

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 (2024 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

In 00 71 00, number the CCDC 18-2023 definitions starting at number one (1) for *Change Directive*, to number thirty (30) for *Working Day*.

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

Add the following definitions:

31. 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.

32. 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.

33. Delay Charges

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.

34. 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 licenced 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.

35. Period of Delay

Period of Delay is defined as the period of time from the *Ready-for-Takeover* date stated in Article A1 of the Agreement - THE WORK, and the actual date of *Ready-for-Takeover*; if any.

36. 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.

37. Site

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

38. 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.

39. Supplementary Specifications

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

40. 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 - CONSTRUCTION SCHEDULE

Revise clause 3.4.1.1 as follows:

“.1 prepare and submit to the *Owner* and the *Engineer* for discussion at the first project stakeholder (“kickoff”) meeting, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their interrelationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;"

Add clause 3.4.2 as follows:

“3.4.2 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 3.4.1.3, 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 GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.”

GC 3.5 – SUPERVISION

Delete clause 3.5.1, and replace with the following:

“3.5.1 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 3.5.3 as follows:

“3.5.3 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 3.6 – LAYOUT OF THE WORK

Delete clause 3.6.1 in its entirety, and replace with the following:

“3.6.1 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 3.9 – SHOP DRAWINGS

Add the following to the end of existing clause 3.9.1:

... “or as requested by the *Engineer*.”

Add the following to the end of existing clause 3.9.7:

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

GC 5.4 - APPLICATIONS FOR PAYMENT

Delete Clause 5.4.2, and replace with the following:

“5.4.2 Applications for payment shall be dated the last day of the monthly payment period. 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.”

Delete clause 5.4.3, and replace with the following:

“5.4.3 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 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 5.5 - PAYMENT

In clause 5.5.1.1, revise "10 working days" to read "15 working days".

After clause 5.5.2, add the following new clause:

“5.5.3 The *Contractor* shall pay promptly, and in compliance with *Payment Legislation*, any and all accounts for labour and services, equipment, and/or materials used in the *Work*, and shall furnish the *Engineer* with proof of payment of such accounts in such form and as often as the *Engineer* may request.”

GC 5.6 - SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

Delete clause 5.6.2, and renumber existing 5.6.1 to 5.6.2. Add new clause 5.6.1 as follows:

“5.6.1 The *Contractor* shall make application to the *Engineer* for *Substantial Performance of the Work*. The proposed date of *Substantial Performance of the Work* shall allow sufficient time for inspection and evaluation of the *Work* by the *Engineer* and *Owner*, and payment of the holdback within the timeframes mandated by *Payment Legislation*, and specified elsewhere in the *Contract Documents* if *Substantial Performance of the Work* is to be approved for the date applied.”

Delete clause 5.6.4, and replace with the following:

“5.6.4 The *Contractor* shall submit an application for payment of the holdback amount in accordance with GC 5.5 – Payment, such that the *Owner* has sufficient time to pay the holdback amount in full within five (5) days of the expiration of the lien period stipulated by the Builders' Lien Act of Nova Scotia. Include the following with application:

- .1 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*;
- .2 A certificate of clearance from the Nova Scotia Worker's Compensation Board, certifying the *Contractor's* continued compliance with the requirements of the applicable act and legislation.
- .3 A valid letter of current Good Standing issued by the Nova Scotia Construction Safety Association and the Nova Scotia Department of Labour.
- .4 A Statutory Declaration on CCDC Form 9A, latest edition, affirming that all accounts for labour, subcontracts, *Products*, *Construction Equipment*, and any other indebtedness which may have been incurred by the *Contractor* in the *Substantial Performance of the Work*, and for which the *Owner* may in any way be held responsible, have been paid in full, except for amounts properly retained as a holdback or as an identified amount in dispute. Any outstanding claims not disclosed shall later be rejected.”

GC 5.7 – FINAL PAYMENT

Delete clause 5.7.1 in its entirety and replace with the following:

- “5.7.1 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, is *Ready-for-Takeover* in accordance with GC 12.1 – READY-FOR-TAKEOVER, has been 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 All identified defects and deficiencies have been corrected and 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 5.7.1:

“5.7.2 If, in the opinion of the *Engineer*, the above requirements are not complete, then the *Engineer* will not accept the application, and request resubmission.

5.7.3 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 5.7.2 through 5.7.4 to 5.7.4 through 5.7.6 respectively.

In renumbered clause 5.7.6, revise "5 calendar 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* proposed by the *Contractor* is a lump sum or unit price quotation as described in 6.2.2.2, the following shall apply:

- .1 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 Itemized quantities and unit rates for *Contractor*-supplied labour and *Products* defined in GC 3.8 – LABOUR AND PRODUCTS;

.2 Itemized *Subcontractor* and *Supplier* costs (where applicable);

Prices will be assessed by the *Engineer* based on the prevailing rates in the locality of the *Place of the Work*.

.2 The unit rates submitted for 6.2.4.1.1 shall be the *Contractor's* standard chargeout rates, and shall already include all overhead and profit. The extended totals shall be the only compensation the *Contractor* is entitled to for any and all overhead, profit, incidental, and/or administrative costs related to the change in the *Work*, including but not limited to any costs related to management and supervision, shop drawing production, estimating, site office and home office expenses, workers tools, temporary facilities and controls, and/or coordination of any and all activities related to the change in the *Work*.

.3 Under 6.2.4.1.2, the maximum *Contractor* markup shall be **Five percent (5%)** net of taxes for all **Products, Construction Equipment, Temporary Work, Subcontracts, and Others**, as defined in 6.3.7;

.3 All *Subcontractors* and *Suppliers* performing a part or parts of the *Work*, or supplying labour and/or *Products* described in GC 3.8 and 6.3.7 which are required by the change, shall have a direct contract with the *Contractor* subject to the requirements of the *Contract Documents*, and upon request, produce a detailed cost summary and/or written quotations as described in 6.2.4.1. A *Subcontractor* may not subcontract and invoice the *Contractor* for any portion of their scope in respect of any change in the *Work* unless agreed by the *Owner*.

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* using the cost plus method, the *Contractor* shall, each *Working Day*, report to the *Engineer* in writing and in full detail, the amount and costs associated with carrying out such work on the preceding working day in the form of daily work records. No claim for compensation shall be considered or allowed unless such reports have been made and verified on a daily basis by the *Engineer*. 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

Delete clause 6.3.6.3, and replace with the following:

- “.3 The *Contractor*’s markup fee shall be **fifteen percent (15%)** for the actual costs of **Labour** performed by the *Contractor*’s own forces, net of taxes, on the first \$20,000, and **ten percent (10%)** thereafter. The *Contractor*’s markup shall be **five percent (5%)** for the costs, net of taxes, for all **Products, Construction Equipment, Temporary Work, Subcontracts, and Others**, as defined in 6.3.7, and subject to the limitations of 6.3.6.5.”

After Clause 6.3.6.3, add the following clauses:

- “.4 All subcontracts shall be with the *Contractor* directly, with the conditions of 6.3.6 being applicable to the *Subcontractor*. A *Subcontractor* may not subcontract and invoice the *Contractor* for any portion of their scope in respect of any change in the *Work* unless agreed by the *Owner*.
- .5 In the event that any of the change in the *Work* contains items or parts that, in the opinion of the *Engineer*, are the same as, or equivalent to items in the *Schedule of Prices*, then the unit prices in the *Schedule of Prices* shall be the prices paid by the *Owner*, without markup, for the work or parts of the work in respect of any change in the *Work*, subject to GC 6.7 – QUANTITY VARIATIONS.
- .6 The markups provided for in 6.3.6 shall be the only compensation the *Contractor* is entitled to for any and all overhead, profit, incidental, and/or administrative costs related to the change in the *Work*, including but not limited to any costs related to management and supervision, shop drawing production, estimating, site office and home office expenses, workers tools, temporary facilities and controls, and/or coordination of any and all activities related to the change in the *Work*.”

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."
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Following Clause 6.5.5, add the following new Clauses:

“6.5.6 Should the *Contractor* fail to attain *Ready-for-Takeover* by the date indicated in Article A1, subclause 3, in the FORM OF AGREEMENT, the period of time from this agreed date to the actual date of *Ready-for-Takeover* 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 costs resulting from the 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 its engineering consultants 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 / Proposed Change Orders (CCOs, RCOs, or PCOs) and Requests for Information (RFIs). The *Engineer* will notify the *Contractor* if it determines that additional services will be required, or have been provided in order not to cause delay. The *Owner* shall make claims based on the invoices of its engineering consultants.”

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, inspections, licenses, letters of approval, and certificates, such as those from the NS Department of Public Works, Nova Scotia Power, Nova Scotia Environment, and shall 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, if required.”

Delete clause 10.2.3, and replace with the following:

“10.2.3 The Contractor shall post or pay any refundable and/or non-refundable fees, where required, before proceeding with the *Work*. The *Contractor* is responsible for the determination of the requirement for each specific project and for the payment of any required deposits.”

Rename PART 11 – INSURANCE to PART 11 – INSURANCE AND CONTRACT SECURITY, and add new GC 11.2 - CONTRACT SECURITY, with the following clauses:

- “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 surety bonds, the costs for which shall be included in the *Contract Price*:
- 11.2.1.1 **Performance Bond** in the amount of 50% of the *Total Amount Payable*; and
 - 11.2.1.2 **Labour & Materials Bond**, in the amount of 50% of the *Total Amount Payable*.
- 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.
- 11.2.3 Bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in the province of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*. The form of such bonds shall be in accordance with the latest edition of the CCDC approved bond forms.”
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GC 12.1 – READY-FOR-TAKEOVER

Add the following subclauses to 12.1.1:

- “.9 All reinstatements as required by the *Contract Documents*.
- .10 Any outstanding closeout submittals per the requirements of Section 01 10 00.”

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 overall 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*.”

00 73 00 - SUPPLEMENTARY GENERAL CONDITIONS

Delete *Standard Specification* section 00 73 00 in its entirety, and refer to supplementary general conditions provided in this section.

01 10 00 - GENERAL REQUIREMENTS

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

1.2 Summary of the Work
<WORK SUMMARIZED HERE>

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.”
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Following 1.3.5, add the following:

- “.6 *Contractor* shall backfill, grade, and clean up the *Work* without delay as the installation proceeds, to limit disruption to affected landowners and users.
- .7 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.
- .8 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*.
- .9 Safe access shall be always maintained through the Site for emergency vehicles, local traffic, and Acadia University staff and operations (when applicable). 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) as necessary when the requirements of the *Work* require complete access restrictions, such as during concrete placement.
- .10 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*.
- .11 Unless agreed to by the *Owner*, equipment shall not be operated before 7:00 am or after 7:00 pm. The *Contractor* shall notify the *Owner* if intending to perform *Work* on holidays. No *Work* shall take place before 12:00 noon on November 11.
- .12 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*.

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

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1.4 Setting Out the Work

- .1 The *Contractor* shall establish, maintain, and protect reference control points, and is responsible for layout of the *Work*, per 00 72 45 – GC 3.6 – LAYOUT OF THE WORK, for the entire duration of the *Contract Time*.
 - .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*.
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- .3 The *Contractor* shall take measurements and cross-sections and record all information before and after changes in construction for determination of quantities for measurement. All such information shall be provided to the *Engineer* for his review and acceptance before proceeding to the next stage. The costs of all materials, labour and equipment required for all surveying on the *Contract* shall be included in the amount of the tender. No additional or direct payment will be made for any part of these services.”

Add the following to Section 1.5:

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- .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*.”

Delete Section 1.7 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 3.9 – SHOP DRAWINGS, submit shop detail or working drawings and manufacturer's data in electronic form for all items requiring fabrication, on or off the *Site*, and for all proprietary equipment to the *Engineer* for review prior to any such items or equipment are commissioned for manufacturing, or are incorporated into the *Work*. Clearly show in detail the dimensions, materials of construction, finish, performance, service and installation requirements, and other pertinent information.
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- .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 Check shop drawings prior to submission. Determine and verify all field measurements, field construction criteria, materials, catalogue numbers, and similar data, and check and coordinate each shop drawing with the requirements of the *Work* and *Contract Documents*. Sign and date each shop drawing to confirm compliance with the above requirements.
 - .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. The *Engineer* will not review *Shop Drawings* where it is evident they do not meet the requirements of the *Contract Documents*.
 - .5 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.
 - .6 Make corrections required by the *Engineer* as noted and resubmit corrected copies to the *Engineer* for review before manufacturing or fabrication.
 - .7 The *Engineer* will mark comments on one (1) copy of each *Drawing* or document submitted and will return this as an electronic (PDF) copy for the *Contractor's* purposes.
 - .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.
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- .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 NSDPW 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 electronic copies of the following prior to application for *Ready-for-Takeover*:
 - .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.
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- .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 1.8 in its entirety, and replace with the following:

“

1.8 Record Drawings

- .1 After award of *Contract*, *Contractor* will maintain a set of As-Built Drawings for the purpose of providing red-line markups to assist the *Engineer* in generating Record Drawings. Accurately and neatly record any deviations from *Contract Documents* caused by *Site* conditions and changes ordered by *Engineer*.
- .2 Identify Drawings as "Project As-Built Copy". Maintain in good condition and make available for inspection on *Site* by *Engineer*.
- .3 *Contractor* is responsible for full-time construction surveying throughout execution of the *Work* for the purposes of collecting digital data suitable for the *Engineer* to produce and certify final record drawings. Discrete survey measurement points to be collected linearly, and at the location of each individual component of the *Work* – pipe installation to be recorded at each bell, flange, fitting, and stub end. Locations of utilities and all other pipes or structures of any nature which intersect or are about the line of the *Work* must be recorded. Data points, in PNEZD, to contain a unique numerical point number, northing and easting (NAD83 CSRS 2010 v6, Nova Scotia MTM Zone 5 – EPSG 8083), vertical elevation (to CGVD 2013), and a descriptor. Horizontal and vertical measurements to be in meters to a precision of one one-thousandth (0.001), and descriptors should be logical and not require interpretation, or include a descriptive code legend or guide.
- .4 Do not backfill pipework, appurtenances, or other portions of the *Work* until necessary measurements have been taken.
- .5 Prior to application for *Ready-for-Takeover*, submit as-built documents and survey point CSV file to *Engineer*."

Delete Section 1.9 in its entirety replace with the following:

“

1.9 Quality Control

- .1 All testing requirements specified in 1.9.3 shall be arranged by the *Engineer* and paid for by the *Owner*, and may be conducted by an independent third-party agency. The *Contractor* shall coordinate with staff of the *Engineer* and the testing
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agency, and shall provide reasonable notice and access to the *Work* for in-situ testing and sample collection.

- .2 Within fifteen (15) *Working Days* following receipt of the construction schedule as defined in GC 3.4 – CONSTRUCTION SCHEDULE, the *Engineer* shall submit to the *Contractor* a Quality Control Testing and Inspection Plan (QCTIP) 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 QCTIP described above, the *Engineer* shall coordinate quality control testing and inspection 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 delivered loads 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* (or as specified in the QCTIP) 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 In situ nuclear densometer compaction testing during bedding and backfilling operations, and during installation of road gravels. 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 testing agency in accordance with the NS Public Works 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 required compaction is achieved in all areas tested.

.3 **Road asphalt** as follows:

.1 Prior to paving, compacted 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 NS Public Works 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, a minimum of two (2) sample sets will be collected 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*, *Engineer*, and any testing agency personnel have adequate access to the *Work* and to locations where products being incorporated into the *Work* are being prepared.

.5 Cooperate and assist 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 their 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 Subsections 1.10.8 and 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 shall be as per 1.3.12”

After Subsection 1.11.2, add the following:

- .3 *Site* shall be kept secure, neat, and tidy, and shall 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;
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- .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 access, safety, and traffic control equipment (signs, barricades, cones, etc.).
- .4 Remove or relocate any privately owned vehicles from *Site* during the *Contract Time* at no additional cost to the *Owner*. Immediately notify the *Owner*, and keep record of any such removals or relocations.”

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. Coordinate proposed traffic control activities with local transit authorities and Acadia University during preparation of traffic control plan (where required). Plans must consider transit routes and access to campus buildings and residences, especially during the **final weekend in August when students move in to begin classes in September**. Any plans found incomplete, ambiguous, or unclear will be returned for revision and re-submittal.

Any requests for full street closures are to be submitted to the *Owner* in writing at least 48 hours in advance of the proposed closure, and *Approved* in writing by the *Owner*, with notifications and public messaging per section 1.3.”

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."
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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*."

Delete Subsections 1.18.1 through 1.18.3, and replace with the following:

- “.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*. 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*.”

Add the following Subclauses after 1.19.4:

- “.5 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.
- .6 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*.
- .7 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.
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- .8 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.
- .9 *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.
- .10 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.
- .11 Restore, upon completion of the *Work*, any utilities or structures that have been disturbed.”

01 22 00 – MEASUREMENT AND PAYMENT

Delete *Standard Specification* section 01 22 00 in its entirety, and replace it with new Section 01 22 00 included with these *Project Documents*.

01 57 00 – ENVIRONMENTAL PROTECTION

Delete subsection 1.5.4, and replace with the following:

“

- .4 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);
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- .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.