



Regional District of Nanaimo

COOMBS-HILLIERS FIREHALL  
WATER TANKS REPLACEMENT

CONTRACT DOCUMENTS

ISSUED FOR TENDER

September 20, 2018

Prepared by:



CASCARA Project Number: 1019-001

**Regional District of Nanaimo  
Coombs-Hilliers Firehall  
Water Tanks Replacement**

**Coombs, BC**

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**PART I**  
**INSTRUCTION TO TENDERERS**

#### ARTICLE 1. TENDER

Sealed tenders marked “**Regional District of Nanaimo Water Tanks Replacements**” will be received at the Regional District of Nanaimo offices, located at 6300 Hammond Bay Road, Nanaimo, BC, V9T 6N2 **up to 2:00 p.m. local time, October 18, 2018**. Tenders will not be opened publicly.

#### ARTICLE 2. SCOPE OF WORK

The work consists of the replacement of two existing 12,000-gallon steel water tanks with three 10,000-gallon plastic water tanks, together with miscellaneous earthworks, concrete works, piping and equipment connections as detailed on the Plans.

#### ARTICLE 3. TENDER DOCUMENTS

Tender documents will be available in PDF format on BC Bid, or can be picked up from the **Cascara Consulting Engineers Limited office at Suite 206-335 Wesley Street, Nanaimo, BC V9R2T5**, upon receipt of a non-refundable payment of \$100 beginning on September 20, 2018.

#### ARTICLE 4. EXAMINE

The Tenderer must carefully examine the Tender Documents and the site of the proposed works, judging for and satisfying themselves as to the probable conditions to be encountered. Should a Tenderer find discrepancies in, or omissions from the drawings or other documents, or should they be in doubt as to their meaning, they should, prior to submitting their Tender, notify the Consultant in writing. The Tenderer may not claim, after the submission of the Tender, that there was any misunderstanding with respect to the condition imposed by the documents.

The Tenderer’s attention is drawn to any addenda which may be issued prior to the time of the tender closure. The Tenderer’s attention is also drawing to the Supplementary Conditions of the documents, which contain any changes or additions to the General Conditions of the Civil Works Contract.

The Contractor is advised that there is currently a resident onsite and that the Contractor can access the property at any time during the Tender period to review the existing conditions and proposed works.

#### ARTICLE 5. SITE MEETING

A non-mandatory site meeting for Contractors is scheduled for 3:00 p.m., local time, on September 27, 2018. The meeting place will be the Coombs-Hilliars Firehall.

#### ARTICLE 6. QUERIES/ADDENDA

All enquiries related to this Tender are to be submitted, in writing, no less than five (5) five working days prior to Closing Time to the following contact persons:

Charles Ramos, P.Eng.  
Ryan Eathorne, ASCT  
Cascara Consulting Engineers Limited  
Email: [cramos@cascara.ca](mailto:cramos@cascara.ca); [reathorne@cascara.ca](mailto:reathorne@cascara.ca)

Cascara Consulting Engineers Limited cannot accept responsibility for delivery/receipt of email so please follow up if you do not receive a response.



Addenda may be issued during the bidding period. All Addenda become part of the Tender Documents.

#### ARTICLE 7. FORM OF SUBMISSION

The Tender must be submitted on a hard copy of the Tender Form accompanied by the specified Bid Bond. The Tender Form must be completed in a non-erasable medium.

#### ARTICLE 8. TENDER SIGNING

The Tender must be executed by an authorized signatory in a position to legally bind their Company to the information contained in the Tender Form.

If the Tenderer is a joint venture, each party to the joint venture shall execute the Tender in the manner appropriate to such party.

#### ARTICLE 9. TENDER PRICE

Unit and lump sum prices shall be filled in where indicated in the Schedule of Prices on page TF-5 of the Tender Form. The unit prices shall be extended in accordance with the quantities shown and the extensions shall be inserted in the space provided. The total Tender must be an accurate extension of the unit and lump sum prices submitted and quantities shown.

In the event of a discrepancy between the unit prices and extended totals, the unit prices will govern.

The prices tendered shall include the supply of all materials except those specified to be supplied by others, all supervision, labour and equipment and a provision for overhead and profit and shall represent the entire cost to the Owner for the completed works as specified and shown on the drawings.

#### ARTICLE 10. TENDERER'S QUESTIONNAIRE

The Tenderer must furnish evidence that they have the necessary experience and is prepared to use the necessary personnel and equipment to carry out the work satisfactorily and within the time stated in the Tender Form. The Tenderer's Questionnaire on page TF-6 in the Tender Form shall be completed in order that the Contractor's capabilities in this regard can be assessed by the Owner. Failure to complete the Tenderer's Questionnaire may result in the Tender being considered incomplete.

#### ARTICLE 11. LIST OF SUBCONTRACTORS

The Tenderer must indicate, in the List of Subcontractors on page TF-7 in the Tender Form, the name of the subcontractor they propose to employ in each subtrade they propose to subcontract.

The Tenderer shall submit on the List of Subcontractors of the Tender Form, only ONE Subcontractor for each subtrade proposed to be subcontracted. The listing of more than one Subcontractor for any subtrade on the List of Subcontractors in the Tender Form may constitute grounds for rejection of the Tenderer's Tender.

Subcontractors shall not be changed, or additional subcontractors employed without the written authorization of the Consultant. Failure to submit a complete list may result in the Tender being considered incomplete.

#### ARTICLE 12. LIST OF MANUFACTURERS AND SUPPLIERS

The Tenderer must indicate in the List of Manufacturers and Suppliers on page TF-7 in the Tender Form, the manufacturer or product brand name of the items listed together with the name of the supplier or distributor from which each item will be purchased.

Manufacturers and suppliers will not be changed from those shown in the Tender Form without the written authorization of the Consultant. Failure to complete the list may result in the Tender being considered incomplete.

#### ARTICLE 13. SCHEDULE OF FORCE ACCOUNT RATES

The Schedule of Force Account Rates on page TF-8 in the Tender Form shall be completed for all personnel and equipment likely to be used on the project. These rates will form the basis for payment for force account work carried out in accordance with the General Conditions. Force Account rates may be a consideration for award of the contract. Failure to complete the Schedule of Force Account Rates may result in the Tender being considered incomplete.

#### ARTICLE 14. PROPOSED ALTERNATE MATERIALS

If a Tenderer intends to use equipment or material other than that specified or shown on the drawings, they must provide the required information in the List of Proposed Alternate Materials on page TF-9 in the Tender Form, together with the applicable price variation. Evaluation of proposed alternate materials will be made by the Owner following closing of Tenders. The total Tender must be based on the use of specified materials.

#### ARTICLE 15. SCHEDULE OF WORK

Tenderers shall insert on page TF-10 their proposed Schedule of Work, including commencement and completion dates, for all works under the Contract. The specified construction period shall begin from the date of the Notice to Proceed and include sufficient time to achieve Substantial Performance as outlined in the General Conditions.

#### ARTICLE 16. FEDERAL AND PROVINCIAL SALES TAXES

Unit and lump sum prices shall include provincial sales tax payable on all applicable materials and equipment incorporated in the work.

GST is NOT to be included in the unit and lump sum prices. GST shall be shown separately on the Schedule of Prices summary page based on the total contract value.

#### ARTICLE 17. SECURITY REQUIREMENTS

##### .1 Bid Bonds:

The Tender must be accompanied by a Bid Bond in an amount not less than ten percent (10%) of the Tender Price. The Bid Bond must be issued by a surety company authorized to transact the business of suretyship in the province or territory wherein the work is located, and shall be maintained in good standing until the fulfillment of the Contract. The form of such bond shall be in accordance with the latest edition of the CCDC approved bond forms. A Certified Cheque or Irrevocable Letter of Credit will be accepted in lieu of a Bid Bond.

If the successful Tenderer fails for any reason to execute the Contract Agreement and to provide the insurance and surety bonds stipulated in the General Conditions within ten (10) calendar days after the Notice of Award, such time limit being extended only on the written approval of

the Owner, their Bid Bond or certified cheque will be forfeited to and retained by the Owner in the amount of the difference in money between the total tender and the amount for which the Owner may legally contract with another party to perform the work, if the latter amount be in excess of the former.

Bid Bonds submitted by unsuccessful Tenderers will be returned to them as soon as the successful Tenderer has delivered to the Owner, the insurance and surety bonds stipulated in the General Conditions of the Contract and a fully executed contract for the work, or when the period for which tenders are irrevocable has elapsed, whichever shall first happen.

.2 Labour and Material Payment Bonds and Performance Bonds:

Submit with the Tender and Bid Bond, a "Consent to Surety" stating that the surety company is willing to supply the following Performance Bond and Labour and Material Payment Bond.

The successful Tenderer shall provide a Labour and Material Payment Bond and a Performance Bond, each in the amount of fifty percent (50%) of the Contract Price.

These bonds must be provided within fourteen (14) calendar days of the Notice of Award, and must be maintained in good standing until the fulfilment of the Contract, including the requirements of the Warranty provided in the General Conditions of the Contract and the payment of all obligations arising under the Contract. Should the successful Tenderer fail to provide these required bonds, the Bid Bond may be forfeited.

All such bonds shall be issued on a form approved by the Insurance Bureau of Canada and issued by a surety company authorized to transact the business of suretyship in the province or territory wherein the work is located, and which is acceptable to the Owner.

The costs attributed to providing such bonds shall be included in the Total Amount of the Tender. The oblige on the bonds must be the Owner.

## ARTICLE 18. TENDER WITHDRAWAL

A Tenderer may, without prejudice to themselves, withdraw their Tender on written request received by the Consultant any time prior to the time set for the closing of the Tender.

## ARTICLE 19. REVISIONS TO TENDER

Any revisions to the Tender by the Tenderer must be in writing by letter, properly executed, and received at the closing location prior to the closing time. The Tenderer assumes all responsibility for the timely and effective delivery of any letter revision.

.1 Letter

Revisions by letter must originate on the Tenderer's letterhead. The revision must substantially comply with the following requirements:

- a. Clearly state the project name and project number
- b. State the closing time
- c. State the amount by which the Tender is to be increased or decreased and the increase or decrease to each unit price affected.

The revision must be signed by an Authorized Signatory. The positions or titles of the Authorized Signatory should be indicated below the signature.

Letter revisions should be enclosed in an envelope stating the project title and marked "Revision to Tender".

.2 Amount of Bid Bond

The Tenderer must ensure that the total amount of the Bid Bond is not less than ten percent (10%) of the total Tender Price. The Tenderer should consider the effect of revisions on the Tender Price and the Bid Bond requirements.

.3 Multiple Revisions

Where a Tenderer submits multiple revisions to the original tender price, each revision should be numbered sequentially by the Tenderer. Unless the Tenderer clearly stipulates to the contrary on the face of the revision, each successive revision will nullify and replace any previous revision to the identified item or tender price.

.4 Unclear or Ambiguous Revisions

If in the opinion of the Consultant, any revision is unclear, ambiguous as to meaning or intent, or does not comply with the requirements of Article 19, that revision will be disregarded and the original Tender Price, or the Tender Price determined by consideration of any other revisions will prevail.

#### ARTICLE 20. TENDER REJECTION

The Owner reserves the right to reject any or all Tenders, or accept other than the lowest Tender and to accept the Tender which it deems most advantageous to the Owner.

Without limiting the generality of the foregoing, any Tender may be disqualified or rejected which is incomplete, obscure or irregular, which has erasures or corrections in the Tender Form, which has prices that are omitted or are unbalanced, which contains an escalator clause or other qualifying conditions or has an insufficient or irregular Surety.

A Tender shall also be rejected if there is any evidence that the Tenderer has any legal connection with any other company, firm or person submitting a Tender for this work, any knowledge of the Tender Prices to be submitted for this work by others, or any undisclosed connection or arrangement with any other company, firm, or person having a financial interest in the proposed Contract.

#### ARTICLE 21. AWARD

Awards will be made on the Tender that gives the greatest value based on quality, service and price.

The Owner will, following receipt of an acceptable Tender, issue in writing a Notice of Award to the successful Tenderer. This notice will be given as soon as possible following the closing of Tenders and unless otherwise agreed to by the Tenderer, not later than sixty (60) days following the closing of Tenders.

#### ARTICLE 22. WorksafeBC

.1 By submission of a Tender, the Tenderer agrees that if it is the successful bidder, it shall be deemed to be the Prime Contractor within the meaning of Part 3 Division 3, Section 118 (1) of the Workers' Compensation Act.

.2 Prior to starting work and accompanying any request for payment, the Contractor will provide a clearance letter showing that it is up to date with its WorksafeBC assessments.

**END OF SECTION**

**PART II**  
**SUPPLEMENTARY & SPECIAL CONDITIONS**

## 1.0 Supplementary Conditions

The following supplementary conditions and alterations shall be read in conjunction with the General Conditions of the CCDC 18 Civil Works Contract and shall govern over them.

### GC 5.5 APPLICATIONS FOR PROGRESS PAYMENT

**Add:**

5.5.7 An application for payment shall be deemed received only if submitted complete with required supporting documentation.

**Add:**

5.5.8 With each and every application for payment subsequent to the first, submit a current CCDC 9A Statutory Declaration of Progress Payment Distribution by Contractor, which shall be completed and sworn before a Notary Public or a Commissioner for Oaths for the Province of British Columbia, along with a Worker's Compensation Board Letter of Good Standing.

### GC 5.6 PROGRESS PAYMENT

**Replace Clause 5.6.2 with:**

5.6.2 The Owner shall make payment to the Contractor on account in accordance with the provisions of Article A-5 of the Agreement no later than thirty (30) calendar days of the date of the Consultant's Payment Certificate. The actual amount paid is subject to the Owner's rights under law or this Contract to make deductions.

### GC 5.7 SUBSTANTIAL PERFORMANCE OF THE WORK

**Add:**

5.7.5 There will be no progressive Substantial Performance of Portions of the Work.

### GC 5.9 PROGRESSIVE RELEASE OF HOLDBACK

**Replace Clause 5.9.1 with:**

5.9.1 There will be no progressive release of holdback funds.

### GC 5.10 FINAL PAYMENT

**Replace Clause 5.10.4 with:**

5.10.4 Subject to the Builders Lien Act, from the date of the issuance by the Consultant of the certificate of Substantial Performance of the Work pursuant to paragraph 5.7.1 of GC 5.7 SUBSTANTIAL PERFORMANCE OF THE WORK, and amount equal to the Contract Price less

.1 twice the value of any deficiencies shown on the Deficiencies List as determined by the Consultant;

.2 the value of incomplete work; and

.3 the amount of all previous certificates of payment; shall become payable by the Owner

**Add:**

5.10.5 When applying for release of holdback, the Contractor shall submit a current CCDC 9A Statutory Declaration of Progress Payment Distribution by Contractor and a current CCDC 9B Statutory Declaration

of Progress Payment Distribution by Sub-Contractor from each of the Sub-Contractors and a Workers' Compensation Board Letter of Good Standing.

#### GC 6.2 CHANGE ORDER

**Add:**

6.2.4 The following shall determine Contractor markup on Change Orders by percentage:

- .1 For work performed by the Contractor directly: cost of materials, plus cost of the Contractor's actual and necessary expenditures for wages of labour and field supervision, plus labour burden, plus 10% markup for overhead (which includes management, supervision, insurance, bonding, as-built and warranty) and profit combined.
- .2 For work performed by Subcontractors for the Contractor: total cost of Subcontractor's work, to which the Contractor may add 10% markup for overhead (which includes management, supervision, insurance, bonding, as-built and warranty) and profit combed for changes up to \$50,000 and 5% on changes greater than \$50,000. With respect to the overhead and profits charges, the following shall apply:
  - .1 One 10% mark-up on the net changes in the Work for the performing contractor. The performing contractor is the one who is carrying out the work.
  - .2 Only one mark-up on the performing contractors work for the administrating contractor (where applicable) regardless of the number of administering contractors that may exist between the performing contractor and the Owner.

#### GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

**Add:**

6.4.5 The Contractor shall be familiar with the site and existing conditions affecting the Work prior to the submission of bids. No claims for an increase in Contract Price or Contract Time arising from observable conditions will be accepted by the Owner or Consultant.

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

**Add:**

10.2.8 The Contractor shall provide the Consultant copies of all inspection reports and test results from the various testing agencies, vendors or authorities having jurisdiction as soon as the Contractor receives them.

#### GC 12.3 WARRANTY

**Add:**

12.3.7 Where a material, product or installation covered by the warranty fails, the stipulated warranty and warranty period shall be renewed for the specific work being replaced or repaired, with the exception of warranties referred to in GC 12.3.6.



## 2.0 Special Conditions

### .1 Date of Commencement and Completion

The Work shall commence after the Notice of Award and be completed as soon as possible. The Tenderer, in submitting the Tender, agrees that the Work can be completed by the date stated in the Tender Form. Work shall be continuous through to total completion.

### .2 Hours of Work

Work may be completed at the following times:

**All days of the week from 7 a.m. to 10 p.m.**

If the Contractor wishes to work outside of the above working hours, he must first receive approval from the Owner.

### .3 Environmental Monitoring

Environmental monitors for the Work will be retained by the Owner as required. The Contractor must be prepared to coordinate with and allow a monitoring team onsite during construction activities. Environmental monitors will have the authority to halt work for violations of permits or upon observing environmentally prohibited construction practices.

### .4 Construction Layout

Construction layout is the Contractor's responsibility. Onsite control points will be provided by the Owner.

END OF SECTION

PART III  
CIVIL WORKS CONTRACT  
(CCDC 18)

# civil works contract

**Project:**

Regional District of Nanaimo  
Coombs-Hilliers Firehall Water Tanks Replacement

Apply a CCDC 18 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 18 – 2001 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.



Canadian Construction Documents Committee

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CCDC 18 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 18 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 18.

**AGREEMENT BETWEEN OWNER AND CONTRACTOR**

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

**by and between**

Regional District of Nanaimo

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 Coombs-Hilliars Firehall Water Tanks Replacement

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

located at Coombs-Hilliars Firehall, Coombs, BC

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

for which the Agreement has been signed by the parties, and for which Cascara Consulting Engineers Limited

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

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

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 Contract
- \*

- \* (Insert here, attaching additional pages if required, a list identifying all other *Contract Documents* e.g.:
- *Supplementary Conditions*;
  - *Schedule of Prices*;
  - *Specifications*, giving a list of contents with section numbers and titles, number of pages, and date;
  - *Drawings*, giving drawing number, title, date, revision date or mark;
  - *Addenda*, giving title, number, date;
  - *Information documents*, or parts thereof, to be incorporated in the *Contract Documents* identifying them by title, date, name of preparer and, if not included in their entirety, the page or sheet numbers to be included).

**ARTICLE A-4 CONTRACT PRICE**

4.1 \* *Unit Prices* form the basis for payment of the *Contract Price*. Quantities in the *Schedule of Prices* are estimated. The estimated *Contract Price*, which is the total extended amount indicated in the *Schedule of Prices*, is:

OR

~~\* A lump sum stipulated price forms the basis for payment of the *Contract Price*. The *Contract Price* is:~~

\* (Manually strike out inapplicable paragraph)

\_\_\_\_\_  
\_\_\_\_\_/100 dollars \$ \_\_\_\_\_

4.2 All amounts are in Canadian funds and exclude Value Added Taxes.

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

**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 \_\_\_\_\_ ten \_\_\_\_\_ percent ( 10 %), the *Owner* shall in Canadian funds:

- .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 payment, 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 two percent (2%) per annum above the prime rate on such unpaid amounts shall also become due and payable until payment. Such interest shall be compounded and adjusted on a monthly basis. The prime rate shall be the rate of interest quoted by \_\_\_\_\_ Royal Bank of Canada \_\_\_\_\_ for prime business loans. (Insert name of chartered lending institution whose prime rate is to be used)
- .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 it is paid.

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

6.1 Notices in writing between the parties or between them and the *Consultant* shall be considered to have been received by the addressee on the date of delivery if delivered to the individual, or to a member of the firm, or to an officer of the corporation for whom they are intended by hand or by registered post; or if sent by regular post, to have been delivered within 5 *Working Days* of the date of mailing when addressed as follows:

The *Owner* at \_\_\_\_\_

\_\_\_\_\_  
*street and number and postal box number if applicable*

\_\_\_\_\_  
*post office or district, province or territory, postal code*

The *Contractor* at \_\_\_\_\_

\_\_\_\_\_  
*street and number and postal box number if applicable*

\_\_\_\_\_  
*post office or district, province or territory, postal code*

The *Consultant* at \_\_\_\_\_

\_\_\_\_\_  
*street and number and postal box number if applicable*

\_\_\_\_\_  
*post office or district, province or territory, postal code*

**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:

**Owner**

\_\_\_\_\_

*name of Owner*

\_\_\_\_\_

*signature*

\_\_\_\_\_

*name and title of person signing*

\_\_\_\_\_

*signature*

\_\_\_\_\_

*name and title of person signing*

**Contractor**

\_\_\_\_\_

*name of Contractor*

\_\_\_\_\_

*signature*

\_\_\_\_\_

*name and title of person signing*

\_\_\_\_\_

*signature*

\_\_\_\_\_

*name and title of person signing*

**WITNESS**

\_\_\_\_\_

*signature*

\_\_\_\_\_

*name and title of person signing*

**WITNESS**

\_\_\_\_\_

*signature*

\_\_\_\_\_

*name and title of person signing*

- N.B. Where legal jurisdiction, local practice, or Owner or Contractor 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*.

1. **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*.
2. **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.
3. **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*.
4. **Consultant**  
The *Consultant* is the person or entity identified as such in the Agreement. The *Consultant* is the Engineer or other 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.
5. **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.
6. **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.
7. **Contract Price**  
When *Unit Prices* form the basis of payment, the *Contract Price* is the sum of the product of each *Unit Price* stated in the *Schedule of Prices* multiplied by the appropriate actual quantity of each 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*. When a lump sum stipulated price forms the basis of payment, the *Contract Price* is the amount stipulated in Article A-4 of the Agreement - CONTRACT PRICE.
8. **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*.
9. **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.
10. **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, schedules, and diagrams.
11. **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*.
12. **Place of the Work**  
The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

13. **Product**  
*Product or Products* means material, machinery, equipment, and fixtures forming the *Work*, but does not include *Construction Equipment*.
14. **Project**  
The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.
15. **Provide**  
*Provide* means to supply and install.
16. **Schedule of Prices**  
The *Schedule of Prices* is the schedule listed in Article A-3 - CONTRACT DOCUMENTS identifying items of work, estimated quantities, units of measure, and *Unit Prices*.
17. **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*.
18. **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, and the services necessary for the performance of the *Work*.
19. **Subcontractor**  
A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work*, or to supply *Products* worked to a special design for the *Work*.
20. **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*.
21. **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*.
22. **Supplier**  
A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products* not worked to a special design for the *Work*.
23. **Temporary Work**  
*Temporary Work* means temporary supports, structures, facilities, services, and other temporary things, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.
24. **Unit Price**  
A *Unit Price* is the amount payable for a single unit of work as stated in the *Schedule of Prices*.
25. **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 is by the *Contractor* as imposed by the tax legislation.
26. **Work**  
The *Work* means the total construction and related services required by the *Contract Documents*.
27. **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 CIVIL WORKS 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 Except for the provisions of article 12.3.6, 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 of the *Work*.
  - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any 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,
    - the *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* during construction until issuance of the final certificate for payment, and subject to GC 2.1 - AUTHORITY OF THE CONSULTANT and with the *Owner's* concurrence, from time to time until the completion of any correction of defects as provided in paragraph 12.3.3 of GC 12.3 - WARRANTY.
- 2.2.2 The *Consultant* may 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*.
- 2.2.3 The *Consultant* will review the *Work* at intervals appropriate to the progress of construction to:
  - .1 become familiar with the progress and quality of the *Work*,
  - .2 determine if the *Work* is proceeding in general conformity with the *Contract Documents*, and
  - .3 verify quantities of *Work* performed under a *Schedule of Prices*.
- 2.2.4 Based on the *Consultant's* observations and evaluation 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 5.6 - PROGRESS PAYMENT, and GC 5.10 - FINAL PAYMENT.
- 2.2.5 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*.

- 2.2.6 The *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents* and shall make findings as to the performance thereunder by both parties to the *Contract*, except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER. Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. When making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.7 Matters in question relating to the performance of the Work or the interpretation of the *Contract Documents*, except for GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER, shall be referred initially to the *Consultant* by notice in writing given to the *Consultant* and to the other party for the *Consultant's* interpretation and finding which will be given by notice in writing to the parties within a reasonable time. With respect to claims, the *Consultant* will make findings as set out in GC 6.6 - CLAIMS, paragraph 6.6.5.
- 2.2.8 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*.
- 2.2.9 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*.
- 2.2.10 The *Consultant* will review and take appropriate action upon such *Contractor's* submittals as *Shop Drawings*, *Product data*, and samples, as provided in the *Contract Documents*.
- 2.2.11 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 2.2.12 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* as provided in GC 5.7 - SUBSTANTIAL PERFORMANCE OF THE WORK.
- 2.2.13 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.
- 2.2.14 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 tests, inspections, or approvals in the *Contract Documents*, or by the *Consultant's* instructions, or the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notice of when the work will be ready for review and inspection. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notice 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 special tests, inspections, or approvals before such special tests, inspections, or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the inspections or tests 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 of 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 remove from the *Place of the Work* and replace or re-execute 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 introduce and store products and use the *Owner's* or other contractor's construction equipment to execute their work;
  - .2 cooperate with other contractors and the *Owner* in reviewing their construction schedules; and
  - .3 where part of the *Work* is affected by or depends upon for its proper execution the work of other contractors or *Owner's* own forces, promptly report to the *Consultant* in writing and prior to proceeding with that part of the *Work*, any apparent deficiencies in such work
- 3.2.4 Where the *Contract Documents* identify the work to be performed by other contractors or the *Owner's* own forces, the *Contractor* shall coordinate and schedule the *Work* with the work of other contractors and the *Owner's* own forces and interface 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 interface 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 - 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 the *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* and notices and instructions given to the appointed representative by the *Consultant* shall be held to have been received by the *Contractor*.

### **GC 3.7 LAYOUT OF THE WORK**

- 3.7.1 The *Owner* shall, in consultation with the *Contractor*, establish reference points for construction which are necessary for the *Contractor* to proceed with the *Work*.
- 3.7.2 The *Contractor* shall be responsible for laying out the *Work*, shall preserve and protect the established reference points, and shall not change or relocate the established reference points without the approval of the *Consultant*.
- 3.7.3 The *Contractor* shall advise the *Consultant* whenever any established reference point is lost, destroyed, damaged, or requires relocation as a result of the *Contractor's* operations. The cost to reestablish any reference point that is lost, destroyed, damaged, or requires relocation as a result of the *Contractor's* operations, shall be at the *Contractor's* expense.

### **GC 3.8 SUBCONTRACTORS AND SUPPLIERS**

- 3.8.1 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*.
- 3.8.2 The *Contractor* shall indicate in writing, at the request of 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.
- 3.8.3 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.
- 3.8.4 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.

- 3.8.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.
- 3.8.6 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 3.9 LABOUR AND PRODUCTS**

- 3.9.1 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*.
- 3.9.2 *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*.
- 3.9.3 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 3.10 DOCUMENTS AT THE SITE**

- 3.10.1 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 3.11 SHOP DRAWINGS**

- 3.11.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.
- 3.11.2 The *Contractor* shall review all *Shop Drawings* prior to submission to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all field measurements, field construction conditions, materials, *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 *Contract Documents*.
- 3.11.3 The *Contractor* shall confirm the review of each shop drawing by stamp, date, and signature of the person responsible for the review. At the time of submission the *Contractor* shall notify the *Consultant* in writing of any deviations in the *Shop Drawings* from the requirements of the *Contract Documents*.
- 3.11.4 The *Contractor* shall submit *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. Upon request of the *Contractor* or the *Consultant*, they jointly shall prepare a schedule of the dates for submission and return of *Shop Drawings*. *Shop Drawings* which require approval of any legally constituted authority having jurisdiction shall be submitted to such authority by the *Contractor* for approval.
- 3.11.5 The *Contractor* shall submit *Shop Drawings* in the form specified or as the *Consultant* may direct. The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or otherwise with reasonable promptness so as to cause no delay. The *Consultant's* review is for conformity to the design concept and for general arrangement only. 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* unless the *Consultant* expressly notes the acceptance of a deviation on the *Shop Drawings*.
- 3.11.6 Upon the *Consultant's* request, the *Contractor* shall revise and resubmit *Shop Drawings* 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 resubmission other than those requested by the *Consultant*.

### **GC 3.12 USE OF THE WORK**

- 3.12.1 The *Contractor* shall confine *Construction Equipment*, *Temporary Work*, storage of *Products*, waste products and debris, and operations of employees to limits indicated by laws, ordinances, permits, or the *Contract Documents* and shall not unreasonably encumber the *Place of Work* with *Products*.
- 3.12.2 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 3.13 CUTTING AND REMEDIAL WORK**

- 3.13.1 The *Contractor* shall do the cutting and remedial work required to make the several parts of the *Work* come together properly.
- 3.13.2 The *Contractor* shall co-ordinate the *Work* to ensure that this requirement is kept to a minimum.
- 3.13.3 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 - CHANGES, GC 6.2 - CHANGE ORDER, and GC 6.3 - CHANGE DIRECTIVE.
- 3.13.4 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 3.14 CLEANUP**

- 3.14.1 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.
- 3.14.2 Before applying for *Substantial Performance of the Work* as provided in GC 5.7 - 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 *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.
- 3.14.3 Prior to application for the final certificate for 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 costs under any cash allowance exceed 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 costs under any cash allowance are 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 actual cost and each 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 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 - CHANGES, GC 6.2 - CHANGE ORDER, and GC 6.3 - CHANGE DIRECTIVE.
- 4.2.3 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.2 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 notify the *Contractor* in writing of any material change in the *Owner's* financial arrangements during performance of the *Contract*.

#### **GC 5.2 BASIS OF PAYMENT FOR UNIT PRICE WORK**

- 5.2.1 Payment for *Unit Price* work shall be based on the *Unit Prices* in the *Contract*.
- 5.2.2 The *Contractor* shall measure the *Work* and the *Consultant* will verify such measurements to determine payment to the *Contractor* in accordance with the measurement provisions of the *Contract Documents*.

#### **GC 5.3 BASIS OF PAYMENT FOR LUMP SUM WORK**

- 5.3.1 Payment for lump sum work shall be based on the stipulated price(s) in the *Contract*.

#### **GC 5.4 BASIS OF PAYMENT FOR COST PLUS WORK**

- 5.4.1 Payment for cost plus work shall be based on the cost of such work, as provided in paragraph 5.4.2, plus a fee calculated as a percentage of the cost of such work, for the *Contractor's* overhead and profit. The percentage amount shall be as provided in the *Contract Documents* but shall not be applied to the cost of *Construction Equipment* when such cost is based on rates which already include the *Contractor's* overhead and profit.
- 5.4.2 The cost of cost plus work shall be at rates prevailing in the locality of the *Place of the Work* and shall include the following cost elements as applicable to such work:
- .1 wages and benefits paid for labour in the direct employ of the *Contractor* under applicable collective bargaining agreements, or under a salary or wage schedule agreed upon by the *Owner* and *Contractor*;
  - .2 salaries, wages, and benefits of the *Contractor's* personnel, when stationed at the field office, in whatever capacity employed; or personnel at shops or on the road, engaged in expediting the production or transportation of materials or equipment;
  - .3 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 5.4.2.1 and 5.4.2.2;
  - .4 travel and subsistence expenses of the *Contractor's* personnel described in paragraphs 5.4.2.1 and 5.4.2.2;
  - .5 the cost of all *Products* including cost of transportation thereof;

- .6 the cost of 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*;
  - .7 the cost of 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;
  - .8 deposits lost;
  - .9 the amounts of all subcontracts;
  - .10 the cost of 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 license 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 and duties for which the *Contractor* is liable;
  - .15 charges for long distance telephone and facsimile communications, courier services, expressage, and petty items incurred in relation to the performance of the *Work*;
  - .16 the cost of removal and disposal of waste products and debris; and
  - .17 cost incurred due to emergencies affecting the safety of persons or property.
- 5.4.3 The *Contractor* shall obtain the *Owner's* approval prior to subcontracting or entering into other agreements for cost plus work.
- 5.4.4 The *Consultant* may refuse to certify payment for all or part of the cost of any item under any cost element, where the item in question was unsuitable, unnecessary or the cost was otherwise improperly incurred in the performance of the *Work*.
- 5.4.5 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of cost plus work and shall provide the *Consultant* with copies thereof when requested.
- 5.4.6 The *Owner* shall be afforded reasonable access to all of the *Contractor's* books, records, correspondence, instructions, drawings, receipts, vouchers, and memoranda related to the cost of cost plus work, and for this purpose the *Contractor* shall preserve such records for a period of one year from the date of *Substantial Performance of the Work*.

## **GC 5.5 APPLICATIONS FOR PROGRESS PAYMENT**

- 5.5.1 Applications for payment on account as provided in Article A-5 of the Agreement - PAYMENT may be made monthly as the *Work* progresses.
- 5.5.2 Applications for payment shall be dated the last day of the agreed monthly payment period and the amount claimed shall be for the value, proportionate to the amount of the *Contract*, of work performed and *Products* delivered to the *Place of the Work* at that date.
- 5.5.3 Where the basis of payment of the *Contract Price* is *Unit Prices*, applications for payment shall include quantity measurements and any other data requested by the *Consultant* to assist the *Consultant* in evaluating the application and verifying quantity measurements.
- 5.5.4 Where the basis of payment of the *Contract Price* is a lump sum stipulated price:
- .1 the *Contractor* shall submit to the *Consultant*, at least 10 *Working Days* before the first application for payment, a schedule of values for the parts of the *Work*, aggregating the total amount of the *Contract Price*, so as to facilitate evaluation of applications for payment;
  - .2 the schedule of values 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, unless it is found to be in error; and
  - .3 the *Contractor* shall include a statement based on the schedule of values with each application for payment.

- 5.5.5 Where the basis of payment for a portion of the *Work* is cost plus, applications for payment shall be based on the cost of the work performed plus the amount of the fee earned, in accordance with GC 5.4 - BASIS OF PAYMENT FOR COST PLUS WORK.
- 5.5.6 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 5.6 PROGRESS PAYMENT**

- 5.6.1 The *Consultant* will issue to the *Owner*, no later than 5 *Working Days* after the receipt of an application for payment from the *Contractor* submitted in accordance with GC 5.2 - APPLICATIONS FOR PROGRESS 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 notify the *Contractor* in writing giving reasons for the amendment.
- 5.6.2 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement - PAYMENT no later than 5 *Working Days* after the date of a certificate for payment issued by the *Consultant*.
- 5.6.3 Where the basis of payment of the *Contract Price* is *Unit Prices*, quantities for progress payments shall be considered approximate until final verification of quantities by the *Consultant*. A certificate for progress payment shall not be construed as the *Consultant's* final verification of quantities. Final verification of quantities will be made after all work of an item is completed.

#### **GC 5.7 SUBSTANTIAL PERFORMANCE OF THE WORK**

- 5.7.1 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 prepare and submit to the *Consultant* a comprehensive list of items to be completed or corrected and apply 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*.
- 5.7.2 No later than 15 *Working Days* after the receipt of the *Contractor's* list and application, the *Consultant* will review the *Work* to verify the validity of the application and notify the *Contractor* whether the *Work* or the designated portion of the *Work* is substantially performed.
- 5.7.3 The *Consultant* will state the date of *Substantial Performance of the Work* or designated portion of the *Work* in a certificate.
- 5.7.4 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 5.8 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK**

- 5.8.1 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 a sworn or affirmed statement 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.
- 5.8.2 After the receipt of an application for payment from the *Contractor* and the sworn or affirmed statement as provided in paragraph 5.8.1, the *Consultant* will issue a certificate for payment of the holdback amount.

- 5.8.3 Where the holdback amount required by the applicable lien legislation has not been placed in a separate holdback account, the *Owner* shall, 5 *Working 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*.
- 5.8.4 In the common law jurisdictions, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable on the 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*.
- 5.8.5 In the Province of Quebec, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable no later than 30 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 5.9 PROGRESSIVE RELEASE OF HOLDBACK**

- 5.9.1 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 *Working Day* following the expiration of the holdback period for such work stipulated in the lien legislation applicable to the *Place of the Work*.
- 5.9.2 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 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*.
- 5.9.3 Notwithstanding the provisions of the preceding paragraph, and notwithstanding the wording of such certificates, the *Contractor* shall ensure that such subcontract work or *Products* is 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 5.10 FINAL PAYMENT**

- 5.10.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.10.2 The *Consultant* will, no later than 15 *Working Days* after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and notify the *Contractor* that the application is valid or give reasons why it is not valid.
- 5.10.3 When the *Consultant* finds the *Contractor's* application for final payment valid, the *Consultant* will promptly issue a final certificate for payment.
- 5.10.4 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 *Working Days* after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement - PAYMENT.

## **GC 5.11 WITHHOLDING OF PAYMENT**

- 5.11.1 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 5.12 NON-CONFORMING WORK**

- 5.12.1 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**

### **GC 6.1 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* or the *Contract Time* is proposed or required, the *Consultant* will provide notice in writing to the *Contractor* describing the proposed change. The *Contractor* shall present, in a form acceptable to the *Consultant*, a method of adjustment or an amount of adjustment of the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change.
- 6.2.2 The method of adjustment of the *Contract Price* presented by the *Contractor* may be:
- .1 *Unit Prices* listed in the *Schedule of Prices* that are applicable to the change in the *Work* or, if *Unit Prices* listed in the *Schedule of Prices* are not directly applicable, by unit prices deduced or extrapolated from such *Unit Prices*,
  - .2 a lump sum or unit price quotation, or
  - .3 the cost plus method as provided in GC 5.4 - BASIS OF PAYMENT FOR COST PLUS WORK.
- 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*, signed by *Owner* and *Contractor*. The value of the work performed as the result of a *Change Order* shall be included in applications 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 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 by the *Owner* to direct a change in the *Work* that is within the general scope of the *Contract Documents*.
- 6.3.3 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.



- 6.3.4 The adjustment in the *Contract Price* for a change in the *Work* carried out by way of a *Change Directive* shall be on the basis of the *Contractor's* actual expenditures and savings attributable to the change. If a change in the *Work* results in expenditures only, the change in the *Work* shall be valued as cost plus work in accordance with GC 5.4 - BASIS OF PAYMENT FOR COST PLUS WORK.
- 6.3.5 If a change in the *Work* results in savings only, the amount of the credit shall be the actual cost savings to the *Contractor*, without deduction for overhead or profit.
- 6.3.6 If a change in the *Work* results in both expenditures and savings, the change in the *Work* shall be valued as specified in GC 6.3.4 and GC 6.3.5, except that overhead and profit on the cost plus work shall be payable only on the net increase, if any, with respect to that change in the *Work*.
- 6.3.7 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.
- 6.3.8 If the *Owner* and *Contractor* do not agree on the proposed adjustment in the *Contract Time* or the method of determining it, the adjustment shall be referred to the *Consultant* for determination.
- 6.3.9 If at any time after the start of the work directed by a *Change Directive*, 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* signed by *Owner* and *Contractor*.

#### **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 notify the other party in writing before conditions 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 The *Contractor* shall not be entitled to an adjustment in the *Contract Price* or the *Contract Time* if such conditions were reasonably apparent prior to the time of bid closing.

#### **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 other cause beyond the *Contractor's* control, other than one resulting from a default of 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*.
- 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 delay, providing however, that in the case of a continuing cause of delay only one notice shall be necessary.
- 6.5.5 If no schedule is made under paragraph 2.2.9 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 and not then, unless the request is reasonable.

## GC 6.6 CLAIMS

- 6.6.1 If the *Contractor* intends to make a claim for additional payment, or if the *Owner* intends to make a claim for a credit to the *Contract Price* or for damages of any kind, the party that intends to make the claim shall give notice in writing of intent to claim to the other party and to the *Consultant* as soon as practicable, but no later than 10 *Working Days* after commencement of the event or series of events giving rise to the claim. Failure to provide such notification shall invalidate the claim.
- 6.6.2 Upon commencement of the event or series of events giving rise to the claim, the party intending to make a claim shall:
- .1 take all reasonable measures to mitigate any loss or damage 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 Within 30 *Working Days* after commencement of the event or series of events giving rise to the claim, or such other reasonable time as may be agreed by the *Consultant*, the party making the claim shall submit 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 with 30 *Working Days* 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 the other party within 30 *Working Days* after receipt thereof by the *Consultant*, or such other time period as may be agreed by the parties. If such finding is not acceptable to both parties, 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 *Owner* or the *Contractor* may request an adjustment to a *Unit Price* contained in a *Schedule of Prices* included in the *Contract* provided that the actual quantity of the item in the *Schedule of Prices* exceeds or falls short of the estimated quantity by more than 15%.
- 6.7.2 Where the actual quantity exceeds the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.1 shall apply only to the quantity that exceeds 115% of the estimated quantity.

- 6.7.3 Where the actual quantity falls short of the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.1 shall not exceed the *Unit Price* that would cause the extended amount to equal the original extended amount derived from the original *Unit Price* and estimated quantity.
- 6.7.4 If either party requests adjustment of a *Unit Price*, both parties shall make all reasonable efforts to agree on a revised *Unit Price*. The agreed revised *Unit Price* shall be recorded in a Change Order.
- 6.7.5 If agreement on a revised *Unit Price* is not reached, the matter shall be subject to final determination in accordance with Part 8 - DISPUTE RESOLUTION. Pending determination of the revised *Unit Price*, payment for the *Work* performed shall be included in progress payments based on the unrevised *Unit Price*.

## **PART 7 DEFAULT NOTICE**

### **GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, STOP 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, by giving the *Contractor* or receiver or trustee in bankruptcy notice in writing, terminate the *Contract*.
- 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, notify the *Contractor* 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.
- 7.1.3 If the default cannot be corrected in the 5 *Working Days* specified, 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 such schedule.
- 7.1.4 If the *Contractor* fails to correct the default in the time specified or subsequently agreed upon, 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* delivered to the *Place of the Work*, subject to the rights of third parties, and 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 in force after such termination.

## **GC 7.2 CONTRACTOR'S RIGHT TO STOP 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, by giving the *Owner* or receiver or trustee in bankruptcy notice in writing, terminate the *Contract*.
- 7.2.2 If the *Work* is stopped 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, by giving the *Owner* notice in writing, terminate the *Contract*.
- 7.2.3 The *Contractor* may notify the *Owner* in writing, 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, stop 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 latest edition of the Rules for Mediation of Construction Disputes as provided in CCDC 40, 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 Day* period, 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 the notice of dispute 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 latest edition of the Rules for Mediation of Construction Disputes as provided in CCDC 40.
- 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 both parties.
- 8.2.6 By giving a notice in writing to the other party, 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 latest edition of the Rules for Arbitration of Construction Disputes as provided in CCDC 40. 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 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 requires by notice in writing given within 10 *Working Days* of the date of notice requesting arbitration in paragraph 8.2.6 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 notices required under Part 8 of the General Conditions - DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3.

- 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 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 known 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 the 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 - CHANGES, GC 6.2 - CHANGE ORDER, and GC 6.3 - CHANGE DIRECTIVE.

### **GC 9.2 DAMAGES AND MUTUAL RESPONSIBILITY**

- 9.2.1 If either party to the *Contract* should suffer damage in any manner because of any wrongful act or neglect of the other party or of anyone for whom the other party is responsible in law, then that party shall be reimbursed by the other party for such damage. The reimbursing party shall be subrogated to the rights of the other party in respect of such wrongful act or neglect if it be that of a third party.
- 9.2.2 If the *Contractor* has caused damage to the work of another contractor on the *Project*, the *Contractor* shall upon due notice in writing settle with the other contractor by negotiation or arbitration. If the other contractor makes a claim against the *Owner* on account of damage alleged to have been so sustained, the *Owner* shall notify the *Contractor* in writing and may require the *Contractor* to defend the action at the *Contractor's* expense. The *Contractor* shall satisfy a final order or judgment against the *Owner* and pay the costs incurred by the *Owner* arising from such action.
- 9.2.3 If the *Contractor* becomes liable to pay or satisfy a final order, judgment, or award against the *Owner*, then the *Contractor*, upon undertaking to indemnify the *Owner* against any and all liability for costs, shall have the right to appeal in the name of the *Owner* such final order or judgment to any and all courts of competent jurisdiction.

### **GC 9.3 TOXIC AND HAZARDOUS SUBSTANCES**

- 9.3.1 For the purposes of applicable environmental legislation, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.3.2 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.

- 9.3.3 The *Owner* shall take all reasonable steps to ensure that no person suffers injury, sickness, or death 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*.
- 9.3.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with legal requirements, 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*.
- 9.3.5 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 disclosed by the *Owner*, as required under paragraph 9.3.2, or which were disclosed but have not been dealt with as required under paragraph 9.3.4, the *Contractor* shall
  - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person suffers injury, sickness, or death and that no property is damaged or destroyed as a result of exposure to or the presence of the substances, and
  - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.
- 9.3.6 If the *Contractor* is delayed in performing the *Work* or incurs additional costs as a result of taking steps required under paragraph 9.3.5.3, the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the *Contractor* shall be reimbursed for reasonable costs incurred as a result of the delay and as a result of taking those steps.
- 9.3.7 Notwithstanding paragraphs 2.2.6 and 2.2.7 of GC 2.2 - ROLE OF THE CONSULTANT, or paragraph 8.1.1 of GC 8.1 - AUTHORITY OF THE CONSULTANT, the *Consultant* may select and rely upon the advice of an independent expert in a dispute under paragraph 9.3.6 and, in that case, the expert shall be deemed to have been jointly retained by the *Owner* and the *Contractor* and shall be jointly paid by them.
- 9.3.8 The *Owner* shall indemnify and hold harmless the *Contractor*, the *Consultant*, their agents and employees, from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of or resulting from 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*. This obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity set out in GC 12.1 - INDEMNIFICATION or which otherwise exist respecting a person or party described in this paragraph.
- 9.3.9 GC 9.3 - TOXIC AND HAZARDOUS SUBSTANCES shall govern over the provisions of paragraph 1.3.1 of GC 1.3 RIGHTS AND REMEDIES or GC 9.2 - DAMAGES AND MUTUAL RESPONSIBILITY.

#### **GC 9.4 ARTIFACTS AND FOSSILS**

- 9.4.1 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*.
- 9.4.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.4.1, and shall notify the *Consultant* immediately upon discovery of such items.
- 9.4.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.4.1. 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, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 - CHANGE ORDER or GC 6.3 - CHANGE DIRECTIVE.

#### **GC 9.5 CONSTRUCTION SAFETY**

- 9.5.1 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 or 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*.

## **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 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 Except for the permits and fees, including those required under paragraph 10.2.3, which the *Contract Documents* specify as the responsibility of the *Contractor*, the *Owner* shall obtain and pay for all necessary approvals, permits, permanent easements, and rights of servitude.
- 10.2.3 The *Contractor* shall obtain and pay for permits, licenses, inspections and certificates necessary for performance of the *Work* and customarily obtained after signing of the *Contract*.
- 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 notify 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 - CHANGES, GC 6.2 - CHANGE ORDER, and GC 6.3 - CHANGE DIRECTIVE.
- 10.2.6 If the *Contractor* fails to notify 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.

### **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 insurance coverages specified in GC 11.1 - INSURANCE. Unless otherwise stipulated, the duration of each insurance policy shall be from the date of commencement of the *Work* until the date of the final certificate for payment. 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.
- .1 General Liability Insurance:  
General liability insurance shall be in the joint names of the *Contractor*, the *Owner*, and the *Consultant*, with limits of not less than \$2,000,000 per occurrence and with a property damage deductible not exceeding \$2,500. The insurance coverage shall not be less than the insurance required by IBC Form 2100, or its equivalent replacement, provided that IBC Form 2100 shall contain the latest edition of the relevant CCDC endorsement form. To achieve the desired limit, umbrella, or excess liability insurance may be used. All liability coverage shall be maintained 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*. Where the *Contractor* maintains a single, blanket policy, the addition of the *Owner* and the *Consultant* is limited to liability arising out of the *Work* and all operations necessary or incidental thereto. The policy shall be endorsed to provide the *Owner* with not less than 30 days notice in writing in advance of any cancellation, and of change or amendment restricting coverage.
  - .2 Automobile Liability Insurance:  
Automobile liability insurance in respect of licensed vehicles shall have limits of not less than \$2,000,000 inclusive per occurrence for bodily injury, death, and damage to property, covering all licensed vehicles owned or leased by the *Contractor*, and endorsed to provide the *Owner* with not less than 15 days notice in writing in advance of any cancellation, change or amendment restricting coverage. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor*.
  - .3 Aircraft and Watercraft Liability Insurance:  
Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft if used directly or indirectly in the performance of the *Work*, including use of additional premises, shall be subject to limits of not less than \$2,000,000 inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof and limits of not less than \$2,000,000 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*. The policies shall be endorsed to provide the *Owner* with not less than 15 days notice in writing in advance of cancellation, change, or amendment restricting coverage.

.4 Property and Boiler and Machinery Insurance:

- (1) "All risks" property insurance shall be in the joint names of the *Contractor*, the *Owner*, the *Consultant*, and all *Subcontractors*, insuring not less than the sum of the amount of the *Contract Price* and the full value, as stated in the Supplementary Conditions, of *Products* that are specified to be provided by the *Owner* for incorporation into the *Work*, with a deductible not exceeding \$2,500. The insurance coverage shall not be less than the insurance required by IBC Form 4042 or its equivalent replacement, provided that IBC Form 4042 shall contain the latest edition of the relevant CCDC endorsement form. The coverage shall be maintained continuously until 5 *Working Days* after the date of the final certificate for payment.
- (2) Boiler and machinery insurance shall be in the joint names of the *Contractor*, the *Owner*, and the *Consultant* for not less than the replacement value of the boilers, pressure vessels, and other insurable objects forming part of the *Work*. The insurance provided shall not be less than the insurance provided by the "Comprehensive Boiler and Machinery Form" and shall be maintained continuously from commencement of use or operation of the property insured and until 5 *Working Days* after the date of the final certificate for payment.
- (3) The policies shall allow for partial or total use or occupancy of the *Work*. If because of such use or occupancy the *Contractor* is unable to provide coverage, the *Contractor* shall notify the *Owner* in writing. Prior to such use or occupancy the *Owner* shall provide, maintain, and pay for all risk property and boiler insurance insuring the full value of the *Work*, as in sub-paragraphs (1) and (2), including coverage for such use or occupancy and shall provide the *Contractor* with proof of such insurance. The *Contractor* shall refund to the *Owner* the unearned premiums applicable to the *Contractor's* policies upon termination of coverage.
- (4) The 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. 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*.
- (5) The *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount at 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 and as provided in GC 5.5 - APPLICATIONS FOR PROGRESS PAYMENT and GC 5.6 - PROGRESS PAYMENT. 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*.
- (6) In the case of loss or damage to the *Work* arising from the work of another contractor, or *Owner's* own forces, the *Owner*, in accordance with the *Owner's* obligations under paragraph 3.2.2.4 of GC 3.2 - 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 provided in GC 5.5 - APPLICATIONS FOR PROGRESS PAYMENT and GC 5.6 - PROGRESS PAYMENT.

.5 Contractors' Equipment Insurance:

"All risks" contractors' equipment insurance covering *Construction Equipment* used by the *Contractor* for the performance of the *Work*, including boiler insurance on temporary boilers and pressure vessels, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. The policies shall be endorsed to provide the *Owner* with not less than 15 days notice in writing in advance of cancellation, change, or amendment restricting coverage. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance, the *Owner* agrees to waive the equipment insurance requirement.

11.1.2 The *Contractor* shall be responsible for deductible amounts under the policies except where such amounts may be excluded from the *Contractor's* responsibility by the terms of GC 9.1 - PROTECTION OF WORK AND PROPERTY and GC 9.2 - DAMAGES AND MUTUAL RESPONSIBILITY.

11.1.3 Where the full insurable value of the *Work* is substantially less than the *Contract Price*, the *Owner* may reduce the amount of insurance required or waive the course of construction insurance requirement.

- 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 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*.

## **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 — WARRANTY**

### **GC 12.1 INDEMNIFICATION**

- 12.1.1 The *Contractor* shall indemnify and hold harmless the *Owner* and the *Consultant*, their agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceedings (hereinafter called "claims"), by third parties that arise out of, or are attributable to, the *Contractor's* performance of the *Contract* provided such claims are:
- .1 attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, and
  - .2 caused by negligent acts or omissions of the *Contractor* or anyone for whose acts the *Contractor* may be liable, and
  - .3 made 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*, 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 *Owner* expressly waives the right to indemnity for claims other than those stated above.
- 12.1.2 The obligation of the *Contractor* to indemnify hereunder shall be limited to \$2,000,000 per occurrence from the commencement of the *Work* until *Substantial Performance of the Work* and thereafter to an aggregate limit of \$2,000,000.
- 12.1.3 The *Owner* shall indemnify and hold harmless the *Contractor*, the *Contractor's* agents and employees 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 a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.
- 12.1.4 GC 12.1 - INDEMNIFICATION shall govern over the provisions of paragraph 1.3.1 of GC 1.3 - RIGHTS AND REMEDIES or GC 9.2 - DAMAGES AND MUTUAL RESPONSIBILITY.

### **GC 12.2 WAIVER OF CLAIMS**

- 12.2.1 Waiver of Claims by *Owner*
- As of the date of the final certificate for payment, the *Owner* expressly waives and releases the *Contractor* from all claims against the *Contractor* including without limitation those that might arise from the negligence or breach of contract by the *Contractor* except one or more of the following:
- .1 those made in writing prior to the date of the final certificate for payment and still unsettled;
  - .2 those arising from the provisions of GC 12.1 - INDEMNIFICATION or GC 12.3 - WARRANTY;
  - .3 those arising from the provisions of paragraph 9.3.5 of GC 9.3 - TOXIC AND HAZARDOUS SUBSTANCES AND MATERIALS and arising from the *Contractor* bringing or introducing any toxic or hazardous substances and materials to the *Place of the Work* after the *Contractor* commences the *Work*.

In the Common Law provinces GC 12.2.1.4 shall read as follows:

- .4 those made 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*, or within such shorter period as may be prescribed by any limitation statute of the province or territory of the *Place of the Work* and arising from any liability of the *Contractor* for damages resulting from the *Contractor's* performance of the *Contract* with respect to substantial defects or deficiencies in the *Work* for which the *Contractor* is proven responsible. As used herein "substantial defects or deficiencies" means 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*.

In the Province of Quebec GC 12.2.1.4 shall read as follows:

- .4 those arising under the provisions of Article 2118 of the Civil Code of Quebec.

#### 12.2.2 Waiver of Claims by *Contractor*

As of the date of the final certificate for payment, the *Contractor* expressly waives and releases the *Owner* from all claims against the *Owner* including without limitation those that might arise from the negligence or breach of contract by the *Owner* except:

- .1 those made in writing prior to the *Contractor's* application for final payment and still unsettled; and
- .2 those arising from the provisions of GC 9.3 - TOXIC AND HAZARDOUS SUBSTANCES or GC 10.3 - PATENT FEES.

12.2.3 GC 12.2 - WAIVER OF CLAIMS shall govern over the provisions of paragraph 1.3.1 of GC 1.3 - RIGHTS AND REMEDIES, GC 6.6 - CLAIMS, and GC 9.2 - DAMAGES AND MUTUAL RESPONSIBILITY.

### **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 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 warranty periods specified in the *Contract Documents*.
- 12.3.4 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.
- 12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.3.
- 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 responsibility of the warrantor.



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## PART IV TENDER FORM

\_\_\_\_\_  
Tenderer's Initials

# Regional District of Nanaimo Coombs-Hilliars Firehall Water Tanks Replacement

The undersigned Tenderer, having carefully examined the Contract documents and the locality of the proposed work, and having full knowledge of the work required and of the materials to be furnished and used, hereby agrees to provide all necessary materials, supervision, labour, and equipment and perform and complete all work and fulfill everything as set forth and in strict accordance with the Contract Documents and Addenda for the prices stated in the Schedule of Quantities and Prices of the Tender Form.

The undersigned also agrees:

1. That the Owner is in no way obligated to accept this Tender.
2. That the Instruction to Tenderers form part of this tender and agrees to be bound by the requirements set forth in the Instruction to Tenderers.
3. That, should the Tender Form be improperly completed or be incomplete, the Owner shall have the right to disqualify and/or reject this Tender.
4. That this Tender is made without knowledge of the Tender prices to be submitted for this work by any other company, firm or person.
5. That this Tender is made without any connection or arrangement with any other competing company, firm, or person submitting a Tender for this work.
6. That this Tender is made without any undisclosed connection or arrangement with any other company, firm, or person having an interest in this Tender or in the proposed Contract.
7. That this Tender is irrevocable for sixty (60) days after the closing date for receipt of Tenders, and that the Owner may at any time within such period accept this Tender whether any other Tender has previously been awarded or not, and whether notice of Award of another Tender has been given or not.
8. To execute the Contract Agreement.
9. To commence and proceed actively with the work within fourteen (14) days following receipt of the Notice of Award, and to complete all work under the Contract within the within the time limit set out in the Tender Form.
10. To do all extra work not inferable from the Specifications or Drawings but called for in writing by the Consultant and to accept as full compensation therefore, payment in accordance with the General Conditions of the Contract.
11. That payment for the work done will be made on the basis of the quantities measured by the Consultant and at the prices shown in the Tender Form, which includes the cost of all pre-selected materials and equipment and which shall be compensated in full for the work done under the terms of the Contract.
12. That the estimates of quantities shown in the Tender Form are estimates only for the purpose of comparing Tenders on a uniform basis and that neither the Owner nor the Consultant represent that the actual quantities will correspond therewith and that we will be paid at the tendered unit prices for the actual quantities handled.
13. That the Owner may delete from the Contract a portion or portions of the Work without any change in the unit prices provided such deletion is not for the purpose of allowing someone else to perform the deleted portion during the Contract Time.

\_\_\_\_\_  
Tenderer's Initials

## ACKNOWLEDGEMENT TO RECEIPT OF ADDENDA

| <b>ADDENDUM No.</b> | <b>DATE RECEIVED</b> |
|---------------------|----------------------|
|                     |                      |
|                     |                      |
|                     |                      |
|                     |                      |
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|                     |                      |
|                     |                      |

Tenderer to acknowledge receipt of the addenda (if any)

\_\_\_\_\_  
Tenderer's Initials



\_\_\_\_\_  
Name of Contractor

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
City, Postal Code

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone No.

Total Amount of Tender \$ \_\_\_\_\_

The above tendered sum includes all taxes, duties and any other additional charges on any or all material, equipment and labour, and it is understood that payment will be made for the completion of all work specified in this Contract on the basis of the unit prices tendered only and that any approved extras or refunds shall be made by mutual agreement between the Consultant and the Contractor.

**Completion of Work**

If the undersigned be notified in writing of the acceptance of this proposal, within fourteen (14) days following such acceptance, they agree to execute the Agreement for the above stated sum in the form of the specimen submitted to guarantee completion of the Contract in accordance with the documents and within the time stated in the Contract.

**Signed and Delivered By**

\_\_\_\_\_  
Full Name of Company

\_\_\_\_\_  
Authorized Signing Officer Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Position/Title

\_\_\_\_\_  
Authorized Signing Officer Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Position/Title

Note: If the Tender is by joint venture, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above

\_\_\_\_\_  
Tenderer's Initials

**Schedule of Prices**

The following are our tendered prices for the cost of the work for each item as outlined in the respective pay item descriptions in the Tender Documents.

| <b>Item</b>      | <b>Description</b>                       | <b>Est. Qty</b> | <b>Units</b>   | <b>Unit Price</b>         | <b>Total</b> |
|------------------|--|-----------------|----------------|---------------------------|--------------|
| <b>Section 1</b> | <b>General Requirements</b>              |                 |                |                           |              |
| 1.1              | Mobilization / Demobilization            | 1               | LS             | _____                     | _____        |
| 1.2              | Project Layout                           | 1               | LS             | _____                     | _____        |
| 1.3              | Remove and Salvage Existing Steel Tanks  | 1               | LS             | _____                     | _____        |
| 1.4              | Common Excavation                        | 40              | m <sup>3</sup> | _____                     | _____        |
| 1.5              | Granular Fill                            | 25              | m <sup>3</sup> | _____                     | _____        |
| 1.6              | Base Course                              | 25              | m <sup>3</sup> | _____                     | _____        |
|                  |  |                 |                | <b>Total Section 1</b>    | =====        |
| <b>Section 2</b> | <b>Pump, Piping and Hydrant</b>          |                 |                |                           |              |
| 2.1              | 150mm PVC DR18 Waterline                 | 30              | m              | _____                     | _____        |
| 2.2              | Fire Hydrant                             | 1               | ea             | _____                     | _____        |
| 2.3              | Pump System                              | 1               | ls             | _____                     | _____        |
| 2.4              | Level Indicator and Fill Line Relocation | 1               | ls             | _____                     | _____        |
| 2.5              | Insulation and Heat Trace                | 1               | ls             | _____                     | _____        |
| 2.6              | Miscellaneous Piping                     | 1               | ls             | _____                     | _____        |
|                  |  |                 |                | <b>Total Section 2</b>    | =====        |
| <b>Section 3</b> | <b>Water Storage Tanks</b>               |                 |                |                           |              |
| 3.1              | Supply and Install Water Tanks           | 1               | ls             | _____                     | _____        |
|                  |  |                 |                | <b>Total Section 3</b>    | =====        |
|                  |  |                 |                | <b>TOTAL ALL SECTIONS</b> | =====        |

## TENDERER'S QUESTIONNAIRE

We provide the following information in order that the Owner may judge our ability to fulfill the Contract requirements:

1. The size, model and make of the equipment which we will place on the project and use during the course of the work is as follows:

| EQUIPMENT | YEAR | SIZE | MAKE | MODEL |
|-----------|------|------|------|-------|
|           |      |      |      |       |
|           |      |      |      |       |
|           |      |      |      |       |
|           |      |      |      |       |
|           |      |      |      |       |
|           |      |      |      |       |
|           |      |      |      |       |
|           |      |      |      |       |
|           |      |      |      |       |

2. The average number of employees we will employ and maintain on the project is \_\_\_\_\_
3. The name of the superintendent that we propose to place on the project and their previous experience on this type of construction is as follows:

Name: \_\_\_\_\_ Years of Experience \_\_\_\_\_

Qualifications: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. The Contractor and all Subcontractors must have a current Business Licence. State Contractor's Business Licence Number \_\_\_\_\_.

\_\_\_\_\_  
Tenderer's Initials

## LIST OF SUBCONTRACTORS

It is our intention that the following work will, subject to the Consultant's approval, be subcontracted to the firms indicated below. All other work will be performed by our forces, except as authorized in writing by the Consultant.

Note: In accordance with the Instructions to Tenderers, list only one Subcontractor for each subtrade you propose to subcontract.

| SUBTRADE | NAME AND ADDRESS |
|----------|------------------|
|          |                  |
|          |                  |
|          |                  |
|          |                  |
|          |                  |
|          |                  |

## LIST OF MATERIALS AND SUPPLIERS

The following is a list of suppliers from whom we intend to purchase the various items of material indicated, together with the product brand name or the name of the manufacturer of each.

| ITEM | PRODUCT BRAND NAME | SUPPLIER |
|------|--------------------|----------|
|      |                    |          |
|      |                    |          |
|      |                    |          |
|      |                    |          |
|      |                    |          |
|      |                    |          |
|      |                    |          |

\_\_\_\_\_  
Tenderer's Initials

## SCHEDULE OF FORCE ACCOUNT RATES

The following personnel and equipment rates will form the basis of payment for force account work carried out in accordance with the General Conditions of the Contract.

Personnel:

| LIST BY OCCUPATION | HOURLY RATE | OVERTIME RATE |
|--------------------|-------------|---------------|
| Superintendent     |             |               |
| Foreman            |             |               |
| Labourer           |             |               |
| Flagger            |             |               |
| Others:            |             |               |
|                    |             |               |
|                    |             |               |

Equipment (Complete with Operator):

| DISCRIPTION                | HOURLY RATE | OVERTIME RATE |
|----------------------------|-------------|---------------|
| Track Excavator            |             |               |
| Rubber-Tired Backhoe       |             |               |
| Dump Truck                 |             |               |
| Dump Truck and Pup         |             |               |
| Compactor                  |             |               |
| Excavator with Rock Hammer |             |               |
| Others:                    |             |               |
|                            |             |               |

\_\_\_\_\_  
Tenderer's Initials



## SCHEDULE OF WORK

Herewith is the Schedule of Work referred to in the Tender submitted and which is an integral part of the Tender.

Note: Tenderer shall attach a Schedule of Work indicating dates of work and identifying coordination with the tide cycles.

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

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

\_\_\_\_\_  
Tenderer's Initials

## **APPENDIX A**

### **DESIGN DRAWINGS**

#### **LIST OF CONTRACT DRAWINGS.**

DWG # REV. # DRAWING TITLE

|     |        |   |
|-----|--------|---|
| C00 | REV. E | COVER SHEET, GENERAL NOTES & DRAWING LIST |
| C01 | REV. E | SITE PLAN                                 |
| C02 | REV. E | DETAILS                                   |



# REGIONAL DISTRICT OF NANAIMO

# COOMBS-HILLIERS FIRE DEPARTMENT NEW WATER TANKS

**GENERAL NOTES:**

1. ALL WORK AND MATERIALS ARE TO BE AS DESCRIBED IN THE CURRENT MMCD PLATINUM EDITION OR AS OTHERWISE APPROVED BY THE ENGINEER.
2. CONNECTION TO, OR ALTERATION OF, EXISTING RDN-OWNED UTILITIES, REQUIRES AUTHORIZATION BY THE RDN ENGINEER.
3. THE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
4. CONTRACTOR TO COMPLY WITH ALL APPLICABLE MINISTRY OF ENVIRONMENT REQUIREMENTS AT ALL TIMES DURING CONSTRUCTION.
5. CONTRACTOR TO CONFIRM LOCATION OF EXISTING UTILITIES AT ALL CROSSINGS AND CONNECTIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
6. ADJUST ALL MANHOLES, WATER VALVES, HYDRO VAULTS, ETC. TO MATCH NEW CONSTRUCTION.
7. ALL LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD BE CONFIRMED BY USE OF A PIPE LOCATOR AND MANUAL DIGGING. ALL OR ANY STRUCTURES NOT NECESSARILY SHOWN. INFORMATION ON EXISTING STRUCTURES AND UTILITIES IS BASED ON ESTIMATED CONSTRUCTION EXTENTS, AND IS APPROXIMATE ONLY.
8. ALL DIMENSIONS ARE IN METRIC UNITS, UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO MEASURE AND CONFIRM ALL OFFSETS IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REVIEWED WITH THE ENGINEER.

**WATER SYSTEM NOTES:**

1. ALL UNDERGROUND WATER PIPING TO BE PVC C900 DR18 WITH JOINT RESTRAINTS, UNLESS NOTED OTHERWISE.
2. PIPING BETWEEN TANKS TO BE 150#, SCHEDULE 10, TYPE 316 STAINLESS STEEL.
3. WATER TANKS TO BE 10,000 U.S. GALLON, VRT HD STORAGE TANK PROVIDED BY BARR PLASTICS
4. SEISMIC RESTRAINT SYSTEM TO BE DESIGNED, FURNISHED, AND INSPECTED BY TANK SUPPLIER'S ENGINEER

**CONCRETE NOTES:**

1. ALLOWABLE BEARING PRESSURE: 150 kPa, AS DETERMINED BY LEA GEOTECHNICAL ASSESSMENT, COMPLETED OCTOBER 2017
2. CONCRETE MATERIALS, QUALITY, MIXING, PLACING, FORMWORK, AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CSA-A23.1
3. SUPPLY CONTROLLED CONCRETE IN ACCORDANCE WITH CSA-A23.1 WITH PROPERTIES NOTED BELOW:
  - a) CLASS OF EXPOSURE: C-1
  - b) MINIMUM 28-DAY COMPRESSIVE STRENGTH: 35MPa
  - c) MAXIMUM AGGREGATE SIZE: 20mm
  - d) AIR CONTENT CATEGORY: 1
  - e) MAXIMUM WATER/CEMENT RATIO: 0.40
  - f) CEMENT TYPE: GU
4. NOTIFY ENGINEER 48 HOURS PRIOR TO CONCRETE PLACEMENT FOR REVIEW OF REINFORCEMENT AND FORMWORK
5. FIELD AND LABORATORY TESTING OF CONCRETE TO BE COMPLETED BY A THIRD PARTY TESTING AND INSPECTION AGENCY APPROVED BY AND RESPONSIBLE TO THE ENGINEER. TESTING AGENCY SHALL BE CERTIFIED TO CSA-A283. ONE SET OF 3 CYLINDERS SHALL BE MADE FOR EACH DAY'S POUR. COPIES OF TEST RESULTS TO BE SENT TO THE ENGINEER AND CONTRACTOR. CONTRACTOR TO PAY FOR TESTS.
6. COLD WEATHER REQUIREMENTS FOR PLACING CONCRETE AS DEFINED BY CAN/CSA 23.1, CLAUSE 7.4.2.5 MUST BE MET.
7. HOT WEATHER REQUIREMENTS FOR PLACING CONCRETE AS DEFINED BY CAN/CSA 23.1, CLAUSE 7.4.1.8.1 MUST BE MET.
8. REINFORCEMENT STEEL TO CONFORM TO CSA-G30.18, GRADE 400
9. REINFORCEMENT IS NOT TO BE WELDED, UNLESS SPECIFICALLY APPROVED BY THE ENGINEER
10. CLEAR CONCRETE COVER TO REINFORCEMENT TO MEET THE FOLLOWING:
  - a) CAST AGAINST FORMWORK OR EXPOSED SURFACE OF SLAB: 40mm
  - b) CAST AGAINST SOIL: 50mm

11. REINFORCEMENT SPLICES TO CONFORM TO THE FOLLOWING TABLE:

| REINFORCEMENT SPLICES   |                         |                                    |                     |  |
|---|-------------------------|------------------------------------|---------------------|--|
| TO BE READ IN CONJUNCTION WITH CONCRETE DESIGN NOTES:   |                         |                                    |                     |  |
| 1. THIS TABLE IS BASED ON NORMAL-WEIGHT CONCRETE $f'_c = 35 \text{ MPa}$ AND ON REINFORCING STEEL $F_y = 400 \text{ MPa}$ |                         |                                    |                     |  |
| 2. FOR STANDARD EMBEDMENT DEPTH INTO CONCRETE, DIVIDE BASIC TENSION LAP SPlice NUMBERS BY 1.3                             |                         |                                    |                     |  |
| BAR SIZE  | COMPRESSION SPlice (mm) | TENSION SPlice (mm)                |                     |  |
|   |                         | VERTICAL OR BOTTOM HORIZONTAL BARS | TOP HORIZONTAL BARS |  |
| 10M   | 300                     | 400                                | 500                 |  |
| 15M   | 450                     | 600                                | 750                 |  |
| 20M   | 600                     | 800                                | 1000                |  |
| 25M   | 750                     | 1200                               | 1525                |  |
| 30M   | 900                     | 1450                               | 1825                |  |
| 35M   | 1025                    | 1700                               | 2150                |  |

12. OPENINGS IN SLABS: PROVIDE TWO 15M BARS EACH SIDE, ONE EACH FACE, EXTENDING 600mm PAST THE OPENINGS, PLUS TWO 15M DIAGONAL BARS AT EACH CORNER, EACH FACE 1200mm LONG UNLESS NOTED OTHERWISE.
13. DO NOT CUT REINFORCEMENT AT OPENINGS WHERE IT CAN BE SPREAD CONTINUOUS AROUND OPENING.
14. ALL REINFORCEMENT TO BE SUPPORTED AT 900mm MAXIMUM SPACING
15. DESIGN, FABRICATION, ERECTION, AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CAN/CSA-S269.3

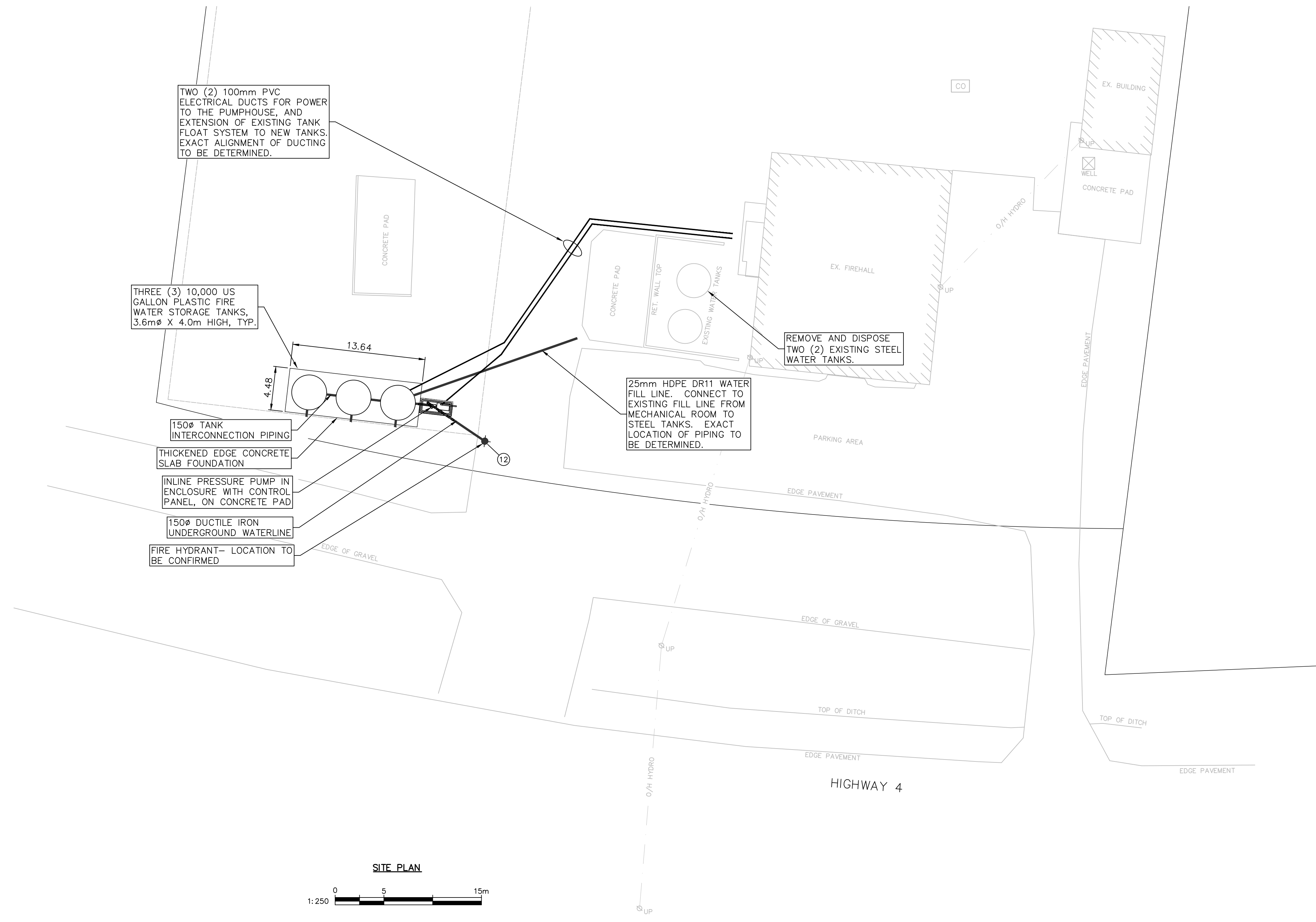
## DRAWING LIST

| DRAWING NO. | DRAWING TITLE                                | REVISION |   |   |   |   |
|-------------|--|----------|---|---|---|---|
|             |  | A        | B | C | D | E |
| C00         | COVER SHEET, GENERAL NOTES, AND DRAWING LIST |          |   |   |   | X |
| C01         | SITE PLAN                                    |          |   |   |   | X |
| C02         | DETAILS                                      |          |   |   |   | X |
|             |  |          |   |   |   |   |
|             |  |          |   |   |   |   |
|             |  |          |   |   |   |   |

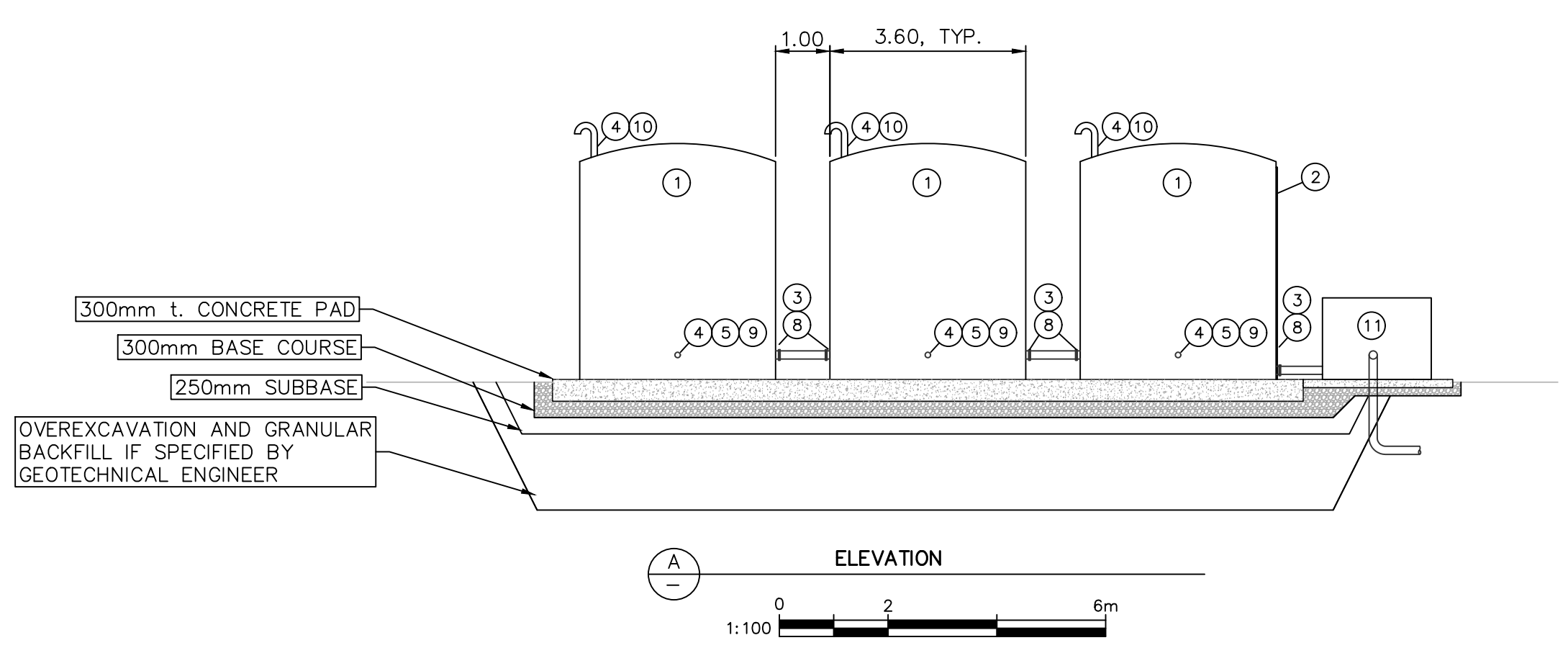
| REV. | DATE    | BY  | DESCRIPTION         | ENG. |
|------|---------|-----|---------------------|------|
| E    | 16APR18 | CDR | ISSUED FOR REVIEW   | CDR  |
| D    | 13MAR18 | CDR | ADDITIONAL DETAILS  | CDR  |
| C    | 16NOV17 | CDR | ISSUED FOR REVIEW   | CDR  |
| B    | 04AUG17 | RDE | REVISED TANK OPTION | CDR  |
| A    | 27JUL17 | MBR | ISSUED FOR REVIEW   | CDR  |

COOMBS-HILLIERS FIRE DEPARTMENT WATER STORAGE TANK

COOMBS, BC



**SITE PLAN**  
1:250



**ELEVATION**  
1:100

| EQUIPMENT SPECIFICATION |      |   |
|-------------------------|------|---|
| ITEM                    | QTY. | DESCRIPTION   |
| 1                       | 3    | 10,000 USG VRT HD STORAGE TANK WITH TOP-OPENING HATCH   |
| 2                       | 3    | 25mm PVC SIGHT TUBE   |
| 3                       | 5    | 150mm FLANGE FITTING  |
| 4                       | 6    | 100mm FLANGE FITTING  |
| 5                       | 3    | 100mm STORZ CONNECTIONS   |
| 6                       | 3    | LADDER ASSEMBLY WITH WELDED LUGS (NOT SHOWN)  |
| 7                       | 3    | HOT-DIP GALVANIZED SEISMIC RESTRAINT SYSTEM (NOT SHOWN)   |
| 8                       | 4    | RESILIENT TYPE 150mm GATE VALVE   |
| 9                       | 3    | 100mm BALL VALVE  |
| 10                      | 3    | 100mm TOP VENT, PIPING AND GOOSENECK, COMPLETE WITH BIRD AND VERMIN SCREEN                              |
| 11                      | 1    | GRUNDFOS 50123LF PRESSURE INCREASING PUMP AND KIOSK ENCLOSURE. NAMEPLATE MOTOR RATING: 40.00hp/29.83 kW |
| 12                      | 1    | FIRE HYDRANT ASSEMBLY   |

DRAWING TITLE:  
**SITE PLAN**



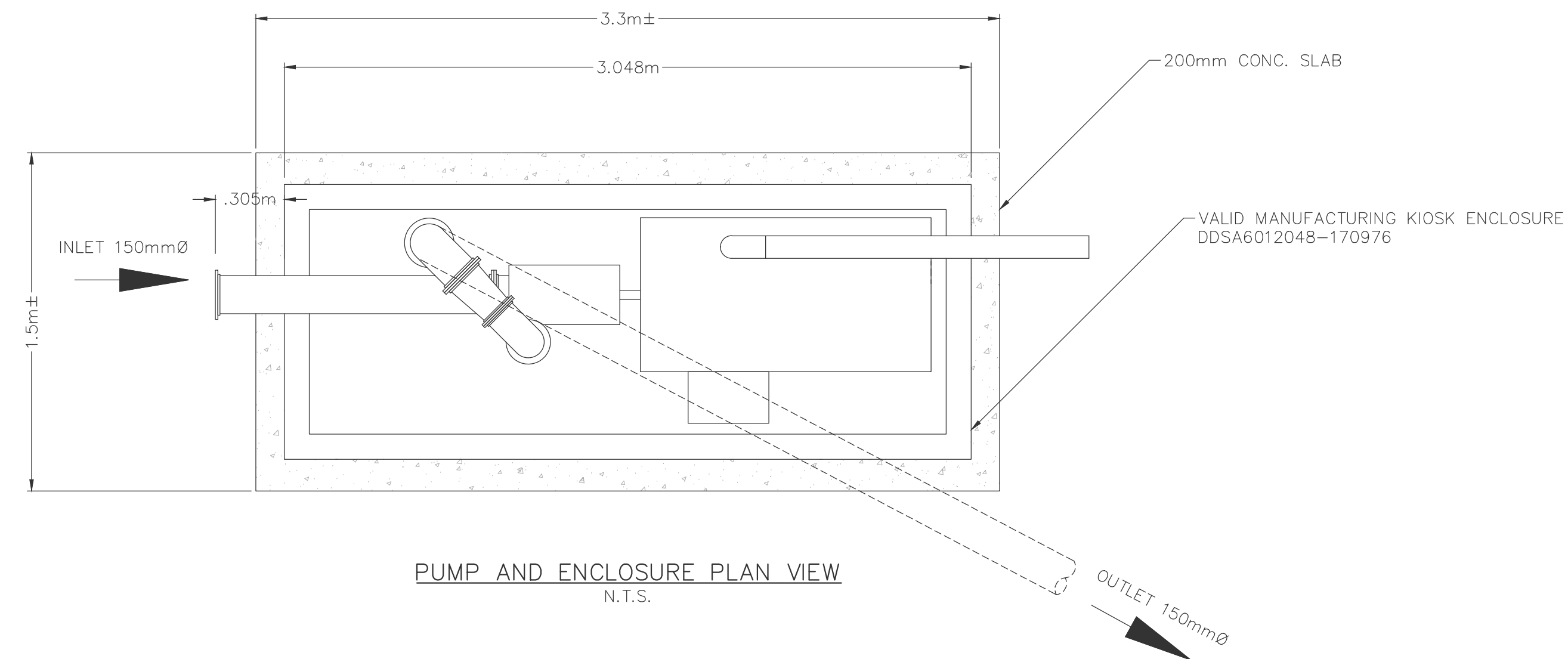
|                                 |                                |
|---------------------------------|--------------------------------|
| DESIGN BY: CDR                  | CHECKED BY: MBR                |
| DRAWN BY: MBR/GPD               | APPROVED BY: CDR               |
| SCALE: HORIZ: 1:250 VERT: 1:250 | SHEET: 2 OF 3                  |
| DATE: 13MAR18                   | ENG. FILE NUMBER: RDN 12-43406 |
| PROJECT NUMBER: 1019-001        | DRAWING NUMBER: C01            |
| REV: E                          |                                |



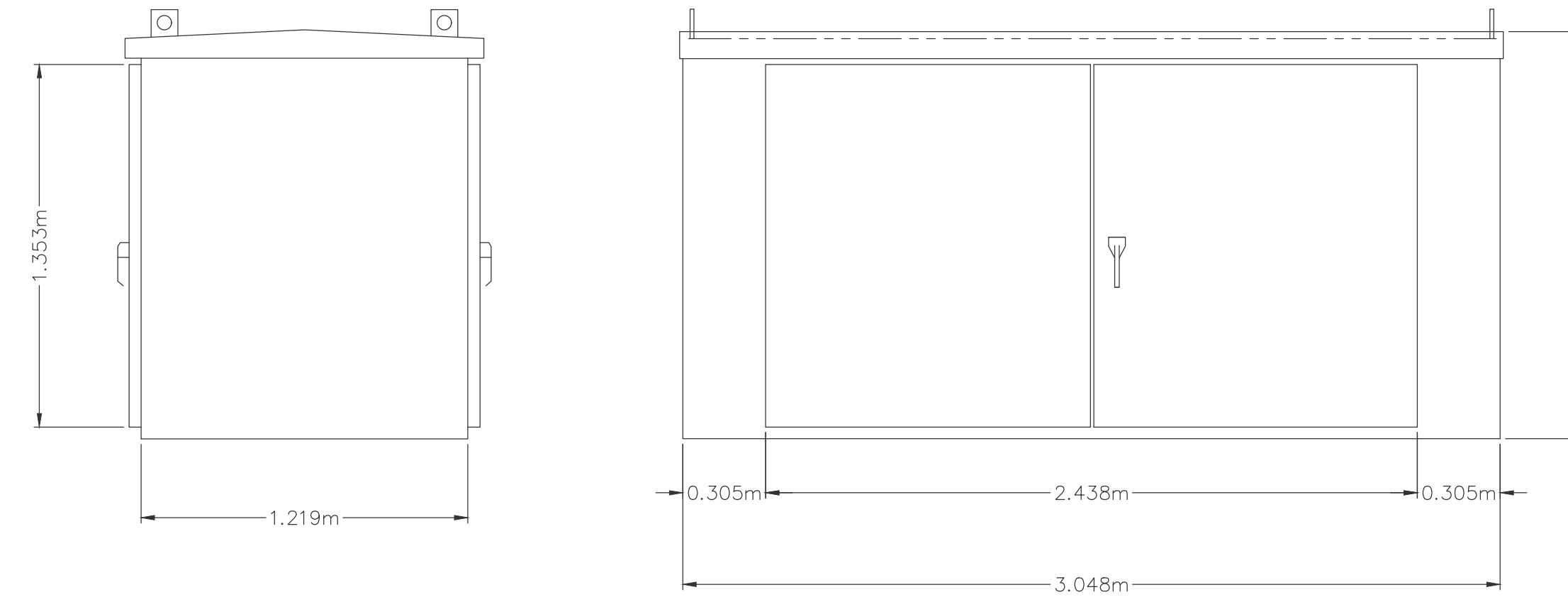
| REV. | DATE    | BY  | DESCRIPTION         | ENG |
|------|---------|-----|---------------------|-----|
| E    | 16APR18 | CDR | ISSUED FOR REVIEW   | CDR |
| D    | 13MAR18 | CDR | ADDITIONAL DETAILS  | CDR |
| C    | 16NOV17 | CDR | ISSUED FOR REVIEW   | CDR |
| B    | 04AUG17 | RDE | REVISED TANK OPTION | CDR |
| A    | 27JUL17 | MBR | ISSUED FOR REVIEW   | CDR |

**COOMBS-HILLIERS FIRE DEPARTMENT  
WATER STORAGE TANK**

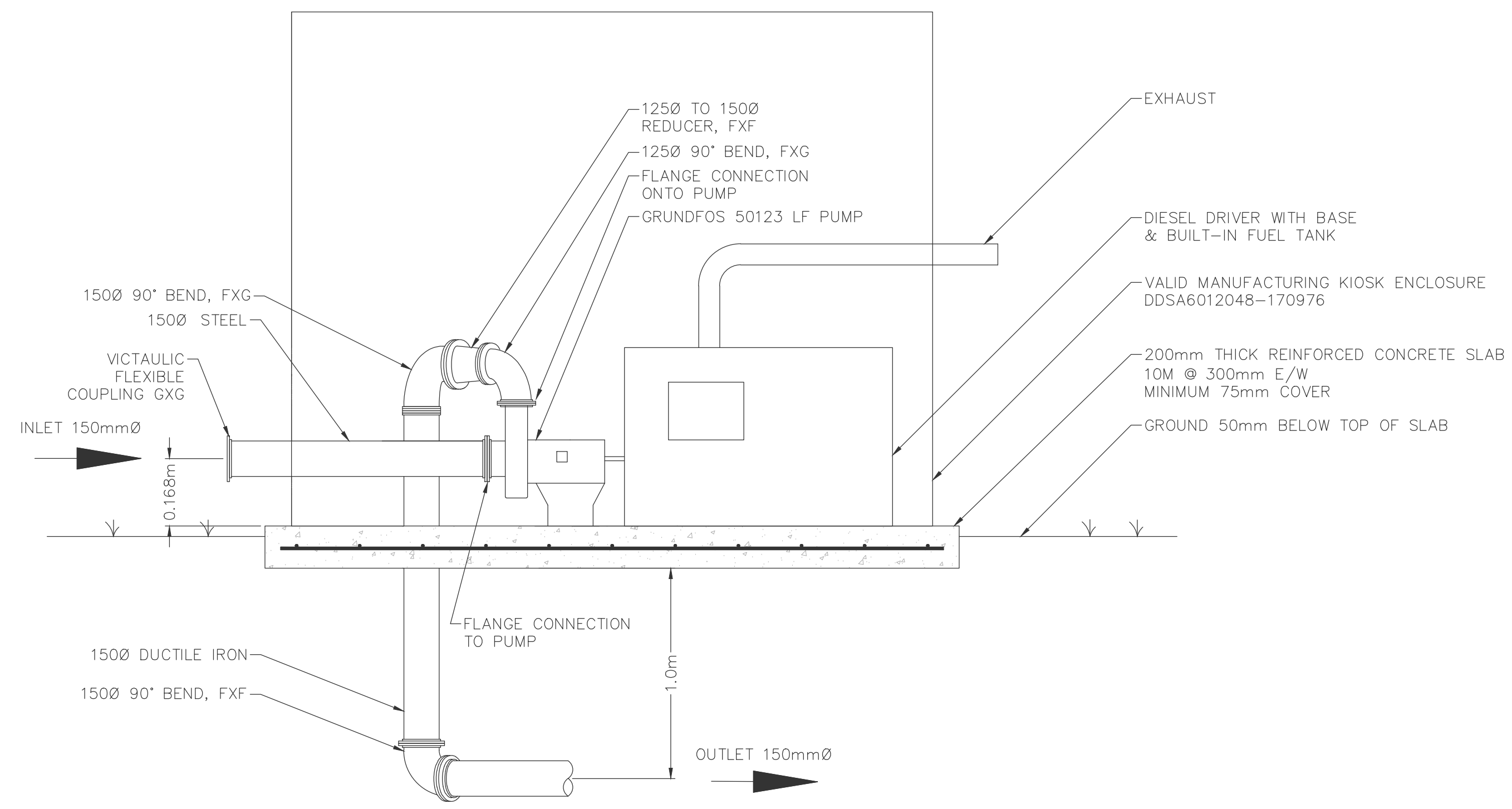
COOMBS, BC



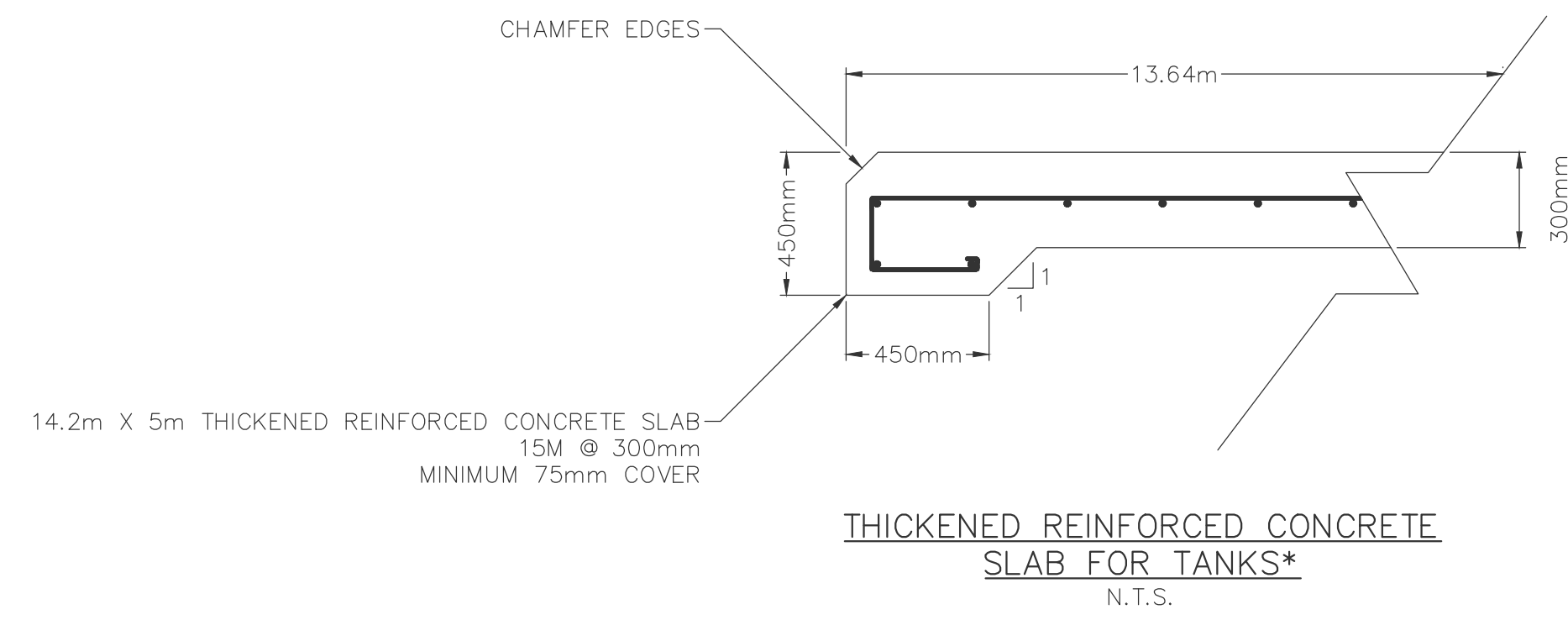
**PUMP AND ENCLOSURE PLAN VIEW**  
N.T.S.



**KIOSK ENCLOSURE**  
(FOR INFORMATION ONLY)  
VALID MANUFACTURING MODEL: DDSA6012048-170976  
N.T.S.



**PUMP AND ENCLOSURE ELEVATION VIEW**  
N.T.S.



**THICKENED REINFORCED CONCRETE SLAB FOR TANKS\***  
N.T.S.

\*FINAL DESIGN, IF MORE CONSERVATIVE FOR SEISMIC REQUIREMENTS, TO COME FROM TANK MANUFACTURER

DRAWING TITLE:  
**DETAILS**

  
 #206-335 WESLEY STREET NANAIMO, BC V9R 2T5  
 TEL: 250.591.7364 EMAIL: info@cascara.ca

|                                 |                             |
|---------------------------------|-----------------------------|
| DESIGN BY: CDR                  | CHECKED BY: MBR             |
| DRAWN BY: MBR/GPD               | APPROVED BY: CDR            |
| SCALE: HORIZ: 1:250 VERT: 1:250 | DATE: 13MAR18 SHEET: 3 OF 3 |
| ENG. FILE NUMBER: RDN 12-43406  | PROJECT NUMBER: 1019-001    |
| DRAWING NUMBER: C02             | REV: E                      |

## **APPENDIX B**

### Specifications – Pay Item Descriptions

## 1.0 General Requirements

### .1 Scope

Payment for the various items of the Schedule of Prices, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of Work being described, as necessary to complete the various items of the Work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction.

No separate payment shall be made for any item that is not specifically set forth in the Schedule of Prices, and all costs therefore shall be included in the prices named in the Schedule of Quantities for the various appurtenant items of Work.

In addition to other incidental items of Work listed elsewhere in the contract, the following items shall also be considered as incidental to other Items of Work under this contract:

- a) Repair of any damage to existing facilities caused by the Contractor in the course of Work.
- b) Erosion and pollution control.

### .2 Mobilization / Demobilization (Pay Item No. 1.1) Price based on Lump Sum

Measurement for payment for this item shall be based upon the completion of the entire Work as a Lump Sum Pay Unit, complete, all in accordance with the requirements of the Contract Documents.

Work under this item includes the obtaining of all permits; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the Work. This item also includes demobilization of the above. Mobilization shall include the following principal items:

- a) Moving on to the site of all Contractor's plant and equipment required for operations
- b) Providing all on-site communication facilities, including radios and cellular phones
- c) Obtaining all required permits
- d) Having all WCB required notices and establishment of safety programs
- e) Having the Contractor's superintendent at the job site full time
- f) Submitting initial submittals
- g) Demobilization following construction

Payment for this item shall be made at the lump sum amount tendered for this item in the Schedule of Prices, with 50% payable after mobilizing to the site and 50% payable after demobilization.

.3 Project Layout (Pay Item No. 1.2) Price based on Lump Sum

Measurement for payment for this item shall be based upon the completion of the entire Work as a Lump Sum Pay Unit, complete, all in accordance with the requirements of the Contract Documents.

Work under this item includes full survey layout as required for construction.

.4 Remove and Salvage Existing Steel Tanks (Pay Item No. 1.3) Price based on Lump Sum

This item is for all costs associated with removing and salvaging the existing steel water tanks.

Work includes removal and relocation to a storage location at the back of the firehall, with the location to be coordinated with the fire chief.

Payment for this item will be made at the lump sum amount tendered for this item.

.5 Common Excavation (Pay Item No. 1.4) Price based on unit rate

This item is for all costs associated with common excavation and removal from site of material removed in accordance with the requirements of MMCD 31 23 01. Excavated volume will be computed as the difference between the original ground and the finished grade surface.

Work includes excavation and removal of all material beneath the new tanks and pump system concrete pads to reach acceptable bearing and install designed base courses.

Payment for this item will be made at the unit price tendered on the Schedule of Prices.

.6 Granular Fill (Pay Item No. 1.5) Price based on unit rate

This item is for all costs associated with filling to the bottom of base course elevations, and will be measured by the cubic meter of material placed, meeting the specifications of Pit Run Gravel all in accordance with the requirements of MMCD sections 31 05 17 and 32 11 23

Work includes supplying, placing, and compacting the material to design grades.

Payment for this item will be made at the unit price tendered on the Schedule of Prices.

.7 Base Course (Pay Item No. 1.6) Price based on unit rate

This item is for all costs associated with installing base course beneath the concrete pads and will be measured by the cubic meter of material placed, meeting the specifications of Granular Base all in accordance with the requirements of MMCD sections 31 05 17 and 32 11 23.

Work includes supplying, placing, and compacting the material to design grades and thicknesses.

Payment for this item will be made at the unit price tendered on the Schedule of Prices.

## 2.0 Pump, Piping and Hydrant

### .1 150 PVC DR18 Waterline (Pay Item 2.1) Price based on unit rate

This item is for all costs associated with installing underground water piping, all in accordance with the requirements of MMCD section 33 11 01.

Work includes supplying materials, excavating the trenches, dewatering if needed, bracing and sheeting, providing and installing pipe bedding, installing the piping, hydrostatic and bacteriological testing, trench backfill with excavated material, and surface restoration.

Payment for this item will be made at the unit price tendered on the Schedule of Prices.

### .2 Fire Hydrant (Pay Item No. 2.2) Price based on unit rate

This item is for all costs associated with supplying and installing a fire hydrant, all in accordance with MMCD section 33 11 01.

Work includes supplying and installing the fire hydrant.

Payment for this item will be made at the unit price tendered on the Schedule of Prices.

### .3 Pump Station (Pay Item No. 2.3) Price based on lump sum

This item is for all costs associated with supplying, installing and commissioning a package pump station, complete with appurtenances, including concrete pad, pump with integral fuel tank, above-ground piping, mechanical and electrical connections.

Work includes supplying, installing and commissioning the specified pump system.

Payment for this item will be made at the lump sum price tendered on the Schedule of Prices.

### .4 Level Indicator and Fill Line Relocation (Pay Item No. 2.4) Price based on lump sum

This item is for all costs associated with relocating the existing tank fill line and level indicator from the existing steel tanks to the new tanks, including connections at the mechanical room, installation of underground ducting, installation of electrical supply and control lines, and commissioning of the level indicators and fill lines.

Work includes supplying materials, installing extension conduits, reconnecting and commissioning the existing level indicator and fill lines.

Payment for this item will be made at the lump sum price tendered on the Schedule of Prices.

**.5 Insulation and Heat Trace (Pay Item No. 2.5) Price based on lump sum**

This item is for all costs associated with supplying and installing insulation and heat trace to all exposed piping, including the following:

- Three GFI Weatherproof Outlet Cover Outdoor Receptacles at the locations adjacent to the connecting pipe.
- Raychem AMC-F5 Fixed Set Point Thermostat and Raychem heat trace wrapped around the pipe at 150mm on center.
- 1" thick fiberglass Insulation c/w Aluminum Jacket on all exterior pipes and flanges.
- Underground ducting to access the heat trace locations

Payment for this item will be made at the lump sum price tendered on the Schedule of Prices.

**.6 Miscellaneous Piping (Pay Item No. 2.6) Price based on lump sum**

This item is for all costs associated with installing valves and piping connections within and between the new water tanks, complete.

Payment for this item will be made at the lump sum price tendered on the Schedule of Prices.

**3.0 Water Storage Tanks**

**.1 Supply and Install Water Tanks (Pay Item No. 3.1) Price based on lump sum**

This item includes all costs associated with supplying and installing three (3) 10,000-gallon water tanks as shown on the Plans, complete with seismic holddowns.

Work includes furnishing and installing the tanks, providing seismic holddown requirements through the tank supplier, providing and installing seismic holddown equipment as specified by the supplier, supplying all valving and piping for specified connections, and commissioning of the water tanks.

Payment for this item will be made at the lump sum price tendered on the Schedule of Prices.

END OF SECTION



**APPENDIX C**  
**Geotechnical Report**



**Lewkovich Engineering Associates Ltd.**  
geotechnical • health, safety & environmental • materials testing

Cascara Consulting Engineers Limited  
#206 - 335 Wesley Street  
Nanaimo, BC  
V9R 2T5

File Number: F5083.02  
Date: November 14, 2017

Attention: Mr. Charles Ramos, P.Eng., P.E.

**PROJECT: COOMBS-HILLIERS FIRE DEPARTMENT  
WATER STORAGE TANKS  
3241 ALBERNI HIGHWAY, QUALICUM BEACH, BC**

**SUBJECT: GEOTECHNICAL ASSESSMENT**

**REFERENCE: Cascara Consulting Engineers Limited drawing titled “Coombs-Hilliers Fire Department, Water Storage Tank, Coombs, BC, Site, Plan,” File No. 1019-001, Drawing No. SK1, Revision B, Dated July 27, 2017 (attached).**

Dear Mr. Ramos:

**1. INTRODUCTION**

As requested, Lewkovich Engineering Associates Ltd. (LEA) has carried out a geotechnical assessment with respect to the above noted development. This report provides a summary of our findings and recommendations.

**2. BACKGROUND**

- a. LEA understands the proposed development consists of improvements to the existing Coombs-Hilliers Fire Department (CHFD) facility. We understand the proposed improvements include demolition and removal of two (2) above ground steel water tanks, and the construction of three (3) new above ground 10,000 gallon plastic water storage tanks.
- b. We understand the new plastic tanks will be supported by a conventional cast-in-place concrete foundation(s), as designed by the project Structural Engineer.
- c. We understand the proposed development will include the installation of associated civil works and services for the tanks, including underground service lines, pumps, and a new hydrant(s).

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### 3. ASSESSMENT OBJECTIVES

Our assessment, as summarized within this report, is intended to meet the following objectives:

- i. Determine whether the land is considered safe for the use intended (defined for the purposes of this report as the construction of three new above ground water storage tanks), with the probability of a geotechnical failure resulting in property damage of less than 10 percent (10%) in 50 years, with the exception of geohazards due to a seismic event which are to be based on a less than 2 percent (2%) probability of exceedance in 50 years, provided the recommendations in this report are followed.
- ii. Identify any geotechnical deficiency that might impact the design and construction of the development, and prescribe the geotechnical works and any changes in the standards of the design and construction of the development that are required to ensure the land, buildings, and works and services are developed and maintained safely for the use intended.
- iii. Acknowledge that Approving and/or Building Inspection Officer may rely on this report when making a decision on applications for the development of the land.

### 4. ASSESSMENT METHODOLOGY

- a. The subsurface geotechnical investigation was carried out on October 5, 2017 using a rubber-tired backhoe provided by Parksville Heavy Equipment. A total of three (3) test pits (TP 17-01 to TP 17-03) were excavated in proximity to the proposed water tank locations. All test pits were backfilled upon completion.
- b. A site plan showing the location of the test pits (Figure 01) is attached, following the text of this report.

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## 5. SITE CONDITIONS

### 5.1 General

- a. The proposed development property is located within the jurisdictional boundaries of the Regional District of Nanaimo (RDN). The property is identified with the civic address of 3241 Alberni Highway. The subject property is situated on the north side of the Alberni Highway, approximately 230m west of the Hilliers Road South/Alberni Highway intersection, and approximately 400m east of the Burbank Road/Alberni Highway intersection. The lot is currently accessed via the existing Alberni Highway frontage.
- b. The terrain of the subject property and development area is essentially level, with little to no vertical relief.
- c. At the time of our field investigation the existing CHFD facility was operational; the proposed location for the three new water tanks was undeveloped, and finished with gravel surfacing.

### 5.2 Soil Conditions

- a. Consistent soil strata were encountered during the test pitting investigation. Generally, these strata consisted of loose to compact, moist, brown to black, sand with some gravel, silt, and organics (fill/topsoil), underlain by a compact to dense, moist, orange-brown to brown, sand (fine) with trace amounts of gravel and silt, underlain by a compact to dense, moist to wet, grey, sand (fine to medium).
- b. The main strata are discussed in general below. Detailed descriptions of the subsurface conditions are provided on the attached test pit logs (TP 17-01 to TP 17-03).
- c. Loose to compact, moist, brown to black, sand with some gravel, silt, and organics (fill/topsoil) was encountered in each of the test pits to a maximum depth of 1.4m.
- d. Compact to dense, moist, orange-brown to brown, sand (fine) with trace amounts of gravel

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and silt was encountered in each of the test pits at depths from 1.0m to 2.3m.

- e. Compact to dense, moist to wet, grey, sand (fine to medium) was encountered in each of the test pits at depths from 1.5m to 2.5m.
- f. Depths are referenced to the existing ground surface at the time of our field investigation. Soil classification terminology is based on the Modified Unified classification system. The relative proportions of the major and minor soil constituents are indicated by the use of appropriate Group Names as provided in ASTM D2488-93 and/or D2487 Figures 1a, 1b, and 2. Other descriptive terms generally follow conventions of the Canadian Foundation Engineering Manual.

### **5.3 Groundwater**

- a. Groundwater seepage was encountered in TP 17-03 at a depth of 2.3m. The encountered seepage was minor.
- b. Given the encountered depth, and the assumed construction methods, we do not expect groundwater flows to have a significant impact on the proposed construction.
- c. Groundwater levels can be expected to fluctuate seasonally with cycles of precipitation. Contact our office immediately if unanticipated conditions are encountered at any point during construction.
- d. If groundwater flows or conditions are different than those encountered during the test pitting investigation, additional measures may be required during construction. Contact our office immediately if unanticipated conditions are encountered at any point during construction.

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## **6. CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 General**

From a geotechnical point of view, the land is considered safe for the use intended (defined for the purposes of this report as the construction of three new above ground water storage tanks), with the probability of a geotechnical failure resulting in property damage of less than 10 percent (10%) in 50 years, with the exception of geohazards due to a seismic event which are to be based on a less than 2 percent (2%) probability of exceedance in 50 years, provided the recommendations in this report are followed.

### **6.2 Removal of Unsuitable Materials and General Excavation Recommendations**

- a. Prior to construction, all unsuitable materials should be removed to provide a suitable base of support. Unsuitable materials include any non-mineral material such as vegetation, topsoil, peat, fill or other materials containing organic matter, as well as any soft, loose, or disturbed soils.
- b. Unsuitable material was encountered in each of the excavated test pits from 1.0m to 1.4m in depth. Based on the conditions encountered during our test pitting investigation, the mean stripping depth in the proposed tank area is 1.2m.
- c. Ground water ingressing into any excavations should be controlled with a perimeter ditch located just outside of the construction areas, connected to positive drainage.
- d. The Geotechnical Engineer is to confirm the removal of unsuitable materials and approve the exposed competent inorganic subgrade.

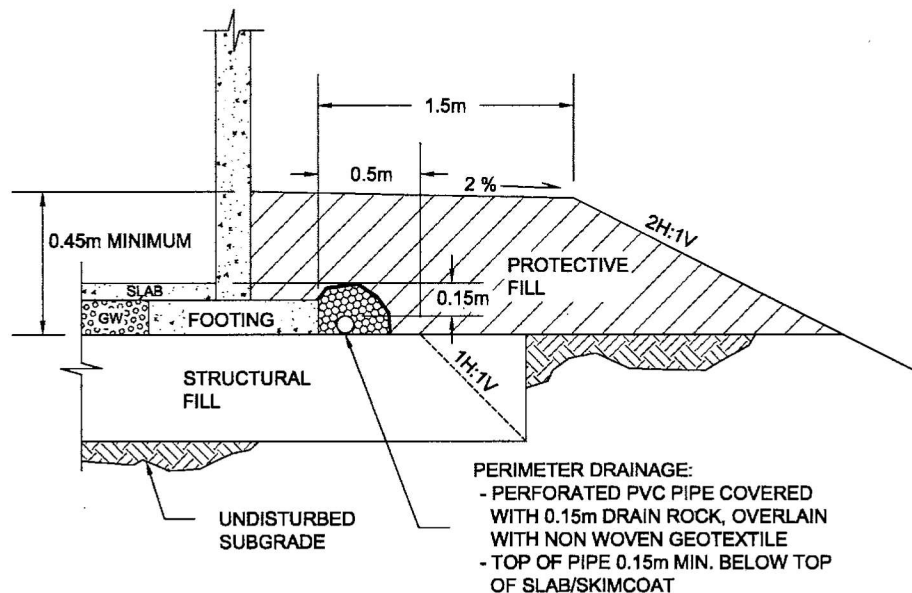
### **6.3 Structural Fill**

- a. Where fill is required to raise areas that will support buildings, slabs, or pavements, structural fill should be used. The Geotechnical Engineer should first approve the exposed subgrade in fill areas, to confirm the removal of all unsuitable materials.

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- b. Structural fill should be inorganic sand and gravel. If structural fill placement is to be carried out in the wet season, material with a fines content limited to 5% passing the 75µm sieve should be used, as such a material will not be overly sensitive to moisture, allowing compaction during rainy periods of weather.
- c. Structural fill should be compacted to a minimum of 95% of Modified Proctor maximum dry density (ASTM D1557) in foundation and floor slab areas, as well as in paved roadway and parking areas.
- d. Structural fills under foundations, roadways, and pavements should include the zone defined by a plane extending down and outward a minimum 0.5m from the outer edge of the foundation at an angle of 45 degrees from horizontal to ensure adequate subjacent support. This support zone is shown in the figure below.



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- e. Compaction of fill should include moisture conditioning as needed to bring the soils to the optimum moisture content and compacted using vibratory compaction equipment in lift thicknesses appropriate for the size and type of compaction equipment used.
- f. A general guideline for maximum lift thickness is no more than 100mm for light hand equipment such as a “jumping-jack,” 150mm for a small roller and 300mm for a large roller or heavy (>500 kg) vibratory plate compactor or a backhoe mounted hoe-pac or a large excavator mounted hoe-pac, as measured loose.
- g. It should be emphasized that the long-term performance of buildings, slabs, and pavements is highly dependant on the correct placement and compaction of underlying structural fills. Consequently, we recommend that structural fills be observed and approved by the Geotechnical Engineer. This would include approval of the proposed fill materials and performing a suitable program of compaction testing during construction.

#### **6.4 Foundation Design & Construction**

- a. Prior to construction, the building area should be stripped to remove all unsuitable materials to provide an undisturbed natural soil subgrade for the footing support.
- b. Foundation loads should be supported on soils and/or material approved for use as a bearing stratum by our office and may be designed using the following values.
  - i. For foundations constructed on structural fill, as outlined in Section 6.3 of this report, a Service Limit State (SLS) bearing pressure of 150 kPa, and an Ultimate Limit State (ULS) of 200 kPa may be used for design purposes. These values assume a minimum 0.45m depth of confinement or cover.
  - ii. For foundations constructed on compact to dense, inorganic, naturally deposited soils, an SLS bearing pressure of 150 kPa, and a ULS bearing pressure of 200 kPa may be used for design purposes. These values assume a minimum 0.45m depth of confinement or cover.



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- 
- c. Exterior footings should be provided with a minimum 0.45m depth of ground cover for frost protection purposes.
  - d. Prior to placement of concrete footings, any bearing soils that have been softened, loosened, or otherwise disturbed during the course of construction should be removed, or else compacted following our recommendations for structural fill. Compaction will only be feasible if the soil has suitable moisture content and if there is access to heavy compaction equipment. If no structural fill is placed, a smooth-bladed clean up bucket should be used to finish the excavation.
  - e. The Geotechnical Engineer should evaluate the bearing soils at the time of construction to confirm that footings are based on appropriate and properly prepared founding material.

## **6.5 Seismic Issues**

- a. No compressible or liquefiable soils were encountered during the test pitting investigation.
- b. Based on the 2012 British Columbia Building Code, Division B, Part 4, Table 4.1.8.4.A, "Site Classification for Seismic Site Response," the soils and strata encountered during the test pitting investigation would be "Site Class D" (Stiff Soil).

## **6.6 Permanent Dewatering**

Conventional requirements of the 2012 British Columbia Building Code pertaining to building drainage are considered suitable at this site.

## **6.7 On Site Infiltration and Stormwater Disposal**

- a. As part of the geotechnical investigation, field observations of the subgrade soil conditions with respect to the on site infiltration and disposal of stormwater were carried out.
- b. In general, subgrade soil conditions consist of a layer of organic fill materials, overlying a naturally deposited subgrade of compact to dense, fine, sand with trace amounts of gravel

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and silt.

- c. Based on the subgrade soil conditions encountered during the test pitting investigation, it is the opinion of LEA that site conditions may be conducive to the installation of an on site stormwater infiltration medium. Site conditions may also be conducive to the installation of storm water detention measures.
- d. If additional site specific testing is required to determine infiltration values and/or conductivity for site soils, please contact the undersigned.
- e. The location(s) of any proposed infiltration/detention measures shall be reviewed by the Geotechnical Engineer to determine if the design method(s) and/or location(s) pose a hazard to the subject property or any adjacent or adjoining properties.

#### **6.8 Pavement Design – On Site Roadways & Parking Areas**

- a. Any organic or deleterious material should be removed from beneath the designated roadway, driveway, or parking areas prior to subgrade preparation. If fill is required to bring the subgrade up to a desired elevation, structural fill should be used.
- b. The subgrade should be proof rolled after final compaction and any areas showing visible deflections should be inspected and repaired.
- c. An estimated soaked California bearing ratio of 3.0% and a 20 year design life have been used in the following recommended pavement designs.
  - i. Areas subject to car and light truck vehicles:

Estimated E.S.A.L. =  $2 \times 10^4$

|                                     |          |
|-------------------------------------|----------|
| Asphaltic Concrete Pavement         | = 50 mm  |
| Granular Base Course (19mm crush)   | = 100 mm |
| Standard Subbase Preparation (SGSB) | = 250 mm |

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ii. Areas subject to delivery trucks:

Estimated E.S.A.L. =  $1 \times 10^5$

|                                     |          |
|-------------------------------------|----------|
| Asphaltic Concrete Pavement         | = 75 mm  |
| Granular Base Course (19mm crush)   | = 150 mm |
| Standard Subbase Preparation (SGSB) | = 300 mm |

## 6.9 Modulus of Subgrade Reaction

The Modulus of Subgrade Reaction,  $k_s$ , while typically a constant, yields variable amounts of “reaction” based on the mass being supported and the thickness of the soil. For design purposes, a value of  $60,000 \text{ kN/m}^3$  may be employed. It is recommended that foundations are designed in consultation with the Geotechnical Engineer.

## 6.10 Lateral Earth Pressures

- a. Any future retaining wall construction within the property shall be reviewed by the Geotechnical and/or Structural Engineer(s).
- b. Lateral earth pressure coefficients ( $K$ ) for the design of the cast-in-place retaining walls are outlined in Table 1. It is assumed that there will be no additional surcharge on the slope. A back slope of  $25^\circ$  has been used in these calculations because of geometric limitations inherent to the equations. It is noted that the methods employed are estimates and further analysis may be required after dimensions of the proposed structure have been determined. Drainage requirements for any wall construction shall be reviewed by the Geotechnical Engineer prior to construction.
- c. An average soil friction angle of  $27^\circ$  has been used to calculate the lateral earth pressure coefficients. It is assumed that retained soils are well compacted, cohesion-less sands and gravels, with a unit weight of  $21 \text{ kN/m}^3$ .
- d. The Mononobe-Okabe (M-O) Method has been used to calculate the active seismic lateral



earth pressure coefficients. The static active lateral earth pressure has been calculated using Coulomb's theory. The results for the passive earth pressures have been calculated using Rankine theory.

- e. The seismic thrust coefficient provides a value that combines both dynamic and static forces. Seismic forces used reflect values from the 2015 National Building Code interpolated seismic hazard values for the Nanaimo area, which are 0.44 Peak Ground Acceleration (PGA) (2% in 50year probability) and 0.22 PGA (10% in 50year probability).
- f. The total thrust for the static case acts through a point that is approximately H/3 above the toe of the wall. The dynamic component of the seismic thrust acts through a point at approximately 0.6H above the toe of the wall.

Table 1

Lateral Earth Pressure Coefficients (ULS)

| Lateral Earth Pressure Condition | Earth Pressure Coefficient (K) |      |
|----------------------------------|--------------------------------|------|
| Static Passive                   | K <sub>p</sub>                 | 2.66 |
| Static Active                    | K <sub>a</sub>                 | 0.34 |
| Seismic Active                   | K <sub>e</sub>                 | 0.53 |

- g. The total thrust resulting from lateral earth pressures under each of the conditions outlined in Table 1 may be calculated using the following relationship:

$$P = 0.5 K \gamma H^2$$

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Where:  $P$  = total thrust (kN/m length of wall)

$K$  = Earth Pressure Coefficient

$\gamma$  = Soil Unit Weight (kN/m<sup>3</sup>)

$H$  = Height of Wall (m)

## 7. GEOTECHNICAL ASSURANCE AND QUALITY ASSURANCE

The 2012 British Columbia Building Code requires that a geotechnical engineer be retained to provide Geotechnical Assurance services for construction of this nature. Geotechnical Assurance services include review of the geotechnical components of the plans and supporting documents, and responsibility for field reviews of these components during construction.

## 8. ACKNOWLEDGEMENTS

Lewkowich Engineering Associates Ltd. acknowledges that this report may be requested by the building inspector (or equivalent) of the Regional District of Nanaimo as a precondition to the issuance of a building or development permit. It is acknowledged that the Approving Officers and Building Officials may rely on this report when making a decision on application for development of the land. We acknowledge that this report has been prepared solely for, and at the expense of Cascara Consulting Engineers Limited.

## 9. LIMITATIONS

The conclusions and recommendations submitted in this report are based upon the data obtained from a limited number of widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction or further investigation. The recommendations given are based on the subsurface soil conditions encountered during test pitting, current construction techniques, and generally accepted engineering practices. No other warrantee, expressed or implied, is made. Due to

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the geological randomness of many soil formations, no interpolation of soil conditions between or away from the test pits has been made or implied. Soil conditions are known only at the test pit locations. If other soils are encountered, unanticipated conditions become known during construction or other information pertinent to the structures become available, the recommendations may be altered or modified in writing by the undersigned.

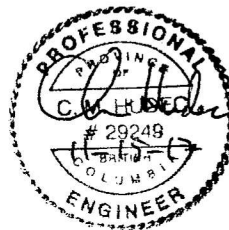
## 10. CLOSURE

Lewkowich Engineering Associates Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,  
Lewkowich Engineering Associates Ltd.



Steven Stacey, B.A., C.Tech  
Senior Technician



Chris Hudec, M.A.Sc., P.Eng.  
Senior Project Engineer

Attachments: Site Plan (Figure 01), Test Pit Logs (TP 17-01 to TP 17-03)





| REV No. | DATE | BY | P.Eng. | REVISION DESCRIPTION |
|---------|------|----|--------|----------------------|
|         |      |    |        |                      |

|   |  |                 |  |
|---|--|-----------------|--|
| DRAWING TITLE                             |  | ENGINEER'S SEAL |  |
| TEST PIT LOCATION SITE PLAN               |  |                 |  |
| PROJECT NAME                              |  | PROJECT No.     |  |
| COOMBS-HILLIERS VOLUNTEER FIRE DEPARTMENT |  | F5083           |  |
| 3241 ALBERNI HIGHWAY, QUALICUM BEACH, BC  |  | DRAWING No.     |  |
| LEGAL DESCRIPTION                         |  | FIGURE 01       |  |

|             |             |
|-------------|-------------|
| PLOT DATE   | DRAWN BY    |
| 2017-11-14  | SBS         |
| REVIEWED BY | SCALE       |
| CH          | NTS         |
| PROJECT No. | DRAWING No. |
| F5083       | FIGURE 01   |

|   |
|---|
| <b>LEA</b>                                  |
| Lewkovich<br>Engineering<br>Associates Ltd. |



# TEST PIT LOG

File Number: F5083

TP 17-01

Project: Coombs-Hilliers Volunteer Fire Department

Location: 3241 Alberni Highway, Qualicum Beach, BC

| Depth (m) | Soil Symbol | Description   |
|-----------|-------------|---|
|           |             | Ground Surface  |
| 0.0       |             | 0-0.3m<br>Sand, some gravel, trace silt, dense, grey, moist (fill)  |
| 0.5       |             | 0.3-0.7m<br>Sand, trace gravel, silt, and organics (roots, rootlets), loose to compact, dark brown, moist (fill/re-worked)  |
| 1.0       |             | 0.7-1.0m<br>Silt and sand, trace gravel and organics (roots, rootlets), loose, dark brown to black, moist                   |
| 1.5       |             | 1.0-1.3m<br>Sand (fine), trace gravel and silt, compact, orange-brown, moist  |
| 2.0       |             | 1.3-1.5m<br>Sand (fine), trace gravel and silt, compact to dense, brown, moist  |
| 2.5       |             | 1.5-2.1m<br>Sand (fine), dense, grey, moist   |
| 3.0       |             |   |
| 3.5       |             |   |
|           |             | Fill/re-worked materials encountered to 0.7m<br>No groundwater seepage observed<br>End test pit at 2.1m (effective refusal) |

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Date: October 5, 2017

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Sheet: 1 of 1

Digging Method: Rubber Tired Backhoe

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Email: geotech@lewkowich.com





# TEST PIT LOG

File Number: F5083

TP 17-02

Project: Coombs-Hilliars Volunteer Fire Department

Location: 3241 Alberni Highway, Qualicum Beach, BC

| Depth (m) | Soil Symbol | Description   |
|-----------|-------------|---|
|           |             | Ground Surface  |
| 0.0       |             | 0-0.3m<br>Sand, some gravel, trace silt, dense, grey, moist (fill)  |
| 0.5       |             | 0.3-1.4m<br>Sand, trace gravel, silt, and organics (roots, rootlets), loose to compact, dark brown, moist (fill/re-worked)  |
| 1.0       |             |   |
| 1.5       |             | 1.4-1.6m<br>Sand (fine), trace gravel and silt, compact to dense, brown, moist  |
| 2.0       |             | 1.6-2.0m<br>Sand (fine), dense, grey, moist   |
| 2.5       |             |   |
| 3.0       |             |   |
| 3.5       |             |   |
|           |             | Fill/re-worked materials encountered to 1.4m<br>No groundwater seepage observed<br>End test pit at 2.0m (effective refusal) |

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# TEST PIT LOG

File Number: F5083

TP 17-03

Project: Coombs-Hilliers Volunteer Fire Department

Location: 3241 Alberni Highway, Qualicum Beach, BC

| Depth (m) | Soil Symbol | Description   |
|-----------|-------------|---|
|           |             | Ground Surface  |
| 0.0       |             | 0-0.3m<br>Sand, some gravel, trace silt, dense, grey, moist (fill)  |
| 0.5       |             | 0.3-0.8m<br>Sand, trace gravel, silt, and organics (roots, rootlets), loose to compact, dark brown, moist (fill/re-worked)              |
| 1.0       |             | 0.8-1.0m<br>Silt, sand, trace gravel and organics (roots, rootlets), loose, dark brown to black, moist                                  |
| 1.5       |             | 1.0-2.3m<br>Sand (fine), trace gravel and silt, compact to dense, brown, moist  |
| 2.0       |             |   |
| 2.5       |             | 2.3-2.5m<br>Sand (medium), compact to dense, grey, wet  |
| 3.0       |             |   |
| 3.5       |             | Fill/re-worked materials encountered to 0.8 m<br>Minor groundwater seepage observed at 2.3m<br>End test pit at 2.5m (effective refusal) |

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Digging Method: Rubber Tire Backhoe

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