



## REQUEST FOR TENDER

TTC S-39B1 Access Road Construction

Close Date: August 4, 2021

**Attachments:**

- 1) Contract:**
  - a. CCDC 4 (2011)
- 2) Supplement to the General Conditions**
- 3) Specifications:**
  - a. 00 01 10 – Table of Contents
  - b. 01 11 00 – Summary of Work
  - c. 01 29 00 – Payment Procedures
  - d. 01 31 19 – Project Meetings
  - e. 01 33 00 – Submittal Procedures
  - f. 01 35 00.06 – Special Procedures for Traffic Control
  - g. 01 35 43 – Environmental Procedures
  - h. 01 52 00 – Construction Facilities
  - i. 31 11 00 – Grubbing
  - j. 31 14 13 – Soil Stripping, Stockpiling and Placing
  - k. 31 22 13 – Rough Grading
  - l. 31 32 19.01 – Geotextiles
  - m. 31 37 00 – Rip-Rap
  - n. 32 11 23 – Aggregate Surface and Base Course
  - o. 33 42 13 – Pipe Culverts
  - p. 32 92 19.16 – Hydraulic Seeding
- 4) Contract Drawings:**
  - a. TTC S-39B1 Access Road Construction, Greenwood Engineering Solutions, May 7, 2021
- 5) Reference Material:**
  - a. Roadway Structure Evaluation – TTC S-39B1 Access Road, Tetra Tech, November 16, 2020
  - b. Typical Residential Access on Fill – YG-HPW Drawing 03030-10, March 2003

## INSTRUCTIONS TO BIDDERS

### 1. General

Contractors are invited to submit Tenders to construct a residential subdivision access road in Teslin. The Work includes site preparation (tree falling has been completed) and road construction including an access to the Alaska Highway and 4 lot accesses.

Please contact Adam Greenwood if you have any questions about how to submit a Tender at (867) 332-0995 or [adam@greenwoodengineering.ca](mailto:adam@greenwoodengineering.ca).

### 2. Tender Submission

Each Tender submitted must clearly identify the Contractor's name and Project name. The Tender Forms must be fully completed, signed, dated and submitted in a clear and legible manner. All applicable blank spaces in the Tender Documents must be filled in.

Tenders that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations or irregularities of any kind may, at the sole discretion of the Teslin Tlingit Council, be declared non-compliant.

Tenders with Tender Forms which are improperly prepared may, at the sole discretion of the Teslin Tlingit Council, be declared non-compliant.

Tenders based upon an unreasonable time duration for the completion of the Work may, at the sole discretion of the Teslin Tlingit Council, be declared non-compliant.

All submitted Tenders and supporting documentation become the property of Teslin Tlingit Council and will not be returned. Tenders and supporting documentation received after the time of the Tender Closing Time will be returned to the Bidder unopened.

### 3. Tender Closing Time

Tenders must be received before **4:00:00 pm** local time on **August 4, 2021** in hard copy by the Teslin Tlingit Council labelled:

Randy Keleher, Lands Environmental Manager  
Teslin Tlingit Council  
Box 133 Teslin, Yukon Y0A 1B0

It is the responsibility of the Contractor to ensure the Tender is received by Teslin Tlingit Council prior to the closing time. Late submissions received will not be considered and will be returned to the sender. Tenders will not be opened in public and will be opened by Teslin Tlingit Council after the closing time.

### 4. COVID-19 Considerations

Teslin Tlingit Council is working with Yukon Government to manage the current COVID-19 pandemic in Yukon. As outlined in Section 3.3 of the Yukon Government Pandemic Co-ordination Plan, the selected Contractor shall “play a direct role in:

- Helping to prevent disease spread, by applying human resource and health promotion policies and strategies to minimise disease spread in their own organization and to the public; and
- Helping Yukon to best manage the pandemic, through information-sharing and open communication with emergency officials on related issues.”

Furthermore, the selected Contractor shall follow the COVID-19 Provisions of Teslin Tlingit Council and the recommendations of Yukon’s Chief Medical Officer of Health (CMOH) throughout the execution of the Work.

### 5. Site Visit

Contractors are encouraged to visit the site to familiarize themselves with the place of work. Contractors are strongly advised to carefully examine the place of the Work, and fully inform themselves of all existing conditions, limitations and difficulties that may arise during the future execution of the Work including but not limited to any or all site-specific health and safety, environmental and operational protocols. Teslin Tlingit Council will not consider claims for additional payments during the administration of the execution of the Work, or at all, for extra

Work, costs, damages or difficulties encountered resulting from conditions which were either visible or could be reasonably inferred from an examination of the place of the Work prior to the submission of Tenders.

## **6. Inquiries and Addenda**

Contractors should carefully and thoroughly examine the Tender document and fully inform themselves as to the content, intent, existing conditions, and/or limitations which may affect their Tender submission. No consideration will be given after Closing to any claim that there was any misunderstanding with respect to the terms and conditions outlined in the Tender documents.

All questions or enquiries shall be submitted at least seventy-two (72) hours before the closing time to:

Adam Greenwood at: [adam@greenwoodengineering.ca](mailto:adam@greenwoodengineering.ca)

Answers to all submitted enquiries will be in the form of an addendum which shall form part of the Tender documents. Addenda are the only means by which Teslin Tlingit Council will vary or change any of the information contained in the Tender documents. Teslin Tlingit Council reserves the right to issue addenda at any time prior to the closing time. If TTC determines that an amendment or clarification to this Tender is required, an addendum will be posted where this tender is advertised.

No oral conversations from a Teslin Tlingit Council representative or any other person will affect or modify any provision of this Tender. Verbal responses are only binding when confirmed by written addenda.

## **7. Withdrawal or Changes to Tender**

Withdrawal or amendments to a Tender are permitted only if received prior to the closing time and must be on the Contractor's letterhead and signed by the parties who signed and sealed the Tender. A Tender amendment shall state the amount added to or deducted from the Tender Price. Amendments to a submitted Tender may be submitted in hard copy by the Teslin Tlingit Council labelled:

Randy Keleher, Lands Environmental Manager  
Teslin Tlingit Council  
Box 133 Teslin, Yukon Y0A 1B0

## **8. Tender Preparation Cost**

The Contractor agrees to prepare and submit Tenders at their own cost. Teslin Tlingit Council is not obligated in any way to pay costs of any kind or nature whatsoever that may be incurred by a Contractor or any third parties in the Tender Process. All such costs shall be the Contractor's sole responsibility.

## **9. Tender and Contract Security**

Tender and Contract Securities are not required for this Work.

**10. Occupational Health and Safety Requirements**

Before commencing Work on a work site owned or controlled by Teslin Tlingit Council, and prior to TTC making any payment to the Contractor, the Contractor shall deliver a "Letter of Good Standing" indicating the Contractor is registered and in good standing with the Yukon Workers Health and Safety Program. The Contractor shall

- i) be responsible in accordance with applicable law for the protection and safety of all persons performing the Work, and for the protection and security of the Work, and related plant, equipment and materials;
- ii) ensure that its personnel are properly trained in all applicable safety procedures; and
- iii) take all reasonable steps to ensure that no person is injured or property damaged or lost due to the performance of the Work.

The Contractor shall ensure compliance on their part and on the part of all Subcontractors with the latest edition of the Occupational Health and Safety Act and Regulations. The Contractor shall ensure that appropriate personnel have up-to-date First Aid Certificates as required under the Yukon Health and Safety Regulations.

**11. Insurance and Indemnity**

Refer to GC 11.1 - INSURANCE.

**12. Duration of Offer**

Tenders shall be irrevocable and remain open to acceptance for a period of sixty (60) days from the Bid Closing Date.

**13. Acceptance of Offer**

The selection/acceptance of a Contractor is subject to the application of the Tlingit preference criteria. The following defines the Tlingit contractor preference criteria assuming that all other tendering and contracting requirements are satisfied:

Where it is judged that a Tlingit contractor has the capacity, then there is a financial preference to a Tlingit or TTC Tlingit contractor of 10% of the lowest qualifying bid. Contractors who are or whose companies are wholly or majority owned by Teslin Tlingit citizens or their spouses are deemed to be Tlingit contractors for this policy.

The lowest or any Bid will not necessarily be accepted. Without limiting the generality of the foregoing, Teslin Tlingit Council, in its sole and absolute discretion:

- 1) Reserves the right to accept or reject any or all of the Tenders;
- 2) Reserves the right to evaluate, accept or reject any Tender, whether or not completed properly and whether or not it contains all required information or is otherwise non-compliant, and Teslin Tlingit Council is not bound to evaluate, accept or reject any Bid;
- 3) Reserves the right, after the selection of the successful Contractor, to negotiate and finalize any changes, amendments, or modifications to the Tender of the successful Contractor as submitted or to the Contract, without offering other Contractors the opportunity to amend their Tenders.

- 4) Reserves the right to not be bound to explain any decision to the Contractor(s). Teslin Tlingit Council may, at its own discretion, release the name of the successful Bidder.
- 5) Bidders expressly waive any right to make any claim against Teslin Tlingit Council for any matter arising from TTC exercising its rights as stated above.
- 6) After acceptance by Teslin Tlingit Council, the successful Contractor will be notified in writing via email.

**END OF INSTRUCTIONS TO BIDDERS**

## TENDER FORM 1: SCHEDULE OF QUANTITIES AND PRICES

I/We, the undersigned, are pleased to submit this quotation for the **TTC S-39B1 Access Road Construction**.

I/We hereby confirm that I/we have read and accepted the specifications and details outlined in the conditions provided with this form and offer the following quotation for consideration:

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization & demobilization	Lump sum	1		
2	Grubbing & stripping	m <sup>2</sup>	4,500		
3	Subgrade preparation	m <sup>2</sup>	4,200		
4	300 mm base gravels	m <sup>3</sup>	700		
5	150 mm road gravels	m <sup>3</sup>	350		
6	Ditching	Linear metre	400		
7	Culverts up to 40 ft (12 m)	each	2		
8	Culverts between 40 ft (12 m) and 60 ft (18 m)	each	2		
9	Spreading stockpiled stripped material	m <sup>2</sup>	3,000		
10	Hydraulic Seeding	m <sup>2</sup>	3,000		
11	Stop sign	each	1		
				Subtotal	
				GST (5%)	
				Total	

TENDER FORM 1: SCHEDULE OF QUANTITIES AND PRICES Continued...

**Declaration of Teslin Tlingit citizenship:**

Company is wholly or majority owned by Teslin Tlingit citizens or their spouses.

**Declaration of Addenda received and reviewed:**

I/We have received Addendum # \_\_\_ to # \_\_\_ and understand that they form part of the contract documents.

\_\_\_\_\_  
AUTHORIZED SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
COMPANY NAME

## TENDER FORM 2: SIGNATURES

\_\_\_\_\_  
Name of Contractor/Corporation (PLEASE PRINT)

\_\_\_\_\_  
Legal Status: Corporation, Partnership, or Sole Ownership (PLEASE PRINT)

\_\_\_\_\_  
Mailing Address (PLEASE PRINT)

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Email Address

\_\_\_\_\_  
Fax Number

### **Names and Addresses of Corporation Officers or Members of the Organization:**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Title

By signing below I/we accept all terms and conditions of this Request for Tender and acknowledge that we have received and taken into consideration all addenda issued in our submitted bid.

### **Signature by Authorized Representative:**

\_\_\_\_\_

(Corporate Seal Here)

\_\_\_\_\_  
Name of Representative (PLEASE PRINT)

\_\_\_\_\_  
Title of Representative (PLEASE PRINT)

### **Signature of Witness:**

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Name of Witness (PLEASE PRINT)

\_\_\_\_\_  
Address of Witness (PLEASE PRINT)

CCDC 4

# Unit Price Contract

# 2 0 1 1

Name of Project

Apply a CCDC 4 copyright seal here. The application of the seal demonstrates the intention of the party proposing the use of this document that it be an accurate and unamended form of CCDC 4 – 2011 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE  
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE  
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE

## TABLE OF CONTENTS

### AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A-1 The Work
- A-2 Agreements and Amendments
- A-3 Contract Documents
- A-4 Contract Price
- A-5 Payment
- A-6 Receipt of and Addresses for Notices in Writing
- A-7 Language of the Contract
- A-8 Succession

### DEFINITIONS

- Change Directive
- Change Order
- Construction Equipment
- Consultant
- Contract
- Contract Documents
- Contract Price
- Contract Time
- Contractor
- Drawings
- Notice in Writing
- Owner
- Place of the Work
- Product
- Project
- Provide
- Schedule of Prices
- Shop Drawings
- Specifications
- Subcontractor
- Substantial Performance of the Work
- Supplemental Instruction
- Supplier
- Temporary Work
- Unit Price
- Value Added Taxes
- Work
- Working Day

### GENERAL CONDITIONS OF THE UNIT PRICE CONTRACT

#### PART 1 GENERAL PROVISIONS

- GC 1.1 Contract Documents
- GC 1.2 Law of the Contract
- GC 1.3 Rights and Remedies
- GC 1.4 Assignment

#### PART 2 ADMINISTRATION OF THE CONTRACT

- GC 2.1 Authority of the Consultant
- GC 2.2 Role of the Consultant
- GC 2.3 Review and Inspection of the Work
- GC 2.4 Defective Work

#### PART 3 EXECUTION OF THE WORK

- GC 3.1 Control of the Work
- GC 3.2 Construction by Owner or Other Contractors
- GC 3.3 Temporary Work
- GC 3.4 Document Review
- GC 3.5 Construction Schedule
- GC 3.6 Supervision
- GC 3.7 Subcontractors and Suppliers
- GC 3.8 Labour and Products
- GC 3.9 Documents at the Site
- GC 3.10 Shop Drawings
- GC 3.11 Use of the Work
- GC 3.12 Cutting and Remedial Work
- GC 3.13 Cleanup

#### PART 4 ALLOWANCES

- GC 4.1 Cash Allowances
- GC 4.2 Contingency Allowance

#### PART 5 PAYMENT

- GC 5.1 Financing Information Required of the Owner
- GC 5.2 Applications for Progress Payment
- GC 5.3 Progress Payment
- GC 5.4 Substantial Performance of the Work
- GC 5.5 Payment of Holdback upon Substantial Performance of the Work
- GC 5.6 Progressive Release of Holdback
- GC 5.7 Final Payment
- GC 5.8 Withholding of Payment
- GC 5.9 Non-conforming Work

#### PART 6 CHANGES IN THE WORK

- GC 6.1 Owner's Right to Make Changes
- GC 6.2 Change Order
- GC 6.3 Change Directive
- GC 6.4 Concealed or Unknown Conditions
- GC 6.5 Delays
- GC 6.6 Claims for a Change in Contract Price
- GC 6.6 Quantity Variations

#### PART 7 DEFAULT NOTICE

- GC 7.1 Owner's Right to Perform the Work, Terminate the Contractor's Right to Continue with the Work or Terminate the Contract
- GC 7.2 Contractor's Right to Suspend the Work or Terminate the Contract

#### PART 8 DISPUTE RESOLUTION

- GC 8.1 Authority of the Consultant
- GC 8.2 Negotiation, Mediation and Arbitration
- GC 8.3 Retention of Rights

#### PART 9 PROTECTION OF PERSONS AND PROPERTY

- GC 9.1 Protection of Work and Property
- GC 9.2 Toxic and Hazardous Substances
- GC 9.3 Artifacts and Fossils
- GC 9.4 Construction Safety
- GC 9.5 Mould

#### PART 10 GOVERNING REGULATIONS

- GC 10.1 Taxes and Duties
- GC 10.2 Laws, Notices, Permits, and Fees
- GC 10.3 Patent Fees
- GC 10.4 Workers' Compensation

#### PART 11 INSURANCE AND CONTRACT SECURITY

- GC 11.1 Insurance
- GC 11.2 Contract Security

#### PART 12 INDEMNIFICATION, WAIVER OF CLAIMS AND WARRANTY

- GC 12.1 Indemnification
- GC 12.2 Waiver of Claims
- GC 12.3 Warranty

CCDC 4 is the product of a consensus-building process aimed at balancing the interests of all parties on the construction project. It reflects recommended industry practices. CCDC 4 can have important consequences. The CCDC and its constituent member organizations do not accept any responsibility or liability for loss or damage which may be suffered as a result of the use or interpretation of CCDC 4.

**AGREEMENT BETWEEN OWNER AND CONTRACTOR**

**For use when unit prices are the primary basis of payment.**

**This Agreement** made on the \_\_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_\_ .

**by and between the parties**

\_\_\_\_\_ hereinafter called the *Owner*

**and**

\_\_\_\_\_ hereinafter called the *Contractor*

The *Owner* and the *Contractor* agree as follows:

**ARTICLE A-1 THE WORK**

The *Contractor* shall:

1.1 perform the *Work* required by the *Contract Documents* for

located at

\_\_\_\_\_ *insert above the name of the Work*

for which the Agreement has been signed by the parties, and for which

\_\_\_\_\_ *insert above the Place of the Work*

is acting as and is hereinafter called the "*Consultant*" and

\_\_\_\_\_ *insert above the name of the Consultant*

1.2 do and fulfill everything indicated by the *Contract Documents*, and

1.3 commence the *Work* by the \_\_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_\_ and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Substantial Performance of the Work*, by the day of \_\_\_\_\_ in the year \_\_\_\_\_ .

## ARTICLE A-2 AGREEMENTS AND AMENDMENTS

- 2.1 The *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 A-3 of the Agreement - CONTRACT DOCUMENTS.
- 2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

## ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement - THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- The General Conditions of the Unit Price Contract
- \*

\* *(Insert here, attaching additional pages if required, a list identifying all other Contract Documents e.g. supplementary conditions; information documents; specifications, giving a list of contents with section numbers and titles, number of pages and date; material finishing schedules; drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date)*





4.2 The estimated *Contract Price*, which is the total amount indicated in the *Schedule of Prices*, and which excludes *Value Added Taxes*, is:

/100 dollars \$

4.3 *Value Added Taxes* (of \_\_\_\_\_ %) payable by the *Owner* to the *Contractor*, based on the estimated *Contract Price*, are:

/100 dollars \$

4.4 Total estimated amount payable by the *Owner* to the *Contractor* for the construction of the *Work* is:

/100 dollars \$

4.5 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.6 All amounts are in Canadian funds.

## ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents*, and in accordance with legislation and statutory regulations respecting holdback percentages and, where such legislation or regulations do not exist or apply, subject to a holdback of \_\_\_\_\_ percent ( \_\_\_\_\_ %), the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* together with such *Value Added Taxes* as may be applicable to such payments, and
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 In the event of loss or damage occurring where payment becomes due under the property and boiler insurance policies, payments shall be made to the *Contractor* in accordance with the provisions of GC 11.1 – INSURANCE.

5.3 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:

- (1) 2% per annum above the prime rate for the first 60 days.
- (2) 4% per annum above the prime rate after the first 60 days.

Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by

(Insert name of chartered lending institution whose prime rate is to be used)

for prime business loans as it may change from time to time.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.3.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

**ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING**

6.1 *Notices in Writing* will be addressed to the recipient at the address set out below. The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by facsimile or other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender. A *Notice in Writing* delivered by one party in accordance with this *Contract* will 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 calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* shall be deemed to have been received on the *Working Day* next following such day. A *Notice in Writing* sent by facsimile or other form of electronic communication 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 on the date of its transmission 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* next following the transmission thereof. An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

**Owner**

*name of Owner\**

*address*

*Facsimile number*

*e-mail address*

**Contractor**

*name of Contractor\**

*address*

*Facsimile number*

*e-mail address*

**Consultant**

*name of Consultant\**

*address*

*Facsimile number*

*e-mail address*

*\* If it is intended that the notice must be received by a specific individual, that individual's name shall be indicated.*

## ARTICLE A-7 LANGUAGE OF THE CONTRACT

- 7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English/French\* language shall prevail.  
\* *Complete this statement by striking out inapplicable term.*
- 7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

**ARTICLE A-8 SUCCESSION**

8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

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

SIGNED AND DELIVERED

in the presence of:

**WITNESS**

**OWNER**

*name of owner*

*signature*

*signature*

*name of person signing*

*name and title of person signing*

*signature*

*signature*

*name of person signing*

*name and title of person signing*

**WITNESS**

**CONTRACTOR**

*name of Contractor*

*signature*

*signature*

*name of person signing*

*name and title of person signing*

*signature*

*signature*

*name of person signing*

*name and title of person signing*

*N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:*  
*(a) 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; or*  
*(b) the affixing of a corporate seal, this Agreement should be properly sealed.*

## DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

### **Change Directive**

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon an adjustment in *Contract Price* and *Contract Time*.

### **Change Order**

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

### **Construction Equipment**

*Construction Equipment* means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

### **Consultant**

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*. The term *Consultant* means the *Consultant* or the *Consultant's* authorized representative.

### **Contract**

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

### **Contract Documents**

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement - CONTRACT DOCUMENTS and amendments agreed upon between the parties.

### **Contract Price**

The *Contract Price* is the sum of the products of each *Unit Price* stated in the *Schedule of Prices* multiplied by the appropriate actual quantity of each *Unit Price* item that is incorporated in or made necessary by the *Work*, plus lump sums, if any, and allowances, if any, stated in the *Schedule of Prices*.

### **Contract Time**

The *Contract Time* is the time stipulated in paragraph 1.3 of Article A-1 of the Agreement - THE WORK from commencement of the *Work* to *Substantial Performance of the Work*.

### **Contractor**

The *Contractor* is the person or entity identified as such in the Agreement. The term *Contractor* means the *Contractor* or the *Contractor's* authorized representative as designated to the *Owner* in writing.

### **Drawings**

The *Drawings* are the graphic and pictorial portions of the *Contract Documents*, wherever located and whenever issued, showing the design, location and dimensions of the *Work*, generally including plans, elevations, sections, details, and diagrams.

### **Notice in Writing**

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

### **Owner**

The *Owner* is the person or entity identified as such in the Agreement. The term *Owner* means the *Owner* or the *Owner's* authorized agent or representative as designated to the *Contractor* in writing, but does not include the *Consultant*.

### **Place of the Work**

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

### **Product**

*Product or Products* means material, machinery, equipment, and fixtures forming the *Work*, but does not include *Construction Equipment*.

**Project**

The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.

**Provide**

*Provide* means to supply and install.

**Schedule of Prices**

The *Schedule of Prices* is the schedule included in Article A-4 - CONTRACT PRICE and, subject to adjustments as provided in the *Contract Documents*, identifies:

- the items of work;
- the units of measure, estimated quantity, and *Unit Price* for each *Unit Price* item;
- the price for each lump sum item, if any; and
- allowances, if any.

**Shop Drawings**

*Shop Drawings* are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.

**Specifications**

The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.

**Subcontractor**

A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.

**Substantial Performance of the Work**

*Substantial Performance of the Work* is as defined in the lien legislation applicable to the *Place of the Work*. If such legislation is not in force or does not contain such definition, or if the *Work* is governed by the Civil Code of Quebec, *Substantial Performance of the Work* shall have been reached when the *Work* is ready for use or is being used for the purpose intended and is so certified by the *Consultant*.

**Supplemental Instruction**

A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.

**Supplier**

A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.

**Temporary Work**

*Temporary Work* means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.

**Unit Price**

A *Unit Price* is the amount payable for a single *Unit Price* item as stated in the *Schedule of Prices*.

**Value Added Taxes**

*Value Added Taxes* means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which, have been imposed on the *Contractor* by the tax legislation.

**Work**

The *Work* means the total construction and related services required by the *Contract Documents*.

**Working Day**

*Working Day* means a day other than a Saturday, Sunday, statutory holiday or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

## GENERAL CONDITIONS OF THE UNIT PRICE CONTRACT

### PART 1 GENERAL PROVISIONS

#### GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
- .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
  - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.3 The *Contract Documents* are complementary, and what is required by any one shall be as binding as if required by all.
- 1.1.4 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.5 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.6 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.7 If there is a conflict within the *Contract Documents*:
- .1 the order of priority of documents, from highest to lowest, shall be
    - the Agreement between the *Owner* and the *Contractor*,
    - the Definitions,
    - Supplementary Conditions,
    - the General Conditions,
    - Division 1 of the *Specifications*,
    - technical *Specifications*,
    - material and finishing schedules,
    - the *Drawings*.
  - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
  - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
  - .4 later dated documents shall govern over earlier documents of the same type.
- 1.1.8 The *Owner* shall provide the *Contractor*, without charge, sufficient copies of the *Contract Documents* to perform the *Work*.
- 1.1.9 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.10 Models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

#### GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

#### GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

- 1.3.2 No action or failure to act by the *Owner*, *Consultant* 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.

#### **GC 1.4 ASSIGNMENT**

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

### **PART 2 ADMINISTRATION OF THE CONTRACT**

#### **GC 2.1 AUTHORITY OF THE CONSULTANT**

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Contractor* and the *Consultant*.
- 2.1.3 If the *Consultant's* employment is terminated, the *Owner* shall immediately appoint or reappoint a *Consultant* against whom the *Contractor* makes no reasonable objection and whose status under the *Contract Documents* shall be that of the former *Consultant*.

#### **GC 2.2 ROLE OF THE CONSULTANT**

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 The *Consultant* will promptly inform the *Owner* of the date of receipt of the *Contractor's* applications for payment as provided in paragraph 5.3.1.1 of GC 5.3 – PROGRESS PAYMENT.
- 2.2.5 Based on the *Consultant's* observations and review of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement - PAYMENT, GC 5.3 - PROGRESS PAYMENT and GC 5.7 - FINAL PAYMENT.
- 2.2.6 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to carry out the *Work* in accordance with the *Contract Documents*. The *Consultant* will not have control over, charge of or be responsible for the acts or omissions of the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees or any other persons performing portions of the *Work*.
- 2.2.7 Except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.8 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.9 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.10 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.11 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

- 2.2.12 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees or other persons performing any of the *Work*.
- 2.2.13 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.14 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other *Contractor's* submittals, in accordance with the *Contract Documents*.
- 2.2.15 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 2.2.16 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* as provided in GC 5.4 - SUBSTANTIAL PERFORMANCE OF THE WORK.
- 2.2.17 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.18 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.

### **GC 2.3 REVIEW AND INSPECTION OF THE WORK**

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for measurement for payment, tests, inspections or approvals in the *Contract Documents*, or by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for measurements, tests, inspections and approvals. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for measurement for payment, tests, inspections or approvals before such measurements, tests, inspections or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the measurements, tests, inspections, or approvals satisfactorily completed, and make good covering work at the *Contractor's* expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is designated by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by the *Consultant* or the *Owner* if such test or inspection is designated in the *Contract Documents*.

### **GC 2.4 DEFECTIVE WORK**

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work has been incorporated in the *Work* and whether or not the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly other contractors' work destroyed or damaged by such removals or replacements at the *Contractor's* expense.

- 2.4.3 If, in the opinion of the *Consultant*, it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a determination.

## **PART 3 EXECUTION OF THE WORK**

### **GC 3.1 CONTROL OF THE WORK**

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.
- 3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

### **GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS**

- 3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to other contractors and to perform work with own forces.
- 3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Owner* shall:
- .1 provide for the co-ordination of the activities and work of other contractors and *Owner's* own forces with the *Work* of the *Contract*;
  - .2 assume overall responsibility for compliance with the applicable health and construction safety legislation at the *Place of the Work*;
  - .3 enter into separate contracts with other contractors under conditions of contract which are compatible with the conditions of the *Contract*;
  - .4 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 - INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
  - .5 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of other contractors or the *Owner's* own forces.
- 3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Contractor* shall:
- .1 afford the *Owner* and other contractors reasonable opportunity to store their products and execute their work;
  - .2 cooperate with other contractors and the *Owner* in reviewing their construction schedules; and
  - .3 promptly report to the *Consultant* in writing any apparent deficiencies in the work of other contractors or of the *Owner's* own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.
- 3.2.4 Where the *Contract Documents* identify work to be performed by other contractors or the *Owner's* own forces, the *Contractor* shall co-ordinate and schedule the *Work* with the work of other contractors and the *Owner's* own forces as specified in the *Contract Documents*.
- 3.2.5 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of other contractors or *Owner's* own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 3.2.6 Disputes and other matters in question between the *Contractor* and other contractors shall be dealt with as provided in Part 8 of the General Conditions - DISPUTE RESOLUTION provided the other contractors have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any other contractor whose contract with the *Owner* contains a similar agreement to arbitrate.

### **GC 3.3 TEMPORARY WORK**

- 3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work*.
- 3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.

3.3.3 Notwithstanding the provisions of GC 3.1 - CONTROL OF THE WORK, paragraph 3.3.1 and paragraph 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

#### **GC 3.4 DOCUMENT REVIEW**

3.4.1 The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency or omission the *Contractor* may discover. Such review by the *Contractor* shall be to the best of the *Contractor's* knowledge, information and belief and in making such review the *Contractor* does not assume any responsibility to the *Owner* or the *Consultant* for the accuracy of the review. The *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies or omissions in the *Contract Documents*, which the *Contractor* did not discover. If the *Contractor* does discover any error, inconsistency or omission in the *Contract Documents*, the *Contractor* shall not proceed with the work affected until the *Contractor* has received corrected or missing information from the *Consultant*.

#### **GC 3.5 CONSTRUCTION SCHEDULE**

3.5.1 The *Contractor* shall:

- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
- .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
- .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions - CHANGES IN THE WORK.

#### **GC 3.6 SUPERVISION**

3.6.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while work is being performed. The appointed representative shall not be changed except for valid reason.

3.6.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

#### **GC 3.7 SUBCONTRACTORS AND SUPPLIERS**

3.7.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:

- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
- .2 incorporate the terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
- .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.

3.7.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.

3.7.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.

3.7.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the differences occasioned by such required change.

3.7.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.

3.7.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor's* or *Supplier's* work which has been certified for payment.

### **GC 3.8 LABOUR AND PRODUCTS**

3.8.1 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.

3.8.2 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.

3.8.3 The *Contractor* shall maintain good order and discipline among the *Contractor's* employees engaged on the *Work* and shall not employ on the *Work* anyone not skilled in the tasks assigned.

### **GC 3.9 DOCUMENTS AT THE SITE**

3.9.1 The *Contractor* shall keep one copy of current *Contract Documents*, submittals, reports, and records of meetings at the *Place of the Work*, in good order and available to the *Owner* and the *Consultant*.

### **GC 3.10 SHOP DRAWINGS**

3.10.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.

3.10.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of other contractors.

3.10.3 Upon request of the *Contractor* or the *Consultant*, they shall jointly prepare a schedule of the dates for provision, review and return of *Shop Drawings*.

3.10.4 The *Contractor* shall provide *Shop Drawings* in the form specified, or if not specified, as directed by the *Consultant*.

3.10.5 *Shop Drawings* provided by the *Contractor* to the *Consultant* shall indicate by stamp, date and signature of the person responsible for the review that the *Contractor* has reviewed each one of them.

3.10.6 The *Consultant's* review is for conformity to the design concept and for general arrangement only.

3.10.7 *Shop Drawings* which require approval of any legally constituted authority having jurisdiction shall be provided to such authority by the *Contractor* for approval.

3.10.8 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:

- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
- .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.

3.10.9 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.

3.10.10 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.

3.10.11 The *Contractor* shall provide revised *Shop Drawings* to correct those which the *Consultant* rejects as inconsistent with the *Contract Documents*, unless otherwise directed by the *Consultant*. The *Contractor* shall notify the *Consultant* in writing of any revisions to the *Shop Drawings* other than those requested by the *Consultant*.

3.10.12 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

### **GC 3.11 USE OF THE WORK**

3.11.1 The *Contractor* shall confine *Construction Equipment*, *Temporary Work*, storage of *Products*, waste products and debris, and operations of employees and *Subcontractors* to limits indicated by laws, ordinances, permits, or the *Contract Documents* and shall not unreasonably encumber the *Place of the Work*.

3.11.2 The *Contractor* shall not load or permit to be loaded any part of the *Work* with a weight or force that will endanger the safety of the *Work*.

### **GC 3.12 CUTTING AND REMEDIAL WORK**

- 3.12.1 The *Contractor* shall perform the cutting and remedial work required to make the affected parts of the *Work* come together properly.
- 3.12.2 The *Contractor* shall co-ordinate the *Work* to ensure that the cutting and remedial work is kept to a minimum.
- 3.12.3 Should the *Owner*, the *Consultant*, other contractors or anyone employed by them be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER’S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 3.12.4 Cutting and remedial work shall be performed by specialists familiar with the *Products* affected and shall be performed in a manner to neither damage nor endanger the *Work*.

### **GC 3.13 CLEANUP**

- 3.13.1 The *Contractor* shall maintain the *Work* in a safe and tidy condition and free from the accumulation of waste products and debris, other than that caused by the *Owner*, other contractors or their employees.
- 3.13.2 Before applying for *Substantial Performance of the Work* as provided in GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK, the *Contractor* shall remove waste products and debris, other than that resulting from the work of the *Owner*, other contractors or their employees, and shall leave the *Place of the Work* clean and suitable for use or occupancy by the *Owner*. The *Contractor* shall remove products, tools, *Construction Equipment*, and *Temporary Work* not required for the performance of the remaining work.
- 3.13.3 Prior to application for the final payment, the *Contractor* shall remove any remaining products, tools, *Construction Equipment*, *Temporary Work*, and waste products and debris, other than those resulting from the work of the *Owner*, other contractors or their employees.

## **PART 4 ALLOWANCES**

### **GC 4.1 CASH ALLOWANCES**

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of work or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, the *Contractor* shall be compensated for the excess incurred and substantiated plus an amount for overhead and profit on the excess as set out in the *Contract Documents*. Where the actual cost of the *Work* under any cash allowance is less than the amount of the allowance, the *Owner* shall be credited for the unexpended portion of the cash allowance, but not for the *Contractor's* overhead and profit on such amount. Multiple cash allowances shall not be combined for the purpose of calculating the foregoing.
- 4.1.5 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the amount of each cash allowance and the actual cost of the work under that cash allowance.
- 4.1.6 The value of the work performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the *Consultant* and *Owner* must authorize ordering of items called for under cash allowances to avoid delaying the progress of the *Work*.

### **GC 4.2 CONTINGENCY ALLOWANCE**

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER’S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

## PART 5 PAYMENT

### GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

### GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement - PAYMENT may be made monthly as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 As of the last day of the payment period, the amount claimed shall be:
1. the value of *Unit Price* work performed, being the sum of the products of each *Unit Price* stated in the *Schedule of Prices* multiplied by the appropriate actual quantity of each *Unit Price* item that is incorporated in or made necessary by the *Work*; plus
  2. the value of lump sum work performed, proportionate to the amount of the lump sum item, plus
  3. the value of *Products* delivered to the *Place of the Work* .
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the lump sum items of work, aggregating the total amount of each lump sum item, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values for lump sum items of work shall be made out in such form and supported by such evidence as the *Consultant* may reasonably direct and when accepted by the *Consultant*, shall be used as the basis for applications for payment for lump sum items, unless it is found to be in error.
- 5.2.6 The *Contractor* shall include with each application for payment:
1. a statement based on the schedule of values for the lump sum items of work; and
  2. quantity measurements and other evidence as requested by the *Consultant* for each *Unit Price* item.
- 5.2.7 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

### GC 5.3 PROGRESS PAYMENT

- 5.3.1 After receipt by the *Consultant* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 - APPLICATIONS FOR PROGRESS PAYMENT:
- .1 the *Consultant* will promptly inform the *Owner* of the date of receipt of the *Contractor's* application for payment,
  - .2 the *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* amends the application, the *Consultant* will promptly advise the *Contractor* in writing giving reasons for the amendment,
  - .3 the *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement - PAYMENT on or before 20 calendar days after the later of:
    - receipt by the *Consultant* of the application for payment, or
    - the last day of the monthly payment period for which the application for payment is made.
- 5.3.2 Where the basis of payment for an item is by *Unit Price*, quantities in progress payments shall be considered approximate until all work required by that *Unit Price* item is complete.

#### **GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK**

- 5.4.1 When the *Contractor* considers that the *Work* is substantially performed, or if permitted by the lien legislation applicable to the *Place of the Work* a designated portion thereof which the *Owner* agrees to accept separately is substantially performed, the *Contractor* shall, within one Working Day, deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for a review by the *Consultant* to establish *Substantial Performance of the Work* or substantial performance of the designated portion of the *Work*. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.
- 5.4.2 The *Consultant* will review the *Work* to verify the validity of the application and shall promptly, and in any event, no later than 20 calendar days after receipt of the *Contractor's* list and application:
- .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
  - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.3 Immediately following the issuance of the certificate of *Substantial Performance of the Work*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.

#### **GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK**

- 5.5.1 After the issuance of the certificate of *Substantial Performance of the Work*, the *Contractor* shall:
- .1 submit an application for payment of the holdback amount,
  - .2 submit CCDC 9A 'Statutory Declaration' to state that all accounts for labour, subcontracts, *Products*, *Construction Equipment*, and other indebtedness which may have been incurred by the *Contractor* in the *Substantial Performance of the Work* and for which the *Owner* might 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.
- 5.5.2 After the receipt of an application for payment from the *Contractor* and the statement as provided in paragraph 5.5.1, the *Consultant* will issue a certificate for payment of the holdback amount.
- 5.5.3 Where the holdback amount required by the applicable lien legislation has not been placed in a separate holdback account, the *Owner* shall, 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.5.4 In the common law jurisdictions, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable on the calendar day following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*. Where lien legislation does not exist or apply, the holdback amount shall be due and payable in accordance with other legislation, industry practice or provisions which may be agreed to between the parties. The *Owner* may retain out of the holdback amount any sums required by law to satisfy any liens against the *Work* or, if permitted by the lien legislation applicable to the *Place of the Work*, other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.
- 5.5.5 In the Province of Quebec, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable 30 calendar days after the issuance of the certificate. The *Owner* may retain out of the holdback amount any sums required to satisfy any legal hypothecs that have been taken, or could be taken, against the *Work* or other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.

#### **GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK**

- 5.6.1 In the common law jurisdictions, where legislation permits and where, upon application by the *Contractor*, the *Consultant* has certified that the work of a *Subcontractor* or *Supplier* has been performed prior to *Substantial Performance of the Work*, the *Owner* shall pay the *Contractor* the holdback amount retained for such subcontract work, or the *Products* supplied by such *Supplier*, on the first calendar day following the expiration of the holdback period for such work stipulated in the lien legislation applicable to the *Place of the Work*. The *Owner* may retain out of the holdback amount any sums required by law to satisfy any liens against the *Work* or, if permitted by the lien legislation applicable to the *Place of the Work*, other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.

- 5.6.2 In the Province of Quebec, where, upon application by the *Contractor*, the *Consultant* has certified that the work of a *Subcontractor* or *Supplier* has been performed prior to *Substantial Performance of the Work*, the *Owner* shall pay the *Contractor* the holdback amount retained for such subcontract work, or the *Products* supplied by such *Supplier*, no later than 30 calendar days after such certification by the *Consultant*. The *Owner* may retain out of the holdback amount any sums required to satisfy any legal hypothecs that have been taken, or could be taken, against the *Work* or other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.
- 5.6.3 Notwithstanding the provisions of the preceding paragraphs, and notwithstanding the wording of such certificates, the *Contractor* shall ensure that such subcontract work or *Products* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when such certificates were issued.

#### **GC 5.7 FINAL PAYMENT**

- 5.7.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.7.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and advise the *Contractor* in writing that the application is valid or give reasons why it is not valid.
- 5.7.3 When the *Consultant* finds the *Contractor's* application for final payment valid, the *Consultant* will promptly issue a final certificate for payment.
- 5.7.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 - WORKERS' COMPENSATION, and any lien legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement - PAYMENT.

#### **GC 5.8 WITHHOLDING OF PAYMENT**

- 5.8.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, there are items of work that cannot be performed, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such remaining work.

#### **GC 5.9 NON-CONFORMING WORK**

- 5.9.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

### **PART 6 CHANGES IN THE WORK**

#### **GC 6.1 OWNER'S RIGHT TO MAKE CHANGES**

- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
  - .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

#### **GC 6.2 CHANGE ORDER**

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present, in a form acceptable to the *Consultant*, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.

- 6.2.2 The method of adjustment or the amount of adjustment to the *Contract Price* presented by the *Contractor* may be one of or a combination of the following:
- .1 Change to the estimated quantities for *Unit Price* items listed in the *Schedule of Prices* that are applicable to the change in the *Work*;
  - .2 Lump sum quotation for the change in the *Work*;
  - .3 *Unit Price* quotation for the change in the *Work*;
  - .4 Cost of the *Contractor's* actual expenditures attributable to the change plus a fee for the *Contractor's* overhead and profit as agreed by the parties;
  - .5 Cost of the *Contractor's* actual savings attributable to the change.
- 6.2.3 When the *Owner* and *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the application for progress payment.

### GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.
- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- .1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
  - .2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
  - .3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following:
- .1 salaries, wages and benefits paid to personnel in the direct employ of the *Contractor* under a salary or wage schedule agreed upon by the *Owner* and the *Contractor*, or in the absence of such a schedule, actual salaries, wages and benefits paid under applicable bargaining agreement, and in the absence of a salary or wage schedule and bargaining agreement, actual salaries, wages and benefits paid by the *Contractor*, for personnel
    - (1) stationed at the *Contractor's* field office, in whatever capacity employed;
    - (2) engaged in expediting the production or transportation of material or equipment, at shops or on the road;
    - (3) engaged in the preparation or review of *Shop Drawings*, fabrication drawings, and coordination drawings; or
    - (4) engaged in the processing of changes in the *Work*.
  - .2 contributions, assessments or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan, insofar as such cost is based on wages, salaries or other remuneration paid to employees of the *Contractor* and included in the cost of the work as provided in paragraphs 6.3.7.1;
  - .3 travel and subsistence expenses of the *Contractor's* personnel described in paragraphs 6.3.7.1;
  - .4 all *Products* including cost of transportation thereof;
  - .5 materials, supplies, *Construction Equipment*, *Temporary Work*, and hand tools not owned by the workers, including transportation and maintenance thereof, which are consumed in the performance of the *Work*; and cost less salvage value on such items used but not consumed, which remain the property of the *Contractor*;
  - .6 all tools and *Construction Equipment*, exclusive of hand tools used in the performance of the *Work*, whether rented from or provided by the *Contractor* or others, including installation, minor repairs and replacements, dismantling, removal, transportation, and delivery cost thereof;
  - .7 all equipment and services required for the *Contractor's* field office;
  - .8 deposits lost;

- .9 the amounts of all subcontracts;
  - .10 quality assurance such as independent inspection and testing services;
  - .11 charges levied by authorities having jurisdiction at the *Place of the Work*;
  - .12 royalties, patent licence fees and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 - PATENT FEES;
  - .13 any adjustment in premiums for all bonds and insurance which the *Contractor* is required, by the *Contract Documents*, to purchase and maintain;
  - .14 any adjustment in taxes, other than *Value Added Taxes*, and duties for which the *Contractor* is liable;
  - .15 charges for long distance telephone and facsimile communications, courier services, expressage, and petty cash items incurred in relation to the performance of the *Work*;
  - .16 removal and disposal of waste products and debris; and
  - .17 safety measures and requirements.
- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the work attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof when requested.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the work attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the work performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for determination.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

#### **GC 6.4 CONCEALED OR UNKNOWN CONDITIONS**

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* which differ materially from those indicated in the *Contract Documents*; or
  - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Consultant*, with the *Owner's* approval, will issue appropriate instructions for a change in the *Work* as provided in GC 6.2 - CHANGE ORDER or GC 6.3 - CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will report the reasons for this finding to the *Owner* and the *Contractor* in writing.
- 6.4.4 If such concealed or unknown conditions relate to toxic and hazardous substances and materials, artifacts and fossils, or mould, the parties will be governed by the provisions of GC 9.2 - TOXIC AND HAZARDOUS SUBSTANCES AND MATERIALS, GC 9.3 - ARTIFACTS AND FOSSILS and GC 9.5 – MOULD.

## **GC 6.5 DELAYS**

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by an action or omission of the *Owner*, *Consultant* or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
  - .2 fire, unusual delay by common carriers or unavoidable casualties,
  - .3 abnormally adverse weather conditions, or
  - .4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*,
- then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, *Consultant* or anyone employed or engaged by them directly or indirectly.
- 6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.
- 6.5.5 If no schedule is made under paragraph 2.2.13 of GC 2.2 - ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

## **GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE**

- 6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.
- 6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:
- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
  - .2 keep such records as may be necessary to support the claim.
- 6.6.3 The party making the claim shall submit within a reasonable time to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based.
- 6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.
- 6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION.

## **GC 6.7 QUANTITY VARIATIONS**

- 6.7.1 The provisions of GC 6.7 - QUANTITY VARIATIONS apply to the estimated quantities identified in the *Schedule of Prices*, or where the estimated quantities have been amended by *Change Order*, the provisions apply to the amended estimated quantities.
- 6.7.2 The *Owner* or the *Contractor* may request an adjustment to a *Unit Price* contained in the *Schedule of Prices* provided the actual quantity of the *Unit Price* item in the *Schedule of Prices* exceeds or falls short of the estimated quantity by more than 15%.
- 6.7.3 Where the actual quantity exceeds the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.2 shall apply only to the quantity that exceeds 115% of the estimated quantity.
- 6.7.4 Where the actual quantity falls short of the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.2 shall apply to the actual quantity of the *Unit Price* item. The adjusted *Unit Price* shall not exceed a *Unit Price* that would cause the payment amount to exceed that derived from the original *Unit Price* and estimated quantity.
- 6.7.5 The party that intends to request for an adjustment to a *Unit Price* shall give timely *Notice in Writing* to the other party and to the *Consultant*.
- 6.7.6 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.
- 6.7.7 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION.

## **PART 7 DEFAULT NOTICE**

### **GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT**

- 7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.1.2 If the *Contractor* neglects to prosecute the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* that sufficient cause exists to justify such action, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor* *Notice in Writing* that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.
- 7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:
- .1 commences the correction of the default within the specified time, and
  - .2 provides the *Owner* with an acceptable schedule for such correction, and
  - .3 corrects the default in accordance with the *Contract* terms and with such schedule.
- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
  - .2 terminate the *Contractor's* right to continue with the *Work* in whole or in part or terminate the *Contract*.

- 7.1.5 If the *Owner* terminates the *Contractor's* right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense, and
  - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued, and
  - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant's* additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 - WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
  - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor's* work under GC 12.3 - WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor's* obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue after such termination of the *Contract*.

## **GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT**

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner's* insolvency, or if a receiver is appointed because of the *Owner's* insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* should be suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner's* contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*, or
  - .2 the *Consultant* fails to issue a certificate as provided in GC 5.3 - PROGRESS PAYMENT, or
  - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by arbitration or court, or
  - .4 the *Owner* violates the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER, confirms by written statement to the *Contractor* that sufficient cause exists.
- 7.2.4 The *Contractor's* *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

## **PART 8 DISPUTE RESOLUTION**

### **GC 8.1 AUTHORITY OF THE CONSULTANT**

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved in the first instance by findings of the *Consultant* as provided in GC 2.2 - ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions - DISPUTE RESOLUTION.
- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.2.3 to 8.2.8 of GC 8.2 - NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.3 - RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.

- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

## **GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION**

- 8.2.1 In accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
  - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.2.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 - ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.2.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.2.4 After a period of 10 *Working Days* following receipt of a responding party's *Notice in Writing* of reply under paragraph 8.2.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing.
- 8.2.5 If the dispute has not been resolved within 10 *Working Days* after the Project Mediator was requested under paragraph 8.2.4 or within such further period agreed by the parties, the Project Mediator shall terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.2.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.2.5, either party may refer the dispute to be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.2.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.2.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.2.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.
- 8.2.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.2.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.2.6 shall be
- .1 held in abeyance until
    - (1) *Substantial Performance of the Work*,
    - (2) the *Contract* has been terminated, or
    - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and
  - .2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.2.6.

## **GC 8.3 RETENTION OF RIGHTS**

- 8.3.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions - DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.

- 8.3.2 Nothing in Part 8 of the General Conditions - DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.2.6 of GC 8.2 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

## **PART 9 PROTECTION OF PERSONS AND PROPERTY**

### **GC 9.1 PROTECTION OF WORK AND PROPERTY**

- 9.1.1 The *Contractor* shall protect the *Work* and the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors in the *Contract Documents*;
  - .2 acts or omissions by the *Owner*, the *Consultant*, other contractors, their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property, or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.

### **GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES**

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
  - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substances exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless toxic or hazardous substances which were present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
  - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
  - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substances exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
  - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.
- 9.2.6 If the *Owner* and *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.

- 9.2.7 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
  - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
  - .3 extend the *Contract* time for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
  - .4 indemnify the *Contractor* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.8 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
  - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
  - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
  - .4 indemnify the *Owner* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions - Dispute Resolution. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

### **GC 9.3 ARTIFACTS AND FOSSILS**

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place or Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Consultant*, with the *Owner's* approval, will issue appropriate instructions for a change in the *Work* as provided in GC 6.2 - CHANGE ORDER or GC 6.3 CHANGE DIRECTIVE.

### **GC 9.4 CONSTRUCTION SAFETY**

- 9.4.1 Subject to paragraph 3.2.2.2 of GC 3.2 - CONSTRUCTION BY OWNER OR OTHER CONTRACTORS, the *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*.

### **GC 9.5 MOULD**

- 9.5.1 If the *Contractor* or *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing, and
  - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and
  - .3 if the *Owner* and *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and *Contractor*.
- 9.5.2 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor's* operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor's* own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
  - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
  - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
  - .4 indemnify the *Owner* as required by paragraph 12.1 of GC 21.1 - INDEMNIFICATION.

- 9.5.3 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor*'s operations under the *Contract*, the *Owner* shall promptly, at the *Owner*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
  - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
  - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
  - .4 indemnify the *Contractor* as required by paragraph 12.1.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have.

## **PART 10 GOVERNING REGULATIONS**

### **GC 10.1 TAXES AND DUTIES**

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement - CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in such included taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

### **GC 10.2 LAWS, NOTICES, PERMITS, AND FEES**

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.
- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will make the changes required to the *Contract Documents* as provided in GC 6.1 - OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; and fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

### GC 10.3 PATENT FEES

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor's* performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor's* performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention in executing anything for the purpose of the *Contract*, the model, plan or design of which was supplied to the *Contractor* as part of the *Contract Documents*.

### GC 10.4 WORKERS' COMPENSATION

- 10.4.1 Prior to commencing the *Work*, *Substantial Performance of the Work* and the issuance of the final certificate for payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation at the *Place of the Work*, including payments due thereunder.
- 10.4.2 At any time during the term of the *Contract*, when requested by the *Owner*, the *Contractor* shall provide such evidence of compliance by the *Contractor* and *Subcontractors*.

## PART 11 INSURANCE AND CONTRACT SECURITY

### GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 12.1 - INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the minimum requirements of which are specified in CCDC 41 – CCDC Insurance Requirements in effect at the time of bid closing except as hereinafter provided:
- 1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Substantial Performance of the Work*. Liability coverage shall be provided for completed operations hazards from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, on an ongoing basis for a period of 6 years following *Substantial Performance of the Work*.
  - 2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.
  - 3 Aircraft or Watercraft Liability Insurance when owned or non-owned aircraft or watercraft are used directly or indirectly in the performance of the *Work*
  - 4 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as Insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
    - (1) 10 calendar days after the date of *Substantial Performance of the Work*;
    - (2) on the commencement of use or occupancy of any part or section of *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*;
    - (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
  - 5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as Insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Substantial Performance of the Work*.
  - 6 The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
    - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;

- (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
- (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces, or another contractor, in accordance with the *Owner's* obligations under the provisions relating to construction by *Owner* or other contractors, shall pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.

.7 *Contractors' Equipment Insurance* from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.

- 11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.
- 11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.
- 11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.
- 11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.
- 11.1.6 If a revised version of CCDC 41 – INSURANCE REQUIREMENTS is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor's* insurance policy becoming due for renewal, and record any agreement in a *Change Order*.
- 11.1.7 If a revised version of CCDC 41 – INSURANCE REQUIREMENTS is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.
- 11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41 – INSURANCE REQUIREMENTS.

## **GC 11.2 CONTRACT SECURITY**

- 11.2.1 The *Contractor* shall, prior to commencement of the *Work* or within the specified time, provide to the *Owner* any *Contract* security specified in the *Contract Documents*.
- 11.2.2 If the *Contract Documents* require surety bonds to be provided, such bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in the province or territory 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.

## **PART 12 INDEMNIFICATION, WAIVER OF CLAIMS AND WARRANTY**

### **GC 12.1 INDEMNIFICATION**

- 12.1.1 Without restricting the *Owner's* obligation to indemnify as described in paragraphs 12.1.4 and 12.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:
  - .1 caused by:
    - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose acts or omissions that party is liable, or
    - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and

- .2 made by *Notice in Writing* within a period of 6 years from the date of *Substantial Performance of the Work* as set out in the certificate of *Substantial Performance of the Work* issued pursuant to paragraph 5.4.2.2 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK or within such shorter period as may be prescribed by any limitation statute of the province or territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.

- 12.1.2 The obligation of either party to indemnify as set forth in paragraph 12.1.1 shall be limited as follows:
  - .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the general liability insurance limit for one occurrence as referred to in CCDC 41 in effect at the time of bid closing.
  - .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
  - .3 In respect to claims by third parties for direct loss resulting from bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, the obligation to indemnify is without limit. In respect to all other claims for indemnity as a result of claims advanced by third parties, the limits of indemnity set forth in paragraphs 12.1.2.1 and 12.1.2.2 shall apply.
- 12.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 12.1.1 and 12.1.2 shall be inclusive of interest and all legal costs.
- 12.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.
- 12.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:
  - .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
  - .2 arising out of the *Contractor's* performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.
- 12.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:
  - .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based became known;
  - .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

## GC 12.2 WAIVER OF CLAIMS

- 12.2.1 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* arising from the *Contractor's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:
  - .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
  - .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
  - .3 claims for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 12.1.4 or 12.1.5 of GC 12.1 – INDEMNIFICATION; and
  - .4 claims resulting from acts or omissions which occur after the date of *Substantial Performance of the Work*.
- 12.2.2 The *Contractor* waives and releases the *Owner* from all claims referenced in paragraph 12.2.1.4 except for those referred in paragraphs 12.2.1.2 and 12.2.1.3 of GC 12.1 – INDEMNIFICATION and claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the date of *Substantial Performance of the Work*.

- 12.2.3 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* arising from the *Owner's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:
- .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
  - .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
  - .3 claims for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 12.1.4 of GC 12.1 - INDEMNIFICATION;
  - .4 damages arising from the *Contractor's* actions which result in substantial defects or deficiencies in the *Work*. "Substantial defects or deficiencies" mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
  - .5 claims arising pursuant to GC 12.3 - WARRANTY; and
  - .6 claims arising from acts or omissions which occur after the date of *Substantial Performance of the Work*.
- 12.2.4 The *Owner* waives and releases the *Contractor* from all claims referred to in paragraph 12.2.3.4 except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the date of *Substantial Performance of the Work* should any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, within such shorter period as may be prescribed by:
- .1 any limitation statute of the Province or Territory of the *Place of the Work*; or
  - .2 if the *Place of the Work* is the Province of Quebec, then Article 2118 of the Civil Code of Quebec.
- 12.2.5 The *Owner* waives and releases the *Contractor* from all claims referenced in paragraph 12.2.3.6 except for those referred in paragraph 12.2.3.2, 12.2.3.3 and those arising under GC 12.3 – WARRANTY and claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the date of *Substantial Performance of the Work*.
- 12.2.6 "Notice in Writing of claim" as provided for in GC 12.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 12.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of the intention to claim;
  - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
  - .3 a statement of the estimated quantum of the claim.
- 12.2.7 The party giving "Notice in Writing of claim" as provided for in GC 12.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.
- 12.2.8 Where the event or series of events giving rise to a claim made under paragraphs 12.2.1 or 12.2.3 has a continuing effect, the detailed account submitted under paragraph 12.2.7 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 12.2.9 If a *Notice in Writing* of claim pursuant to paragraph 12.2.1.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.3.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*. If a *Notice in Writing* of claim pursuant to paragraph 12.2.3.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.1.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*.

## GC 12.3 WARRANTY

- 12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date of *Substantial Performance of the Work*.
- 12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.

- 12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.
- 12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor's* expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.
- 12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.
- 12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor's* responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.

## Teslin Tlingit Council TTC S-39B1 Access Road Construction

### SUPPLEMENT TO THE GENERAL CONDITIONS

---

This Supplement to the General Conditions shall be read in conjunction with the Contract (CCDC 4 – Unit Price Contract, 2011). If there is a conflict or inconsistency between the terms of the Contract and this supplement, the terms of this supplement supersedes the information contained in the Contract.

#### 1) Change to GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

Paragraphs 10.2.8, 10.2.9, and 10.2.10 added.

##### Add Paragraph “10.2.8

In addition to other laws of the *Place of the Work*, the Teslin Tlingit Land and Resources Act and Regulations shall govern the *Work*.”

##### Add Paragraph “10.2.9

The *Owner* shall obtain a Development Permit from Teslin Tlingit Council. The *Contractor* shall be responsible for adhering to any conditions on the development permit.”

##### Add Paragraph “10.2.10

The *Contractor* shall follow the COVID-19 Provisions of Teslin Tlingit Council and the recommendations of Yukon’s Chief Medical Officer of Health (CMOH) throughout the execution of the *Work*. If requested by the *Owner*, the *Contractor* shall submit a COVID-19 Precautions Plan to be approved by the *Owner* prior to commencing the *Work*.”

End of Supplement to the General Conditions

**SPECIFICATIONS**

Section Number	Section Title	No. of Pages
01 11 00	Summary of Work	2
01 29 00	Payment Procedures	3
01 31 19	Project Meetings	2
01 33 00	Submittal Procedures	2
01 35 00.06	Special Procedures for Traffic Control	2
01 35 43	Environmental Procedures	5
01 52 00	Construction Facilities	2
31 11 00	Grubbing	2
31 14 13	Soil Stripping, Stockpiling and Placing	2
31 22 13	Rough Grading	2
31 32 19.01	Geotextiles	2
31 37 00	Rip-Rap	2
32 11 23	Aggregate Surface and Base Course	3
32 92 19.16	Hydraulic Seeding	3
33 42 13	Pipe Culverts	3

**DRAWINGS**

Drawing Set	No. of pages
Project Drawings	3

**END OF SECTION**

**Part 1            General**

**1.1                WORK COVERED BY CONTRACT DOCUMENTS**

- .1        Work of this Contract comprises general construction of a gravel road, located at Alaska Highway km 1252.8; and further identified as the TTC S-39B1 Access Road.

**1.2                CONTRACT METHOD**

- .1        Construct Work under unit price contract.

**1.3                QUALITY CONTROL AND QUALITY ASSURANCE**

- .1        As outlined in the Contract Documents, the Contractor will be responsible for Quality Control.
- .2        As outlined in the Contract Documents, the Owner will pay for compaction testing and inspection of the Work by a Geotechnical Engineer to ensure general conformity with the Contract Documents.
- .3        The Owner reserves the right to charge the Contractor the cost of additional compaction testing if there are repeated compaction testing failures attributed to the Contractor's workmanship.

**1.4                SITE SURVEY**

- .1        the Consultant will be responsible for completing the following survey:
  - .1        Survey layout prior to stripping
  - .2        Final survey following completion of Work
  - .3        Quantity surveys to determine quantities for progress payments
- .2        Survey layout includes placing work stakes to include grubbing limits, slope stakes, second grade stakes, final grade stakes, culvert stakes, and all other work stakes necessary to complete the work to the lines and grades as indicated in the drawings.
- .3        The Contractor shall give the Consultant at least 48 hours notice in writing before requiring survey layout on any portion of the work.
- .4        The Contractor shall, before commencing Work, satisfy themselves as to the meaning and correctness of all stakes and markers, and shall be held liable for their preservation including protecting them from being disturbed by the public or other contractors. The Owner reserves the right to charge the Contractor the cost of re-staking due to actions or work activities of the Contractor.
- .5        The Contractor shall furnish the Consultant's surveyor with reasonable help in setting out the work stakes and taking measurements for payment. The personnel provided by the Contractor shall be available to the Consultant's surveyor during the completion of the survey.
- .6        If the Contractor does not agree with the quantity surveys completed by the Owner's surveyor, the Contractor can complete their own survey to work with the Consultant in establishing quantities for payments as described in the contract documents.

## **1.5 WORK BY OTHERS**

- .1 Co-operate with other Contractors in carrying out their respective works and carry out instructions from Consultant.
- .2 Co-ordinate work with that of other Contractors. If any part of work under this Contract depends for its proper execution or result upon work of another Contractor, report promptly to Consultant, in writing, any defects which may interfere with proper execution of Work.
- .3 Activities undertaken by others prior to start of Work of this Contract include:
  - .1 Tree falling and stockpiling.
  - .2 Removal of brush.
- .1 Activities undertaken by others during of after Work of this Contract include:
  - .1 Installation of power and communications infrastructure.
  - .2 Construction of sub-divided lot accesses beyond what is included in the Work.

## **1.6 CONTRACTOR USE OF PREMISES**

- .1 Limit use of premises for Work to allow:
  - .1 Work by other contractors.
  - .2 Access to lots by subdivision lease holders and their contractors.
- .2 Co-ordinate use of premises under direction of Consultant.
- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

## **1.7 DOCUMENTS REQUIRED**

- .1 Maintain at job site, one copy each document as follows:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Change Orders.
  - .5 Other Modifications to Contract.
  - .6 Field Test Reports.
  - .7 Copy of Approved Work Schedule.
  - .8 Health and Safety Plan and Other Safety-Related Documents.
  - .9 Other documents as specified.

**END OF SECTION**

## **Part 1 GENERAL**

### **1.1 Summary**

- .1 Payments will be made on the basis of: the Lump Sum prices and the Unit Prices in the Bid.
- .2 The method of measurement of quantities for payment and the basis for payment will be in accordance with the items of this Section. All measurements will be done by the Consultant using generally accepted methods.
- .3 All gravel and fill material will be supplied by the Owner at no cost to the Contractor. The Contractor will be paid for equipment and labour necessary to move the material from the quarry.
- .4 The prices for the supply of materials by the Contractor shall be full compensation of shop drawing submittals, approvals, factory acceptance tests, supplying, delivering, site storage, field acceptance testing, commissioning, operating manuals, operator training, warranty etc. together with all other work subsidiary and incidental thereto for which separate payment is not provided elsewhere. The Measurement and Payment of these materials are described in Part 2.

## **Part 2 MEASUREMENT AND PAYMENT**

### **2.1 Item 1.1 – Mobilization and Demobilization**

- .1 **Measurement:** Per work completed
- .2 **Payment:** Lump Sum price bid. 60% of the priced bid will be paid on first progress claim when the work is proceeding on site on a full-time basis and the remaining 40% will be paid on last progress claim when Substantial Performance is issued, the site clean and handed over to the Owner.
- .3 **Work Includes:** Mobilization of crew and all required equipment to and from the site; insurance and bonding; repair and replacement costs for all equipment; supply and erect signs and markings to delineate the site; traffic control and diversions; all other initial site work required for setting up and thereafter move all offices, signs, temporary fencing and other equipment on completion; clean and restore all Work.

### **2.2 Item 2 – Grubbing and Stripping**

- .1 **Measurement:** Per square metre.
- .2 **Payment:** Paid per square metre grubbed and stripped.
- .3 **Work Includes:** All work, equipment, and labour involved in grubbing and stripping to specified depth. Work includes disposing of grubbed material offsite and stockpiling stripped material onsite.

### **2.3 Item 3 – Subgrade preparation**

- .1 **Measurement:** Per square metre.
- .2 **Payment:** Per square metre graded and compacted.

- .3 **Work Includes:** All work, equipment, and labour involved in subgrade preparation to specifications.
  
- 2.4 Item 4 – 300 mm base gravels
  - .1 **Measurement:** Per cubic metre as measured after compaction.
  - .2 **Payment:** Paid per cubic metre of base gravel.
  - .3 **Work Includes:** Supply and placement of 300 mm base gravel, grading, compaction. All work, equipment, and labour involved in proper placement of 300 mm base gravels.
  
- 2.5 Item 5 – 150 mm road gravels
  - .1 **Measurement:** Per cubic metre as measured after compaction.
  - .2 **Payment:** Paid per cubic metre of road gravel.
  - .3 **Work Includes:** Supply and placement of 150 mm road gravel, grading, compaction. All work, equipment, and labour involved in proper placement of 150 mm road gravels.
  
- 2.6 Item 6 – Ditching
  - .1 **Measurement:** Per linear metre.
  - .2 **Payment:** Paid per linear metre of ditching.
  - .3 **Work Includes:** All work, equipment, and labour involved in ditch grading to specifications.
  
- 2.7 Item 7 – Culverts Up to 40 ft (12m)
  - .1 **Measurement:** Per culvert.
  - .2 **Payment:** Paid per culvert installed.
  - .3 **Work Includes:** Supply and placement of geotextile, bedding material and culverts including watertight collars at pipe connections, and rip rap as specified. All work, equipment, and labour involved in proper placement of the above.
  
- 2.8 Item 8 – Culverts Between 40 ft (12m) and 60 ft (18m)
  - .1 **Measurement:** Per culvert.
  - .2 **Payment:** Paid per culvert installed.
  - .3 **Work Includes:** Supply and placement of geotextile, bedding material and culverts including watertight collars at pipe connections, and rip rap as specified. All work, equipment, and labour involved in proper placement of the above.
  
- 2.9 Item 9 – Spreading stockpiled stripped material
  - .1 **Measurement:** Per square metre.
  - .2 **Payment:** Paid per square metre of topsoil spread.
  - .3 **Work Includes:** Placement and compaction of stockpiled topsoil to specifications. All work, equipment, and labour involved in proper placement of topsoil.

- 2.10**           Item 10 – Hydraulic seeding
- .1       **Measurement:** Per square metre.
  - .2       **Payment:** Paid per square metre seeded.
  - .3       **Work Includes:** All work, equipment, and labour involved in seeding to specifications.
- 2.11**           Item 3 – Stop sign
- .1       **Measurement:** Unit price bid.
  - .2       **Payment:** Unit price bid.
  - .3       **Work Includes:** All work, equipment, and labour involved in supply and installation to specifications.

**END OF SECTION**

**Part 1            General**

**1.1                ADMINISTRATIVE**

- .1        The Consultant will be responsible for scheduling and administer project meetings throughout the progress of the work and will include the following:
  - .1        Prepare agenda for meetings.
  - .2        Distribute written notice of each meeting four days in advance of meeting date.
  - .3        Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
  - .4        Reproduce and distribute copies of minutes within three days after meetings and transmit to meeting participants.
  
- .2        Contractor shall:
  - .1        Provide physical space and make arrangements for meetings.
  - .2        Preside at meetings.
  - .3        Representative of Contractor attending meetings will be qualified and authorized to act on behalf of Contractor.

**1.2                PRECONSTRUCTION MEETING**

- .1        Within 15 days after award of Contract, the Consultant shall schedule an onsite preconstruction meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2        Owner representative, Consultant, Contractor, major Subcontractors, and field inspectors will be in attendance.
- .3        Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .4        Agenda to include:
  - .1        Appointment of official representative of participants in the Work.
  - .2        Schedule of Work.
  - .3        Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences.
  - .4        Site security.
  - .5        Proposed changes, change orders, procedures, approvals required, administrative requirements.
  - .6        Monthly progress claims, administrative procedures, photographs, hold backs.
  - .7        Appointment of inspection and testing agencies or firms.
  - .8        Insurances.

**1.3                    PROGRESS MEETINGS**

- .1        During course of Work and one week prior to project completion, schedule progress meetings every two weeks.
- .2        Contractor, major Subcontractors involved in Work, Consultant, Owner representative are to be in attendance.
- .3        Notify parties minimum 4 days prior to meetings.
- .4        Record minutes of meetings and circulate to attending parties and affected parties not in attendance within 3 days after meeting.
- .5        Agenda to include the following:
  - .1        Review, approval of minutes of previous meeting.
  - .2        Review of Work progress since previous meeting.
  - .3        Field observations, problems, conflicts.
  - .4        Problems which impede construction schedule.
  - .5        Corrective measures and procedures to regain projected schedule.
  - .6        Revision to construction schedule.
  - .7        Progress schedule, during following work period.
  - .8        Maintenance of quality standards.
  - .9        Review proposed changes for affect on construction schedule and on completion date.
  - .10      Other business.

**END OF SECTION**

**Part 1            General**

**1.1                ADMINISTRATIVE**

- .1        Submit to Consultant submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2        Do not proceed with Work affected by submittal until review is complete.
- .3        Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4        Where items or information is not produced in SI Metric units converted values are acceptable.
- .5        Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .6        Notify Consultant, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7        Verify field measurements and affected adjacent Work are co-ordinated.
- .8        Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submittals.
- .9        Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant review.
- .10      Keep one reviewed copy of each submission on site.

**1.2                SHOP DRAWINGS AND PRODUCT DATA**

- .1        Refer to CCDC 4 GC 3.10.
- .2        The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .3        Allow 3 days for Consultant's review of each submission.
- .4        Adjustments made on shop drawings by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.
- .5        Make changes in shop drawings as Consultant may require, consistent with Contract Documents. When resubmitting, notify Consultant in writing of revisions other than those requested.
- .6        The review of shop drawings by Consultant is for sole purpose of ascertaining conformance with general concept.

- .1 This review shall not mean that Consultant approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.

### **1.3 PHOTOGRAPHIC DOCUMENTATION**

- .1 Submit electronic copy of colour digital photography in jpg format, standard resolution monthly with progress statement and as directed by Consultant.
- .2 Project identification: name and number of project and date of exposure indicated.
- .3 Number of viewpoints: 2 locations for each portion of the Work where progress is being claimed.
- .4 Frequency of photographic documentation: weekly and as directed by Consultant.

### **1.4 CERTIFICATES AND TRANSCRIPTS**

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

**END OF SECTION**

**Part 1           General**

**1.1           PROTECTION OF PUBLIC TRAFFIC**

- .1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
- .2 When working on travelled way:
  - .1 Place equipment in position to minimize interference and hazard to travelling public.
  - .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
  - .3 Do not leave equipment on travelled way overnight.
- .3 Close lanes of road only after receipt of written approval from Consultant.
  - .1 Before re-routing traffic erect suitable signs and devices to ensure the public's safety.
- .4 Keep travelled way graded, free from potholes and of sufficient width for required number of lanes of traffic.
- .5 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, except where other means of road access exist that meet approval of Consultant.

**1.2           INFORMATIONAL AND WARNING DEVICES**

- .1 Provide and maintain signs, and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices.
- .3 Meet with Consultant prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Consultant.
- .4 Continually maintain traffic control devices in use:
  - .1 Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.

**1.3           CONTROL OF PUBLIC TRAFFIC**

- .1 Provide competent flag personnel, trained and properly equipped to manage traffic for situations as follows:
  - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.

- .2 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
- .3 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.

#### **1.4 OPERATIONAL REQUIREMENTS**

- .1 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified and approved by Consultant to protect and control public traffic.
- .2 Provide access and temporary relocated roads as necessary to maintain traffic.
- .3 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .4 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.
- .5 Dust control: adequate to ensure safe operation at all times.
- .6 Provide snow removal during period of Work.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES**

- .1    Definitions:
  - .1    Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.
  - .2    Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.
- .2    Reference Standards:
  - 1.    Yukon Environment Act - Contaminated Sites Regulation, OIC 2002/171 (CSR)
  - 2.    Yukon Waters Act, Waters Regulation, OIC 2003/58
  - 3.    U.S. Environmental Protection Agency (EPA)/Office of Water
    - .1    EPA 832/R-92-005-[92], Storm Water Management for Construction Activities, Chapter 3.
    - .2    EPA General Construction Permit (GCP) [2012].

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

- .1    Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2    Product Data:
  - .1    Provide on site copies of WHMIS MSDS sheets for fuel and other products used.
- .3    Before commencing construction activities or delivery of materials to site, submit Environmental Protection Plan for review and approval by Consultant.
- .4    Environmental Protection Plan must include comprehensive overview of known or potential environmental issues to be addressed during construction.
- .5    Address topics at level of detail commensurate with environmental issue and required construction tasks.
- .6    Include in Environmental Protection Plan:
  - .1    Name[s] of person[s] responsible for ensuring adherence to Environmental Protection Plan.
  - .2    Descriptions of environmental protection personnel training program.
  - .3    Erosion and sediment control plan identifying type and location of erosion and sediment controls to be provided including monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Territorial, and Municipal laws and regulations.
  - .4    Drawings indicating locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures,

- sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on site.
- .5 Traffic Control Plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather.
    - .1 Plans to include measures to minimize amount of material transported onto paved public roads by vehicles or runoff.
  - .6 Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use.
    - .1 Plan to include measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.
  - .7 Spill Control Plan to include procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
  - .8 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
  - .9 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.
  - .10 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Territorial, and Municipal laws and regulations for storage and handling of these materials.
  - .11 Waste Water Management Plan identifying methods and procedures for management of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines.
  - .12 Historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands.
  - .13 Pesticide treatment plan to be included and updated, as required.

### **1.3 Oil and Fuel Management**

- .1 The Contractor shall prepare and submit an Oil/Fuel Management and Spill Contingency Plan including details of storage, dispensing procedures, disposal of used oils and containment and treatment plan for contaminated soils to the Consultant for approval a minimum of 5 business days prior to start of construction.
- .2 The Contractor is responsible for testing, clean up and treatment of all oil/fuel spills and leaks that may occur. Clean up is to be undertaken promptly to minimize contaminant transport. The contractor is advised that any soil that is deemed to be potentially contaminated must undergo confirmatory testing by a qualified third party and be transported and treated at an approved facility in accordance with the Yukon Contaminated Sites Regulation.
- .3 Particular attention shall be given to ensuring that service and fueling areas have adequate spill prevention controls, containment structures and spill kit materials. The Consultant may complete an on site inspection to ensure the Contractor's approved plan

is being followed. If deficiencies are observed, the Consultant may stop work until deficient items are rectified by the Contractor.

#### **1.4 Other Environmental Conditions**

- .1 The Contractor shall ensure that their personnel, and any subcontractor personnel performing the work are fully aware of the requirements to be met under the laws, regulations, permits and licensing conditions which apply to the work being undertaken.
- .2 The Contractor shall conduct operations in such a manner that construction equipment does not leave confines of flagged or designated right-of-way limits without prior approval of the Consultant.
- .3 Do not operate heavy construction equipment in streams, wetland or muskeg areas without prior written approval of the Consultant.
- .4 Be alert to archaeological or paleontological remains and materials which may be uncovered that may be of significance in recording the historic and prehistoric past. If archaeological or paleontological remains are uncovered, immediately halt operations in the discovery location and notify the Consultant. Make every effort to preserve the archaeological or paleontological remains intact in their original positions in relation to any other materials and to the enclosing soil.
- .5 Do not burn waste oil or solid products unless authorized in writing by the appropriate authority.

#### **1.5 Enforcement**

- .1 The Contractor shall be responsible for any cost or expense incurred by the Owner taking corrective action following an unsatisfactory environmental condition on site. The Contractor will not be relieved of any responsibility because of any act, or failure to act on the part of the Consultant.
- .2 If the Contractor fails to provide environmental compliance or fails to correct forthwith an unsatisfactory condition upon being so advised, the Consultant may suspend the work immediately. The Contractor must not resume work until the Consultant is satisfied that the situation has been rectified.

#### **1.6 FIRES**

- .1 Fires and burning of rubbish on site is not permitted.
- .2 Where fires or burning is permitted, prevent staining or smoke damage to structures, materials or vegetation which is to be preserved.
  - .1 Restore, clean and return to new condition stained or damaged work.
- .3 Provide supervision, attendance and fire protection measures as directed.

#### **1.7 DRAINAGE**

- .1 Develop and submit Erosion and Sediment Control Plan (ESC) identifying type and location of erosion and sediment controls provided. Plan to include monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.

- .2 Provide temporary drainage and pumping required to keep excavations and site free from water.
- .3 Ensure pumped water into waterways, sewer or drainage systems is free of suspended materials.
- .4 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

#### **1.8 SITE CLEARING AND PLANT PROTECTION**

- .1 Protect trees and plants on site and adjacent properties as necessary.
- .2 Protect roots of trees to dripline during excavation and site grading to prevent disturbance or damage.
  - .1 Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .3 Minimize stripping of topsoil and vegetation.

#### **1.9 WORK ADJACENT TO WATERWAYS**

- .1 Construction equipment to be operated on land only.
- .2 Use waterway beds for borrow material only after written receipt of approval from Consultant.
- .3 Waterways to be kept free of excavated fill, waste material and debris.
- .4 Design and construct temporary crossings to minimize erosion to waterways.
- .5 Do not skid logs or construction materials across waterways.

#### **1.10 POLLUTION CONTROL**

- .1 Maintain temporary erosion and pollution control features installed under this Contract.
- .2 Control emissions from equipment and plant in accordance with local authorities' emission requirements.
- .3 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

#### **1.11 HISTORICAL/ARCHAEOLOGICAL CONTROL**

- .1 Provide historical, archaeological, cultural resources, biological resources, and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on project site: and identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in area are discovered during construction.
- .2 Plan: include methods to assure protection of known or discovered resources and identify lines of communication between Contractor personnel and Consultant.

**1.12 NOTIFICATION**

- .1 Consultant will notify Contractor in writing of observed noncompliance with Federal, Territorial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.
- .2 Contractor: after receipt of such notice, inform Consultant of proposed corrective action and take such action for approval by Consultant.
  - .1 Take action only after receipt of written approval by Consultant.
- .3 Consultant will issue stop order of work until satisfactory corrective action has been taken.
- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

**Part 2 Execution**

**2.1 CLEANING**

- .1 See CCDC 4 – GC 3.13.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES**

- .1            Canadian Construction Documents Committee (CCDC)
  - .1            CCDC 4-2011, Unit Price Contract.

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

- .1            Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

**INSTALLATION AND REMOVAL**

- .2            Prepare site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used, avenues of ingress/egress to fenced area and details of fence installation.
- .3            Identify areas which have to be gravelled to prevent tracking of mud.
- .4            Indicate use of supplemental or other staging area.
- .5            Provide construction facilities in order to execute work expeditiously.
- .6            Remove from site all such work after use.

**1.3                EQUIPMENT, TOOL AND MATERIALS STORAGE**

- .1            Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2            Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

**1.4                SANITARY FACILITIES**

- .1            Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2            Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

**1.5                PROTECTION AND MAINTENANCE OF TRAFFIC**

- .1            See Section 01 35 00.06 – Special Procedures for Traffic Control.

**1.6                CLEAN-UP**

- .1            See CCDC 4 – GC 3.13.
- .2            Clean dirt or mud tracked onto paved or surfaced roadways.

**Part 2 Execution**

**2.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL**

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES**

- .1 U.S. Environmental Protection Agency (EPA)/Office of Water
  - .1 EPA 832R92005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

**1.2 DEFINITIONS**

- .1 Grubbing consists of excavation and disposal of stumps, roots, boulders, and rock fragments of specified size to not less than specified depth below existing ground surface.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Soil Material for Fill:
  - .1 Excavated soil material: free of debris, roots, wood, scrap material, vegetable matter, refuse, soft unsound particles, deleterious, or objectionable materials.
  - .2 Remove and store soil material for reuse as cover in grassed areas.

**Part 3 Execution**

**3.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL**

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties, according to sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

**3.2 PREPARATION**

- .1 Locate and protect utility lines: preserve in operating condition active utilities traversing site.
  - .1 Notify Consultant immediately of damage to or when unknown existing utility line[s] are encountered.

**3.3 GRUBBING**

- .1 Remove and dispose of roots larger than 7.5 cm in diameter, matted roots, and designated stumps from indicated grubbing areas.

- .2 Grub out stumps and roots to not less than 200 mm below ground surface.
- .3 Grub out visible rock fragments and boulders, greater than 300 mm in greatest dimension, but less than 0.25 m<sup>3</sup>.

**3.4 REMOVAL AND DISPOSAL**

- .1 Remove grubbed materials off site to suitable disposal area.

**3.5 CLEANING**

- .1 On completion and verification of performance, remove surplus materials, excess materials, and rubbish.

**END OF SECTION**

**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1            Section 31 22 13 – Rough Grading.

**Part 2            Execution**

**2.1                TEMPORARY EROSION AND SEDIMENTATION CONTROL**

- .1            Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties, according to sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
- .2            Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3            Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

**2.2                STRIPPING OF TOPSOIL**

- .1            Ensure that procedures are conducted in accordance with applicable Territorial requirements.
- .2            Remove topsoil before construction procedures commence to avoid compaction of topsoil.
- .3            Handle topsoil only when it is dry and warm.
- .4            Strip topsoil to depths as indicated by Consultant based on field conditions.
  - .1            Avoid mixing topsoil with subsoil.
- .5            Pile topsoil in berms in locations as directed by Consultant.
  - .1            Stockpile height not to exceed 3 m.
- .6            Dispose of unused topsoil off-site in suitable location.
- .7            Protect stockpiles from contamination and compaction.

**2.3                PLACING OF TOPSOIL**

- .1            Place topsoil only after Consultant has accepted subgrade.
- .2            Spread topsoil during dry conditions by mechanical hoe in uniform layers not exceeding 200 mm, over unfrozen subgrade free of standing water.
- .3            Place topsoil to 150 mm depth, as measured after compaction, and grade to maintain positive drainage away from roadways and to avoid ponding.
- .4            If stockpiled material is insufficient to cover all grassed areas to specified depth, Consultant to specify depth and areas for topsoil placement.

- .5 Establish traffic patterns for equipment to prevent driving on topsoil after it has been spread to avoid compaction.
- .6 Cultivate soil following spreading procedures.

**2.4 CLEANING**

- .1 On completion and verification of performance of installation, remove surplus materials, excess materials, and rubbish.

**END OF SECTION**

**Part 1           General**

**1.1               RELATED REQUIREMENTS**

- .1       Section 31 14 13 – Soil Stripping and Stockpiling.
- .2       Section 01 35 43 – Environmental Procedures.

**1.2               REFERENCES**

- .1       ASTM International
  - .1       ASTM D698-[07e1], Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (600 kN-m/m<sup>3</sup> ).
- .2       Underwriters' Laboratories of Canada (ULC)

**Part 2           Products**

**2.1               MATERIALS**

- .1       Excavated or graded material existing on site suitable to use as fill for grading work if approved by Consultant.

**Part 3           Execution**

**3.1               GRADING**

- .1       Rough grade to levels, profiles, and contours allowing for surface treatment as indicated.
- .2       Rough grade to following depths below finish grades:
  - .1       150 mm for grassed areas.
  - .2       450 mm for gravel paving.
- .3       Grade ditches to depth to ensure positive drainage.
- .4       Prior to placing fill over existing ground, scarify surface to depth of 150 mm minimum. Maintain fill and existing surface at approximately same moisture content to facilitate bonding.
- .5       Compact filled and disturbed areas to maximum dry density to ASTM D698, as follows:
  - .1       85% under landscaped areas.
  - .2       95% under gravel areas.
- .6       Do not disturb soil within branch spread of trees or shrubs to remain.

**3.2               TESTING**

- .1       Inspection and testing of soil compaction will be carried out by testing laboratory designated by ULC. Costs of tests will be paid in accordance with CCDC 4 – GC 2.3 Review and Inspection of the Work.

**3.3 CLEANING**

- .1 See CCDC 4 – GC 3.13

**END OF SECTION**

**Part 1            General**

**1.1                ACTION AND INFORMATIONAL SUBMITTALS**

- .1        Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Product Data:
  - .1        Submit manufacturer's instructions, printed product literature and data sheets for geotextiles and include product characteristics, performance criteria, physical size, finish and limitations.
- .3        Test and Evaluation Reports:
  - .1        Submit copies of mill test data and certificate at least 4 weeks prior to start of Work.

**1.2                DELIVERY, STORAGE AND HANDLING**

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

**Part 2            Products**

**2.1                MATERIAL**

- .1        Geotextile: needle punched non-woven synthetic fibre fabric, supplied in rolls.
  - .1        Width: 3 ft minimum.
  - .2        Length: 3 ft minimum.
- .2        Physical properties:
  - .1        Tensile strength and elongation (in any principal direction): to
    - .1        Tear: 115 lbs
  - .2        Grab tensile strength and elongation: to
    - .1        Breaking force: minimum 300 lbs
    - .2        Elongation at future: 50%
- .3        Hydraulic properties:
  - .1        Permittivity: to 0.8 L/sec.

**Part 3            Execution**

**3.1                EXAMINATION**

- .1        See CCDC 4 – GC 2.3 Review & Inspection of the Work.

**3.2           INSTALLATION**

- .1     Place geotextile material by unrolling onto graded surface in orientation, manner and locations indicated.
- .2     Place geotextile material smooth and free of tension stress, folds, wrinkles and creases.
- .3     Place geotextile material on sloping surfaces in one continuous length from toe of slope to upper extent of geotextile.
- .4     Overlap each successive strip of geotextile 600 mm over previously laid strip.
- .5     Protect installed geotextile material from displacement, damage or deterioration before, during and after placement of material layers.
- .6     After installation, cover with overlying layer within 4 hours of placement.
- .7     Replace damaged or deteriorated geotextile to approval of Consultant.
- .8     Place and compact soil layers in accordance with other sections.

**3.3           PROTECTION**

- .1     Vehicular traffic not permitted directly on geotextile.

**END OF SECTION**

**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1            Section 31 32 19.01 - Geotextiles.

**1.2                REFERENCES**

- .1            American Society for Testing and Materials (ASTM)
  - .1            ASTM C144-99, Standard Specification for Aggregate for Masonry Mortar.
  - .2            ASTM C618-00, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.

**Part 2            Products**

**2.1                STONE**

- .1            Hard, dense, durable quarry stone, free from seams, cracks or other structural defects, to meet following size distribution for use intended:
  - .1            Hand placed rip-rap:
    - .1            Minimum size of individual stones 10 dm<sup>3</sup>.
    - .2            Not less than 75% of total volume of stones with individual volume of 25 dm<sup>3</sup> or more.
    - .3            Supply rock spalls or cobbles to fill open joints.

**2.2                GEOTEXTILE FILTER**

- .1            Geotextile: in accordance with Section 31 32 19.01 - Geotextiles.

**Part 3            Execution**

**3.1                PLACING**

- .1            Where rip-rap is to be placed on slopes, excavate trench at toe of slope to dimensions as indicated.
- .2            Fine grade area to be rip-rapped to uniform, even surface. Fill depressions with suitable material and compact to provide firm bed.
- .3            Place geotextile on prepared surface in accordance with Section 31 32 19.01- Geotextiles and as indicated. Avoid puncturing geotextile. Vehicular traffic over geotextile not permitted.
- .4            Place rip-rap to thickness and details as indicated.
- .5            Place stones in manner approved by Consultant to secure surface and create a stable mass. Place larger stones at bottom of slopes.
- .6            Hand placing:

- .1 Use larger stones for lower courses and as headers for subsequent courses.
- .2 Stagger vertical joints and fill voids with rock spalls or cobbles.
- .3 Finish surface evenly, free of large openings and neat in appearance.

**END OF SECTION**

**Part 1 General**

**1.1 NO OWNER-SUPPLIED AGGREGATE MATERIALS**

- .1 Contractor shall be responsible for supply and material costs of aggregate surface and base courses.

**1.2 REFERENCES**

- .1 ASTM International
  - .1 ASTM C136-06, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- .2 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.
- .3 U.S. Environmental Protection Agency (EPA) / Office of Water
  - .1 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

**1.4 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with applicable standards.
- .2 Storage and Handling Requirements:
  - .1 Replace defective or damaged materials with new.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Granular surface: material in accordance with following requirements:
  - .1 20 mm crushed basecourse aggregate.
  - .2 Gradations to be within limits specified when tested to ASTM C136. Sieve sizes to CAN/CGSB-8.2.
    - .1 Gradation limits as follows:

Particle size (mm)	% Passing by mass
20.000	100
15.000	64 – 100
5.000	36 – 72
1.250	12 – 42
0.315	4 – 22
0.080	3 – 6

- .2 Granular sub-base: material in accordance with following requirements:

- .1 200 mm pit-run.
- .2 Gradations to be within limits specified when tested to ASTM C136. Sieve sizes to CAN/CGSB-8.2.
  - .1 Gradation limits as follows:

Particle size (mm)	% Passing by mass
200.000	100
80.000	75 – 100
25.000	55 – 100
12.500	42 – 84
5.000	26 – 65
1.250	11 – 47
0.315	3 – 30
0.080	0 – 8

### **Part 3 Execution**

#### **3.1 PREPARATION**

- .1 Temporary Erosion and Sedimentation Control:
  - .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
  - .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
  - .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

#### **3.2 PLACEMENT AND INSTALLATION**

- .1 Place granular base after sub-base surface is inspected and approved in writing by Consultant.
- .2 Placing:
  - .1 Construct granular base to depth and grade in areas indicated.
  - .2 Ensure no frozen material is placed.
  - .3 Place material only on clean unfrozen surface, free from snow and ice.
  - .4 Begin spreading base material on crown line or on high side of one-way slope.
  - .5 Place material using methods which do not lead to segregation or degradation of aggregate.
  - .6 For spreading and shaping material, use spreader boxes having adjustable templates or screeds which will place material in uniform layers of required thickness.
  - .7 Place material to full width in uniform layers not exceeding 150 mm compacted thickness.

- .1 Consultant may authorize thicker lifts (layers) if specified compaction can be achieved.
- .8 Shape each layer to smooth contour and compact to specified density before succeeding layer is placed.
- .9 Remove and replace that portion of layer in which material becomes segregated during spreading.
- .3 Compaction Equipment:
  - .1 Ensure compaction equipment is capable of obtaining required material densities.
- .4 Compacting:
  - .1 Compact to density not less than 98% of Standard Proctor maximum dry density.
  - .2 Shape and roll alternately to obtain smooth, even and uniformly compacted base.
  - .3 Apply water as necessary during compacting to obtain specified density.
  - .4 In areas not accessible to rolling equipment, compact to specified density with mechanical tampers approved in writing by Consultant.
  - .5 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.

### **3.3 SITE TOLERANCES**

- .1 Finished base surface to be within plus or minus 10 mm of established grade and cross section but not uniformly high or low.

### **3.4 CLEANING**

- .1 See CCDC 4 – GC 3.13 Cleanup.

### **3.5 PROTECTION**

- .1 Maintain finished base in condition conforming to this Section until succeeding material is applied or until acceptance by Consultant.

**END OF SECTION**

**Part 1 General**

**1.1 ADMINISTRATIVE REQUIREMENTS**

- .1 Scheduling:
  - .1 Schedule hydraulic seeding to coincide with preparation of soil surface.
  - .2 Schedule hydraulic seeding between dates recommended by Territorial Agricultural Department.

**1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for seed, mulch, tackifier, fertilizer, liquid soil amendments and micronutrients.
  - .2 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 43 - Environmental Procedures.
- .3 Submit in writing 5 days prior to commencing work:
  - .1 Volume capacity of hydraulic seeder in litres.
  - .2 Amount of material to be used per tank based on volume.
- .4 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .5 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.

**1.3 QUALITY ASSURANCE**

- .1 Qualifications:
  - .1 Landscape Contractor: to be a Member in Good Standing of a Canadian horticultural trades association.

**1.4 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements:
  - .1 Labelled bags of fertilizer identifying mass in kg, mix components and percentages, date of bagging, supplier's name and lot number.
  - .2 Inoculant containers to be tagged with expiry date.
- .3 Storage and Handling Requirements:
  - .1 Store fertilizer in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Replace defective or damaged materials with new.

## **1.5 WARRANTY**

- .1 For seeding, 12 months warranty period is extended to 1 full growing season.
- .2 Contractor hereby warrants that seeding will remain free of defects in accordance with General Conditions CCDC GC 12.3, but for 1 full growing season.
- .3 End-of-warranty inspection will be conducted by Owner Representative.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Contractor to supply a local seed mix to be approved by Consultant.

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Verification of Conditions: verify conditions of substrate previously installed under other Sections or Contracts are acceptable for hydraulic seeding in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Consultant.
  - .2 Inform Consultant of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied.

### **3.2 PROTECTION OF EXISTING CONDITIONS**

- .1 Protect structures, signs, guide rails, fences, plant material, utilities and other surfaces not intended for spray.
- .2 Immediately remove any material sprayed where not intended as directed by Consultant.

### **3.3 PREPARATION OF SURFACES**

- .1 Do not perform work under adverse field conditions such as wind speeds over 10 km/h, frozen ground or ground covered with snow, ice or standing water.
- .2 Fine grade areas to be seeded free of humps and hollows.
  - .1 Ensure areas are free of deleterious and refuse materials.
- .3 Ensure areas to be seeded are moist to depth of 150 mm before seeding.
- .4 Obtain Consultant's approval of grade and topsoil depth before starting to seed.

### **3.4 CLEANING**

- .1 See CCDC 4 – GC 3.13 Cleanup.

### **3.5 PROTECTION**

- .1 Protect seeded areas from trespass until plants are established.
- .2 Remove protection devices as directed by Consultant.

**3.6 MAINTENANCE DURING ESTABLISHMENT PERIOD**

- .1 Perform following operations from time of seed application until acceptance by Owner Representative.
- .2 Grass Mixture:
  - .1 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
  - .2 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.

**3.7 ACCEPTANCE**

- .1 Seeded areas will be accepted by Consultant provided that:
  - .1 Seeded areas are free of rutted, eroded, bare or dead spots.
- .2 Areas seeded in fall will achieve final acceptance in following spring, one month after start of growing season provided acceptance conditions are fulfilled.

**3.8 MAINTENANCE DURING WARRANTY PERIOD**

- .1 Perform following operations from time of acceptance until end of warranty period:
  - .1 Repair and reseed dead or bare spots to satisfaction of Owner Representative.

**END OF SECTION**

**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1            Section 31 37 00 Geotextiles.
- .2            Section 31 37 00 Rip-Rap.

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

- .1            Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2            Product Data:
  - .1            Submit manufacturer's instructions, printed product literature and data sheets for pipes and backfill and include product characteristics, performance criteria, physical size, finish and limitations.
- .3            Certification: to be marked on pipe.
- .4            Test and Evaluation Reports:
  - .1            Submit manufacturer's test data and certification at least 2 weeks prior to beginning Work.

**1.3                DELIVERY, STORAGE AND HANDLING**

- .1            Deliver, store and handle materials in accordance with Section with manufacturer's written instructions.
- .2            Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3            Storage and Handling Requirements:
  - .1            Store materials in accordance with manufacturer's recommendations.
  - .2            Store and protect pipes from damage.
  - .3            Replace defective or damaged materials with new.

**Part 2            Products**

**2.1                CORRUGATED STEEL PIPE**

- .1            Corrugated steel pipe: to CAN/CSA-G401.
- .2            Water-tight cut-off collars to be installed at all pipe connections.

**2.2                GRANULAR BEDDING [AND BACKFILL]**

- .1            Granular bedding and backfill material to the following requirements:
  - .1            Crushed pit run or screened stone, gravel or sand.
  - .2            Gradations to be within limits specified when tested to ASTM C136. Sieve sizes to CAN/CGSB-8.2.

.1 Gradation limits as follows:

Particle size (mm)	% Passing by mass
20.000	100
15.000	64 – 100
5.000	36 – 72
1.250	12 – 42
0.315	4 – 22
0.080	3 – 6

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for pipe culvert installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Consultant.
  - .2 Inform Consultant of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

**3.2 PREPARATION**

- .1 Implement Temporary Erosion and Sedimentation Controls prior to culvert installation.

**3.3 TRENCHING**

- .1 Obtain Consultant's approval of trench line and depth prior to placing bedding material or pipe.

**3.4 BEDDING**

- .1 Dewater excavation, as necessary, to allow placement of culvert bedding in dry condition.
- .2 Place 150 mm minimum thickness of approved granular material on bottom of excavation and compact to 98% minimum of Standard Proctor maximum dry density.
- .3 Shape bedding to fit lower segment of pipe exterior so that width of at least 50% of pipe diameter is in close contact with bedding and to camber as indicated or as directed by Consultant, free from sags or high points.
- .4 Place bedding in unfrozen condition.

**3.5 LAYING CORRUGATED STEEL PIPE CULVERTS**

- .1 Begin pipe placing at downstream end.
- .2 Ensure bottom of pipe is in contact with shaped bed or compacted fill to full length.
- .3 Lay pipe with outside circumferential laps facing upstream and longitudinal laps or seams at side or quarter points.

- .4 Lay paved invert or partially lined pipe with longitudinal centre line of paved segment coinciding with flow line.
- .5 Do not allow water to flow through pipes during construction except as permitted by Consultant.

### **3.6 JOINTS: CORRUGATED STEEL CULVERTS**

- .1 Corrugated steel pipe:
  - .1 Match corrugations or indentations of coupler with pipe sections before tightening.
  - .2 Tap couplers firmly as they are being tightened, to take up slack and ensure snug fit.
  - .3 Insert and tighten bolts.
  - .4 Repair spots where damage has occurred to spelter coating by applying two coats of asphalt paint approved in writing by Consultant.

### **3.7 BACKFILLING**

- .1 Backfill around and over culverts as indicated or as directed by Consultant.
- .2 Place granular backfill material in 150 mm layers to full width, alternately on each side of culvert, so as not to displace it laterally or vertically.
- .3 Compact each layer to 98% minimum of Standard Proctor maximum dry density taking special care to obtain required density under haunches.
- .4 Protect installed culvert with minimum 600 mm cover of compacted fill before heavy equipment is permitted to cross.
  - .1 During construction, width of fill, at its top, to be at least twice diameter or span of pipe and with slopes not steeper than 1:2.
- .5 Place backfill in unfrozen condition.

### **3.8 FLUMING**

- .1 Assemble and install fluming as indicated.
- .2 Set top edges of fluming flush with side slope.

### **3.9 CLEANING**

- .1 See CCDC 4 – GC 3.13 Cleanup.

**END OF SECTION**



# TTC S-39B1 ACCESS ROAD

ISSUED FOR TENDER

JUNE 4, 2021



**KEY PLAN**  
N.T.S.



**LOCATION PLAN**  
1:40,000

DRAWING LIST	
Sheet Number	Title
1	Site Plan
2	Profile & Cross Sections
3	Details



**Notes:**

1. The Contractor Is Responsible For Locating All Existing Structures And Utilities Prior To Construction.
2. Any Deviation Or Inconsistencies From This Plan Shall Be Reported To The Engineer Immediately.
3. The Dimensions Shown On This Plan Take Precedence Over Scaled Dimensions.
4. All Dimensions Are In Meters, And Decimals Thereof Unless Otherwise Noted.
5. Tree Clearing Has Been Completed By Owner.
6. Access To Be Constructed As Per Yukon Highways & Public Works "typical Residential Access On Fill" Drawing 03030-10 (mar. 2003).
7. Existing And Proposed Surface Elevations Are Approximate Only And Must Be Field Confirmed. Contractor To Confirm Necessary Design Modifications With Consultant.
8. Contractor Is Required To Maintain Access To Lots By Lease Holders And Their Contractors, Except Where Permitted Otherwise - See Section 01 11 00 - Summary Of Work.
9. Contractor To Confirm Presence Of Existing Accesses And Align New Accesses With Existing Where Possible. Contractor To Construct New Access 5 M Past Culvert.
10. Road Surface To Be Superelevated On Horizontal Curves At 8%.
11. Signs Shall Conform To Tac Manual Of Uniform Traffic Control Devices For Canada.
12. Stockpile Suitable Topsoil Material For Reuse In Grassed Areas.

**Data Sources:**

Original Ground Contours - Government of Yukon LiDAR.  
 Acquisition Date: 2015-06-24. Project Area: Alaska Highway  
 Aerial Photograph - Government of Yukon, GeoYukon.  
 Acquisition Date: 2015-08-09. Location: Alaska Highway

2	2021-06-04	ISSUED FOR TENDER
1	2021-04-05	REVIEW
YYYY-MM-DD	SUBMISSION INFORMATION	

STAMP	PERMIT TO PRACTICE

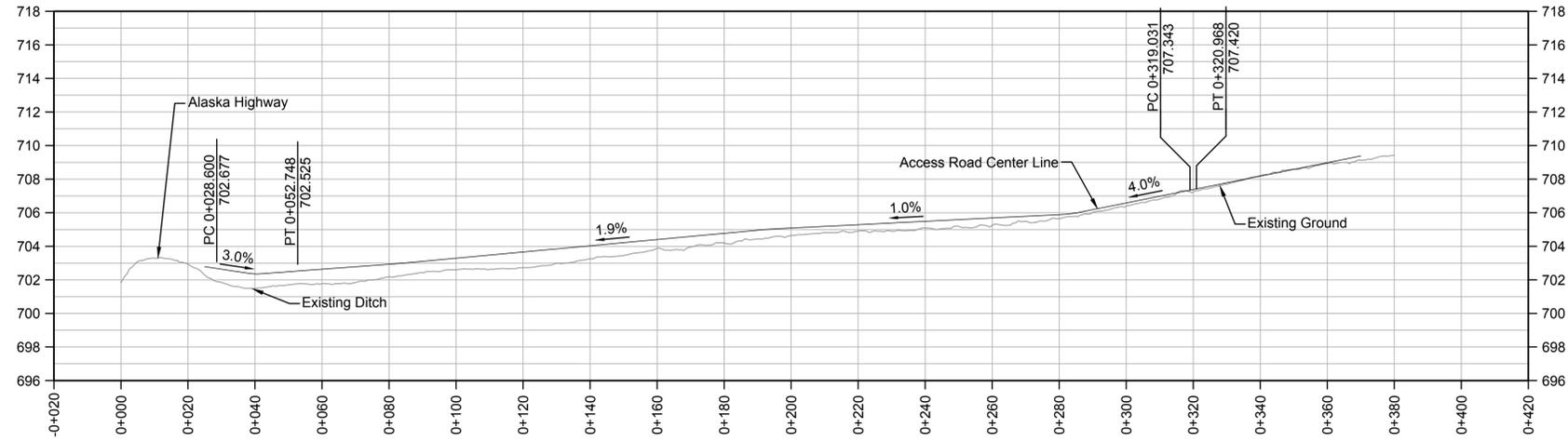


PROJECT  
**TTC S-39B1 ACCESS ROAD**

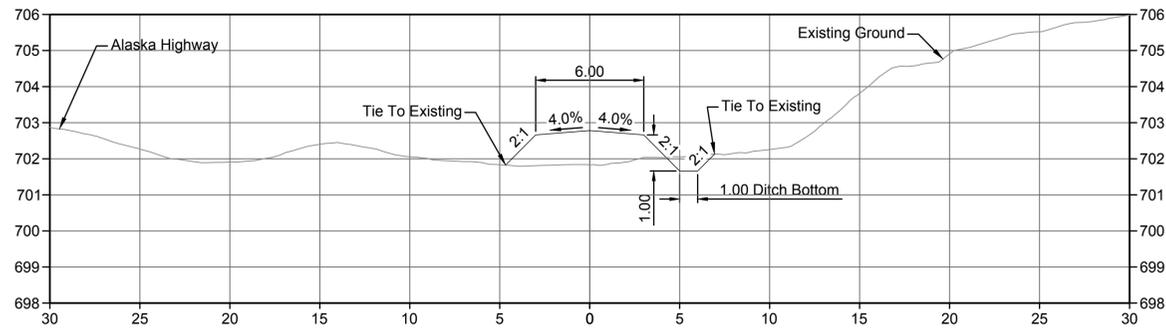
DRAWING  
**Site Plan**

DESIGN COK	DATE June 4, 2021	SCALE 1:1000
DRAWN WMP	PROJECT NO. -	VERSION 2
CHECKED -	DRAWING NO. 1	
APPROVED -		

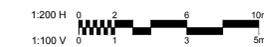
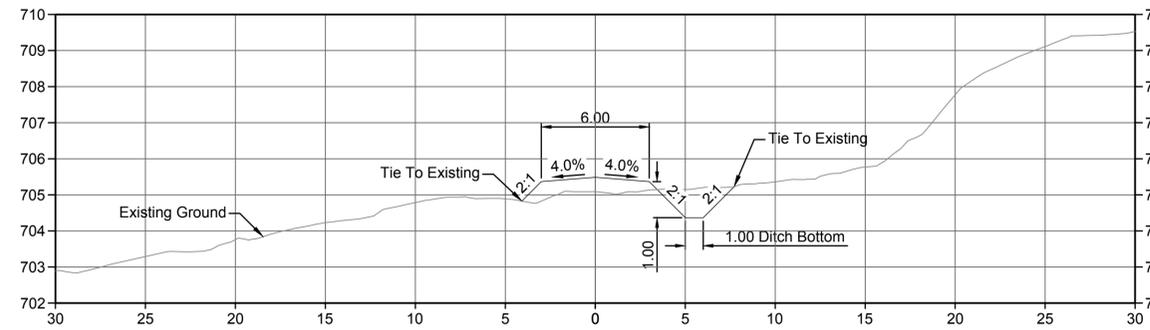
Profile: TTC - Access Road-Option2



Section 1 - 0+070.00



Section 2 - 0+240.00



2	2021-06-04	ISSUED FOR TENDER
1	2021-04-05	REVIEW
YYYY-MM-DD	SUBMISSION INFORMATION	

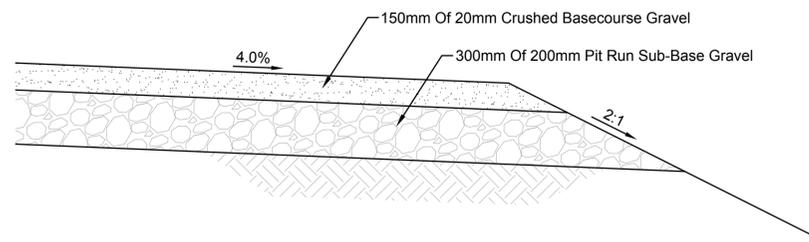
STAMP	PERMIT TO PRACTICE
-------	--------------------



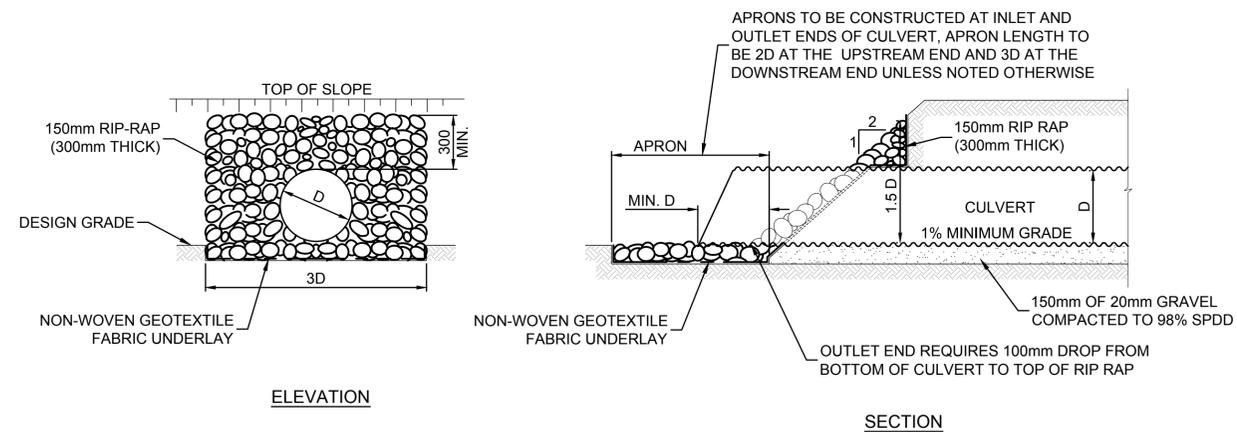
PROJECT  
TTC S-39B1 ACCESS ROAD

DRAWING  
Profile & Cross Sections

DESIGN COK	DATE June 4, 2021	SCALE As Shown
DRAWN WMP	PROJECT NO. -	
CHECKED -	DRAWING NO. 2	VERSION 2
APPROVED -		

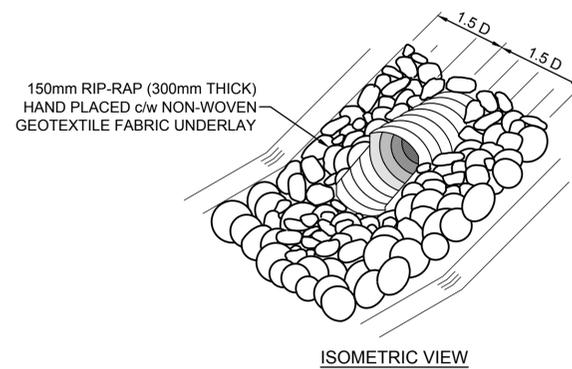


**1** **DETAIL - GRAVEL ROAD STRUCTURE**  
1:20



**ELEVATION**

**SECTION**



**ISOMETRIC VIEW**

**2** **DETAIL - CULVERT INSTALLATION WITH RIP RAP END TREATMENT**  
N.T.S.

2	2021-06-04	ISSUED FOR TENDER
1	2021-04-05	REVIEW
	YYYY-MM-DD	SUBMISSION INFORMATION

STAMP	PERMIT TO PRACTICE



PROJECT  
**TTC S-39B1 ACCESS ROAD**

DRAWING  
**Details**

DESIGN COK	DATE June 4, 2021	SCALE
DRAWN WMP	PROJECT NO. -	As Shown
CHECKED -	DRAWING NO.	VERSION
APPROVED -	<b>3</b>	<b>2</b>



November 16, 2020

Greenwood Engineering Solutions  
4 Carpiquet Road  
Whitehorse, Yukon • Y1A 0J4

ISSUED FOR USE  
FILE: 704-ENG.WARC03914-01  
Via Email: [cian@greenwoodengineering.ca](mailto:cian@greenwoodengineering.ca)

**Attention:** Cian O’Neill-Kizoff  
Project Manager

**Subject:** Roadway Structure Evaluation  
TTC S-39B1 Access Road – Near Teslin, Yukon

## 1.0 INTRODUCTION

### 1.1 General

Tetra Tech Canada Inc. (Tetra Tech) was retained by Greenwood Engineering Solutions to complete a desk-top level geotechnical evaluation for the design and construction of a low volume roadway that will access Lots 1 – 6 of the S-39B1 subdivision located at km 1252.7 of the Alaska Highway west of Teslin.

This report summarizes the anticipated soil conditions based on surficial geology mapping and a knowledge of the study area and provides recommendations for access road construction.

For additional conditions regarding the use of this report, please refer to Tetra Tech’s Limitations on the Use of this Document included in Appendix A.

## 2.0 SITE CONDITIONS

The proposed access road runs along the bottom edge of Lots 1 to 3 next to the existing Alaska Highway corridor. Mid-way through Lot 4, and on towards Lot 6, the proposed access road moves up-gradient onto a bench which overlooks the existing 3 m wide trail (that was likely part of the old Alaska Highway alignment).

Tree cover exists along the trail and the uncleared portions of the site. Photo documentation suggests that lodgepole pine predominates but in low lying sections, spruce and willows were noted by Greenwood Engineering staff during a site reconnaissance of the study area.

### 2.1 Terrain

The site slopes upwards from the proposed access road. Up-gradient slopes throughout the subdivision are moderately steep but the elevation gain along the trail and on the upper bench (lots 4, 5, and 6) is quite gentle as you proceed north-west. Isolated depressions were noted (in the areas where the spruce and willow tree cover were observed).

### 2.1.1 Depositional History

Depositional history of the study area has been interpreted from information presented on the Soils and Surficial Geology – Southern Lake Series mapping by Morison, McKenna and Davies. The depositional history pertaining to the Teslin Lake Area (map sheet 105 C SE) suggests that the study area is located at the transition between two soil polygons; with alluvial delta deposition at the northwest end of the study area (where Land Disposition #2016-1965 Reservation / Gravel is located), and morainal blanket deposition at the south east end of the site (where the access road will be constructed). The subdivision site is moderately (due to the positive slope it is located on) to imperfectly drained. As is typical with morainal till deposition, cobble and possibly boulder sized pieces can be expected in the subgrade soils.

### 2.1.2 Anticipated Geotechnical Conditions

Although there is no site-specific geotechnical data to draw from for this evaluation, the photo documentation and information presented on the surficial geology mapping strongly suggests that the soils along the access road route will be silty sand till. This soil type is somewhat frost susceptible but is acceptable as a subgrade material if it doesn't become saturated. To explain, for frost heave to occur, three conditions need to exist, including cold temperatures, frost susceptible soils and excess moisture. If one of the three conditions are not present, frost heave is less likely to occur. So, since the Teslin area has cold temperatures for a good portion of the year and we anticipate frost susceptible soils, the best way to minimize potential for frost heave is to keep the subgrade soils from becoming saturated. Roadway design must ensure control of surface water by constructing proper ditches and installing culverts at key locations to divert surface water flow away from the access road embankment.

### 2.1.3 Seasonal Frost Penetration

In 1998, EBA Engineering Consultants Ltd. produced a Geothermal Design Manual for the City of Whitehorse. Thermistor cables were installed at strategic locations throughout Whitehorse (in a variety of different soil types) and the thermistor cables were monitored for a five-year period. Geothermal analysis was completed and based on soil thermal properties and local climate data (including 54 years of temperature, snow cover, wind velocity and solar radiation data from the Whitehorse airport). Based on the Finite Element Analyses completed, 1 in 50-year climatic events for snow covered areas (boulevards) and non-snow-covered areas (roads, sidewalks, parking areas, etc.) were completed to assist with determining:

- Soil cover requirements for deep and shallow utility installations;
- Insulation requirements for buried utilities within the seasonal frost zone;
- Determining when frost protection devices can be activated (and deactivated in the spring); and
- Assessing road ban requirements.

Based on 1 in 50-year design, till subgrade soils and little snow cover along the access road in the winter, seasonal frost depths of at least 4.0 m can be expected. This information likely isn't critical for the access road design but it reinforces the need for good geometric design.

### 2.1.4 Groundwater and Bedrock Conditions

It is unlikely that groundwater or bedrock will influence access road construction for this site.

## 3.0 RECOMMENDATIONS

### 3.1 Access Road Structure

For the design of this access road, it has been decided that Chapter 510 – Low Volume Roads of the BC MoTI supplement to TAC GEOMETRIC DESIGN GUIDE was appropriate, but with the following modifications:

- 150 mm of 20 mm crushed basecourse gravel (for this project a surfacing aggregate is recommended in order to reduce maintenance costs); and
- 300 mm of 80 mm pit run sub-base gravel.

The access road corridor must be cleared stripped and grubbed, removing all organics or other deleterious materials prior to roadway construction.

### 3.2 Roadway Construction

The subgrade surface must be scarified, moisture conditioned (this may require adding water to facilitate compaction or it may require additional scarification and grading to dry out the subgrade soils, ensuring a stable subgrade on which the sub-base and surfacing courses can be constructed.

All imported granular materials (pit-run sub-base and crushed surfacing aggregates) must meet the gradation limits presented in Table 1. If non-compliant materials a proposed, a sample can be submitted to Tetra Tech for testing and an opinion regarding use can be supplied.

**Table 1: Imported Gravel Gradation Specifications**

20 mm Crushed Surfacing Aggregate		80 mm Pit-run Sub-Base Aggregate (GRAN D)	
Particle Size (mm)	% Passing by Mass	Particle Size (mm)	% Passing by Mass
20.000	100	80.000	100
12.500	64 – 100	25.000	55 – 100
5.000	36 – 72	12.500	42 – 84
2.500		5.000	26 – 65
1.250	14 – 42	1.250	11 – 47
0.315	12 – 24	0.315	3 – 30
0.080	10 – 14	0.080	0 – 8

Gradation Limits Based on Government of Yukon Material Specifications for Granular Courses

As long as large compaction equipment is available, both the sub-base and surfacing courses can be placed in a single lift. The contractor should be prepared to moisture condition each lift to facilitate compaction and all material must be compacted to a minimum of 98% of Standard Proctor maximum dry density.

### 3.3 Granular Borrow Sources

The availability of good quality granular products is very limited in the Teslin area, but it is understood that material can be sourced from the Deadman Creek borrow area. Historically, acceptable aggregate products have been produced from this source and it is the pit located closest to the TTC S39B1 site.

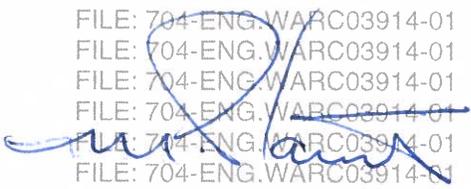
## 4.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of the Greenwood Engineering Solutions and their agents. Tetra Tech Canada Inc. (operating as Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Greenwood Engineering Solutions, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of this Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.

## 5.0 CLOSURE

We trust this document meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,  
Tetra Tech Canada Inc.

FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01



FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01  
FILE: 704-ENG.WARC03914-01

Prepared by:  
Myles Plaunt, CET  
Senior Technologist – Arctic Region  
Engineer Practice  
Direct Line: 867.668.9217  
Myles.Plaunt@tetrattech.com

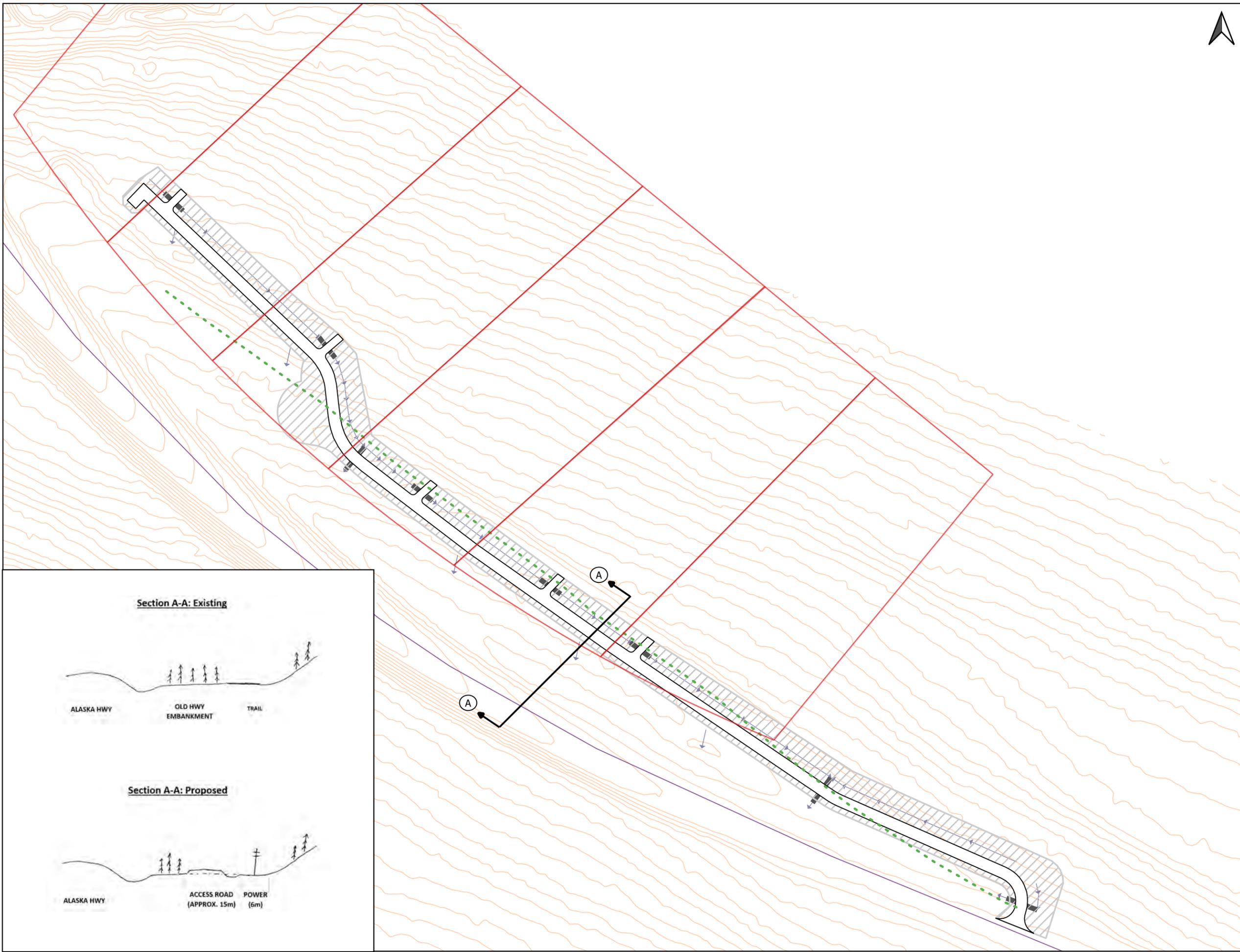
Reviewed by:  
Chad Cowan, P.Eng.  
Geotechnical Manager – Yukon, Arctic Region  
Engineer Practice  
Direct Line: 867.668.9214  
Chad.Cowan@tetrattech.com

/cr

<b>PERMIT TO PRACTICE TETRA TECH CANADA INC.</b>	
SIGNATURE	
Date	Nov 16/20
PERMIT NUMBER PP003 Association of Professional Engineers of Yukon	

## FIGURES

Figure 1 Greenwood Engineering Final Roadway Design (2020-11-10)



- Existing**
- TTC Lot Boundaries
  - - - Trail (approx CL)
  - Alaska Hwy (approx CL)
- Proposed**
- Road surface
  - Clearing
  - Culvert
  - Drainage
- Topography**
- Contour Line (1m interval)

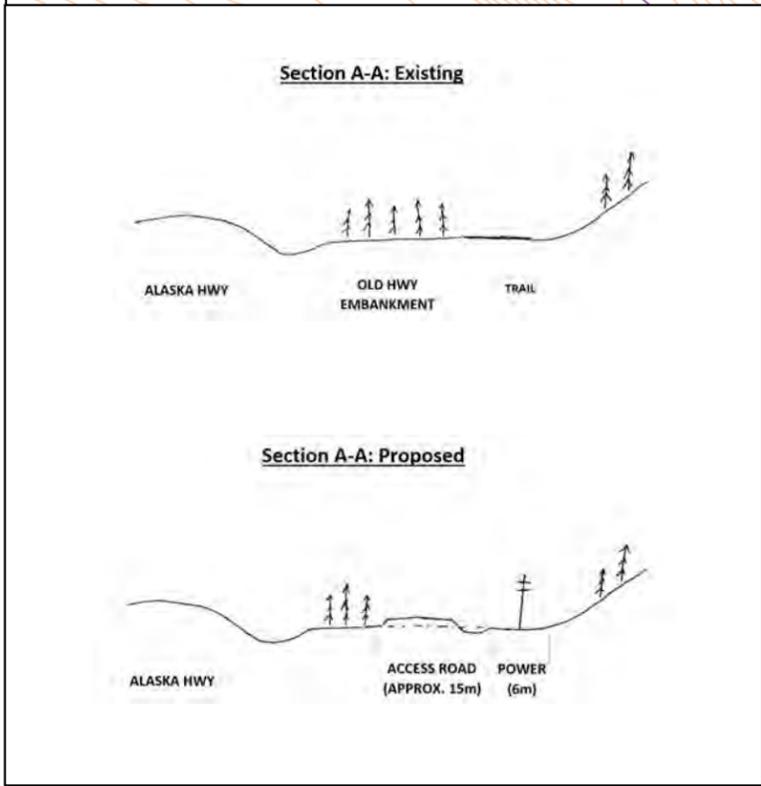


**TTC S-39B1 Access Road**

**02 - Proposed Road (Final)**

Project No.: 12-02  
 Drawing No.: 02  
 Drawn By: C. O'Neill-Kizoff  
 Reviewed By: A. Greenwood

Revision No.: 2  
 Revision Date: 2020-11-10



## APPENDIX A

### TETRA TECH'S LIMITATIONS ON THE USE OF THIS DOCUMENT

# LIMITATIONS ON USE OF THIS DOCUMENT

## GEOTECHNICAL

### 1.1 USE OF DOCUMENT AND OWNERSHIP

This document pertains to a specific site, a specific development, and a specific scope of work. The document may include plans, drawings, profiles and other supporting documents that collectively constitute the document (the "Professional Document").

The Professional Document is intended for the sole use of TETRA TECH's Client (the "Client") as specifically identified in the TETRA TECH Services Agreement or other Contractual Agreement entered into with the Client (either of which is termed the "Contract" herein). TETRA TECH does not accept any responsibility for the accuracy of any of the data, analyses, recommendations or other contents of the Professional Document when it is used or relied upon by any party other than the Client, unless authorized in writing by TETRA TECH.

Any unauthorized use of the Professional Document is at the sole risk of the user. TETRA TECH accepts no responsibility whatsoever for any loss or damage where such loss or damage is alleged to be or, is in fact, caused by the unauthorized use of the Professional Document.

Where TETRA TECH has expressly authorized the use of the Professional Document by a third party (an "Authorized Party"), consideration for such authorization is the Authorized Party's acceptance of these Limitations on Use of this Document as well as any limitations on liability contained in the Contract with the Client (all of which is collectively termed the "Limitations on Liability"). The Authorized Party should carefully review both these Limitations on Use of this Document and the Contract prior to making any use of the Professional Document. Any use made of the Professional Document by an Authorized Party constitutes the Authorized Party's express acceptance of, and agreement to, the Limitations on Liability.

The Professional Document and any other form or type of data or documents generated by TETRA TECH during the performance of the work are TETRA TECH's professional work product and shall remain the copyright property of TETRA TECH.

The Professional Document is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of TETRA TECH. Additional copies of the Document, if required, may be obtained upon request.

### 1.2 ALTERNATIVE DOCUMENT FORMAT

Where TETRA TECH submits electronic file and/or hard copy versions of the Professional Document or any drawings or other project-related documents and deliverables (collectively termed TETRA TECH's "Instruments of Professional Service"), only the signed and/or sealed versions shall be considered final. The original signed and/or sealed electronic file and/or hard copy version archived by TETRA TECH shall be deemed to be the original. TETRA TECH will archive a protected digital copy of the original signed and/or sealed version for a period of 10 years.

Both electronic file and/or hard copy versions of TETRA TECH's Instruments of Professional Service shall not, under any circumstances, be altered by any party except TETRA TECH. TETRA TECH's Instruments of Professional Service will be used only and exactly as submitted by TETRA TECH.

Electronic files submitted by TETRA TECH have been prepared and submitted using specific software and hardware systems. TETRA TECH makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

### 1.3 STANDARD OF CARE

Services performed by TETRA TECH for the Professional Document have been conducted in accordance with the Contract, in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions in the jurisdiction in which the services are provided. Professional judgment has been applied in developing the conclusions and/or recommendations provided in this Professional Document. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of the Professional Document.

If any error or omission is detected by the Client or an Authorized Party, the error or omission must be immediately brought to the attention of TETRA TECH.

### 1.4 DISCLOSURE OF INFORMATION BY CLIENT

The Client acknowledges that it has fully cooperated with TETRA TECH with respect to the provision of all available information on the past, present, and proposed conditions on the site, including historical information respecting the use of the site. The Client further acknowledges that in order for TETRA TECH to properly provide the services contracted for in the Contract, TETRA TECH has relied upon the Client with respect to both the full disclosure and accuracy of any such information.

### 1.5 INFORMATION PROVIDED TO TETRA TECH BY OTHERS

During the performance of the work and the preparation of this Professional Document, TETRA TECH may have relied on information provided by third parties other than the Client.

While TETRA TECH endeavours to verify the accuracy of such information, TETRA TECH accepts no responsibility for the accuracy or the reliability of such information even where inaccurate or unreliable information impacts any recommendations, design or other deliverables and causes the Client or an Authorized Party loss or damage.

### 1.6 GENERAL LIMITATIONS OF DOCUMENT

This Professional Document is based solely on the conditions presented and the data available to TETRA TECH at the time the data were collected in the field or gathered from available databases.

The Client, and any Authorized Party, acknowledges that the Professional Document is based on limited data and that the conclusions, opinions, and recommendations contained in the Professional Document are the result of the application of professional judgment to such limited data.

The Professional Document is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site conditions present, or variation in assumed conditions which might form the basis of design or recommendations as outlined in this document, at or on the development proposed as of the date of the Professional Document requires a supplementary exploration, investigation, and assessment.

TETRA TECH is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the property, the decisions on which are the sole responsibility of the Client.

### 1.7 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, TETRA TECH has not been retained to explore, address or consider and has not explored, addressed or considered any environmental or regulatory issues associated with development on the subject site.

### 1.8 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems, methods and standards employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. TETRA TECH does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

### 1.9 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

### 1.10 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historical environment. TETRA TECH does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional exploration and review may be necessary.

### 1.11 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

### 1.12 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

### 1.13 INFLUENCE OF CONSTRUCTION ACTIVITY

Construction activity can impact structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques, and construction sequence are known.

### 1.14 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, and the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

### 1.15 DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued satisfactory performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

### 1.16 DESIGN PARAMETERS

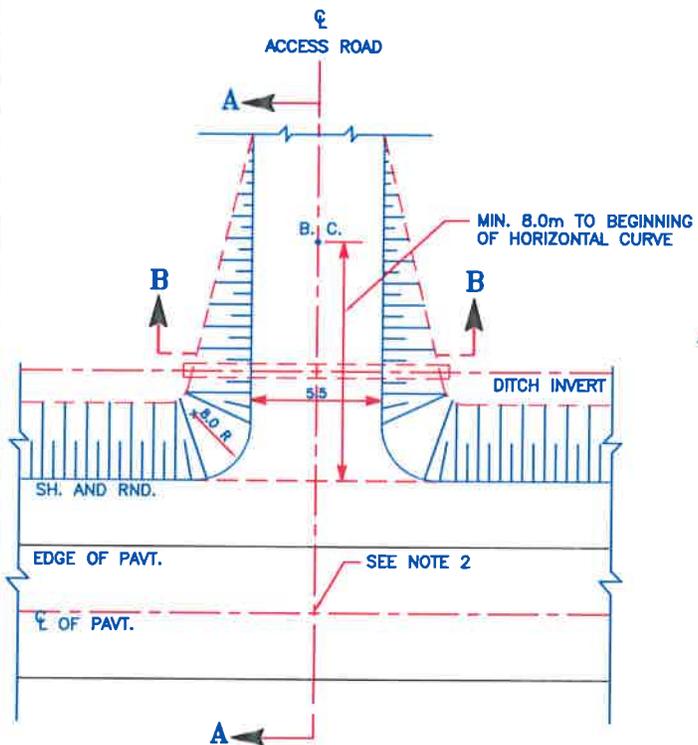
Bearing capacities for Limit States or Allowable Stress Design, strength/stiffness properties and similar geotechnical design parameters quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition used in this report. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions considered in this report in fact exist at the site.

### 1.17 SAMPLES

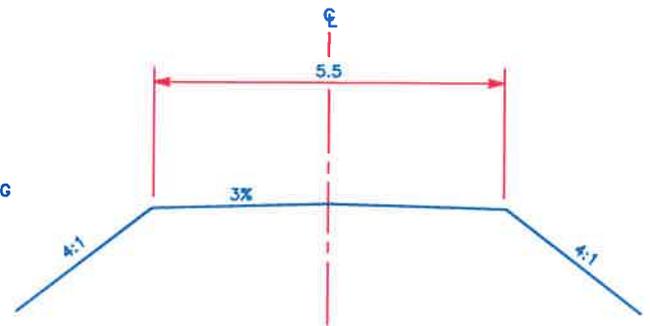
TETRA TECH will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the Client's expense upon written request, otherwise samples will be discarded.

### 1.18 APPLICABLE CODES, STANDARDS, GUIDELINES & BEST PRACTICE

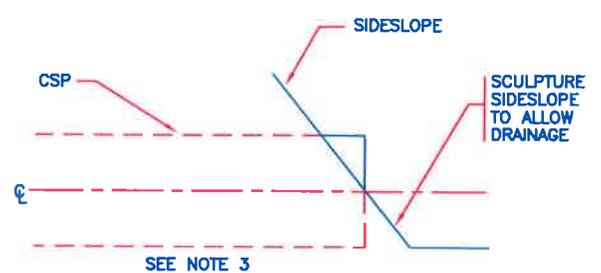
This document has been prepared based on the applicable codes, standards, guidelines or best practice as identified in the report. Some mandated codes, standards and guidelines (such as ASTM, AASHTO Bridge Design/Construction Codes, Canadian Highway Bridge Design Code, National/Provincial Building Codes) are routinely updated and corrections made. TETRA TECH cannot predict nor be held liable for any such future changes, amendments, errors or omissions in these documents that may have a bearing on the assessment, design or analyses included in this report.



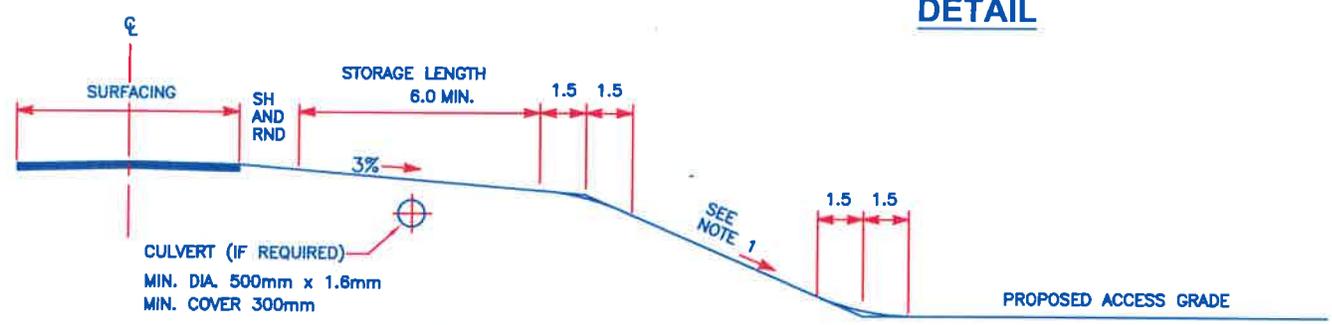
**PLAN**



**SECTION B-B**



**CULVERT END DETAIL**



**SECTION A-A**

1. MAXIMUM GRADIENT IS 10% FOR ACCESS ROAD.
2. ACCESS ROAD TO BE BUILT AT 90° TO THE CENTRE OF THE HIGHWAY. ANGLES BETWEEN 70° TO 110° MAY BE ALLOWED IN EXCEPTIONAL CIRCUMSTANCES AND ONLY WITH THE PERMISSION OF GOVERNMENT OF THE YUKON.
3. CULVERT ENDS TO EXTEND TO A POINT WHERE SIDESLOPE INTERSECTS CENTRELINE OF CSP. SEE CULVERT END DETAIL.
4. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
5. ANY ACCESS WHICH IS PROPOSED TO CONNECT TO THE HIGHWAY ON A HORIZONTAL CURVE SHALL BE EVALUATED, BUT WILL NOT NORMALLY BE ALLOWED WHERE THE SUPERELEVATION RATE EXCEEDS 0.040m/m.



Transportation Engineering Branch

**DRAWING TITLE**

**TYPICAL**

**RESIDENTIAL ACCESS**

**ON FILL**

<b>designed:</b>	YTG
<b>drawn:</b>	ysd
<b>app'd:</b>	
<b>date:</b>	Mar. 2003
<b>scale:</b>	N.T.S.
<b>drwg:</b>	03030-10