table 2, Series D and E only;
 - .2 Asphalt density, per 6.2.4;
 - .3 Asphalt thickness, per 6.2.5.One (1) of the above sample sets shall have descriptive labelling applied to the outside of each bulk sample container and asphalt core, and shall be delivered to the *Owner*. The sample set will be retained for independent testing at a qualified laboratory agreed to by all parties, should a dispute arise.
 - .3 All testing results shall be submitted to the *Engineer* for acceptance and payment adjustment calculation (if required) in accordance with Table 4.
 - .4 If requested, ensure *Owner* and *Engineer* have adequate access to the *Work* and to locations where products being incorporated into the *Work* are being prepared.
 - .5 Cooperate and assist *Engineer* in conducting necessary tests when requested.
 - .6 Arrange for inspections and tests by authorities other than the *Engineer* when required.
 - .7 Do not backfill pipework, appurtenances, or other portions of the *Work* until necessary inspections by the *Engineer* are completed, QC and other required tests are completed, and passing results are achieved.
 - .8 The *Engineer* may order any buried *Work* to be uncovered for examination, if necessary. Correction of defective *Work* shall be paid for by *Contractor*. If *Work* was previously *Approved* and no defects are found, the *Owner* will reimburse the *Contractor* for his costs.

Delete Subsection 1.10.3, and replace with the following:

“.3 *Engineer’s* Site office is not required.”

Delete Subsections 1.10.6 and 1.10.7, and replace with the following:

- .6 The *Contractor* shall make arrangements and pay for any temporary power, if required. Coordinate with the electrical utility when arranging for, and installing temporary power.
- .7 Temporary water piping and connections to be *Provided* by the *Contractor* in coordination with the *Owner*. Water to be supplied by the *Owner* when necessary.”

After replaced Subsection 1.10.7, add new Subsection 1.10.8 & 1.10.9 as follows:

- .8 Ensure temporary reinstatement is maintained throughout construction *Site* for the duration of the *Project* until final reinstatement.
- .9 Access to and from all properties may be required at any time. By the end of each *Working Day*, all driveway access must be either temporarily or permanently reinstated unless otherwise directed.”

Delete Subsection 1.11.1, and replace with the following:

- “.1 Confine *Construction Equipment, Products*, and operations to within the boundaries of streets, specified right-of-way, or *Site* limits shown or *Site* secured by the *Contractor* as an operations base. Use of private property outside of the limits specified here shall be as per 1.3.11”

After Subsection 1.11.2, add the following:

- “.3 *Site* shall be kept neat and tidy and undergo a thorough cleanup at the end of each *Working Day* (or more frequent intervals if required), to the satisfaction of the *Engineer*. This includes, but is not limited to, the following;
- .1 Removal of gravel/soils/debris from paved and landscaped areas;
 - .2 Removal and disposal of waste materials/garbage;
 - .3 Grading (and gravelling, if required) of travelled ways to ensure a smooth unimpeded passage of vehicles;
 - .4 Application and maintenance of dust control measures, as required, and as *Approved* by the *Engineer*;
 - .5 Maintenance of safety and traffic control equipment (signs, barricades, cones, etc.).”

Delete Subsection 1.12.1, and replace with the following:

- “.1 While the *Work* is being carried out, *Provide* continuous traffic control in accordance with Temporary Workplace Traffic Control Manual, latest edition, as issued by the Nova Scotia Department of Transportation and Infrastructure Renewal. A Temporary Workplace Signer certified by the province of Nova Scotia is required to prepare traffic control plans and oversee traffic control operations for all *Work* performed within the right-of-way.

The basic objective of each traffic control plan is to permit the *Contractor* to *Work* within the right-of-way efficiently and effectively, while maintaining a safe and efficient movement of vehicles and pedestrians around or through temporary workplaces, and to protect workers in temporary workplaces from errant vehicles.

Traffic control plans shall be submitted to the *Engineer* for *Approval* a minimum of five (5) *Working Days* prior to commencement of the *Work* requiring the traffic control activity. Any plans found incomplete, ambiguous, or unclear will be returned for revision and re-submittal.

Full street closures are not permitted.”

After Subsection 1.14.1, add the following:

- “.2 Comply with all *Owner* Health and Safety requirements for *Contractors*. Complete and return Health and Safety Checklist.”

Delete Subsection 1.16.1, and replace with the following:

- “.1 Prepare a Waste Management Plan, including source separating plan and waste disposal plan indicating anticipated waste types, disposal methods, and disposal locations. Plan shall be submitted to the *Engineer* for *Approval* a minimum of five (5) *Working Days* prior to commencement of the *Work*.”

Section 01 22 00: MEASUREMENT AND PAYMENT

Delete Subsection 1.1 – GENERAL and replace with the following:

1.1 GENERAL

1. Unit prices shall be full compensation for the work necessary to complete each item in the *Contract* and in combination for all work necessary to complete the *Work* as a whole.
2. For every item, include all of the following as required where individual quantities are not provided in the Tender Form: mobilization, demobilization, traffic control, assistance to the *Engineer*, coordination with all utilities, environmental protection, protection of existing trees, reinstatement, and all incidentals.
3. For water, sanitary sewers, and storm sewer systems (including culverts) include all of the following as required where individual quantities are not provided in the Tender Form: common and rock excavation, shoring (pipes, utility poles, banks, etc.), dewatering, protection and shoring of existing pipes and infrastructure, bedding, backfilling, compaction, disposal of surplus material, importation of material, joint restraints and thrust blocks, thrust anchors, testing, flushing and disinfection, closed circuit television inspections, tracer wire, reinstatement, shop drawings, manhole and catchbasin frames, covers, and grade adjustment rings, and all incidentals.
4. All measurement shall be along a horizontal plane unless otherwise indicated.
5. The numbers of the items described below correspond to the numbers of the items in Section 00 41 43, subsection 4 – Schedule of Quantities and Unit Prices.

EARTHWORK

Add the following subsections:

8. Geotechnical Inspection

Unit of Measurement: Lump Sum (L.S)

This item includes: Provision of on-site inspection and testing by qualified geotechnical field personnel. All excavation, backfill, material placement, bedding, asphalt and concrete placement to be inspected. All inspections to be certified by a professional engineer (licensed to practice in NS) that the works completed are in accordance with the project specifications and industry standards. The level of effort of inspection must be sufficient for the geotechnical engineer to confirm that project requirements were met and that existing site conditions were reviewed and considered. At the completion of construction, a report summarizing test results and stating compliance with project specifications is to be completed and delivered to the Owner.

WATER MAIN

Add subsection 19 as follows:

19. Existing Water Concrete Encasement

Unit of Measurement: metre (m)

Method of Measurement: along centreline of pipe through fittings.

This item includes: locating and exposing existing water main as indicated on the project drawings, concrete encasement complete with formwork and supply and placement of low-slump fill, excavation, removal and disposal of surplus and/or unsuitable material, bedding and pipe protection gravels, backfill, dewatering, and any

other work or materials shown on the drawings not included in any other pay item.

SANITARY SEWER

Add subsection 28 as follows:

28. Existing Sanitary Concrete Encasement

Unit of Measurement: metre (m)

Method of Measurement: along centreline of pipe.

This item includes: locating and exposing existing sanitary main as indicated on the project drawings, concrete encasement complete with formwork and supply and placement of low-slump fill, excavation, removal and disposal of surplus and/or unsuitable material, bedding and pipe protection gravels, backfill, dewatering, and any other work or materials shown on the drawings not included in any other pay item.

STORM SEWER

Delete subsection 31 and replace with the following:

31. Pipe

Unit of Measurement: metre (m)

Method of Measurement: along centreline of pipe from centre of catch basin to edge of box culvert.

This item includes: removal and disposal of existing pipes, supply and installation of pipe complete with fittings and connections to catch basins, excavation, disposal of surplus material, bedding and pipe protection gravels, backfilling, shoring, dewatering, traffic control, reinstatement of roadway gravels and asphalt, and any other work or materials shown on the drawings related to the installation and supply of this item not included in any other pay item.

Delete subsection 33 and replace with the following:

33. Catch Basin Replacement

Unit of Measurement: each (ea)

This item includes: removal and disposal of existing structure, supply and installation of catch basins as indicated, excavation, disposal of surplus material, bedding, backfilling, adjustment to finished grade, shop drawings, re-connection of existing pipes, shoring, dewatering, traffic control, reinstatement of road gravels and asphalt, and any other work or materials shown on the drawings related to the installation and supply of this item not included in any other pay item.

Delete subsection 36 and replace with the following:

36. Connections of Storm Main to Proposed Culvert

Unit of Measurement: each (ea)

This item includes: supply and installation of all fittings, core drilling and sealing as indicated, excavation, disposal of surplus material, bedding and pipe protection gravels, backfilling, shoring, dewatering, traffic control, reinstatement of roadway gravels and asphalt, and any other work or materials shown on the drawings related to the installation and supply of this item not included in any other pay item.

Delete subsection 37 and replace with the following:

37. Culverts

Unit of Measurement: metre (m)

Method of Measurement: along centreline of pipe.

This item includes: shop drawings, supply and installation of precast concrete box section, excavation, disposal of surplus material, removal and disposal of existing culvert as required, removal and disposal of existing trees as necessary for culvert installation, bedding, backfill, shoring, dewatering, traffic control, any associated environmental protection, reinstatement and regrading of roadway gravels, asphalt, and asphalt curb, reinstatement and regrading of driveway gravels and asphalt, reinstatement of landscaping, exposing and locating any existing underground infrastructure as noted on the drawings, and utility pole shoring as required.

Delete subsection 39 and replace with the following:

39. Cast-in-Place Headwall

Unit of Measurement: square metre (m²)

Method of Measurement: total area of wall face.

This item includes: removal and disposal of existing retaining walls, removal of surplus material, removal and disposal of existing trees as necessary for installation, importation of material, cast-in-place headwall complete with formwork and concrete supply, all fittings and connections, reinforcing, dowelled connection to concrete box culverts, bedding, backfilling, temporary shoring and bracing, design, and shop drawings stamped by a Professional Engineer. In addition to normal wall design, design to consider global stability and handrail placement.

Add Subsection 40 as follows:

40. Boulders

Unit of Measurement: each (ea)

This item includes: supply and placement of boulders as indicated on the project drawings and as directed by the Engineer in the field.

STREET CONSTRUCTION

Add subsection 53 as follows:

53. Galvanized Steel Handrail

Unit of Measurement: metre (m)

Method of Measurement: Slope length along center line of concrete cap.

This item includes: supply and installation of galvanized steel handrail as shown on the project drawings. This item includes, but is not limited to, shop drawings, and railing and grate fabrication and installation, including footings and fixings.

Add subsection 54 as follows:

54. Asphalt Walkway Replacement

Unit of Measurement: square metre (m²)

Method of Measurement: slope measure of indicated area at mean depth.

This item includes: removal and disposal of existing asphalt walkway including base gravels, supply and placement of asphalt walkway including base gravels as per project drawings, excavation and embankment, removal and disposal of surplus and/or unsuitable material, backfill, reinstatement of all disturbed areas including grassed boulevard and sodding as per the project drawings, and any other work or materials shown on the drawings related to the installation and supply of this item not included in any other pay item.

ADDITIONAL ITEMS

Delete subsection 72 and replace with the following:

72. Trench Excavation – Unsuitable Material (Provisional)

Unit of Measurement: cubic metre (m³)

Method of Measurement: average end area method for volume of unsuitable material less theoretical trench volume.

This item includes: all excavation and disposal of unsuitable material beyond limits of the theoretical trench as per channel section detail provided in project drawings. **Written authorization of Engineer required.**

Delete subsection 73 and replace with the following:

73. Replacement of Unsuitable Material with Surge Rock (Provisional)

Unit of Measurement: cubic metre (m³)

Method of Measurement: average end area method for volume of unsuitable material less theoretical trench volume.

This item includes: supply and placement of surge rock in locations where unsuitable material has been excavated from the trench beyond the limits of the theoretical trench as per the channel section detail provided in the project drawings. This item also includes compaction of the material and placement of filter fabric. **Written authorization of Engineer required.**

ENVIRONMENTAL PROTECTION

Delete subsection 87 and replace with the following:

87. Rock Rip Rap Protection

Unit of Measurement: square metre (m²)

Method of Measurement: slope measure of indicated area at specified depth.

This item includes: excavation, supply and placement of rip rap as specified in the project drawings, and reinstatement as required.

Add subsection 90 as follows:

90. Environmental Protection

Unit of Measurement: Lump Sum (L.S.)

This item includes: supply and installation of all environmental protection measures required to complete the project works, including all erosion and sedimentation control measures required as per the *Erosion and Sedimentation Control: Handbook for Construction Sites* as published by NSECC.

01 57 00 – ENVIRONMENTAL PROTECTION

Delete subsection 1.5.4, and replace with the following:

“

- .1 Control emissions from equipment by employing the following mitigation best practices:
 - .1 Procure fuel-efficient equipment models, equipped with run-time indicators where possible, to assist in monitoring and lowering fuel consumption and cost;
 - .2 Encourage reduced idling by use of automatic shut-off mechanisms where possible, and through driver training programs;
 - .3 Assess the capacity of the equipment being considered, and use only equipment that meets minimum size requirements, to reduce unnecessary fuel consumption;
 - .4 Regularly maintain vehicles and equipment to ensure efficient operation (e.g. regularly checking tire pressure, and conducting operational maintenance on the basis of engine hours);
 - .5 Vehicle route planning to take the shortest transportation route possible;
 - .6 Install energy efficient security and task lighting (e.g., LED lights);
 - .7 Minimize areas of disturbance, where possible;
 - .8 Arrange site toolbox talks to encourage compliance with the mitigation measures listed above, and to raise awareness of the benefits of the mitigation measures.”

PART 2 Products

2.1 NOT USED

- .1 Not used.

PART 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION