

REGIONAL DISTRICT OF NANAIMO

Greater Nanaimo Pollution Control Centre Secondary Treatment Upgrade

CIVIL EARTHWORKS CONTRACT

Contract Document
Issued for Tender

Volume 1 of 1
Specifications

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DIVISION 0 - LEAD DOCUMENTS

TENDERER'S CHECKLIST

Before submitting your tender, check the following points:

1. Has your tender been signed, sealed and witnessed? ()
2. Have you enclosed the Bid Bond? ()
3. Have you enclosed the Agreement to Bond, signed and sealed by your proposed Surety? ()
4. Have you completed all schedules and prices in the Tender Form? ()
5. Have you completed Statement "A" – Experience in Similar Work? ()
6. Have you completed Statement "B" – Senior Supervisory Staff? ()
7. Have you completed Statement "D" – Subcontractors? ()
8. Have you completed Statement "E" – Force Account Rates? ()
9. Have you signed the acknowledgement of receipt of the Environmental Performance Requirements in Appendix A? ()
10. Are the documents complete? ()

END OF SECTION

INFORMATION TO TENDERERS

1. GENERAL

1.1 Tenders

- .1 Sealed tenders clearly marked as to contents, will be received for:

**“GREATER NANAIMO POLLUTION CONTROL CENTRE
SECONDARY TREATMENT UPGRADE – CIVIL EARTHWORKS CONTRACT”**

Tenders must be addressed and received at the Regional District of Nanaimo, 6300 Hammond Bay Road, Nanaimo, BC, V9T 6N2, not later than 2:00 pm, local time on:

August 12, 2015

The time of Tender closing will be based on the clock on the computer at the Reception Desk. Tenders will be opened publicly immediately after the time for receipt of Tenders.

1.2 Tender Form

- .1 Tenders must be completed in ink or typed and submitted on the official Tender Form, which is part of the Contract. Tenders are to be offered on the basis that the Tenderer whose tender is accepted shall enter into a written agreement with the Owner pursuant to the provisions of the current edition of the Canadian Construction Documents Committee (CCDC) 2 – Stipulated Price Contract. Article A-4, Contract Price, and Article A-5, Payment, of the AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR are amended by the document CONTRACT FORM, which is included as a part of this tender package. The General Conditions are amended by the Supplementary General Conditions, Section 00800, which are included as a part of this tender package.
- .2 Each tender shall include the completed two copies of each of the following:
- .1 Tender Form,
 - .2 Agreement to Bond (one original, one copy),
 - .3 Bid Bond (one original, one copy)
- .3 Within 24 hours of closing of this Tender, the Tenderer will submit supplemental information to his Tender that will be used in the evaluation of his Tender, as follows:
- .1 Tender Price Breakdown (Section 00305)
 - .2 Schedule of Quantities and Prices (Section 00310)
 - .3 Statements “A”, “B”, “D” and “E”
 - .4 Preliminary Construction Schedule showing all major work items
- .4 The complete written Tender documents must be submitted as the Tender. The Tender Form and attachments only, will be submitted; however, the Tenderer accepts and acknowledges

INFORMATION TO TENDERERS

by his provision of a Tender that he has read and understood all of the requirements of the Contract Documents.

- .5 The Tenderer shall fill in all blank spaces, item prices, lump sums and other information in the Tender Form and in the Tender Price Breakdown.
- .6 Original tenders submitted by E-mail, facsimile, telex, or telegraph will not be considered.
- .7 **(Note: The duplicate tender forms are only required for Owner Agreements.)** The other information in this clause is repeated in Clause 1.2.1. The Tenderer should provide his own envelope for the Tender. The envelope should be marked clearly with the Contract Title, Contract Number, and the Name of the Tenderer.

1.3 Tender Deposit

- .1 Each Tenderer shall include a tender deposit in the form of a Bid Bond payable to the Regional District of Nanaimo in the amount of 10% of the tender price.
- .2 Bid Bonds shall be submitted on CCDC Form 220 and shall remain valid for a period of seventy (75) days following the Tender closing date.
- .3 Tender deposits shall be returned to unsuccessful Tenderers after a reasonable time for the consideration and award of the Contract has elapsed.
- .4 The tender deposit of the successful Tenderer shall be exchanged for the Performance Bond and the Labour and Material Payment Bond, upon the award of the Contract.
- .5 Should the successful Tenderer fail to enter into a Contract with the Owner or fail to produce the required Performance Bond within 2 weeks of the date of acceptance of the Tender, or to start work as directed, the tender deposit will be forfeited to the Owner.

1.4 Signature Required on Tender

- .1 The Tender must bear:
 - .1 One signature, plus a corporate seal, or
 - .2 A signature, and a signature from a witness, or
 - .3 A signature and wording underneath "*I have the authority to bind the Corporation*" – if indeed they have this authority.
- .2 No photocopies of signatures are acceptable; they must be original.

1.5 Disqualification of Tenders

- .1 Under no circumstances will tenders be considered which:
 - .1 Are received after the above advertised closing time for tenders.

INFORMATION TO TENDERERS

- .2 Are not accompanied by a Bid Bond in the amount specified.
- .3 Are not signed.
- .2 Tenderers shall not contact or attempt to contact any representative of the Regional District of Nanaimo and any attempt by the Tenderer or by an officer, employee or agent of the Tenderer to contact an elected member of the Regional District of Nanaimo in connection with the submission or award of this Tender may be grounds for disqualification of the Tender.
- .3 The Owner may, in its absolute discretion, reject a tender submitted by a Tenderer, if the Tenderer, or any officer or director of the Tenderer is or has been engaged either directly or indirectly through another corporation in a legal action against the Owner, its elected or appointed officers and employees in relation to any other contract for works or services within five years of the date of this Call for Tenders.

In determining whether to reject a tender under this clause, the Owner will consider whether the litigation is likely to affect the Tenderer's ability to work with the Owner, its consultants and representatives and whether the Owner's experience or the experience of municipalities within the boundaries of the Owner indicates that the Owner is likely to incur increased staff and legal costs in the administration of this Contract if it is awarded to the Tenderer.

1.6 Informal or Unbalanced Tenders

- .1 Tenders which are incomplete, conditional, illegible or obscure or that contain additions not called for, reservations, erasures, alterations, or irregularities of any kind, may be rejected as informal.
- .2 Tenders that contain prices which appear to be so unbalanced as likely to affect adversely the interests of the Owner may be rejected.
- .3 The Owner reserves the right to waive informalities at its discretion.
- .4 Tenderers who have submitted tenders that have been rejected by the Owner because of informalities will normally be notified of the reasons for the rejection within 10 days after the closing date of tenders.

1.7 Subsequent Withdrawal or Modifications of a Tender

- .1 A Tenderer who has already submitted a Tender may submit a further sealed Tender at any time before the official closing time. The last Tender received shall supersede and invalidate all Tenders previously submitted by the Tenderer.
- .2 A Tender may be withdrawn by the Tenderer by written notice delivered to the Owner prior to the time fixed for opening tenders.
- .3 The onus is on the Tenderer to ensure timely receipt of Tender modifications. The Owner makes no assurances regarding the availability of fax communication lines or equipment. To

INFORMATION TO TENDERERS

be considered, fax transmissions of Tender modifications must be received in full prior to the time stipulated for receipt of Tender.

- .4 A Tender may be modified by a letter of facsimile in accordance with the following:
 - .1 Modifications to a submitted Tender will be permitted only if received on the Tenderer's letterhead and if signed by the same party or parties who signed and sealed the Tender.
 - .2 A Tender modification shall state the amount to be added to or deducted from the Tender.
 - .3 Tender modifications sent by fax transmission should be sent to the Regional District of Nanaimo at 250.390.1542.

1.8 Tender Validity

- .1 This Tender shall constitute an irrevocable offer by the Tenderer, open for acceptance by the Owner for a period of 75 days, after which time, if not accepted, the Tender shall be null and void.
- .2 It is understood that errors in the Tender, whether accidental, caused by negligence of the Tenderer or otherwise shall not confer any additional rights of withdrawal upon the Tenderer.

1.9 Omissions / Discrepancies

- .1 Should a Tenderer find discrepancies in, or omissions from the drawings, specifications or other Tender documents, or should he be in doubt as to their meaning, he should notify the Engineer who may send a written instruction to all Tenderers. Verbal answers are only binding when confirmed by written addenda.
- .2 Should the Tenderer not agree that the materials and methods specified, or designated on the drawings, will provide an installation to meet the requirements of the project, he shall notify the Engineer in writing, stating his reason for objection, and may submit a suggested alternative. In such an event, the Engineer may choose to issue an addendum.

1.10 Errors and Omissions on Tender Form

- .1 Wherever in a Tender the amount tendered for an item does not agree with the extension of the estimated quantity and the tendered unit price, the unit price shall govern and the amount of the Total Tender Price shall be corrected accordingly.
- .2 If a Tenderer has omitted to enter a price for an item of work set out in the Tender Form, he shall, unless he has specifically stated otherwise in his Tender, be deemed to have allowed elsewhere in the Tender Form for the cost of performing the said item of work. Unless otherwise agreed to by the Owner, no increase shall be made in the total Tender price on

INFORMATION TO TENDERERS

account of such omission and the Tenderer shall be deemed to have tendered for the entirety of the scope of work set out in the Tender Form.

1.11 Availability of Drawings, Specifications and Addenda

- .1 The Tender Document complete with drawings, specifications and any addenda will only be available at www.bcbid.gov.bc.ca. It will be the proponent's responsibility to obtain any and all addenda on BC Bid. The Regional District of Nanaimo will not provide notice of any addenda outside of BC Bid. Documents will be available for download after 3:00 pm. on Tuesday, July 28, 2015.
- .2 Drawings and specifications will be available for viewing at the offices of the Regional District of Nanaimo and at AECOM's Burnaby office.

1.12 Qualification of Tenderers

- .1 The Owner may make such investigations as it deems necessary to determine the ability of the Tenderer to perform the work, and the Tenderer shall furnish to the Owner all such information and data for the purpose as the Owner may request. The Owner reserves the right to reject any Tender if the evidence submitted by or investigation of such Tenderer fails to satisfy the Owner that such Tenderer is properly qualified to carry out the obligations of the Contract and to complete the work as contemplated therein.

1.13 Proof of Ability

- .1 In order to aid the Owner in determining the ability of each Tenderer to complete the work, the Tenderer shall complete the following Statement sheets which are bound in the document:
 - .1 Statement "A" – Tenderer's Experience in Similar Work: Stating the Tenderer's experience in similar work which it has successfully completed. Include experience for major subcontractors.
 - .2 Statement "B" – Tenderer's Senior Supervisory Staff: Giving a list of the Tenderer's senior supervisory staff with a summary of the experience of each. Include staff and experience for major subcontractors.
 - .3 Statement "D" – Subcontractors and Suppliers: Giving the name and address of each proposed sub-contractor used in making up his Tender, where that Subcontractor is responsible for more than 2.5 percent of the work or as noted, and shall state the portion of the work allotted to each. Only one sub-contractor shall be named for each part of the work to be sub-contracted. Where these items are to be undertaken by the Contractor's own forces, note in the statement.
 - .4 Statement "E" – Force Account Rates: Complete schedule.

INFORMATION TO TENDERERS

- .2 The Tenderer may be required to furnish additional statements covering other matters including financial resources and convictions or orders imposed under Health & Safety or Environmental legislation.
- .3 Information submitted in the Statements shall be used as the basis for the successful Tenderer completing his work. Personnel, equipment, or products listed in the Statements cannot be changed subsequently without the written permission from the Engineer and only at the discretion of the Owner.

1.14 Evaluation of Tenders

- .1 Tenders will be evaluated based on the following criteria:
 - .1 Qualifications and related experience of the Tenderer and senior personnel and subcontractors to be assigned to this project;
 - .2 Performance of the Tenderer and subcontractors on similar projects, including, without limitation, the Tenderer's history with respect to quality of work, scheduling, changes in the work and force account work;
 - .3 The Tenderer's compliance and ability to comply with all statutes, regulations, bylaws and other enactments affecting the Tenderer's work;
 - .4 Lowest price to the Owner of having the Work completed in accordance with the Tender Documents;
 - .5 The conformity of the Tender to the requirements set forth in the Instructions to Tenderers; and,
 - .6 Compliance with any time requirements or stipulations provided for in this Contract.
- .2 The Owner reserves the right to make enquires regarding the qualifications and experience of any one or more of the Tenderers, and shall not be obliged to make the same enquiries regarding all Tenderers.
- .3 The evaluation process will be conducted at the discretion of the Owner, and the Owner may decide to utilize other criteria and review of Tenderers other than those set out above and, without limiting the generality of the foregoing, the price to complete the Work is not the only or primary criterion to be used by the Owner in awarding the Contract.
- .4 The Owner reserves the right, at its discretion, to negotiate with any Tenderer that the Owner believes has the most advantageous Tender, or with any other Tenderer or Tenderers concurrently. In no event will the Owner be required to offer any modified terms to another Tenderer prior to entering into a contract with the successful Tenderer and the Owner shall incur no liability to any other Tenderer as a result of such negotiations or modifications.

INFORMATION TO TENDERERS

1.15 Agreement to Bond

- .1 Every Tender shall be accompanied by an “Agreement to Bond” in the form attached to the Tender Submission, and shall be executed under its corporate seal by a Surety Company lawfully doing business in the Province of British Columbia from which the Tenderer proposes to obtain the required Bonds prescribed in the Contract. In the event that the Tenderer proposes to submit an alternate Performance Guarantee, a letter from the Bank confirming that the institution is providing the Surety is required to be submitted with the Tender.

1.16 Goods and Services Tax

- .1 The tendered unit prices shall include the Goods and Services Tax (GST) and this amount shall be shown separately on the Tender Form and on invoices submitted by the Contractor.

1.17 Taxes and Duties

- .1 The Tenderer shall include sales tax in accordance with current sales tax legislation taking into account any changes that have been made known by the Government and that will occur during the life of the Contract.
- .2 If sales taxes are increased or decreased, or other amendments are made in the legislation during the course of the Contract that alter tax amounts carried in the Contract price, an adjustment will be made accordingly to the Total Contract Price.
- .3 The Contractor shall keep records and invoices of accounts subject to Goods and Services Tax and Provincial Sales Tax for the purpose of establishing taxes paid and for substantiation in the event of changes to the tax legislation during the course of the Contract.
- .4 The Tenderer shall contact the Sales Tax authorities and determine what the applicable taxes are and the procedures for tax exemption and/or refunding and include related administrative costs in the Tender.

1.18 Non-resident Contractor

- .1 If the Contractor is a non-resident of British Columbia, he shall, immediately after he has received the Engineers’s written Notice of Award, obtain from the Retail Sales Tax Branch a certificate showing that the Contractor has registered with the Retail Sales Tax Branch and shall submit such certificate to the Owner at the same time that he furnishes the Performance Bond and the Labour and Material Payment Bond.
- .2 The Contractor shall not commence work or order any materials or equipment for the Contract until he has registered with the Retail Sales Tax Branch.
- .3 The Contractor shall ensure that all sub-contractors whom he proposes to use for carrying out any of the work required by the Contract and who are non-residents of British Columbia have registered with and have complied with the requirements of the Retail Sales Tax Branch before they commence any such work.

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1.19 Prime Contractor

- .1 The Owner shall assign Prime Contractor responsibility to the Contractor as defined by WorkSafe BC OH&S Regulations and in the British Columbia Workers' Compensation Act.

1.20 Examination of Site

- .1 Tenderers can visit the site of the work to satisfy itself by personal examination as to the local conditions to be encountered during the construction and conduct of the work. It shall make its own estimate of the surface facilities, sub-surface conditions and difficulties to be encountered. A Tenderer is not to claim at any time after submission of its Tender that there was any misunderstanding of the terms and conditions of the Contract relating to site conditions.
- .2 The Tenderer, during the period of tender, may make additional examinations of the soil and subsurface conditions, as it may deem necessary to satisfy itself as to the conditions that may be encountered during construction.

1.21 Soils Investigation Reports

- .1 A copy of Levelton Consultants' Geotechnical Borehole Logs (2015) for the project site is included in Appendix B of the Contract Document.
- .2 The borehole logs record properties of the soils at a given location, and, by their nature, cannot reveal all conditions which exist or can occur on the project site.

1.22 Questions During Tender Period

- .1 No oral interpretations shall be made to any Tenderers as to the meaning of any of the contract documents or to modify any of the provisions of the contract documents. All inquiries shall be in writing and directed to:

AECOM
Fourth Floor, 3292 Production Way
Burnaby, B.C. V5A 4R4
Phone: 604-444-6400
Fax: 604-294-8597
Attention: Michael Celli (michael.cell@aecom.com)

- .2 No formal addenda shall be issued within 48 hours of Tender closing.
- .3 No questions shall be submitted in the 72 hours before Tender closing (excludes weekends and holidays).

1.23 Acceptance

- .1 The Owner reserves the right in its absolute discretion to accept the Tender which it deems most advantageous to itself and the right to reject any or all Tenders, in each case without

INFORMATION TO TENDERERS

giving any notice. The lowest or any Tender will not necessarily be accepted. In no event will the Owner be responsible for the costs of preparation or submission of a Tender.

- .2 Tenders, which contain qualifying conditions or otherwise fail to conform to the Information to Tenderers or for failure to comply with the process for submission set out in these Information to Tenderers may be disqualified or rejected. The Owner may, however, in its sole discretion, reject or retain the Tender for its consideration.

1.24 Schedule

- .1 For scheduling purposes, the intent of the Regional District of Nanaimo is to issue notice of award of the Contract on August 17, 2015. The Tenderer shall use these dates when preparing the schedule. If the dates of notice of award change from those listed above, the Tenderer's schedule shall be extended by the equivalent length of time after that date.

1.25 Optional Pre-tender Meeting

- .1 The time and date of the Pre-Tender Meeting is 9:30 a.m. on Wednesday, August 5, 2015. It is strongly recommended that all interested tenderers attend.
- .2 The meeting will be conducted at the Greater Nanaimo Pollution Control Centre at 4600 Hammond Bay Road, Nanaimo, B.C.

1.26 Award of Contract

- .1 The award of the Contract is subject to approval by the Regional District of Nanaimo.
- .2 The Owner reserves the right not to proceed with and award the Contract.
- .3 Award of the Contract is subject to the availability of sufficient funds to complete the Work.

1.27 Duration of Contract

- .1 The Contract is anticipated to take 2 months from Contract Award to completion of the Work.

1.28 Construction Documents

- .1 Four complete paper copy sets of the issued for construction Contract Document (inclusive of specifications and half-size drawings) and four additional sets of full-size drawings will be issued to the successful Tenderer.

END OF SECTION

TENDER FORM

1. GENERAL

1.1 Submission

.1 Tender for the Construction of:

**GREATER NANAIMO POLLUTION CONTROL CENTRE
SECONDARY TREATMENT UPGRADE – CIVIL EARTHWORKS CONTRACT**

.2 The following Tender is hereby submitted to:

Regional District of Nanaimo
6300 Hammond Rd.
Nanaimo, BC
V9T 6N2

hereinafter called the “Owner”

On behalf of:

Contractor

Address

hereinafter called the “Tenderer”

.3 (We), the undersigned, having fully examined the locality and Place of the Work, having fully investigated the conditions of the Work, having read and understood the Contract Documents (comprised of the tendering information, supplementary general conditions, general conditions, specifications and drawings, including all supplements, addenda and revisions to same to the date of this tender) and having secured all of the information necessary to enable the submission of this tender, hereby agree and offer to perform the totality of the Work described in the Contract Documents, in accordance with the Contract Documents, for the total sum of:

Total Tender Price (excluding GST)

***\$.....**

Goods and Services Tax:

*\$.....

*[Note: * To be completed by the Tenderer]*

TENDER FORM

- .4 Further, we, the undersigned, hereby agree and offer to perform the totality of the Work described in the Contract Documents, in accordance with the Contract Documents, to achieve Total Completion of the Work by the 30th day of October in the year 2015.

1.2 Additions and Deductions

- .1 The Tenderer agrees that, if this tender is accepted by the Owner:
- .1 It will carry out any additional or extra work (including the supplying of any additional Products pertaining thereto) or will delete any work as may be required by the Engineer in accordance with the Contract; and,
- .2 The carrying out of any work referred to in paragraph (.1) above or the issuance by the Engineer of a Contract Change Order relating to such work or the acceptance by the Tenderer of such Contract Change Order shall not, except as expressly stated in such Contract Change Order, waive, affect or vary any of the terms of the Contract or of an Contract Change Order previously issued by the Engineer or any of the rights of the Owner or of the Engineer under the Contract.
- .2 The Tenderer agrees that, if this tender is accepted by the Owner the prices applicable to work referred to in paragraph 1.3.1 above shall be determined as outlined in the General Conditions of the Contract as amended by the Supplemental General Conditions.

1.3 Addenda

- .1 We agree that we have received Addenda to inclusive, and the tender price includes for the provisions set out in such Addenda.

1.4 Declarations of Tenderer

- .1 The Tenderer declares that no person, firm or corporation other than the Tenderer has any interest in this tender or in the proposed Contract for which this tender is made.
- .2 The Tenderer declares that this tender is made without any connection, comparison of figures or arrangement with, or knowledge of, any other corporation, firm or person making a tender for the same Work and is in all respects fair and without collusion or fraud.
- .3 The Tenderer declares that the Tender Price Breakdown and the various Statements (A to E) will be submitted within 24 hours of the closing of this tender.

1.5 Conditions of Tender

- .1 This Tender is irrevocable from the official closing time and is unconditionally open for acceptance for 75 days after the official closing time, whether any other tender has been previously accepted or not.

1.6 Disclaimer

- .1 The Tenderer agrees and acknowledges there is no representation, warranty, collateral agreement or condition, whether direct or collateral, or expressed or implied, which induced

TENDER FORM

the Tenderer to submit this tender, or on which reliance is placed by the Tenderer, or which affects this tender.

1.7 Signatures

Offered by the Tenderer _____ this _____ day
of _____ 2015.

Signature of Tenderer, Title

Signature of Witness

Signature of Tenderer, Title

Signature of Witness

Corporate Seal

NOTE: In the case of a tender submitted by a Corporation, the signatory or signatories warrant as follows:

“I/We have authority to bind the Corporation.”

If the tender is submitted by an individual or partnership, it is deemed to be given under seal.”

END OF SECTION

TENDER PRICE BREAKDOWN

We certify that the following is an accurate and balanced breakdown of our tender price(s). Work required, but not specifically mentioned, is included in the item with which it is most closely associated.

<u>Item</u>	<u>Lump Sum Price</u>
1.0 DIVISION 0 – CONTRACT REQUIREMENTS	
.1 Bonds and Insurance	_____
2.0 DIVISION 1 – GENERAL REQUIREMENTS	
.1 Mobilization/Demobilization (Section 01505, Item 1.3)	_____
.2 Survey (Section 01050, Item 1.5)	_____
3.0 DIVISION 2 - SITEWORKS	_____
.1 Clearing and Grubbing (Section 02231, Item 1.3)	_____
.2 Common Excavation (Section 02315, Item 1.5)	_____ (1)
.3 Sedimentation and Erosion Control (Section 01561, Item 1.13)	_____
.4 Traffic Control (Section 01550, Item 1.7)	_____
TOTAL TENDER PRICE (excluding GST)	_____ *

Notes:

⁽¹⁾Refer to Section 00310 - Schedule of Quantities and Prices

*Enter this amount in the Tender Form, Section 00300, Item 1.1.3.

END OF SECTION

SCHEDULE OF QUANTITIES AND PRICES

Work required for common excavation as shown on Contract Drawings and described in Section 02315 – Excavation, Trenching and Backfilling.

ITEM	DESCRIPTION	Unit of Measure	QTY.	UNIT PRICE	AMOUNT
1.0 DIVISION 2 - SITEWORKS					
1.1	Common Excavation	7500	m ³		
SUB-TOTAL WORK					\$ _____ ⁽¹⁾

⁽¹⁾ Enter sub-total amount in Section 00305 – Tender Price Breakdown, 3.0 - Division 2 – Siteworks, Item 3.2 “Common Excavation Lump Sum Price”. Payment for this item will be made based on the quantity of common excavation completed at the unit price indicated. Final payment to be verified by survey.

END OF SECTION

BID BOND

Standard Construction Document

CCDC 220 - 2002

No. _____

Bond Amount \$ _____

_____ as Principal, hereinafter called the Principal, and
_____ a corporation created and existing under the laws
of _____ and duly authorized to transact the business of Suretyship in _____ as Surety, hereinafter
called the Surety, are held and firmly bound unto _____ as
Obligee, hereinafter called the Obligee, in the amount of _____
_____ Dollars (\$ _____) lawful money of Canada, for the payment
of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has submitted a written bid to the Obligee, dated _____ day of _____, in the year _____
for _____

The condition of this obligation is such that if the Principal shall have the bid accepted within the time period prescribed in the Obligee's bid documents, or, if no time period is specified in the Obligee's bid documents, within _____ () days from the closing date as specified in the Obligee's bid documents, and the Principal enters into a formal contract and gives the specified security, then this obligation shall be void; otherwise, provided the Obligee takes all reasonable steps to mitigate the amount of such excess costs, the Principal and the Surety will pay to the Obligee the difference in money between the amount of the bid of the Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former.

The Principal and Surety shall not be liable for a greater sum than the Bond Amount.

It is a condition of this bond that any suit or action must be commenced within seven (7) months of the date of this Bond.

No right of action shall accrue hereunder to or for the use of any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated _____ day of _____,
in the year _____.

SIGNED and SEALED

Principal

in the presence of

ATTORNEY IN FACT

Signature

Name of person signing

Surety

Signature

Name of person signing



Copyright 2002

Canadian Construction Documents Committee

(CCDC 220 - 2002 has been approved by the Surety Association of Canada)

PERFORMANCE BOND

CCDC 221 - 2002

No. _____

Bond Amount \$ _____

_____ as Principal, hereinafter called the Principal, and
 _____ a corporation created and existing under the laws
 of _____ and duly authorized to transact the business of Suretyship in _____ as Surety, hereinafter
 called the Surety, are held and firmly bound unto _____ as
 Obligee, hereinafter called the Obligee, in the amount of _____
 _____ Dollars (\$ _____) lawful money of Canada, for the payment
 of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated _____ day of _____, in the year _____
 for _____

hereinafter referred to as the Contract.

The condition of this obligation is such that if the Principal shall promptly and faithfully perform the Contract then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever the Principal shall be, and declared by the Obligee to be, in default under the Contract, the Obligee having performed the Obligee's obligations thereunder, the Surety shall promptly:

- 1) remedy the default, or;
- 2) complete the Contract in accordance with its terms and conditions or;
- 3) obtain a bid or bids for submission to the Obligee for completing the Contract in accordance with its terms and conditions and upon determination by the Obligee and the Surety of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as work progresses (even though there should be a default, or a succession of defaults, under the contract or contracts of completion, arranged under this paragraph) sufficient funds to pay to complete the Principal's obligations in accordance with the terms and conditions of the Contract and to pay those expenses incurred by the Obligee as a result of the Principal's default relating directly to the performance of the work under the Contract, less the balance of the Contract price; but not exceeding the Bond Amount. The balance of the Contract price is the total amount payable by the Obligee to the Principal under the Contract, less the amount properly paid by the Obligee to the Principal, or;
- 4) pay the Obligee the lesser of (1) the Bond Amount or (2) the Obligee's proposed cost of completion, less the balance of Contract price.

It is a condition of this bond that any suit or action must be commenced before the expiration of two (2) years from the earlier of (1) the date of Substantial Performance of the Contract as defined in the lien legislation where the work under the Contract is taking place, or, if no such definition exists, the date when the work is ready for use or is being used for the purpose intended, or (2) the date on which the Principal is declared in default by the Obligee.

The Surety shall not be liable for a greater sum than the Bond Amount.

No right of action shall accrue on this Bond, to or for the use of, any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated _____ day of _____,
 in the year _____.

SIGNED and SEALED

Principal

in the presence of

ATTORNEY IN FACT

Signature

Name of person signing

Surety

Signature

Name of person signing



LABOUR & MATERIAL PAYMENT BOND (Trustee Form)

Standard Construction Document

CCDC 222 - 2002

No. _____ Bond Amount \$ _____
_____ as Principal, hereinafter called the Principal, and
_____ a corporation created and existing under the laws
of _____ and duly authorized to transact the business of Suretyship in _____ as Surety, hereinafter
called the Surety, are held and firmly bound unto _____ as
Obligee, hereinafter called the Obligee, in the amount of _____
_____ dollars (\$ _____) lawful money of Canada, for the payment
of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated _____ day of _____, in the year _____
for _____

in accordance with the Contract Documents submitted, and which are by reference made part hereof and are hereinafter referred to as the Contract.

The Condition of this obligation is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant for the purpose of this Bond is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial rental value of equipment shall be determined, insofar as it is practical to do so, by the prevailing rates in the equipment marketplace in which the work is taking place.
2. The Principal and the Surety, hereby jointly and severally agree with the Obligee, as Trustee, that every Claimant who has not been paid as provided for under the terms of its contract with the Principal, before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of its contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants, or any of them, to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceeding, then such act, action or proceeding, shall be taken on the understanding and basis that the Claimants, or any of them, who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Obligee by reason thereof. Provided still further that, subject to the foregoing terms and conditions, the Claimants, or any of them may use the name of the Obligee to sue on and enforce the provisions of this Bond.
3. It is a condition precedent to the liability of the Surety under this Bond that such Claimant shall have given written notice as hereinafter set forth to each of the Principal, the Surety and the Obligee, stating with substantial accuracy the amount claimed, and that such Claimant shall have brought suit or action in accordance with this Bond, as set out in sub-clauses 3 (b) and 3 (c) below, Accordingly, no suit or action shall be commenced hereunder by any Claimant:
 - a) unless such notice shall be served by mailing the same by registered mail to the Principal, the Surety and the Obligee, at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or Territory in which the subject matter of the Contract is located. Such notice shall be given.

- i) in respect of any claim for the amount or any portion thereof, required to be held back from the Claimant by the Principal, under either the terms of the Claimant's contract with the Principal, or under the lien Legislation applicable to the Claimant's contract with the Principal, whichever is the greater, within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal;
 - ii) in respect of any claim other than for the holdback, or portion thereof, referred to above, within one hundred and twenty (120) days after the date upon which such Claimant did, or performed, the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with the Principal;
 - b) after the expiration of one (1) year following the date on which the Principal ceased work on the Contract, including work performed under the guarantees provided in the Contract;
 - c) other than in a Court of competent jurisdiction in the Province or Territory in which the work described in the Contract is to be installed or delivered as the case may be and not elsewhere, and the parties hereto agree to submit to the jurisdiction of such Court.
4. The Surety agrees not to take advantage of Article 2365 of the Civil Code of the Province of Quebec in the event that, by an act or an omission of a Claimant, the Surety can no longer be subrogated in the rights, hypothec and privileges of said Claimant.
 5. Any material change in the contract between the Principal and the Oblige shall not prejudice the rights or interest of any Claimant under this Bond, who is not instrumental in bringing about or has not caused such change.
 6. The amount of this Bond shall be reduced by, and to the extent of any payment or payments made in good faith, and in accordance with the provisions hereof, inclusive of the payment by the Surety of claims made under the applicable lien legislation or legislation relating to legal hypothecs, whether or not such claim is presented under and against this Bond.
 7. The Surety shall not be liable for a greater sum than the Bond Amount.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated _____ day of _____, in the year _____.

SIGNED and SEALED

Principal

in the presence of

ATTORNEY IN FACT

Signature

Name of person signing

Surety

Signature

Name of person signing



Copyright 2002

Canadian Construction Documents Committee

(CCDC 222 – 2002 has been approved by the Surety Association of Canada)

AGREEMENT TO BOND

Date: _____, 20__

“Name & Address of Surety Company”

Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC
V9T 6N2

Gentlemen/Madam:

CONTRACT NO.: _____

Should the Regional District of Nanaimo [hereinafter referred to as the “Owner”] accept the Tender of and execute an Agreement with _____ [hereinafter referred to as the “Tenderer”], we, the undersigned Surety Company, do hereby consent and agree to become bound to the Owner as Surety for the Tenderer in any of the following Bonds, on the standard format of the Canadian Construction Association.

1. Performance Bond for an amount equal to 50% of the Total Tender Price.
2. Labour and Material Payment Bond for an amount equal to 50% of the Total Tender Price.

We, the undersigned Surety Company, agree to furnish the Owner with the said Bonds within 7 days after written notification that the Owner has requested the said Bond or Bonds. We hereby further declare that our Company is legally entitled to do business in the Province of British Columbia.

Yours truly,

[Name of Surety Company]

[Address]

[Seal]

NOTE: This Agreement must be executed on behalf of the Surety Company by its authorized Officers under the Company’s corporate seal.

END OF SECTION

FORM CERTIFICATE OF INSURANCE

PROOF OF LIABILITY INSURANCE WILL BE ACCEPTED ON THIS FORM ONLY

The Regional District of Nanaimo
CERTIFICATE OF INSURANCE

Contract Number _____ Description of Contract _____
 (if applicable) _____

INSUREDS: (Contractor) _____ *

AND the Regional District of Nanaimo AND All Sub-Contractors of either employed directly or in the work to be performed.

AND _____

POLICY	COMPANY & POLICY NO.	DATE		LIMITS OF LIABILITY
		EFFECTIVE	EXPIRATION	
GENERAL LIABILITY BODILY INJURY PROPERTY DAMAGE				Minimum Requirement \$5,000,000. Inclusive Per Occurrence
AUTOMOBILE LIABILITY Must cover all vehicles on or behalf of (Contractor) BODILY INJURY PROPERTY DAMAGE				Minimum Requirement \$5,000,000. Inclusive Per Occurrence

OTHER (Describe)

IMPORTANT: This Certificate confirms that the Policies listed above are in full force and effect and that these Policies will not be amended to restrict coverage or cancelled without 30 days prior written notice being given The Regional District of Nanaimo and further that the General Liability Policy listed above includes all coverages outlined under (1) and (2) below and includes coverages under (3) as follows:

GENERAL LIABILITY COVERAGE INCLUDES:

- 1) Cross Liability clause
- 2)
 - (i) completed operations, which cover shall be maintained continuously in force for a period of not less than twenty-four months from the date of the Certificate of Total Performance of the Work.
 - (ii) Blanket Contractual Liability
 - (iii) Contingent Employers Liability
 - (iv) Non-owned automobile Liability
 - (v) Broad Form Property Damage
 - (vi) Excavation
- 3) where applicable, includes coverage for
 - (i) Underpinning, Shoring
 - (ii) Demolition
 - (iii) Building Raising or Moving
 - (iv) Blasting or the use of explosives
 - (v) Tunneling
 - (vi) Pile driving, caisson work
 - (vii) Use of aircraft or watercraft, owned or non-owned

Date _____, 20 _____

NAME OF INSURANCE COMPANY (IES) (NOT BROKERS)

ADDRESS OF INSURANCE COMPANY OR BROKER

BY _____
 (AUTHORIZED REPRESENTATIVE OR OFFICIAL)

TB2330(REV12/95)

* Enter name of Consulting Engineer, Architect, Construction or Project Management Firm, if applicable

END OF SECTION

STATEMENT "A" – TENDERER'S EXPERIENCE IN SIMILAR WORK

1. TENDERER'S EXPERIENCE

<u>Year</u>	<u>Description of Contract</u>	<u>Owner's Name & Telephone Number</u>	<u>Value (\$ Canadian)</u>

NOTE: Details can be provided on separate sheets attached to this page.

STATEMENT "A" – TENDERER'S EXPERIENCE IN SIMILAR WORK

2. SUBCONTRACTOR'S EXPERIENCE

Name of Subcontractor: _____

<u>Year</u>	<u>Description of Contract</u>	<u>Owner's Name & Telephone Number</u>	<u>Value (\$ Canadian)</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Name of Subcontractor: _____

<u>Year</u>	<u>Description of Contract</u>	<u>Owner's Name & Telephone Number</u>	<u>Value (\$ Canadian)</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NOTE: Details can be provided on separate sheets attached to this page.

END OF SECTION

STATEMENT "B" – TENDERER'S SENIOR SUPERVISORY STAFF

1. TENDERER'S SENIOR SUPERVISORY STAFF EXPERIENCE

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
_____	<u>Project Manager</u>	_____
_____	<u>Project Superintendent</u>	_____
_____	<u>Safety Supervisor</u>	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

NOTE: Qualifications and experience (resumes) should be provided in detail on separate sheets attached to this page. Back-up capability and personnel should be indicated of each category of staffing.

STATEMENT "B" – TENDERER'S SENIOR SUPERVISORY STAFF

2. SUBCONTRACTOR'S SENIOR SUPERVISORY STAFF EXPERIENCE

Name of Subcontractor: _____

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
_____	_____	_____
_____	Project Superintendent	_____
_____	_____	_____

Name of Subcontractor: _____

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
_____	_____	_____
_____	Project Superintendent	_____
_____	_____	_____

Name of Subcontractor: _____

<u>Name</u>	<u>Appointment</u>	<u>Qualifications and Experience</u>
_____	_____	_____
_____	Project Superintendent	_____
_____	_____	_____

END OF SECTION

STATEMENT “D” – SUB-CONTRACTORS

1. SUB-CONTRACTORS AND SUPPLIERS

The Tenderer shall quote the name and address of each proposed sub-contractor or supplier, who will be responsible for more than 2.5 percent of the total Contract Work. As a minimum, the below noted Subcontractors will be noted regardless of whether they are responsible for 2.5 percent of the total Contract Work. After the Tender has been accepted by the Owner, the Contractor shall not be allowed to substitute other sub-contractors or suppliers in place of those named below without written approval of the Engineer.

Where Contractor intends to undertake the work with his own forces, in the space allocated for the Subcontractor Name, indicate “Own Forces”.

<u>Sub-Trade Section</u>	<u>Name and Address of Sub-Contractor</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

<u>Equipment</u>	<u>Manufacturer and Model</u>
_____	_____
_____	_____
_____	_____
_____	_____

NOTE: Additional information can be provided on separate sheets attached to this page.

END OF SECTION

STATEMENT "E" – FORCE ACCOUNT RATES

SCHEDULE OF FORCE ACCOUNT RATES

Work not covered under the "Tender Price Breakdown", may be paid for on a force account basis. The Contractor shall insert the hourly rates which will apply in all cases. The rates shall include all allowances for machinery and operator where required and the full amount covers overhead, profit, small tools and supervision of work.

<u>Personnel Listed by Occupation</u>	<u>Hourly Rate</u>	<u>Overtime Hourly Rate</u>
Foreman	\$	\$
Equipment Operator	\$	\$
Grademan	\$	\$
Skilled Labourer	\$	\$
Unskilled Labourer	\$	\$
Surveyor	\$	\$
Rodman	\$	\$
<u>Excavating Equipment & Size(Including Operator)</u>	<u>Hourly Rate</u>	<u>Overtime Hourly Rate</u>
Backhoe(Rubber Tire) -	\$	\$
Excavator -	\$	\$
Gradall	\$	\$
Bulldozer -	\$	\$
Bulldozer -	\$	\$
Grader -	\$	\$
Loader -	\$	\$
<u>Trucks & Sizes (Including Operator)</u>	<u>Model</u>	<u>Hourly Rate</u>
Dump Truck S/A		\$
Dump Truck with Pup Trailer		\$
Other		\$
<u>Additional Items</u>		
Equipment for		\$
		\$
		\$
		\$

END OF SECTION

CCDC 2

stipulated price contract

2 0 0 8

Regional District of Nanaimo
Greater Nanaimo Pollution Control Centre - Secondary Treatment Upgrade
Civil Earthworks Contract

Apply a CCDC 2 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 2 – 2008 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

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

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- Public Sector Owners
- Private Sector Owners
- Canadian Bar Association (Ex-Officio)
 - * The Association of Canadian Engineering Companies
 - * The Canadian Construction Association
 - * Construction Specifications Canada
 - * The Royal Architectural Institute of Canada

*Committee policy and procedures are directed and approved by the four constituent national organizations.

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AGREEMENT BETWEEN OWNER AND CONTRACTOR

For use when a stipulated price is the basis of payment.

This Agreement made on the _____ day of _____ in the year _____ .

by and between the parties

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

Regional District of Nanaimo, GREATER NANAIMO POLLUTION CONTROL CENTRE -
SECONDARY TREATMENT UPGRADE - CIVIL EARTHWORKS CONTRACT

insert above the name of the Work

located at

Nanaimo, B.C.

insert above the Place of the Work

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

AECOM CANADA LTD.

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.

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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 Stipulated Price Contract
- *

Bid Bond

Agreement to Bond

Performance Bond

Labour and Materials Payment Bond

Addenda

Information to Tenderers

Tender Form, Associated Forms and Additional Information

Supplementary General Conditions

Technical Specifications

Drawings

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

ARTICLE A-4 CONTRACT PRICE

4.1 The *Contract Price*, which excludes *Value Added Taxes*, is:

_____ /100 dollars \$ _____

4.2 *Value Added Taxes* (of 5 %) payable by the *Owner* to the *Contractor* are:

_____ /100 dollars \$ _____

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

_____ /100 dollars \$ _____

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

4.5 All amounts are in Canadian funds.

ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents*, and in accordance with legislation and statutory regulations respecting holdback percentages and, where such legislation or regulations do not exist or apply, subject to a holdback of ten percent (10 %), the *Owner* shall:

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

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

5.3 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:
 - (1) 2% per annum above the prime rate for the first 60 days.
 - (2) 4% per annum above the prime rate after the first 60 days.Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by

The Royal Bank of Canada

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

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

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

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

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

Owner

REGIONAL DISTRICT OF NANAIMO

name of Owner*

6300 Hammond Bay Road, Nanaimo, BC V9T 6N2

address

250-390-1542

facsimile number

email address

Contractor

name of Contractor*

address

facsimile number

email address

Consultant

AECOM CANADA LTD.

name of Consultant*

4th Floor, 3292 Production Way, Burnaby, BC V5A 4R4

address

604-294-8597

facsimile number

ken.moysiuk@aecom.com

email address

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

ARTICLE A-7 LANGUAGE OF THE CONTRACT

7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English / French # language shall prevail.
Complete this statement by striking out inapplicable term.

7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

ARTICLE A-8 SUCCESSION

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

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

SIGNED AND DELIVERED

in the presence of:

WITNESS

OWNER

REGIONAL DISTRICT OF NANAIMO

name of owner

signature

signature

name of person signing

name and title of person signing

signature

signature

name of person signing

name and title of person signing

WITNESS

CONTRACTOR

name of Contractor

signature

signature

name of person signing

name and title of person signing

signature

signature

name of person signing

name and title of person signing

- N.B.** Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:
- (a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or
 - (b) the affixing of a corporate seal, this Agreement should be properly sealed.

DEFINITIONS

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

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 adjustments in the *Contract Price* and the *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 engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*. The term *Consultant* means the *Consultant* or the *Consultant's* authorized representative.
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**
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, and diagrams.
11. **Notice in Writing**
A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.
12. **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*.
13. **Place of the Work**
The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.
14. **Product**
Product or *Products* means material, machinery, equipment, and fixtures forming the *Work*, but does not include *Construction Equipment*.

15. **Project**
The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.
16. **Provide**
Provide means to supply and install.
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, quality, 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* at the *Place of 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*.
23. **Temporary Work**
Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.
24. **Value Added Taxes**
Value Added Taxes means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the *Contractor* by the tax legislation.
25. **Work**
The *Work* means the total construction and related services required by the *Contract Documents*.
26. **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 STIPULATED PRICE CONTRACT**PART 1 GENERAL PROVISIONS****GC 1.1 CONTRACT DOCUMENTS**

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

GC 1.2 LAW OF THE CONTRACT

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

GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.
- 1.3.2 No action or failure to act by the *Owner*, *Consultant* or *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

GC 1.4 ASSIGNMENT

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

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

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

GC 2.2 ROLE OF THE CONSULTANT

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 The *Consultant* will promptly inform the *Owner* of the date of receipt of the *Contractor's* applications for payment as provided in paragraph 5.3.1.1 of GC 5.3 – PROGRESS PAYMENT.
- 2.2.5 Based on the *Consultant's* observations and 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 5.3 - PROGRESS PAYMENT and GC 5.7 - FINAL PAYMENT.
- 2.2.6 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to carry out the *Work* in accordance with the *Contract Documents*. The *Consultant* will not have control over, charge of or be responsible for the acts or omissions of the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or any other persons performing portions of the *Work*.
- 2.2.7 Except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.8 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.9 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.10 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.11 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 2.2.12 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or other persons performing any of the *Work*.

- 2.2.13 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.14 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other *Contractor's* submittals, in accordance with the *Contract Documents*.
- 2.2.15 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 2.2.16 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* as provided in GC 5.4 - SUBSTANTIAL PERFORMANCE OF THE WORK.
- 2.2.17 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.18 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for tests, inspections or approvals in the *Contract Documents*, or by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for review and inspection. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for 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 applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by the *Consultant* or the *Owner* if such test or inspection is designated in the *Contract Documents*.

GC 2.4 DEFECTIVE WORK

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work has been incorporated in the *Work* and whether or not the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly other contractors' work destroyed or damaged by such corrections at the *Contractor's* expense.
- 2.4.3 If in the opinion of the *Consultant* it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a determination.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

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

GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

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

GC 3.3 TEMPORARY WORK

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

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

GC 3.4 DOCUMENT REVIEW

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

GC 3.5 CONSTRUCTION SCHEDULE

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

GC 3.6 SUPERVISION

- 3.6.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while work is being performed. The appointed representative shall not be changed except for valid reason.
- 3.6.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

GC 3.7 SUBCONTRACTORS AND SUPPLIERS

- 3.7.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:
- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
 - .2 incorporate the terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
 - .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.
- 3.7.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.
- 3.7.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.
- 3.7.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the differences occasioned by such required change.

- 3.7.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.
- 3.7.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor's* or *Supplier's* work which has been certified for payment.

GC 3.8 LABOUR AND PRODUCTS

- 3.8.1 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.
- 3.8.2 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.
- 3.8.3 The *Contractor* shall maintain good order and discipline among the *Contractor's* employees engaged on the *Work* and shall not employ on the *Work* anyone not skilled in the tasks assigned.

GC 3.9 DOCUMENTS AT THE SITE

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

GC 3.10 SHOP DRAWINGS

- 3.10.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.
- 3.10.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of other contractors.
- 3.10.3 Upon request of the *Contractor* or the *Consultant*, they shall jointly prepare a schedule of the dates for provision, review and return of *Shop Drawings*.
- 3.10.4 The *Contractor* shall provide *Shop Drawings* in the form specified, or if not specified, as directed by the *Consultant*.
- 3.10.5 *Shop Drawings* provided by the *Contractor* to the *Consultant* shall indicate by stamp, date and signature of the person responsible for the review that the *Contractor* has reviewed each one of them.
- 3.10.6 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.10.7 *Shop Drawings* which require approval of any legally constituted authority having jurisdiction shall be provided to such authority by the *Contractor* for approval.
- 3.10.8 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
 - .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.10.9 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.10.10 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.10.11 The *Contractor* shall provide revised *Shop Drawings* to correct those which the *Consultant* rejects as inconsistent with the *Contract Documents*, unless otherwise directed by the *Consultant*. The *Contractor* shall notify the *Consultant* in writing of any revisions to the *Shop Drawings* other than those requested by the *Consultant*.
- 3.10.12 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

GC 3.11 USE OF THE WORK

- 3.11.1 The *Contractor* shall confine *Construction Equipment, Temporary Work, storage of Products, waste products and debris, and operations of employees and Subcontractors* to limits indicated by laws, ordinances, permits, or the *Contract Documents* and shall not unreasonably encumber the *Place of the Work*.
- 3.11.2 The *Contractor* shall not load or permit to be loaded any part of the *Work* with a weight or force that will endanger the safety of the *Work*.

GC 3.12 CUTTING AND REMEDIAL WORK

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

GC 3.13 CLEANUP

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

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

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

GC 4.2 CONTINGENCY ALLOWANCE

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

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

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

GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement - PAYMENT may be made monthly as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 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* as of the last day of the payment period.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the parts of the *Work*, aggregating the total amount of the *Contract Price*, so as to facilitate evaluation of applications for payment.
- 5.2.5 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.
- 5.2.6 The *Contractor* shall include a statement based on the schedule of values with each application for payment.
- 5.2.7 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

GC 5.3 PROGRESS PAYMENT

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

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

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

GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

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

GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK

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

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

GC 5.7 FINAL PAYMENT

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

GC 5.8 WITHHOLDING OF PAYMENT

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

GC 5.9 NON-CONFORMING WORK

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

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

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

GC 6.2 CHANGE ORDER

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present, in a form acceptable to the *Consultant*, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.
- 6.2.2 When the *Owner* and *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the application for progress payment.

GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.
- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- .1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
 - .2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
 - .3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following:
- .1 salaries, wages and benefits paid to personnel in the direct employ of the *Contractor* under a salary or wage schedule agreed upon by the *Owner* and the *Contractor*, or in the absence of such a schedule, actual salaries, wages and benefits paid under applicable bargaining agreement, and in the absence of a salary or wage schedule and bargaining agreement, actual salaries, wages and benefits paid by the *Contractor*, for personnel
 - (1) stationed at the *Contractor's* field office, in whatever capacity employed;
 - (2) engaged in expediting the production or transportation of material or equipment, at shops or on the road;
 - (3) engaged in the preparation or review of *Shop Drawings*, fabrication drawings, and coordination drawings; or
 - (4) engaged in the processing of changes in the *Work*.
 - .2 contributions, assessments or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan, insofar as such cost is based on wages, salaries or other remuneration paid to employees of the *Contractor* and included in the cost of the *Work* as provided in paragraph 6.3.7.1;
 - .3 travel and subsistence expenses of the *Contractor's* personnel described in paragraph 6.3.7.1;
 - .4 all *Products* including cost of transportation thereof;
 - .5 materials, supplies, *Construction Equipment*, *Temporary Work*, and hand tools not owned by the workers, including transportation and maintenance thereof, which are consumed in the performance of the *Work*; and cost less salvage value on such items used but not consumed, which remain the property of the *Contractor*;
 - .6 all tools and *Construction Equipment*, exclusive of hand tools used in the performance of the *Work*, whether rented from or provided by the *Contractor* or others, including installation, minor repairs and replacements, dismantling, removal, transportation, and delivery cost thereof;
 - .7 all equipment and services required for the *Contractor's* field office;
 - .8 deposits lost;
 - .9 the amounts of all subcontracts;
 - .10 quality assurance such as independent inspection and testing services;
 - .11 charges levied by authorities having jurisdiction at the *Place of the Work*;
 - .12 royalties, patent licence fees and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 - PATENT FEES;
 - .13 any adjustment in premiums for all bonds and insurance which the *Contractor* is required, by the *Contract Documents*, to purchase and maintain;
 - .14 any adjustment in taxes, other than *Value Added Taxes*, and duties for which the *Contractor* is liable;
 - .15 charges for long distance telephone and facsimile communications, courier services, expressage, and petty cash items incurred in relation to the performance of the *Work*;
 - .16 removal and disposal of waste products and debris; and
 - .17 safety measures and requirements.

- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof when requested.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for determination.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

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

GC 6.5 DELAYS

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by an action or omission of the *Owner*, *Consultant* or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.

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

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

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

PART 7 DEFAULT NOTICE

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

- 7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.1.2 If the *Contractor* neglects to prosecute the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* that sufficient cause exists to justify such action, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor* *Notice in Writing* that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.

- 7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:
- .1 commences the correction of the default within the specified time, and
 - .2 provides the *Owner* with an acceptable schedule for such correction, and
 - .3 corrects the default in accordance with the *Contract* terms and with such schedule.
- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
 - .2 terminate the *Contractor's* right to continue with the *Work* in whole or in part or terminate the *Contract*.
- 7.1.5 If the *Owner* terminates the *Contractor's* right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense, and
 - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued, and
 - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant's* additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 - WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
 - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor's* work under GC 12.3 - WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor's* obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue after such termination of the *Contract*.

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

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

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved in the first instance by findings of the *Consultant* as provided in GC 2.2 - ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions - DISPUTE RESOLUTION.
- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.2.3 to 8.2.8 of GC 8.2 - NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.3 - RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.
- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.2.1 In accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
 - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.2.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 - ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.2.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.2.4 After a period of 10 *Working Days* following receipt of a responding party's *Notice in Writing* of reply under paragraph 8.2.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing.
- 8.2.5 If the dispute has not been resolved within 10 *Working Days* after the Project Mediator was requested under paragraph 8.2.4 or within such further period agreed by the parties, the Project Mediator shall terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.2.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.2.5, either party may refer the dispute to be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.2.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.2.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.2.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.

- 8.2.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.2.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.2.6 shall be
- .1 held in abeyance until
 - (1) *Substantial Performance of the Work*,
 - (2) the *Contract* has been terminated, or
 - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and
 - .2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.2.6.

GC 8.3 RETENTION OF RIGHTS

- 8.3.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions - DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.
- 8.3.2 Nothing in Part 8 of the General Conditions - DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.2.6 of GC 8.2 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

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

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
 - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substances exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless toxic or hazardous substances which were present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.

- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
 - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
 - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substances exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
 - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.
- 9.2.6 If the *Owner* and *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.2.7 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
 - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
 - .3 extend the *Contract* time for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
 - .4 indemnify the *Contractor* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.8 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
 - .4 indemnify the *Owner* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions - Dispute Resolution. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

GC 9.3 ARTIFACTS AND FOSSILS

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

GC 9.4 CONSTRUCTION SAFETY

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

GC 9.5 MOULD

- 9.5.1 If the *Contractor* or *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing, and
 - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and
 - .3 if the *Owner* and *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and *Contractor*.
- 9.5.2 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor*'s operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
 - .2 make good any damage to the *Work*, the *Owner*'s property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
 - .4 indemnify the *Owner* as required by GC 12.1 - INDEMNIFICATION.
- 9.5.3 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor*'s operations under the *Contract*, the *Owner* shall promptly, at the *Owner*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
 - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
 - .4 indemnify the *Contractor* as required by GC 12.1 - INDEMNIFICATION.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed as provided by GC 9.5 - MOULD.

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

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

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.

- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will make the changes required to the *Contract Documents* as provided in GC 6.1 - OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; and fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

GC 10.3 PATENT FEES

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

GC 10.4 WORKERS' COMPENSATION

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

PART 11 INSURANCE AND CONTRACT SECURITY

GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 12.1 - INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the minimum requirements of which are specified in CCDC 41 – CCDC Insurance Requirements in effect at the time of bid closing except as hereinafter provided:
- .1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Substantial Performance of the Work*. Liability coverage shall be provided for completed operations hazards from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, on an ongoing basis for a period of 6 years following *Substantial Performance of the Work*.
 - .2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.
 - .3 Aircraft or Watercraft Liability Insurance when owned or non-owned aircraft or watercraft are used directly or indirectly in the performance of the *Work*
 - .4 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
 - (1) 10 calendar days after the date of *Substantial Performance of the Work*;

- (2) on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitation, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*;
 - (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
- .5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Substantial Performance of the Work*.
- .6 The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
- (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;
 - (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
 - (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces or another contractor, the *Owner* shall, in accordance with the *Owner's* obligations under the provisions relating to construction by *Owner* or other contractors, pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.
- .7 *Contractors' Equipment Insurance* from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.

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

GC 11.2 CONTRACT SECURITY

- 11.2.1 The *Contractor* shall, prior to commencement of the *Work* or within the specified time, provide to the *Owner* any *Contract* security specified in the *Contract Documents*.

- 11.2.2 If the *Contract Documents* require surety bonds to be provided, such bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in the province or territory of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*. The form of such bonds shall be in accordance with the latest edition of the CCDC approved bond forms.

PART 12 INDEMNIFICATION, WAIVER OF CLAIMS AND WARRANTY

GC 12.1 INDEMNIFICATION

- 12.1.1 Without restricting the parties' obligation to indemnify as described in paragraphs 12.1.4 and 12.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:

- .1 caused by:
 - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose acts or omissions that party is liable, or
 - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and
- .2 made by *Notice in Writing* within a period of 6 years from the date of *Substantial Performance of the Work* as set out in the certificate of *Substantial Performance of the Work* issued pursuant to paragraph 5.4.2.2 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK or within such shorter period as may be prescribed by any limitation statute of the province or territory of the *Place of the Work*.

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

- 12.1.2 The obligation of either party to indemnify as set forth in paragraph 12.1.1 shall be limited as follows:

- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the general liability insurance limit for one occurrence as referred to in CCDC 41 in effect at the time of bid closing.
- .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
- .3 In respect to claims by third parties for direct loss resulting from bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, the obligation to indemnify is without limit. In respect to all other claims for indemnity as a result of claims advanced by third parties, the limits of indemnity set forth in paragraphs 12.1.2.1 and 12.1.2.2 shall apply.

- 12.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 12.1.1 and 12.1.2 shall be inclusive of interest and all legal costs.

- 12.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

- 12.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:

- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
- .2 arising out of the *Contractor's* performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.

- 12.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:

- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based became known;
- .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

GC 12.2 WAIVER OF CLAIMS

- 12.2.1 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* arising from the *Contractor's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:
- .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
 - .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
 - .3 claims for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 12.1.4 or 12.1.5 of GC 12.1 – INDEMNIFICATION; and
 - .4 claims resulting from acts or omissions which occur after the date of *Substantial Performance of the Work*.
- 12.2.2 The *Contractor* waives and releases the *Owner* from all claims referenced in paragraph 12.2.1.4 except for those referred in paragraphs 12.2.1.2 and 12.2.1.3 and claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the date of *Substantial Performance of the Work*.
- 12.2.3 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* arising from the *Owner's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:
- .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
 - .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
 - .3 claims for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 12.1.4 of GC 12.1 - INDEMNIFICATION;
 - .4 damages arising from the *Contractor's* actions which result in substantial defects or deficiencies in the *Work*. “Substantial defects or deficiencies” mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
 - .5 claims arising pursuant to GC 12.3 - WARRANTY; and
 - .6 claims arising from acts or omissions which occur after the date of *Substantial Performance of the Work*.
- 12.2.4 The *Owner* waives and releases the *Contractor* from all claims referred to in paragraph 12.2.3.4 except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the date of *Substantial Performance of the Work* should any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, within such shorter period as may be prescribed by:
- .1 any limitation statute of the Province or Territory of the *Place of the Work*; or
 - .2 if the *Place of the Work* is the Province of Quebec, then Article 2118 of the Civil Code of Quebec.
- 12.2.5 The *Owner* waives and releases the *Contractor* from all claims referenced in paragraph 12.2.3.6 except for those referred in paragraph 12.2.3.2, 12.2.3.3 and those arising under GC 12.3 – WARRANTY and claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the date of *Substantial Performance of the Work*.
- 12.2.6 “*Notice in Writing* of claim” as provided for in GC 12.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 12.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of the intention to claim;
 - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
 - .3 a statement of the estimated quantum of the claim.
- 12.2.7 The party giving “*Notice in Writing* of claim” as provided for in GC 12.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.

- 12.2.8 Where the event or series of events giving rise to a claim made under paragraphs 12.2.1 or 12.2.3 has a continuing effect, the detailed account submitted under paragraph 12.2.7 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 12.2.9 If a *Notice in Writing* of claim pursuant to paragraph 12.2.1.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.3.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*.
- 12.2.10 If a *Notice in Writing* of claim pursuant to paragraph 12.2.3.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.1.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*.

GC 12.3 WARRANTY

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

**CCDC 41
CCDC INSURANCE REQUIREMENTS**

PUBLICATION DATE: JANUARY 21, 2008

1. General liability insurance shall be with limits of not less than \$5,000,000 per occurrence, an aggregate limit of not less than \$5,000,000 within any policy year with respect to completed operations, and a deductible not exceeding \$5,000. The insurance coverage shall not be less than the insurance provided by IBC Form 2100 (including an extension for a standard provincial and territorial form of non-owned automobile liability policy) and IBC Form 2320. To achieve the desired limit, umbrella or excess liability insurance may be used. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
2. Automobile liability insurance in respect of vehicles that are required by law to be insured under a contract by a Motor Vehicle Liability Policy, shall have limits of not less than \$5,000,000 inclusive per occurrence for bodily injury, death and damage to property, covering all vehicles owned or leased by the *Contractor*. 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 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 have limits of not less than \$5,000,000 inclusive per occurrence for bodily injury, death and damage to property including loss of use thereof and limits of not less than \$5,000,000 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*.
4. "Broad form" property insurance shall have limits of not less than the sum of 1.1 times *Contract Price* and the full value, as stated in the *Contract*, of *Products* and design services that are specified to be provided by the *Owner* for incorporation into the *Work*, with a deductible not exceeding \$5,000. The insurance coverage shall not be less than the insurance provided by IBC Forms 4042 and 4047 (excluding flood and earthquake) or their equivalent replacement. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
5. Boiler and machinery insurance shall have limits of not less than the replacement value of the permanent or temporary boilers and pressure vessels, and other insurable objects forming part of the *Work*. The insurance coverage shall not be less than the insurance provided by a comprehensive boiler and machinery policy.
6. "Broad form" contractors' equipment insurance coverage covering *Construction Equipment* used by the *Contractor* for the performance of the *Work*, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance, the *Owner* may agree to waive the equipment insurance requirement.
7. Standard Exclusions
 - 7.1 In addition to the broad form property exclusions identified in IBC forms 4042(1995), and 4047(2000), the *Contractor* is not required to provide the following insurance coverage:
 - Asbestos
 - Cyber Risk
 - Mould
 - Terrorism

SUPPLEMENTARY GENERAL CONDITIONS

The Canadian Construction Documents Committee, Standard Construction Document CCDC 2 – Stipulated Price Contract, 2008, is hereby modified as follows:

GC ARTICLE A-1

Subsection 1.3 is deleted and replaced with the following:

“1.3 Subject to adjustment in Contract Time as provided for in the Contract Documents, attain Substantial Performance by the date noted in Section 00300 Clause 1.1.4 and Total Performance of the Work by the date noted in Section 00300 Clause 1.1.4.”

GC ARTICLE A-5 PAYMENT

Subsection 5.1 is revised to read:

“5.1 Subject to provisions of the *Contract Documents*, and in accordance with the Builders Lien Act (British Columbia), the *Owner* shall in Canadian funds:”

Add Subsection 5.1.4 as follows:

“.4 withhold ten percent (10%) of each progress payment to be held in a holdback trust account.”

GC ARTICLE A-9 NO DUTY OF CARE

Add the following paragraph:

9.1 The Contractor acknowledges that the Owner, in the preparation of the Contract Documents, supply of oral or written information to Tenderers, review of Tenders or the carrying out of the Owner’s responsibilities under the Contract does not owe a duty of care to the Contractor and the Contractor waives for itself and its successors the right to sue the Owner in tort of any loss, including economic loss, damage, cost or expense arising from or connected with any error, omission or misrepresentation occurring in the preparation of the Contract Documents, supply of oral or written information to Tenderers, review of tenders or the carrying out of the Owner’s responsibilities under the Contract.

SUPPLEMENTARY GENERAL CONDITIONS

GENERAL CONDITIONS (GC)

GC DEFINITIONS

Add the following definitions:

.1 **Addendum**

“Addendum” means an addition to or a change in the Contract Documents that is issued by the Engineer prior to the tender closing.

.2 **Final Acceptance**

In addition to all other prior requirements, “Final Acceptance” will not occur until the successful completion of the warrantee period and the Work has passed all inspections and testing requirements.

.3 **Total Performance of the Work**

“Total Performance of the Work” means when the entire Work, except those items arising from the provisions of GC 12.3 – WARRANTY, has been performed to the requirements of the Contract Documents and is so certified by the Engineer.

In addition to all prior requirements, Total Performance will not occur until the Work has passed all inspections and testing requirements.

.4 **Engineer’s Representative**

The “Engineer’s Representative” means any person authorized from time to time by the Engineer to perform the duties of the Engineer whose authority shall be notified in writing to the Contractor by the Engineer.

Modify the following definitions:

.5 The definition of "**Consultant**" in definition 4 is deleted and replaced by the following:

"**Consultant or Engineer**" - The Contract Administrator solely in charge of this Contract.

.6 The definition of "**Subcontractor**" in definition 19 is deleted and replaced by the following:

"**Subcontractor**" - A person, firm or corporation undertaking the execution of a part of the Work by virtue of an agreement with the Contractor, which has been approved by the Owner.

SUPPLEMENTARY GENERAL CONDITIONS

- .7 The definition of "**Substantial Performance of the Work**" in definition 20 is deleted and replaced by the following:
- .1 The Work is substantially performed:
- 1) when the Work, or a substantial part thereof has passed inspection and testing and is ready for use or is being used for the intended purposes, and:
 - 2) when the work to be performed under the Contract is capable of completion or, where there is a known defect, correction is a cost of not more than
 - i) 3% of the first \$500,000 of the Contract price,
 - ii) 2% of the next \$500,000 of the Contract price, and
 - iii) 1% of the balance of the Contract price
- .2 For the purposes of this Contract where the Work or a substantial part thereof is ready for use or is being used for the purposes intended and the remainder of the Work cannot be completed expeditiously for reasons beyond the control of the Contractor or, where the Owner and the Contractor agree not to complete the Work expeditiously, the price of the services or materials remaining to be supplied and required to complete the work shall be deducted from the Contract price in determining substantial performance.

GC 1.1: CONTRACT DOCUMENTS

Subsection GC 1.1.7 is deleted, and replaced by the following:

- 1.1.7 In the event of conflicts between the Contract Documents, the following shall apply:
- (a) constructed works take precedence over drawing dimensions and details. Prior to fabrication of any item dependent upon accurate dimensions or details of the constructed works, the Contractor shall take field measurements of such constructed works,
 - (b) figured dimensions shown on a drawing shall govern even though they may differ from dimensions scaled on the same drawing,
 - (c) detailed drawings shall govern over general drawings,
 - (d) specifications shall govern over drawings,
 - (e) the Supplementary General Conditions shall govern over the General Conditions, and

SUPPLEMENTARY GENERAL CONDITIONS

- (f) the executed agreement between the Owner and Contractor shall govern over all documents.

Notwithstanding the foregoing, documents of later date shall always govern those of an earlier date.

GC1.4 ASSIGNMENT

Amend by the addition of the following paragraph:

No assignment of this Contract in whole or in part shall be valid unless it shall contain a provision that the funds to be paid to the assignee under the assignment are subject to the prior lien for services rendered or material supplied for the performance of the work called for in the Contract in favour of persons, firms, or corporations rendering such services or supplying such materials.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

Add the following clause:

- 2.3.6 If the Engineer is required to make visits for the purpose of witnessing the testing of equipment or materials, or the factory inspection of equipment or materials on more than one occasion for the same piece of equipment or materials, by reason of delays of the Contractor, or malfunctioning of the equipment under test, or from whatever reason caused by the Contractor or his subcontractors, the Contractor shall pay to the Owner the additional fees and expenses incurred for the second and any such subsequent extra visits by the Engineer and charged by him to the Owner.

GC 3.1 CONTROL OF THE WORK

Section GC 3.1 shall be renamed "Contractor's Responsibility and Control of the Work" and is hereby amended by the addition of the following sections:

- 3.1.3 The Contractor shall commence the Work within 10 days after receiving Notice to Proceed from the Engineer. The Contractor will not commence the work until the Contract has been officially accepted by the Owner, the Insurance Certificates and the Performance Bonds are satisfactory to the Corporation, and the Contractor has received Notice from the Engineer to commence the work.
- 3.1.4 The Contractor shall provide for efficient drainage of all sections of the work during all stages of construction at his own expense. The Contractor will be held responsible for all damage which may be caused through his failure to provide proper drainage facilities. The Contractor shall restore any existing drainage works which are disturbed as a result of his construction activities.

SUPPLEMENTARY GENERAL CONDITIONS

- 3.1.5 In order to assist the Owner in inspecting the progress of the work, the Contractor shall prepare a Schedule of Work prior to starting the Contract and shall revise the schedule weekly for any changes throughout the Contract.
- 3.1.6 Prior to commencement of construction, the Engineer and the Contractor will locate on site those property bars, baselines and benchmarks which are necessary to delineate the Working Area and to lay out the Work, all as shown on the Contract Drawings.
- 3.1.7 The Contractor shall be responsible for the preservation of all property bars while the Work is in progress, except those property bars which must be removed to facilitate the Work. Any property bars disturbed, damaged or removed by the Contractor's operations shall be replaced under the supervision of a British Columbia Land Surveyor, at no extra cost to the Owner.
- 3.1.8 The Contractor will give the Engineer at least 48 hours notice in writing before requiring any baselines or benchmarks in connection with the work. The Contractor shall clearly state in such notice the exact location where levels, lines, or stakes are required. The Contractor must satisfy himself before commencing any work as to the meaning and correctness of all stakes and marks, and no claim will be entertained by the Owner for or on account of any alleged inaccuracies, unless the Contractor notified the Engineer of such inaccuracies in writing before commencing the work.

The Contractor will be held responsible for the preservation of all stakes and marks in their proper positions, and where any of them are disturbed, lost or destroyed, it shall at once notify the Engineer in writing, and all expenses incurred in replacing such stakes or marks will be billed against the Contractor and if not paid by the Contractor will be deducted from any monies due the Contractor under the Contract.

All stakes and marks set will not in every case represent all the grades, levels, lines, angles or surfaces in the finished work and in this regard the Contractor shall ensure that such stakes and marks are read correctly and used in a manner consistent with the plans, details, specifications and directions of the Engineer. Should the Contractor discover or suspect any errors in stakes, lines, and grades which have been established for its use, the Contractor shall at once discontinue the work until such suspicions are investigated and any errors or misunderstanding rectified, but no claims shall be made or allowed on this account, or because of any resulting delay.

The Contractor shall assume full responsibility for alignment, elevations, and dimensions of each and all parts of the Work, regardless of whether the Contractor's layout work has been checked by the Engineer.

The Contractor shall furnish the Engineer or any of his assistants with all reasonable help which may be required at any time in driving stakes or laying out the work. The Contractor will receive no additional compensation for this.

SUPPLEMENTARY GENERAL CONDITIONS

3.1.9 Maintaining Roadways and Detours

Where an existing Roadway is affected by construction, it shall be kept open to traffic, and the Contractor shall, except as otherwise provided in this subsection, be responsible for providing and maintaining for the duration of the Work, a road through the Work, including the road under construction, in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).

The Contractor shall not be required to maintain a road through the Working Area until such time as the Contractor has commenced operations or on any part of the Contract that has been accepted in accordance with these General Conditions.

The Contractor will bear the cost of maintaining, in a satisfactory condition for traffic, a road through the working area. The road through the Work will include any detour constructed in accordance with the Contract Documents or required by the Engineer. Compensation for all labour, equipment and materials to do this work and to maintain the road, shall be considered to be included in the prices bid for the various tender items and no additional payment will be made.

Where work under the Contract is discontinued for any extended period including seasonal shutdown, the Contractor shall, when directed by the Engineer, open and place the roadway and detours in a passable, safe and satisfactory condition for public travel.

Where the Contractor constructs a detour which is not specifically provided for in the Contract Document or required by the Engineer, the construction of the detour and, if required, the subsequent removal shall be performed at the Contractor's expense. The detour shall be constructed and maintained to structural and geometric standards approved by the Engineer. Removal shall be performed as directed by the Engineer.

Compliance with the foregoing provisions shall in no way relieve the Contractor of obligations under General Conditions, Part 9, Protection of Persons and Property, dealing with the Contractor's responsibility for damage claims.

In order to satisfy the Owner that the Contractor has addressed concerns regarding traffic control and safety it will be required to submit a sketch indicating its proposed method of barricades and/or signage for each of the work sites included in the Contract. This information shall be available for review and approval by the Engineer at the Contract pre-construction meeting.

GC 3.6 SUPERVISION

Subsection GC 3.6.1 is deleted, and replaced with the following paragraph:

- 3.6.1 The Contractor shall be solely responsible for construction health and safety within the working areas and for compliance with the Occupational Health and Safety Act and Regulations. So as to avoid any misunderstanding as to the extent of the Contractor's

SUPPLEMENTARY GENERAL CONDITIONS

responsibility, the Contractor, by executing the Contract unequivocally acknowledges that the Contractor is the Constructor within the meaning of the Act.

Section GC 3.6 is amended by adding the following paragraph:

- 3.6.3 To co-ordinate the work, the Contractor or person(s) authorised to act for the Contractor will attend regular meetings with the Engineer or his representative during the period over which the work under the Contract is carried out, at a time and place to be decided by the Engineer.

GC 3.8 LABOUR AND PRODUCTS

Section GC3.8 is amended by the addition of the following paragraphs:

3.8.4 Contractor to keep Records which are to be Open for Inspection

The Contractor shall keep proper books and records showing the names, trades, addresses and hourly wage rates of all employees in his employ and the wages paid to and time worked by such employees both at regular wage rates and at overtime wage rates, and the books or documents containing such records shall be open for inspection by Officers of the Ministry of Labour, British Columbia, at any time it may be expedient to the Minister of Labour to have the same inspected.

GC 3.11 USE OF THE WORK

Section GC 3.11 is amended by the addition of the following subsections:

- 3.11.3 The Contractor shall maintain the Working Area in a tidy condition and free from the accumulation of debris.
- 3.11.4 The Contractor shall ensure that during night work the site of the Work is adequately floodlit to the Engineer's satisfaction.
- 3.11.5 Streets beyond the limits of the work and other construction areas shall be kept clean. Dusty materials shall be transported in covered haulage vehicles. Wet materials shall be transported in suitable watertight haulage vehicles.
- 3.11.6 The Contractor shall take such steps as may be required to prevent dust nuisance resulting from its operations either within the limits of the work or elsewhere or by public traffic where it is the Contractor's responsibility to maintain a roadway through the Work.
- 3.11.7 Where the Work requires the sawing of asphalt or the sawing or grinding of concrete, blades and grinders of the wet type shall be used together with sufficient water to prevent the incidence of dust, wherever dust would affect traffic or wherever dust would be a nuisance to residents of the area where the Work is being carried out.

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- 3.11.8 Permitted dust control measures may include the application of calcium chloride, or water. More frequent applications of water should be employed in close proximity to watercourses.

The General Conditions are amended by the addition of the following section GC 3.14:

GC 3.14 COMMUNICATIONS PROTOCOL

- 3.14.1 All communications to and from the Contractor shall go through the Engineer. The Contractor shall not take any direction from Owner's operation staff except under emergency situations.

GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

Section GC 5.2.1 is deleted, and replaced with the following:

- 5.2.1 Application for payment on account as provided in Article A-5 of the Agreement – PAYMENT may be made monthly as the work progresses, and in accordance with subsection GC 5.2.1.1 which follows:
- 5.2.1.1 Notwithstanding Paragraph GC 5.2.7 the Owner may withhold any or all payments to the Contractor or portions thereof in circumstances where the Contractor is considered by the Owner or Engineer to be unreasonable or in default of specified times for completion of the work.

Amend GC 5.2 with the addition of the following:

- 5.2.8 Applications for payment on account may be made monthly as the Work progresses. The Contractor shall present to the Engineer two [2] copies of the estimate that he has certified to be correct. Two [2] copies of each progress payment certificate shall be delivered by the Engineer to the Contractor. Upon receipt of the progress payment certificate verified as aforesaid and upon its approval by the Engineer, the Owner will process the payment to the Contractor.

GC 5.3 PROGRESS PAYMENT

Notwithstanding the provisions of Article A5-Payment, GC 5.3.1.3 is deleted and replaced with the following:

- 5.3.1.3 The Owner shall make payment to the Contractor on account as provided in Article A-5 of the Agreement – payment no later than 30 days after the date of Certificate for Payment issued by the Consultant.
- (a) The Contractor shall furnish the Engineer with satisfactory evidence in the form of a WorkSafe BC Certificate of Clearance that he has made suitable provision

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for meeting any liability under The Workman's Compensation Act of British Columbia, prior to the release of any monthly progress payment.

- (b) The Contractor shall furnish the Engineer with a Statutory Declaration that all liabilities incurred by the Contractor and its sub-Contractors in carrying out the Contract have been discharged and that all liens in respect of the Contract have expired or have been satisfied, discharged or provided for by payment. The Statutory Declaration shall be provided prior to all monthly progress payments except the first one.

GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

Replace Section 5.5.2 with the following paragraph:

- 5.5.2 “The Contractor shall furnish to the Owner a statutory declaration, dated not earlier than 7 days after expiry of the statutory lien period stating that no lien claim has been filed against title to the lands of the Owner or the lands of any other person and stating that all materials, labour, work and services incurred directly or indirectly on account of the work have been paid for by the Contractor.”

Delete Section 5.5.3 in its entirety.

GC 5.7 FINAL PAYMENT

Replace Section 5.7.4 with the following paragraph:

- 5.7.4 “Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS’ COMPENSATION, and any lien legislation applicable to the *Place of Work*, the *Owner* shall, no later than thirty (30) days after the issuance of a final certificate for payment, pay the Contractor as provided in Article A-5 of the Agreement – PAYMENT.”

PART 6 CHANGES IN THE WORK

Throughout Part 6, Changes In The Work, “Change Directive” shall have the same meaning as “Field Order.”

GC 6.1 Changes

Section GC6.1 is amended by the addition of the following:

- 6.1.3 When the valuation of a change in the work is to be determined either by estimate and acceptance in a lump sum, or by cost and fixed, or, percentage fee, the valuation shall be in accordance with the following:

SUPPLEMENTARY GENERAL CONDITIONS

6.1.3.1 Mark Up

Cost of net increases or decreases to contract value due to changes in the work shall be marked up as follows:

Contractor's Own Work: 10 percent of actual base costs;

Sub-contractor's Own Work: 10 percent of actual base costs;

Sub-contractor's Work: Contractor's mark-up is 5 percent of actual base costs.

6.1.3.2 Substantiation

When requested, the Contractor shall submit details, quantities, prices, and fees together with substantiating documentation.

6.1.3.3 Time for Submission and Acceptance of Quotation

The Contractor shall co-operate in the pricing of changes by submitting quotations within 10 days of the Engineer's request. Quotations shall remain open for acceptance for 21 days from the date of submission.

6.1.4 Other Methods for the Valuation of Changes

The Engineer shall determine the amount, if any, to be added to, or deducted from, the sum named in the Tender, in respect of any changes ordered. All such work shall be valued at the prices set out in the Form of Tender and the Schedule of Additional Unit Prices if such are applicable in the opinion of the Engineer.

If this Contract does not contain any prices applicable to changes requested, then the Contractor and Engineer may agree on a price which shall be comparable to prices quoted on work of a similar nature.

Valuation methods presented in the construction documents are mutually exclusive in terms of their application.

GC 6.3 Change Directive

Subsection GC 6.3.6.1 is deleted and replaced with the following:

6.3.6.1 If the change results in a net increase in the Contractor's cost, the *Contract Price* shall be increased by the amount calculated in accordance with Supplemental General Condition 6.1.3.

Subsection GC 6.3.6.2 is deleted and replaced with the following:

6.3.6.2 If the change results in a net decrease in the Contractor's cost, the *Contract Price* shall be decreased by the amount calculated in accordance with Supplemental General Condition 6.1.3.

SUPPLEMENTARY GENERAL CONDITIONS

Section GC6.3 is further amended by the addition of the following:

6.3.14 Upon receipt of a Change Directive, the Contractor may be directed, by either the Owner, or the Engineer, to proceed with extra work on the basis of daily force account sheets provided:

- (i) Pre-approved, all inclusive, labour, material, and equipment rental charge out unit rates are on file with the Engineer.
- (ii) Daily force account sheets outlining, as a minimum, the unit quantities used for the day, field instruction number, project name, and date, are provided to the Engineer for signature, and records, on a daily basis for work completed on the previous working day.
- (iii) Work to proceed on the basis of daily force account sheets only after the Engineer has issued the Contractor a written, and numbered, change directive, or field instruction, to proceed with the extra work.

“Daily force account sheet” shall have the same meaning as “daily extra work order sheet”, “daily work records”, or, “daily time sheet.”

Whenever extra work is being performed in accordance with GC 6.3.14 the Contractor shall submit daily force account sheets for approval to/by the Engineer showing the quantities of labour, materials and equipment used directly in carrying out each order for work on the preceding day, together with substantiating documentation. No claim for compensation for extra work will be considered in absence of such force account sheets. The Engineer will not allow any compensation for the cost of repairs to equipment or for damage to anything used in performing such extra work.

The Contractor shall not be entitled to interest on any bill for extra work on account of delay in its approval by the Engineer, or the Owner.

GC 6.5 Delays

Section GC6.5 is amended by the addition of the following:

6.5.6 If the Contractor is delayed in the performance of the Work by:

- a) abnormal inclement weather; or
- b) archaeological finds

then the Contractor shall not be reimbursed by the Owner for any costs incurred by the Contractor as the result of such delay. Any delay in the performance of the work shall be considered for the extension of Contract Time only.

In the case of an application for an extension due to abnormal inclement weather, the Contractor shall, with the Contractor's application, submit evidence from Environment

SUPPLEMENTARY GENERAL CONDITIONS

Canada in support of such application. Extension of Contract Time will be granted in accordance with subsection GC 6.5.3.

- 6.5.7 If the Contractor's operations expose any items which may indicate an archaeological find, such as building remains, hardware, accumulations of bones, pottery, or arrowheads:
- a) The Contractor shall immediately notify the Engineer and suspend operations within the area identified by the Engineer. Work shall remain suspended within that area until otherwise directed by the Engineer in writing.
 - b) Any delay in the completion date of the Contract that is caused by such a cessation of construction operations will be considered to be beyond the Contractor's control in accordance with Subsection GC6.5.3
 - c) Any work directed or authorised by the Engineer with an archaeological find will be considered as Extra Work in accordance with Section GC6.5.3.
- 6.5.8 The Owner is not liable to pay Standby Time for any labour or equipment rental under this Contract.
- 6.5.10 The Contractor shall complete this Contract in its entirety by the completion date specified in the Tender Form.

If the time limit specified is not sufficient to permit completion of the Work by the Contractor working a normal number of hours each day or week on a single daylight shift basis, it is expected that additional and/or augmented daylight shifts will be required throughout the life of the Contract to the extent deemed necessary by the Contractor to ensure that the Work will be completed within the time limit specified. Any additional costs occasioned by compliance with these provisions will be considered to be included in the prices bid for the various items of Work and no additional compensation will be allowed therefore.

- 6.5.11 An extension of time may be granted in writing by the Engineer in his sole discretion in the event of the Work being delayed beyond the prescribed time for completion. Such extension shall be for such time as the Engineer may prescribe and the Engineer shall fix the terms on which such an extension may be granted. An application for an extension of time shall be made in writing by the Contractor to the Owner at least 15 days prior to the date of completion fixed by the Contract. The date of expiry of all Bonds and other Surety furnished to the Owner by the Contractor shall be extended at the expense of the Contractor.
- 6.5.12 Any extension of time that may be granted to the Contractor shall be so granted and accepted without prejudice to any rights of the Owner whatsoever under this Contract and all of such rights shall continue in full force and effect after the time limited in this Contract for completion of the work and whenever in this Contract, power or authority is given to the Owner or the Engineer or any person to take any action consequent upon the act, default, neglect, delay, breach, non-observance or non-performance by the Contractor in respect of the Work or Contract of any portion thereof, such powers or authorities may

SUPPLEMENTARY GENERAL CONDITIONS

be exercised from time to time, and not only in the event of the happening of such contingencies before the time limited in this Contract for the completion of the Work but also in the event of the same happening after the time so limited in the case of the Contractor being permitted to proceed with the execution of the Work under an extension of time granted by the Owner. In the event of the Owner granting an extension of time, time shall continue to be deemed strictly of the essence of this Contract.

- 6.5.13 Immediately upon signing the Contract, the Contractor must review product requirements and anticipate foreseeable delivery delays in any items. If delays in deliveries of material, equipment, or articles are foreseeable, propose substitutions or other remedial action in ample time to prevent delay in performance of the Work.

If such proposal is not given to the Engineer by the Contractor, the Engineer reserves the right to substitute more readily available products later in order to prevent delays at no additional cost to the Owner.

No substitution of any item will be permitted unless the specified item cannot be delivered to the job site in time to comply with the Schedule and the Engineer has approved the substitutes.

To receive approval, proposed substitutes must equal or exceed the quality, finish, and performance of those products specified and/or shown, and must not exceed the space requirements allotted on the drawings. The Contractor must provide documentary proof of equality.

GC 7.1 OWNER'S RIGHT TO PERFORM WORK OR STOP THE WORK OR TERMINATE CONTRACT

Subsections GC 7.1.2 and GC 7.1.3 are amended as follows:

- 7.1.2 Change reference from five (5) to three (3) working days.
7.1.3 Change reference from five (5) to three (3) working days.

Section GC 7.1 is amended by the addition of the following paragraphs:

- 7.1.7 The Engineer may stop any portion of the Work, if in his judgement the weather is such as to prevent the Work being properly done. No compensation of any kind will be made for such stoppage except an extension of time for the completion of the Work as provided in GC6.5.3
- 7.1.8 The Contractor shall, upon written notice from the Engineer, discontinue or delay any or all Work of base, foundation, or paving construction on any section of any road, if in the opinion of the Engineer, the foundation is not sufficiently compacted or settled for surfacing of the Work in question, and the Work shall not be resumed until the Engineer shall in writing so direct, and the Contractor shall not be entitled to any compensation for such stoppage or delay to the Work, other than an extension of time.

SUPPLEMENTARY GENERAL CONDITIONS

GC 9.1 PROTECTION OF WORK AND PROPERTY

Section GC 9.1 is amended by the addition of the following subsections:

- 9.1.5 When carrying out excavation work, the Contractor may encounter such underground utilities as sewers, gas mains, telephone cables, power cables, and watermains. The Contractor shall be fully responsible for any breakage or damage to such utilities, and the Contractor shall pay the full cost of repairing such damages and making good any losses or damages which are caused as a result of his operation in carrying out this Contract.
- 9.1.6 It shall be the Contractor's responsibility to obtain written permission and to make any required arrangements with the Owners of any adjacent properties which the Contractor may encroach.
- 9.1.7 The Contractor shall furnish and bear the cost of any watchman he may require for protection to perform this Contract except as provided in paragraph GC 10.2.6

GC 10.2 LAWS, NOTICES, PERMITS AND FEES

Subsection GC 10.2 is amended by the addition of the following paragraph:

- 10.2.8 The Contractor will notify, obtain inspections and approvals from, and co-operate with other organizations involved or affected by the Work, such as telephone, light and power, gas, railway companies, government agencies.

GC 11.1 INSURANCE

Sub-subsection GC 11.1.1.1 is replaced by the following:

11.1.1.1 General Liability Insurance:

The Contractor shall obtain and maintain Comprehensive General Liability Insurance against Bodily Injury and Property Damage claims with respect to all work to be performed under this Contract. Such Insurance shall:

- a) be in the joint names of the Contractor, the Owner, the Engineer, and all sub-Contractors of the above employed directly or indirectly in the work to be performed.
- b) contain a Cross Liability Clause;
- c) include coverage for:
 - i) Completed Operations, which coverage shall be maintained continuously in force for a period of not less than 24 months from the date of the Certificate of Total Performance of the Work, and thereafter to be maintained for a further period of four (4) years
 - ii) Blanket Contractual Liability

SUPPLEMENTARY GENERAL CONDITIONS

- iii) Contingent Employers Liability
 - iv) Non-owned Automobile Liability
 - v) Broad Form Property Liability
 - vi) Excavation
- d) where applicable, include coverage for:
- i) Underpinning, shoring
 - ii) Demolition
 - iii) Building raising or moving
 - iv) Blasting or the Use of Explosives
 - v) Tunnelling
 - vi) Pile driving, caisson work
- e) Five-million dollars (\$5,000,000.00) inclusive per occurrence.

Amend Subsection GC 11.1.1.6 by the addition of the following paragraph:

- (4) Property and Boiler insurance is required.

Subsection GC 11.1.9 is added as follows:

- 11.1.9.1 It shall be the duty of the Contractor to fully comply with the terms and conditions of the Liability Insurance coverage, including, without limiting the generality of the foregoing, the requirement to promptly report claims to the Insurer.
- 11.1.9.2 The Contractor shall also promptly notify the Engineer of all such claims in writing.
- 11.1.9.3 If a claim is settled, the Contractor shall thereupon provide the Engineer with a copy of the Claimant's Release.
- 11.1.9.4 If a claim is rejected, the Engineer shall be notified at the time of rejection.
- 11.1.9.5 The Engineer shall be provided full information as to such claims at all times as the Engineer may require and in any event should 30 days elapse after the claim has been received by the Contractor and the Contractor is not able to report settlement or rejection of the claim, the Contractor will provide a full report to the Engineer as to the status of and steps being taken with respect to the claim.

Subsection GC 11.1.10 is added as follows:

- 11.1.10 All forms of insurance to be endorsed to provide the Owner with not less than thirty (30) days written notice in advance of any cancellation, change or amendment restriction coverage. Prior to the commencement of any work under this Contract the Contractor shall file with the Owner, to the attention of the Owner's Clerk, Certificates evidencing full compliance with the above clauses, in accordance with the prescribed Certificate which is located after the "Tender Form" in the documents.

SUPPLEMENTARY GENERAL CONDITIONS

GC 11.2 BONDS

Section GC 11.2 is deleted and replaced by the following:

- 11.2.1 The Contractor, together with a surety company approved by the Owner and authorised by law to carry on business in the Province, shall furnish a 50% Labour and Materials Payment Bond to the Owner using CCDC Document(s) 222. The bond shall remain in effect until 12 months after the date the Engineer accepts the entire work.
- 11.2.2 The Contractor, together with a surety company, approved by the Owner and authorised by law to carry on business in the Province in which the work is to be performed, shall furnish a Performance Bond to the Owner using CCDC Document(s) 221 in the amount of 50% of the Contract price.

GC 12.1 INDEMNIFICATION

Subsection 12.1.1 is revised to read:

- 12.1.1 “The Contractor shall release, indemnify and save harmless the Owner and its elected and appointed officers, employees, agents and the Engineer from and against all claims, actions, costs, expenses, judgements, damages, fines and fees of whatever kind, including solicitors fees on solicitor and own client basis, which the Owner or any other person may have or incur and which arises out of or in connection with any act or omission or alleged act or omission of the Contractor, its agents, employees or subcontractors in the execution of the Work and other wise in the performance of or failure to perform the Contract.”

Subsection GC 12.1.2 is deleted.

GC 12.3 WARRANTY

Subsection 12.3.1 is revised to read:

- 12.3.1 The warranty period with regard to the Contract is one (1) year from the date of Total Performance. Such approval shall not be unreasonably withheld.

Add the following subclauses to Clause 12.3:

- 12.3.7 Any defective item of equipment necessitating substantial repairs or replacement within the Warranty Period shall be subject to a further Warranty Period of 12 months from the time of repairing or replacement of same. The cost associated with the extended warranty shall be borne by the Contractor.

ADDITIONS TO THE GENERAL CONDITIONS

The following clauses are additional conditions of the Contract::

SUPPLEMENTARY GENERAL CONDITIONS

GC 13 RECORD DRAWINGS

- 13.1 The Contractor shall keep one set of Contract drawings on the site at all times. As the work progresses, he shall record, in a neat legible manner, all changes in the work. The following information shall be recorded for each change:
- i) Full Description of change
 - ii) Date
 - iii) Authority
- 13.2 At the completion of work, this set of drawings shall be forwarded to the Engineer for incorporation in a set of "RECORD" drawings for this project.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SUMMARY OF WORK

1. GENERAL

1.1 Description of Work

- .1 The work to be performed under this Contract shall include the labour, equipment, and materials required to complete the preliminary earthworks for the Greater Nanaimo Pollution Control Centre – Secondary Treatment Upgrade, as specified in the Contract Documents.
- .2 The work includes, but is not limited to the following elements:
 - .1 Clearing and grubbing of stumps within the excavation footprint.
 - .2 Excavation of native material and grading to approximate depth of 1.5m as indicated on the Drawings.
 - .3 Erosion and sediment control as indicated on the Drawings.
 - .4 Traffic control within the Plant and on public roads.
 - .5 Street sweeping or other approved alternate to prevent accumulation of dust and mud on plant and public roads.

1.2 Coordination

- .1 Cooperate and liaise with other contractors, utility agencies, the Owner's employees or their appointed representatives in order to make appropriate working arrangements to ensure satisfactory execution and timely completion of the work. The Contractor will not have exclusive rights to the construction area.
- .2 Attend coordination meetings, as directed by the Engineer, when the Engineer considers that they are necessary for ensuring the sufficiency of the liaison and co-operation with other contractors. The Contractor shall be deemed to have allowed in his Tender Price for any interference to his operations which may result from any of the above. He must also take all precautions necessary to ensure that he does not hinder or delay in any way the progress of these other parties or cause damage to their completed work.

1.3 Contractor Use of Premises

- .1 Generally restrict operations to the construction and laydown areas as indicated on the drawings or directed by the Engineer.
- .2 The Owner will make reasonable efforts to accommodate the work of the Contractor. However, the Wastewater Treatment Plant must remain in operation throughout the Construction Period. Refer to Section 01070 for special requirements when work has to be completed in occupied areas of the plant.
- .3 Ascertain and abide by conditions pertaining to use of temporary working easements or rights-of-way.

SUMMARY OF WORK

- .4 Obtain and pay for use of additional storage, access or work areas needed for work under this Contract.

1.4 Completion Dates

- .1 The completion dates for the project are noted in Section 00300. These dates will establish the Time Limits for the Contract.
- .2 Time and all time limits stated in the Contract Documents are of the essence of the Contract. The Contractor shall perform his work expeditiously and with adequate forces to achieve the completion dates.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

FIELD ENGINEERING

1. GENERAL

1.1 Survey Reference Points and Legal Survey Markers

- .1 Existing survey control points are designated on Drawings.
- .2 Locate, confirm and protect control points and legal survey markers prior to starting Work. Preserve permanent reference points during construction.
- .3 Replace legal survey markers lost or destroyed as a result of construction activities at no cost to the Owner.

1.2 Survey Requirements

- .1 Establish permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in project record documents.
- .2 Perform all surveying, establish lines and levels, locate and layout, by instrumentation.
- .3 Provide the Engineer with a detailed certified electronic survey of the site prior to construction to confirm location and elevation of existing and proposed structures.
- .4 Provide the engineer with a detailed survey upon completion of the works to verify quantity of material excavated.
- .5 Perform all survey's affecting the line and elevation under the direction of a qualified surveyor.
- .6 Provide surveys, checking of layout, measurement of quantities and compilation of record data as requested by the Engineer.

1.3 Records

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of Work, prepare a certified survey showing elevations of the work for purpose of establishing final quantities.

1.4 Submittals for Information Only

- .1 Submit documentation in accordance with Section 01330 to verify accuracy of field engineering work.
- .2 Submit certificate signed by Surveyor certifying that all elevations and locations of completed work are in conformance or non-conformance with Contract Documents.

FIELD ENGINEERING

1.5 Measurement and Payment

- .1 Payment for survey will be made at the lump sum price shown in the Tender Form and includes pre-construction and post-construction survey of sufficient detail provided in electronic format to verify quantities of excavated material.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

SITE CONDITIONS

1. GENERAL

1.1 Site Conditions/Limits

.1 Examination of Site

- .1 Prior to commencing actual construction work, inspect field conditions, obtain and confirm actual site dimensions, examine surface conditions as required to ensure correct execution of the Work.
- .2 Maintain or arrange for the removal, relocation and replacement as appropriate of any existing utilities which may be affected by the works, whether buried or surface utilities, signs, structures or any other object which may be in conflict with the works.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

SPECIAL PROJECT REQUIREMENTS

1. GENERAL

1.1 General Requirements

- .1 These special project requirements and site sensitivities are over and above the requirements and care normally taken on a project.
- .2 The Contractor, Subcontractor and all workers on site shall be made aware of the fact that the wastewater treatment plant operation will take priority over construction activity in this contract. Also they shall be made aware that there are special site sensitivities that site personnel must be aware of and conform to, together with supplemental rules and regulations that will be established, as set out below.
- .3 Cooperation will be required by all parties.

1.2 Orientation Program

- .1 The Contractor shall be responsible for ensuring that all his sub-contractors are familiar with statutory and special requirements for this project and all other regulations governing their work including the plant's health and safety requirements.
- .2 An Orientation Program outlining the nature of the work and the special project requirements will be instituted by the Contractor for all workers on the site. The Owner will cooperate and provide their special requirements for this purpose. The Orientation Program will consist of the following:
 - .1 Description of the existing plant.
 - .2 General description of planned construction activities.
 - .3 Summary of special project sensitivities (need to maintain operations and operations access, security requirements, etc.)
 - .4 Safety requirements associated with work activities on the project site.
 - .5 Reporting requirements.
- .3 An agenda and summary of the Orientation Program will be submitted for review to the Engineer prior to the Contractor moving any operations on site. The Engineer will provide a reasonable level of information to the Contractor to facilitate preparation of this agenda and summary.
- .4 The Orientation Program will be scheduled at regular intervals at the discretion of the Contractor, as necessary to ensure that all employees attend prior to working on the site.
- .5 All Contractor personnel will be required to complete the Orientation Program prior to working on the site. The Contractor will prepare indicators (hardhat stickers) to be applied upon the workers hardhats in visible locations. No Contractor personnel will be allowed on

SPECIAL PROJECT REQUIREMENTS

site for more than three days without attending the Orientation Program. Contractor personnel who have not attended the Orientation Program be required to be accompanied by personnel who have completed the Orientation Program.

- .6 The Contractor will allow for the attendance of up to five Owner and Engineer personnel at any Orientation Program proceeding.

1.3 Work Adjacent to Public or Private Property

- .1 Obtain written consent from the Owner of adjacent property before proceeding with a part of the Work that necessitates entry onto such property for the underpinning of adjacent structures and where overswing of cranes may occur. Such written consent will not limit the Contractor's responsibility for property damage or personal injury.

1.4 Access to Site

- .1 It will be the Contractor's responsibility to check that the access to the site is in suitable condition before any plant, equipment, or materials are dispatched to site.
- .2 Access to the site will be via the Main Plant entrance on McGuffie Road.

1.5 Hours of Work

- .1 Work inside the Owner's property shall be carried out between the hours of 0700 hours (7:00 AM) and 16:30 hours (4:30 pm) on weekdays unless other arrangements are made between the Owner and the Contractor.
- .2 Normal working hours at the existing Pollution Control Centre are 8:00 a.m. to 4:30 p.m. from Monday to Friday (to be confirmed with the Owner). When work is planned for periods outside of this time frame, arrange with the Engineer and Owner a minimum of 7 days prior to when the work is to be completed.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

PROJECT MEETINGS

1. GENERAL

1.1 Preconstruction Meeting

- .1 Within ten (10) days after award of Contract, the Engineer will request a project meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Representatives of the Owner, Engineer, Contractor, and Major Subcontractors must be in attendance.
- .3 Representatives of the Contractor and Subcontractors attending the preconstruction meeting must be qualified and authorized to act on behalf of the party each represents.
- .4 After the time and location of this meeting has been established, the Contractor shall notify all parties concerned a minimum of ten (10) days before the meeting.
- .5 The Engineer will arrange space and facilities for this meeting.
- .6 The Engineer will chair and record discussions and decisions, and circulate the meeting notes to all parties concerned.
- .7 Agenda to include the following:
 - .1 Appointment and notification of official representatives of participants in the Work.
 - .2 Schedule of the Work, progress scheduling.
 - .3 Schedule of shop drawing submissions.
 - .4 Schedule for the procurement and delivery of specified equipment.
 - .5 Plant orientation program.
 - .6 Requirements for temporary facilities, site signs, offices, storage sheds, utilities, hoarding, site access and use.
 - .7 Site security.
 - .8 Health and Safety issues:
 - .1 As part of this agenda item, the contractor will be asked to complete a Safety Checklist.
 - .9 Modification procedures, Contemplated Change Notices and Change Order procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements (GC) as originated by the owner or in the case of a savings, by the Contractor.

PROJECT MEETINGS

- .10 Product and tool storage.
- .11 Weather protection.
- .12 Record drawings.
- .13 Operation and maintenance manuals.
- .14 Commissioning, acceptance, and handover.
- .15 Warrantees.
- .16 Monthly progress claims, administrative procedures, photographs, holdbacks.
- .17 Appointment of inspection and testing agencies or firms.
- .18 Insurances and transcript of policies.
- .19 Communications routing and logistics.
- .20 Access to site and work areas.
- .21 Survey.
- .22 A schedule for progress meetings.
- .23 Emergency telephone numbers.
- .24 Other items as arise at the meeting.

1.2 Progress Meetings

- .1 Schedule and administer weekly progress meetings throughout the construction period.
- .2 Provide input to the Engineer for the meeting agenda at least two days prior to the meeting.
- .3 Representatives of the Owner, Engineer, Contractor, and Major Subcontractors must be in attendance. Arrange for the attendance of other subcontractors and suppliers as necessary to address issues on the agenda.
- .4 Representatives of the Contractor and Subcontractors attending meetings must be qualified and authorized to act on behalf of the party each represents.
- .5 Agenda for Construction Progress Meetings to include the following:
 - .1 Review and approval of minutes of previous meeting.
 - .2 Field observations, problems, conflicts.

PROJECT MEETINGS

- .3 Review of environmental incidents.
- .4 Review submittal schedules: Expedite as required.
- .5 Progress, schedule, during succeeding work period.
- .6 Problems which impede construction schedule.
- .7 Corrective measures and procedures to regain projected schedule.
- .8 Revisions to construction schedule.
- .9 Site coordination review.
- .10 Maintenance of quality standards.
- .11 Review of site cleanliness.
- .12 Review of site safety and security.
- .13 Review of temporary facilities.
- .14 Review requests for information.
- .15 Review of contemplated change notices, field orders, change orders, and field instructions.
- .16 Review proposed changes for effect on construction schedule and on completion date.
- .17 Review of progress payments.
- .18 Outstanding action items.
- .19 Date and location of next meeting.
- .20 Other business.
- .6 The Engineer will preside at the meetings.
- .7 The Engineer will record notes of the project meetings, including significant proceedings, decisions, "Action By" parties, dates for completion of duties, etc.

1.3 Special Meetings

- .1 Special meetings may be requested by the Owner, Engineer or Contractor to discuss specific issues. Generally, three days notice is required for special meetings. The agenda will be fashioned to suit the meeting. Minutes will be kept by the Engineer.

PROJECT MEETINGS

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

SITE PROGRESS RECORDS

1. GENERAL

1.1 Daily Record of Work Progress

- .1 Maintain at the site a permanent written record of progress of the Work. Make the record available to the Engineer upon request and provide him with a copy if requested. Include in the record each day:
 - .1 The weather conditions with maximum and minimum temperatures.
 - .2 The conditions encountered during excavation.
 - .3 The commencement and the completion dates of the Work of each trade in each area of the Contract.
 - .4 The progress of each trade in each area of the work.
 - .5 The numbers and classifications of the Contractor's and the Subcontractor's tradesmen working at the site and the numbers and classifications of construction machinery and equipment and the number of hours each is operated.
 - .6 The visits to the site by the Owner, the Engineer, the regulatory authorities, the testing companies, the subcontractors and the suppliers.

1.2 Progress Photographs

- .1 When the Work commences at the site, and at weekly intervals thereafter, take digital photographs of the progress of the Work.
- .2 Photographs taken are to show the general extent of the Work by both exterior and interior views.
- .3 Title each photograph at the bottom so no pertinent detail is obscured. Include in the title, the direction of view and the date when taken.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

MEASUREMENT AND PAYMENT

1. GENERAL

1.1 Documents

- .1 This section of the Specification forms part of the Contract Documents, and is to be read, interpreted and coordinated with all other parts.

1.2 Measurement and Payment

- .1 The Work, including any Materials, equipment and services, will be paid for in accordance with the prices set out in Section 00305 – Tender Price Breakdown and Section 00310 – Schedule of Quantities. The Section 00305 prices and any further breakdown does not limit the Work to the items listed therein. The Contractor has allowed for sufficient amounts to cover the cost of any Work or Materials not specifically listed in Section 00305, but included in the Drawings and Specifications by either direct mention or implication, by including all such amounts in the items to which they pertain most closely in Section 00305. Costs of a general nature that do not pertain to any one item have been distributed among all the items.

1.3 Applications for Payment

- .1 Refer to Part 5 Payment – General Conditions (CCDC 2), and Section 00800 – Supplementary General Conditions.
- .2 The Contractor shall use standard forms for submission of progress claims in the format agreed prior to the end of each month of Work.
- .3 Show previous amount claimed and the amount claimed for the period ending. Show percentage of Work completed to date and holdback retained.

1.4 Changes in the Work

- .1 Refer to Part 6 Changes in the Work – General Conditions (CCDC 2), and Section 00800 – Supplementary General Conditions.
- .2 Changes to the work will be defined as below and be documented using the following forms:
 - .1 **Field Order** – Will be used when an instruction is given to the Contractor in the field, which may result in an adjustment to the Contract Price. A Field Order signed by the Engineer and the Owner is authorization to proceed with the Work on a Lump Sum, Unit Price or Force Account/Time and Material basis as stipulated on the Field Order form. Extra work shall not commence until the Contractor receives a copy of the Field Order signed by the Owner and the Engineer.
 - .2 **Field Memo** – Will be issued by the Engineer and be used as an instruction in situations where the change is not anticipated to result in an adjustment to the Contract Price.
 - .3 **Change Order** – Will be used for additions or deletions to the Work which originate in the form of revisions to Drawings and Specifications, and which may result in a change

MEASUREMENT AND PAYMENT

to the Contract Price. A Change Order signed by the Engineer and the Owner is authorization to proceed with the Work as stipulated in the Change Order. Extra work shall not commence until the Contractor receives a copy of the Change Order signed by the Owner and Engineer.

.3 Contemplated Changes in the Work

- .1 Where a change in the Work is contemplated, the Engineer will give the Contractor written notice advising the Contractor of a contemplated change in the Work. Such notice requires that the Contractor submit either a lump sum quotation or an estimate based on unit prices and quantities, or labour and equipment rates, to the Engineer within the time specified on the form. **Such notice is for information only and is not an instruction to execute changes, or to stop Work in progress.** The Contractor's quotation shall:
 - .1 Make reference to the contemplated change order letter;
 - .2 Be set out in sufficient detail acceptable to the Engineer;
 - .3 Indicate the methodology and resources that the Contractor shall use to perform the extra work;
 - .4 Indicate the cost or credit to complete the extra work;
 - .5 Indicate the schedule to perform the extra work; and indicate the impact on the overall project schedule.
 - .6 Indicate any incremental cost impact included in quotation to maintain the Completion Date;
 - .7 Indicate that quotation will remain open for acceptance by the Owner for thirty (30) days; and
 - .8 Submit all required back-up documents.
- .2 The Engineer will review the Contractor's quotations for contemplated changes in the Work to determine whether the quotation is acceptable, requires resubmittal or should be rejected. Support quotation with additional substantiating data if requested by the Engineer.
- .3 When the quotation has been evaluated and is deemed acceptable to the Engineer, the Engineer will prepare and complete a Change Order entering the acceptable quotation adjustments to the Contract Price and Completion Date for the Owner's signature. Once the Change Order is signed and fully executed by the Owner, it will then be forwarded to the Contractor for signature. The Change Order, signed by the Owner, records and authorizes the Contractor to proceed with the Work.

.4 Methods for Valuing and Evaluating Changes on the Work

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- .1 Lump Sum Change Orders and Field Orders
 - .1 The content of Change Orders or Field Orders will be based on a prior quotation from the Contractor and agreed to by the Engineer and the Owner.
 - .2 The Contractor shall submit all necessary backup and the quotation shall be broken down as much as required by the Engineer.
- .2 Unit Price Change Orders and Field Orders
 - .1 The content of Change Orders or Field Orders will be based on either prior agreed quantities or a survey of completed Work.
 - .2 The amounts of unit prices shall be those quoted in the Schedules to the Contract.
 - .3 When quantities can be determined prior to start of Work, the Engineer will prepare and complete a Change Order or Field Order describing the Work and entering the agreed confirmed unit prices, total quantities and total cost adjustments to the Contract Price and the construction schedule, for the Owner's signature. Once the Change Order or Field Order is signed and fully executed by the Owner, it will then be forwarded to the Contractor for signature. The Change Order, signed by the Owner, records and authorizes the Contractor to proceed with the Work.
 - .4 When quantities **cannot be determined** prior to start of Work, the Engineer will assign to the Contractor a Field Order signed by the Owner agreeing and authorizing the described Work to proceed immediately on the basis of the unit prices and an estimate mutually agreed upon. Upon completion of the changes involved, the Engineer will complete the Field Order entering the final total cost for the Work based on agreed confirmed unit prices and actual measured quantities support data submitted for the Owner's signature to adjust the Contract Price and Completion Date as applicable.
- .3 Force Account/Time and Material Change Orders and Field Orders
 - .1 When a change in the Work cannot be agreed upon by the Lump Sum and Unit Price methods, the Engineer may authorize the Work to be carried out on a Force Account/Time and Material basis.
 - .2 The Engineer will provide the Contractor with a Field Order, signed by the Owner agreeing and authorizing the described extra work to proceed immediately on a Force Account/Time and Material basis as reviewed on the Work Site.
 - .3 The Contractor shall support claims for changes determined by this method via numbered Daily Time Sheets (DTS) submitted the day following the Work with dates and times the Work was performed and by whom; time record, summary of hours worked and hourly rates paid; receipts and invoices for equipment used,

MEASUREMENT AND PAYMENT

listing dates and times of use; materials and products used, listings quantities; subcontracts.

- .4 Submit claims on standard form.
- .5 Upon completion of the changes, the Engineer will complete the Field Order entering the final approved total cost for the extra work involved, based on agreed confirmed time and material support data, invoices, time sheets and records submitted for the Owner's signature to adjust the Contract Price and Completion Date as applicable.
- .6 The percentage mark-up permitted for changes in the Work done on a Force Account basis is specified in the General Conditions.
- .4 Quotations for changes in the Work shall show credits for work deleted from the Contract as a result of the change in the Work, if applicable.
- .5 The mark-up on each change shall be applied to the net difference between credits and extras except in the case where the change results in a net credit to the Contract Price, in which case the Contractor is not entitled to charge mark-up on the net credit.
- .6 Any dispute arising under this Section shall be governed by Part 8 Dispute Resolution – General Conditions (CCDC 2).

2. PRODUCTS

Not applicable.

3. EXECUTION

Not applicable.

END OF SECTION

SCHEDULES AND PROGRESS REPORTS

1. GENERAL

1.1 Schedule

- .1 Prepare a time scaled detailed schedule that will provide a basis for determining the progress status of the project relative to the completion time and specific dates and for determining the acceptability of the Contractor's requests for payment.
- .2 Based on the construction schedule and the agreed Tender Price Breakdown, develop cash flow projections for the entire project period.

1.2 Schedule Submittal

- .1 Within 15 days after award of Contract, prepare and submit a preliminary schedule showing the activities through the Project, for review, to the Engineer.
- .2 The schedule for the Contract shall be based on the Contract completion dates, and the milestone dates for critical activities.
- .3 Submit the entire schedule in digital form, based on the use of MS Project or similar software, and the following information on hard copy:
 - .1 Tabular listing of activities sorted by early start and showing activity description, scheduled duration in working days, early and late start and finish dates, total float, predecessors and/or successors to each activity and the cost assigned to each activity.
 - .2 Time scaled logic diagram for all scheduled activities.

1.3 Schedule Review

- .1 Schedule shall show dates of commencement and completion of various parts of the Work, phasing and timing for various subtrades and all other detailed information to the satisfaction of the Engineer.
- .2 The Engineer will review the submitted schedules and cash flow projections within 14 working days of receipt. If the Engineer finds that the submitted schedule does not comply with the specified requirements, or does not provide acceptable schedule detail, the deficiencies will be identified in writing to the Contractor for correction and resubmittal. Correct and resubmit the schedule within 10 working days after the deficiencies have been identified by the Engineer.
- .3 The accepted schedule will serve as background for the requests for payment.
- .4 Submit for review in accordance with Section 01330.

SCHEDULES AND PROGRESS REPORTS

1.4 Schedule Revisions

- .1 Submit proposed revisions to the accepted construction schedule to the Engineer for review. Changes in timing for activities may be modified with agreement of the Contractor and Engineer. A change affecting the Contract Price and the completion time may be made only by approved change order.
- .2 Add separate activities to the construction schedule for each approved change order.
- .3 Add separate activity codes for change orders to allow separate sorting.
- .4 Should the actual sequence of work performed by the Contractor deviate from the planned sequence indicated in the accepted schedule, the Engineer may require the Contractor to revise the schedule to reflect changes in the actual sequence and/or the future sequence of work.

1.5 Progress Reports

- .1 Submit an updated schedule on a monthly basis concurrent with the submittal of the progress payment request. Indicate on the updated schedule progress achieved to date on all activities. Submit the updated schedule and other information in digital form and in hard copy as specified for the original construction schedule.
- .2 Provide updated cash flow projections with each progress report of significant schedule revisions.
- .3 Each report shall include sufficient details on the work completed and the anticipated work to be undertaken for the next report period. If the progress falls behind schedule, the Contractor shall include explanations for the delay and propose remedial actions.

1.6 Manpower/Overtime

- .1 Should the Work fail to progress according to the approved progress schedule, work such additional time (including weekends and holidays), employ additional workers, or both, as may be required to bring the Work back on schedule, at no additional cost to the Owner.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

SUBMITTALS

1. GENERAL

1.1 General Requirements

- .1 Unless otherwise noted, make submittals to the Engineer for review.
- .2 Provide and submit mark-ups of the technical specifications to identify where the equipment differs from that specified.
- .3 Make submittals with reasonable promptness and in an orderly sequence to avoid any delay in the Work. Failure to submit in ample time is not considered cause for an extension of Contract Time, and no claim for extension by reason of such default will be allowed.
- .4 Do not proceed with Work affected by submittals until review is complete.
- .5 The submittal reviews do not authorize changes in cost or time. Changes involving cost or time are authorized only by a signed change order.

1.2 Record Drawings

- .1 After award of Contract the Engineer will provide a complete set of drawings for the purpose of maintaining Project record drawings. These drawings shall consist of a full size white paper copy.
- .2 Record on the white prints on a daily basis, work constructed differently than shown on the Contract Documents. Record all changes in the Work caused by site conditions, or originated by the Owner, the Engineer, the Contractor, or a Subcontractor and by addenda, supplemental drawings, site instructions, supplementary instructions, change orders, correspondence, and directions of regulatory authorities. Do not use these drawings for daily working purposes and make the set available for periodic inspection by the Engineer.
- .3 Accurately record the location of concealed services. Do not conceal critical Work until its location has been recorded.
- .4 Dimension the installed locations of concealed service lines on the site or within the structure by reference from the centre line of the service to structure column lines or other main finished faces or other structural points easily identified and located in the finished Work.
- .5 Make records in a neat and legibly printed manner with a non-smudging medium.
- .6 Identify drawings as "Project Record Copy". Maintain in good condition and make available for inspection on site by Engineer at all times.
- .7 The record drawings will be reviewed monthly prior to acceptance by the Engineer of the monthly payment certificate. Failure to maintain the record drawings will result in a 10 percent reduction in payment to the Contractor for that month. The amount will be returned to the Contractor on the next payment as long as the record drawings are brought up to date.

SUBMITTALS

- .8 Failure to provide acceptable "Record Drawings" may delay acceptance of the project by the Owner. The Owner may assess against the Contract a sum based on their calculations of costs to prepare such plans.

1.3 Photographs and Publicity

- .1 No press or publicity releases will be permitted without prior approval of the Engineer.

1.4 Procedures

- .1 The Contractor shall, if required by the Engineer, submit for the review of the Engineer method statements which describe in detail, supplemented with drawings where necessary, the methods to be adopted for executing any portion of Work.
- .2 These statements shall also include details of constructional plant and labour to be employed. Acceptance by the Engineer shall not relieve the Contractor of any of his responsibilities, nor shall reasonable refusal to approve entitle the Contractor to extra payment or an extension of time.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

REGULATORY REQUIREMENTS

1. GENERAL

1.1 Permits/Inspections

- .1 The Owner will be responsible for obtaining and paying for the Building Permit.
- .2 Refer to the General Conditions and Supplemental General Conditions for other requirements related to permits and other regulatory requirements.
- .3 Arrange and pay for the regulatory submittals and inspections necessary for the completion of the Work in accordance with Federal, Provincial, and District laws, regulations, and by-laws.
- .4 Within one week of receipt, provide one copy of all regulatory reports, permits, and other documents to the Engineer. Include any reports from WorkSafe BC related to Contractor operations on the site.

1.2 Applicable Codes/Standards

- .1 Where specified codes/standards are not dated, conform to latest issue of specified codes/standards as amended and revised to the Tender closing date.
- .2 Maintain one copy of all specified and applicable codes and standards at the job site for ready reference.
- .3 Confine apparatus, the storage of Products and the operations of workers to limits indicated by laws, ordinances, permits and by directions of the Engineer. Do not unreasonably encumber the premises with Products.
- .4 In the event of discrepancies between codes, standards or other provisions, the most stringent shall apply.
- .5 Conform to all Federal, Provincial, and District Codes, regulations and by laws.

1.3 Visitors

- .1 Ensure that visitors are provided safety orientation.

1.4 Working Limits

- .1 Confine all deliveries and operations within the project property limits.

2. PRODUCTS

Not Applicable.

REGULATORY REQUIREMENTS

3. EXECUTION

Not Applicable.

END OF SECTION

TEMPORARY FACILITIES

1. GENERAL

1.1 Equipment and Tool Storage

- .1 Provide and maintain in a clean and orderly condition adequate lockable storage sheds for tools and equipment. Locate where shown in the drawings.

1.2 Materials Storage

- .1 Provide and maintain in a clean and orderly condition suitable weatherproof and lockable sheds for storage and protection of materials which require such protection. Locate sheds in the area shown on the drawings, or as directed by the Engineer.
- .2 Allocate storage areas on site for materials which do not require weatherproof sheds. Maintain areas in clean and orderly condition. Limit storage of materials and items to storage areas only.

1.3 Sanitary Facilities

- .1 Provide a portable washroom. Maintain facilities in clean and tidy condition.

1.4 Temporary Power and Light

- .1 Provide temporary electric power for all construction needs. Locate receptacles so power is available to any part of the work within reach of a 30 m extension cord. Provide power at temporary storage sheds and field offices. Provide extension cords as required.
- .2 Provide and pay for all temporary power required during construction period for temporary lighting and the operations. Contractor responsible for all equipment and requirements for hook-up. Connection to the Owner's power and lighting system will not be allowed.

1.5 Temporary Telephone and Fax

- .1 If required for Contractor's use, arrange and pay for establishment of telephone service for telephone and fax. Use of the Owner's telephone service will not be allowed.

1.6 Existing Services

- .1 Maintain existing services in operation at all times during construction.
- .2 Protect all existing services from damage. Repair services damaged by construction at no additional cost to the Owner.
- .3 If service interruptions are necessary, such interruptions shall be made only at times approved by the Engineer.

TEMPORARY FACILITIES

- .4 When breaking into or connecting to existing services or utilities, carry out work at times directed by local governing authorities, with a minimum of disturbance to the Work and/or building occupants and pedestrian and vehicular traffic.
- .5 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in a manner approved by local governing authorities having jurisdiction.

1.7 Ladders, Stairs

- .1 Provide and maintain adequate temporary ladders and stairs required for construction.
- .2 Secure to structure.
- .3 Ladders and stairs are to comply with all safety requirements of governing authorities.
- .4 Provide temporary wood treads on steel pan stairs for use prior to placement of permanent treads.

1.8 Protection for Off-Site and Public Property

- .1 Protect adjacent private and public property from damage during the performance of the Work.
- .2 During excavation, provide sheeting, piling or shoring as required to protect adjacent facilities from movement.
- .3 Be responsible for all damages incurred due to improper protection.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

MOBILIZATION

1. GENERAL

1.1 Mobilization

- .1 Mobilization shall consist of preparatory work and operations including, but not limited to, those necessary to the movement of personnel, equipment, supplies and incidentals to the Site; and for all work and operations which must be performed or costs incurred prior to beginning work on the various items on the Site.

1.2 Demobilization

- .1 Demobilization shall consist of cleanup work and operations including, but not limited to, those necessary for the removal of personnel, equipment, and incidentals from the Site.

1.3 Payment

- .1 Payment for mobilization and demobilization will be made at the lump sum price shown in the Tender Form. Fifty percent (50%) of the lump sum price will be paid on the first progress payment certificate due after the Contractor has established the operations and facilities specified. The remaining fifty percent (50%) will be paid upon completion of the contract and removal of equipment and cleanup of the work areas to the satisfaction of the Engineer.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

TRAFFIC CONTROL, ACCESS ROADS AND PARKING

1. GENERAL

1.1 General

- .1 This section addresses general requirements for temporary vehicle movement, site access and parking not incorporated into the final or permanent work, as well as traffic control during construction. This section must be referenced to and interpreted simultaneously with all other sections pertinent to the works described herein.
- .2 During progress of the Works, make adequate provision to accommodate normal traffic along streets immediately adjacent to or crossing the Works so as to minimize the inconvenience to the general public.
- .3 Give minimum 48 hours notice or as otherwise required by local bylaws to local police, fire departments, emergency services and municipal works authorities prior to beginning construction and comply in all respects with their requirements.
- .4 Inform all owners or occupants of properties where access is affected in advance of proposed road and/or sidewalk closures.

1.2 Installation/Removal

- .1 Provide temporary access and parking areas as required.
- .2 Remove from Site all such work after use.

1.3 Access Road

- .1 If authorized to use existing roads for access to Site, maintain such roads for duration of Contract and make good damage resulting from contractors' use of roads.
- .2 Prior to final inspection, obtain and submit to Owner written signed releases from owners of all roads used for Site access, verifying that roads have been adequately restored and left in a satisfactory condition.
- .3 Trim loads of trucks hauling excavated material, cement, sand, stone, gravel, debris or other loose material before leaving the site, and ensure that the bodies of such vehicles are tight so that no spillage of loads occurs.

1.4 Access to Utility Installations

- .1 Do not obstruct hydrants, valve or control pit covers, valve boxes, curb stop boxes, fire or police call boxes, and all other utility controls, warning systems, and appurtenances.

TRAFFIC CONTROL, ACCESS ROADS AND PARKING

- .2 Provide and pay for bridges, walks, or other temporary facilities necessary to ensure that these controls or warning systems are free for use in their normal manner at all times during construction.

1.5 Construction Parking

- .1 Parking will be permitted on Site in designated areas and provided it does not disrupt the performance of Work.

1.6 Traffic Control

- .1 During progress of the Work, make adequate provision to accommodate normal traffic along streets immediately adjacent to or crossing the Works so as to cause minimum of inconvenience to general public.
- .2 Regulate traffic in general accordance with municipal requirements except where specified otherwise and in compliance with specific requirements stipulated herein.
- .3 Comply with requirements of the "Traffic Control Manual for Work on Roadways", published by the British Columbia Ministry of Transportation, for regulation of vehicle and pedestrian traffic or use of roadways upon or over which it is necessary to carry out work or haul materials or equipment.
- .4 Provide and maintain reasonable road access and egress to property fronting along or in vicinity of work under contract unless approved otherwise by Contract Administrator.
- .5 Traffic Control Informational and Warning Devices
 - .1 Meet with Engineer prior to commencement of work to prepare list of signs and other devices required for the project.
 - .2 Provide and maintain signs and other devices required to indicate construction activities or other temporary and unusual conditions resulting from project work which may required road user response.
 - .3 Supply and erect signs, delineators, barricades and other miscellaneous warning devices in accordance with Municipal requirements.
 - .4 Place signs and other devices in additional locations as appropriate or as directed by the Engineer.
 - .5 Continually maintain traffic control devices in use by:
 - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Removing or covering signs which do not apply to conditions existing from day to day.

TRAFFIC CONTROL, ACCESS ROADS AND PARKING

.6 Control of Traffic Using Flaggers

.1 Provide flag persons, trained and properly equipped for the following situations:

- .1 When public traffic is required to pass working vehicles or equipment which may block all or part of travelled roadway.
- .2 In situations where complete protection for workmen, working equipment and public traffic is not provided by other traffic control devices.

.7 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified herein and approved by Engineer to protect and control public traffic, existing conditions for traffic may be restricted.

1.7 Payment

- .1 Payment for all traffic control work performed under this Section will be made at the lump sum price in the Tender Form.
- .2 Payment for all other work under this Section will be incidental to payment for work described in other Sections unless shown otherwise in the Tender Form.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

TEMPORARY BARRICADES AND ENCLOSURES

1. GENERAL

1.1 Installation/Removal

- .1 Provide temporary barriers and enclosures as required to protect against injury and damage.
- .2 Remove from Site all such work after use.

1.2 Hoarding

- .1 Provide hoarding with chain link fence 2.3 m high, protecting public and private property from injury or damage. Provide lockable gates within hoarding for access to site by workers and vehicles.

1.3 Guard Rails and Barricades

- .1 Provide as required by governing authorities.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

ENVIRONMENTAL PROTECTION

1. GENERAL

1.1 Intent

- .1 This Section covers the work for the protection of the environment during construction. The provisions of this Section are in addition to the provisions of other Sections of this Contract.

1.2 Site Working Areas

- .1 Confine operations to limits of the site working area shown on Drawings.
- .2 Provide access roads to the site working area and on the site in locations shown or otherwise acceptable to the Engineer.
- .3 Install fencing to clearly define the working limits to the site working area, haul routes, parking areas, access routes and maintenance areas to ensure all activity is confined to these areas.

1.3 Environmental Management System (EMS)

- .1 Comply with the requirements of the Regional District of Nanaimo's Wastewater Services (WWS) Environmental Management System as documented in Appendix A of the Contract Document.

1.4 Codes and Standards

- .1 The Contractor shall follow the "Land Development Guidelines for the Protection of Aquatic Habitat", by the Department of Fisheries and Oceans and the Ministry of Environment, for controlling erosion and sediment transfer.
- .2 The Contractor shall follow the "Environmental Construction Guidelines for Municipal, Road, Sewage and Drainage Projects 1987" by the Municipal Engineers Associations. These Guidelines recommend construction procedures that are considered to be sound environmental practice for the following areas of concern:
 - .1 Construction Works Yard and Access Routes
 - .2 Equipment Fuelling, Maintenance and Storage
 - .3 Mud, Dust and Particulate Control
 - .4 Noise and Vibration Control
 - .5 Drilling and Blasting
 - .6 Protection of Land Features and Vegetation
 - .7 Clearing Right-of-Way/Disposal of Excess Material
 - .8 Dewatering
 - .9 Water Crossings and Construction through Sensitive Areas

ENVIRONMENTAL PROTECTION

- .10 Groundwater and Well Water
- .11 Site Restoration
- .3 The Contractor shall acquire and be familiar with the guidelines.

1.5 Construction Practices

- .1 Notwithstanding the above general concerns, the following environmental construction practices are specific to this Contract:
 - .1 Prior to, and during construction, the Contractor shall take full responsibility for controlling erosion and sediment transfer to prevent discharge of sediment into environmentally sensitive areas.
 - .2 No channel construction or work shall be carried out that will interfere with the migration of fish.
 - .3 Control measures shall be provided to prevent silt-laden water from entering natural watercourses in accordance with the requirements of the Ministry of Environment.
 - .4 The velocity of discharge water shall be controlled to prevent unnecessary disturbance of natural watercourses.
 - .5 All equipment maintenance and refuelling shall be carried out so as to prevent the entry of petroleum products into the ground or watercourses at all times.
 - .6 The Contractor shall ensure the immediate availability of the products with which to affect temporary repair to broken pipelines and other services so the spill or other emission of a pollutant is immediately controlled and stopped and to mitigate the damages.
 - .7 Maintain temporary erosion and pollution control features installed under this contract.
 - .8 Control noise emission from equipment and plant to local authorities' noise emission requirements.
 - .9 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.6 Site Restoration

- .1 In general, the Contractor shall restore the site to conditions equal to or, if specified elsewhere, to a condition better than existing conditions.
- .2 The Contractor shall restore lands outside of the limits of the Work which are disturbed by the Work to their original condition.

ENVIRONMENTAL PROTECTION

1.7 Spills Reporting

- .1 In the event of a spill or other emission of a pollutant into the natural environment, every person responsible for the emission of who causes or permits it must forthwith notify:
 - .1 The Ministry of Environment
 - .2 The municipality or the regional municipality within the boundaries of which the spill occurred.
 - .3 The owner of the pollutant, if known.
 - .4 The person having control of the pollutant, if known.
 - .5 The Engineer: Of the spill, of the circumstances thereof, and of the action taken or intended to be taken with respect thereto.

1.8 Contingency Plan

- .1 Prior to commencing construction, the Contractor shall prepare a contingency plan for the control and clean up of a spill. The Contractor shall submit for the Engineer's review and the review of other responsible Parties a copy of the Contingency Plan and make appropriate changes to it based on review comments received. The plans shall be reviewed at the pre-construction meeting. The contingency plan shall include:
 - .1 The names and the telephone numbers of the persons in the local municipalities to be notified forthwith of a spill.
 - .2 The names and the telephone numbers of the representatives of the fire, the police and the health departments of the local municipalities who are responsible to respond to emergency situations.
 - .3 The Contractor's proposal for the immediate containment and control of the spill, the cleanup procedures to be initiated immediately and any other action to be taken to mitigate the potential environmental damage while awaiting additional assistance.
 - .4 The name and the office and home telephone number of the Contractor's representative responsible for preparing, implementing, directing and supervising the contingency plan.

1.9 Disposal of Wastes

- .1 Fires and burning of rubbish on site are not permitted.
- .2 Do not bury rubbish and waste materials on site.
- .3 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

ENVIRONMENTAL PROTECTION

1.10 Site Clearing and Plant Protection

- .1 Protect trees and plants on site and adjacent properties where indicated.
- .2 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .3 Minimize stripping of topsoil and vegetation.
- .4 Restrict tree removal to areas indicated or designated by Engineer.

1.11 Dust Control

- .1 Control dust at all times for the duration of the Contract.
- .2 Provide regular sweeping of the roadways inside the Plant and McGuffie Road outside the Plant.

1.12 Temporary Erosion and Sediment Controls

- .1 Drainage
 - .1 Do not discharge water containing suspended materials into watercourses, sewer or drainage systems.
 - .2 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with Federal, Provincial and Municipal requirements.
- .2 Temporary Erosion and Sediment Controls
 - .1 Refer to temporary erosion and sediment and control measures design information shown on Drawings.
 - .2 Silt fence to be manufactured from a woven, slit film geotextile material with a shiny to smooth surface texture designed to reduce velocity of runoff to point that suspended particles settle out due to reduction of hydraulic energy.
 - .3 Construct granular sediment trap within existing ditch as shown on Drawings.

1.13 Payment

- .1 Payment for all temporary and permanent sediment control measures under this Section and as shown on the Drawings will be made at the lump sum priced in the Tender Form.
- .2 Provide weekly monitoring of sediment control measures to ensure system functionality for a period of eight (8) weeks after completion of Work.
- .3 Payment for all other work performed under this Section will be incidental to payment to work described in other Sections unless shown otherwise in the Tender Form.

ENVIRONMENTAL PROTECTION

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

CLOSEOUT PROCEDURES

1. GENERAL

1.1 Description

- .1 This section describes administrative procedures preceding preliminary and final inspections of Work.

1.2 Inspection and Declaration

- .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Engineer in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Engineer Inspection.
- .2 Engineer Inspection: Engineer and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Certificates required by regulatory authorities have been submitted.
 - .4 Work is complete and ready for Final Inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Owner, Engineer, and Contractor. If Work is deemed incomplete by Engineer, complete outstanding items and request re-inspection.
- .5 Declaration of Substantial Performance: when Owner and Engineer consider deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for certificate of Substantial Performance. Refer to General Conditions Clause 5.4 - Substantial Performance of the Work and Section 00800 Supplementary Conditions.
- .6 Commencement of Lien Period: date of Owner's acceptance of submitted declaration of Substantial Performance shall be date for commencement of lien period.
- .7 Final Payment: When Owner and Engineer consider final deficiencies and defects have been corrected and it appears requirements of Contract have been totally performed, make application for final payment. Refer to General Conditions Clause 5.7 for specifics to

CLOSEOUT PROCEDURES

application. If Work is deemed incomplete by Owner and Engineer, complete outstanding items and request re-inspection.

- .8 Payment of Holdback: After issuance of certificate of Substantial Performance of Work, submit an application for payment of holdback amount in accordance with General Conditions Clause 5.5.

2. PRODUCTS

Not Applicable.

3. EXECUTION

Not Applicable.

END OF SECTION

DIVISION 2 – SITE WORKS

CLEARING AND GRUBBING

1. GENERAL

1.1 Definitions

- .1 Clearing consists of cutting off trees and brush vegetative growth to not more than a specified height above ground and disposing of felled trees, previously uprooted trees and stumps, and surface debris.
- .2 Grubbing consists of excavation and disposal of stumps and roots boulders and rock fragments of specified size to not less than a specified depth below existing ground surface.

1.2 Protection

- .1 Prevent damage to fencing, trees, landscaping, natural features, bench marks, existing buildings, existing pavement, utility lines, Work Site appurtenances, water courses and root systems of trees which are to remain.
- .2 Repair any damaged items to approval of Engineer.
- .3 Replace any trees designated to remain, if damaged, as directed by Engineer.

1.3 Measurement and Payment

- .1 Payment for all clearing and grubbing items includes removal and disposal of all branches, stumps, timbers and vegetation remains.
- .2 Payment for all clearing and grubbing items will be on a lump sum based on the area to be cleared and grubbed as identified on the Drawings.

2. PRODUCTS

Not Applicable.

3. EXECUTION

3.1 Preparation

- .1 Inspect Work Site and verify with Engineer, items designated to remain.
- .2 Locate and protect utility lines. Preserve in operating condition active utilities traversing Work Site.
- .3 Notify utility authorities before starting clearing and grubbing.

CLEARING AND GRUBBING

3.2 Clearing

- .1 Clear as indicated or as directed by Engineer, by cutting at a height of not more than 300 mm above ground. In areas to be subsequently grubbed, height of stumps left from clearing operations to be not more than 1000 mm above ground surface.

3.3 Grubbing

- .1 Grub out stumps and roots to not less than 200 mm below ground surface.
- .2 Grub out visible rock fragments and boulders, greater than 300 mm in greatest dimension, but less than 0.5 m³.

3.4 Removal and Disposal

- .1 Remove and dispose of cleared and grubbed materials off-site.

3.5 Finished Surface

- .1 Leave ground surface in condition suitable for immediate grading operations or stripping of topsoil.

END OF SECTION

SITE GRADING

1. GENERAL

1.1 Protection

- .1 Protect and/or transplant existing fencing, trees, landscaping, natural features, bench marks, surface or underground utility lines which are to remain as directed by the Engineer. If damaged, restore to original or better condition unless directed otherwise.
- .2 Maintain access roads to prevent accumulation of construction related debris on roads.

1.2 Related Work

- .1 Section 02315: Excavating, Trenching and Backfill
- .2 Section 02231: Clearing and Grubbing

1.3 Measurement and Payment

- .1 Payment for rough site grading will be incidental to payment for work under Section 02315 – Excavating, Trenching and Backfill.

2. PRODUCTS

2.1 Materials

Not Applicable

3. EXECUTION

3.1 Grading

- .1 Rough grade to levels, profiles, and contours allowing for surface treatment as indicated.
- .2 Grade ditches to depth as directed.
- .3 Do not disturb soil within branch spread of trees or shrubs to remain.

3.2 Surplus Material

- .1 Remove and dispose of material off site.

END OF SECTION

EXCAVATING, TRENCHING AND BACKFILLING

1. GENERAL

1.1 Definitions

- .1 Rock is defined as all solid rock in the form of bedrock, masses, ledges, seams or layers and includes igneous rock of any sort, conglomerate, sandstone or shale, that requires breaking by continuous drilling and blasting before excavation and removal. Rock also includes rocks having individual volumes in excess of 1.0 m³, removed by blasting or other.
- .2 Common excavation: Excavation of materials of whatever nature, which are not included under definitions of rock excavation.
- .3 Unclassified excavation: Excavation of deposits of whatever character encountered in work.
- .4 Topsoil: Material capable of supporting good vegetative growth and suitable for use in top dressing, landscaping, and seeding.
- .5 Waste material: Excavated material unsuitable for use in work or surplus to requirements.
- .6 Borrow material: Material obtained from locations outside area to be graded, and required for construction of fill areas or for other portions of work.

1.2 Protection of Existing Features

- .1 Existing buried utilities and structures:
 - .1 Size, depth and location of existing the utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.
 - .2 Prior to commencing excavation work, notify applicable corporation or authorities having jurisdiction, establish location and state of use of buried utilities and structures. The corporations or authorities having jurisdiction are to clearly mark such locations to prevent disturbance during work.
 - .3 Confirm locations of buried utilities by careful test excavations.
 - .4 Maintain and protect from damage, water, sewer, gas, electric, telephone, and other utilities and structures encountered as indicated.
 - .5 Where utility lines or structures exist in area of excavation, obtain direction of the Engineer before excavating.
 - .6 Record location of maintained, re-routed and abandoned underground lines.
- .2 Existing buildings and surface features:

EXCAVATING, TRENCHING AND BACKFILLING

- .1 Conduct, with the Engineer, condition survey of existing buildings, trees and other plants, lawns, fencing, service poles, wires, rail tracks, pavement, survey bench marks and monuments which may be affected by work.
- .2 Protect existing buildings and surface features from damage while work is in progress. In event of damage, immediately make repair to the approval of the Engineer.
- .3 Where required for excavation, cut roots or branches as approved by the Engineer.

2. PRODUCTS

2.1 Materials

Not Applicable

3. EXECUTION

3.1 Excavation

- .1 Advise the Engineer at least 7 days in advance of excavation operations.
- .2 Excavate to lines, grades, elevations and dimensions required for construction.
- .3 Excavation must not interfere with normal 45 degrees splay of bearing from bottom of any footing.
- .4 Do not disturb soil within branch spread of trees or shrubs that are to remain. If excavating through roots, excavate by hand and cut roots with sharp axe or saw.
- .5 For trench excavation, unless otherwise authorized by the Engineer in writing, do not excavate more than 30 m of trench in advance of installation operations and do not leave open more than 15 m at end of day's operation.
- .6 All excess excavated material is to be disposed offsite.
- .7 Do not obstruct flow of surface drainage or natural watercourses.
- .8 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.
- .9 Notify the Engineer when bottom of excavation is reached.
- .10 Obtain the Engineer's approval of completed excavation.
- .11 Correct unauthorized over-excavation as follows:

EXCAVATING, TRENCHING AND BACKFILLING

- .1 Fill under bearing surfaces and footings with Type 1 fill compacted to 100% of Standard Proctor Density, or with lean mix fill concrete.
- .2 Fill under other areas with Type 2 fill compacted to not less than 95% of Standard Proctor Density.
- .3 Where over-excavation is authorized, provide estimated fill quantities to the Engineer prior to work. Payment to be made on an agreed-to unit price basis.

3.2 Restoration

- .1 Upon completion of work, remove waste materials and debris, trim slopes, and correct defects.
- .2 Clean and reinstate areas affected by work as directed by the Engineer.

END OF SECTION

APPENDIX A
EMS – CONTRACTOR/SUPPLIER PACKAGE



WASTEWATER SERVICES

Contractor-Supplier Package ISO 14001 Contractor and Supplier Environmental Performance Requirements



The purpose of this package is to convey the requirements of Wastewater Services' (WWS) Environmental Management System (EMS) to contractors and suppliers. This package is applicable to all wastewater treatment facilities and pump stations.

As a contractor or supplier to WWS, you have a responsibility to comply with all provisions identified in the Contract Documents regarding Environmental Protection. Where Contract Documents do not exist, the service provider will comply with Sections Two, Three and Four.

Please retain a copy for your records.

PACKAGE CONTENTS:	
1.0	General Overview: ISO 14001
1.1	Environmental Management System (EMS)
1.2	Environmental Policy and ISO Clause
1.3	Environmental Aspects and Impacts
1.4	Environmental Objectives and Targets
1.5	Environmental Management Programs (EMPs)
2.0	Operating Procedures
3.0	Emergency Preparedness and Response Procedures
4.0	Environmental Specifications
4.1	Air Emissions
4.2	Cleaning Equipment
4.3	Dust Control
4.4	Energy Consumption
4.5	Hazardous Materials
4.6	Noise
4.7	Sensitive Areas
4.8	Spills
4.9	Surface Water Control
4.10	Use of Pesticides
4.11	Waste Management - Solid Non-Hazardous Waste
5.0	Attachments
	Environmental Policy
	ISO Clause
	Canadian Environmental Protection Act – Section 95

I, _____ of _____
(please print name) (please print company name)

acknowledge that I have received a Contractor-Supplier Package (ISO 14001 Contractor Supplier Environmental Performance Requirements) containing the materials listed above.

(Date)

(Supplier/Contractor Employee's Signature)

(Date)

(WWS Project Supervisor's Signature)

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1.0 GENERAL OVERVIEW: ISO 14001

1.1 Environmental Management System (EMS)

- An EMS is the part of an organization’s management system used to develop and implement its environmental policy and manage its environmental aspects.
- It includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources.

1.2 Environmental Policy and ISO Clause

- An Environmental Policy is a statement by the organization of its overall intentions and direction related to its environmental performance. It provides a framework for action and for the setting of environmental objectives and environmental targets.
- It is a driver for implementing and maintaining our EMS and reflects commitment to continual improvement, legal compliance and prevention of pollution
- The Environmental Policy is posted at each of the WWS wastewater treatment facilities and pump stations, and is available on the RDN website: www.rdn.bc.ca
- Uncontrolled copy of the Environmental Policy attached (Section 5.0 of this package)
- Uncontrolled copy of WWS’ ISO Clause (Section 5.0 of this package)

1.3 Environmental Aspects and Impacts

- Environmental Aspect: element of an organization’s activities, products or services that can interact with the environment.
- Environmental Impacts: any changes to the environment whether adverse or beneficial, wholly or partially resulting from an organization’s environmental aspects.
- Environmental impacts include:
 - Air Pollution and Odour
 - Depletion of Natural Resources (Energy Use)
 - Landfill (Garbage)
 - Noise
 - General Repairs-Construction (Sensitive Areas)
 - Sewage Bypass (Leak/Spill)
 - Treatment Disposal (Hazardous Waste)

1.4 Environmental Objectives, Targets and Programmes

- Environmental Objective: overall environmental goal consistent with the environmental policy, that an organization sets itself to achieve.
- Environmental Target: a detailed performance requirement that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
- Objective and Targets are set to minimize environmental impacts.
- Any legal requirements that must be met by the organization (i.e. permit requirements) help create the objectives and targets.

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1.5 Environmental Management Programs (EMPs)

- EMPs combine all of the above details and create tangible programmes that will be used to achieve the objectives and targets and demonstrate continual improvement in the EMS.
- EMPs address schedules, resources and responsibilities for achieving environmental objectives and targets.

2.0 OPERATING PROCEDURES

- All WWS wastewater treatment facilities have Operating Procedure Manuals.
- Procedures applicable to contractors and suppliers will be supplied by the WWS Project Supervisor at pre-construction meetings or prior to the work commencing.
- Contractors and Suppliers will be required to sign a Procedure Checklist acknowledging that they have received copies of applicable procedures at a pre-construction meeting or prior to commencing work on site.
- The WWS Project Supervisor will ensure that a site induction is completed prior to work commencing as per the ISO Clause attached. (Section 5.0 of this package)

3.0 EMERGENCY PREPAREDNESS AND RESPONSE PROCEDURES

- All WWS wastewater treatment facilities have Emergency Preparedness and Response Procedure Manuals.
- Procedures applicable to contractors and suppliers will be supplied by the WWS Project Supervisor at pre-construction meetings or prior to the work commencing.
- Contractors and Suppliers will be required to sign a Procedure Checklist acknowledging that they have received copies of applicable procedures at a pre-construction meeting or prior to commencing work on site.
- The WWS Project Supervisor will ensure that a site induction is completed prior to work commencing as per the ISO Clause (Section 5.0 of this package)

4.0 ENVIRONMENTAL SPECIFICATIONS

Contractors and suppliers must abide by the following environmental specifications while working on site, as applicable.

4.1 Air Emissions

- Contractors and Suppliers will ensure that excess vehicle idling is minimized.
- Contractors will ensure that their staff are trained in the proper use and handling of all materials and chemicals to ensure air emissions/odours are minimized.
- No open burning of waste materials is permitted.

4.2 Cleaning Equipment

- Do not clean equipment in streams/rivers or lakes.
- Clean construction equipment prior to entering roadways.

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- Do not clean equipment in locations where debris can gain access to sewers, watercourses or aquifers.
- 4.3 Dust Control**
- Transport dusty materials in covered haulage vehicles.
 - Public roadways shall be kept clean and free of mud unless closed to through traffic with the permission of the Project Engineer.
- 4.4 Energy Consumption**
- Contractors and Suppliers will use energy efficient equipment when undertaking any work on a job site, where practical.
 - Contractors and Suppliers staff will turn off lights and equipment when not in use and where practical when on a job site.
- 4.5 Hazardous Materials**
- Hazardous materials brought on site and removed shall be managed in accordance with current MOE Regulations current at the time of work.
 - Governing Ministry of Labour Regulations respecting protection of works, remedial handling and disposition of Designated Substances encountered shall be followed.
 - Do not empty fuel, lubricants, herbicides, pesticides, fungicides, paint materials, solvents or other chemicals into sewers or watercourses (only legally acceptable disposal methods are acceptable).
- 4.6 Noise**
- Use vehicles and equipment with efficient muffling devices.
 - Provide and use devices that will minimize noise levels in construction areas.
 - Minimize noise resulting from activities while on-site whenever practical.
- 4.7 Sensitive Areas**
- Inform WWS staff in writing of the particular schedule for each river crossing, channelizing or other work in the designated sensitive areas.
 - Avoid encroachment on unique natural areas and establish boundary protection and signage to avoid encroachment.
 - Do not disturb habitats of rare or endangered species. Agree and implement mitigative measures with WWS staff.
 - Protect wetland sites used as feeding or breeding areas by migratory fowls or as habitats for other animals and establish boundary protection and signage to avoid such encroachment.
 - Schedule construction in sensitive areas so that there will be minimal interference with water uses including fish migration or spawning, or disruption of incubation periods for eggs.
 - Keep removal of vegetation to a minimum.
 - Contain and deposit on land all aquatic plants uprooted or cut prior to or during construction.

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4.8 Spills

- Be prepared at all times to intercept, clean up and dispose of any spillage that may occur whether on land or water.
- Keep all materials required for clean-up of spills readily accessible on-site (e.g. spill kit)
- Notify WWS staff immediately if there are any spills.
- Compliance with Section 95 of the Canadian Environmental Protection Act (Section 5.0 of this package)

4.9 Surface Water Control

- Control all surface water and groundwater including rainfall and run-off. Ensure that erosion is controlled and that flooding of excavations or damage to structures does not occur.
- Intercept surface drainage as far back from excavations as practical by means of ditches, berms or other interception methods as may be required for effective control.
- Direct pumped water or run-off to settling ponds or sediment basins prior to discharge to adjacent storm sewers or watercourses.
- Provide settling ponds and sediment basins where needed.
- Control overflow rates from settling ponds or sediment basins to ensure minimum solids transportation.
- Provide straw bales, filter berms or sand bags as required to retard and filter run-off prior to discharge to storm sewers or watercourses.
- Clean out settling ponds from time to time so that sediment discharge is prevented.
- Intercept and divert concentrated run-off from unstable areas under sheet flow conditions, as directed by WWS Engineer.
- Do not direct any flow of water across or over pavements, except through approved pipes or properly constructed troughs.
- Keep gutters and drainage ditches open at all times to provide adequate surface drainage.
- Maintain all existing storm sewers clean and free of deleterious materials and blockages.
- Provide splash pads where water is discharged to the watercourse.
- Dispose of water so as not to be injurious to public health or safety, to property or to any part of work completed or under construction

4.10 Use of Pesticides

- Contractors and Suppliers will NOT apply pesticides to any WWS treatment facility or pump station property.

4.11 Waste Management – Solid Non-Hazardous Waste

- No open burning is permitted.
- All wastes generated by contractors will be cleaned-up and disposed of as per MOE Regulations.
- Whenever possible Contractors and Suppliers should utilize recycling opportunities for the disposal of waste.

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5.0 ATTACHMENTS

Environmental Policy

The Regional District of Nanaimo's (RDN) Wastewater Services (WWS) **Environmental Policy** reflects the values and priorities of the RDN's Board Strategic Plan 2010-2012, Regional Growth Strategy and Liquid Waste Management Plan.

The RDN's WWS is committed to providing reliable, high quality, and cost-effective wastewater services to the people and communities we serve. We strive to optimize our treatment and re-use processes and employ state-of the art pollution prevention strategies at our facilities. In fulfillment of this commitment, it is the WWS policy:

-  **To do our utmost to comply with the letter and spirit of relevant environmental laws and regulations. There shall be thorough and accurate measurement and reporting of our environmental compliance.**
-  **To prevent pollution. This includes avoiding or reducing environmental pollution produced directly from WWS operations, or indirectly by the consumption of power, fuel, chemicals, and other resources.**
-  **To identify and monitor environmental impacts and set measurable objectives and targets to reduce those impacts on the environment.**
-  **To foster openness and dialogue with employees and the public, and respond to their concerns about potential hazards and impacts of our operations.**
-  **To practice sustainable asset management planning at all our facilities.**
-  **To continually improve our performance relevant to this environmental policy.**

This policy will be communicated regularly to all WWS staff and will be made available to regulatory agencies, the public, or other interested parties upon request.

John Finnie

General Manager, Regional and Community Utilities

Date: 19 April 2010

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ISO CLAUSE

The following clause is to be included in any contract related to WWS that has the potential to have a significant environmental impact.

“Whereas the Regional District of Nanaimo’s Wastewater Services (WWS) is operating to the ISO 14001: 2004 standard, it is a condition of this contract that the Contractor comply with the WWS’ Environmental Management System (EMS). Pursuant to Element 4.4.2 – Competence, Training and Awareness, paragraph 5.11 of the WWS’ EMS Policy and Procedure Manual: any contracted personnel whose activities can create a significant impact (as defined by the WWS’ EMS) on the environment are required to undergo training. Such training will require one session of approximately one half hour. While the Regional District of Nanaimo (the RDN) will provide the initial training to a representative Contractor, it is the responsibility of the Contractor to train the Contractor’s own personnel, as well as any personnel of the Contractor’s Subcontractor who will be working on a site of WWS. The Contractor hereby warrants that it will provide any ISO 14001 related training which the RDN deems necessary to the Contractor’s own personnel and any personnel of the Contractor’s Subcontractor and will forward records thereof to the RDN at no additional charge to the RDN.”

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Canadian Environmental Protection Act, 1999 (1999, c. 33)

Part 5: Controlling Toxic Substances – *Regulation of Toxic Substances*

Section 95: Report and Remedial Measures

95. (1) Where there occurs or is a likelihood of a release into the environment of a substance specified on the List of Toxic Substances in Schedule 1 in contravention of a regulation made under section 92.1 or 93 or an order made under section 94, any person described in subsection (2) shall, as soon as possible in the circumstances,

(a) subject to subsection (4) and any regulations made under paragraph 97(b), notify an enforcement officer or any other person designated pursuant to the regulations and provide a written report on the matter to the enforcement officer or other person;

(b) take all reasonable measures consistent with the protection of the environment and public safety to prevent the release or, if it cannot be prevented, to remedy any dangerous condition or reduce or mitigate any danger to the environment or to human life or health that results from the release of the substance or may reasonably be expected to result if the substance is released; and

(c) make a reasonable effort to notify any member of the public who may be adversely affected by the release or likely release.

Application

(2) Subsection (1) applies to any person who

(a) owns or has the charge, management or control of a substance immediately before its release or its likely release into the environment; or

(b) causes or contributes to the release or increases the likelihood of the release.

Report by property owner

(3) Where there occurs a release of a substance as described in subsection (1), any person, other than a person described in subsection (2), whose property is affected by the release and who knows that it is a substance specified on the List of Toxic Substances in Schedule 1 shall, as soon as possible in the circumstances and subject to subsection (4), report the matter to an enforcement officer or to any person that is designated by regulation.

Report to provincial official

(4) Where there are in force, by or under the laws of a province or an aboriginal government, provisions that the Governor in Council, by regulation, declares to be adequate for dealing with a release described in subsection (1), a report required by paragraph (1)(a) or subsection (3) shall be made to a person designated by those provisions.

Intervention by enforcement officer

(5) Where any person fails to take any measures required under subsection (1), an enforcement officer may take those measures, cause them to be taken or direct any person referred to in subsection (2) to take them.

Limitation on power of direction

(6) A direction of an enforcement officer under subsection (5) that is inconsistent with a requirement imposed by or under any other Act of Parliament is void to the extent of the inconsistency.

Access to property

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(7) Any enforcement officer or other person authorized or required to take any measures under subsection (1) or (5) may enter and have access to any place or property and may do any reasonable things that may be necessary in the circumstances.

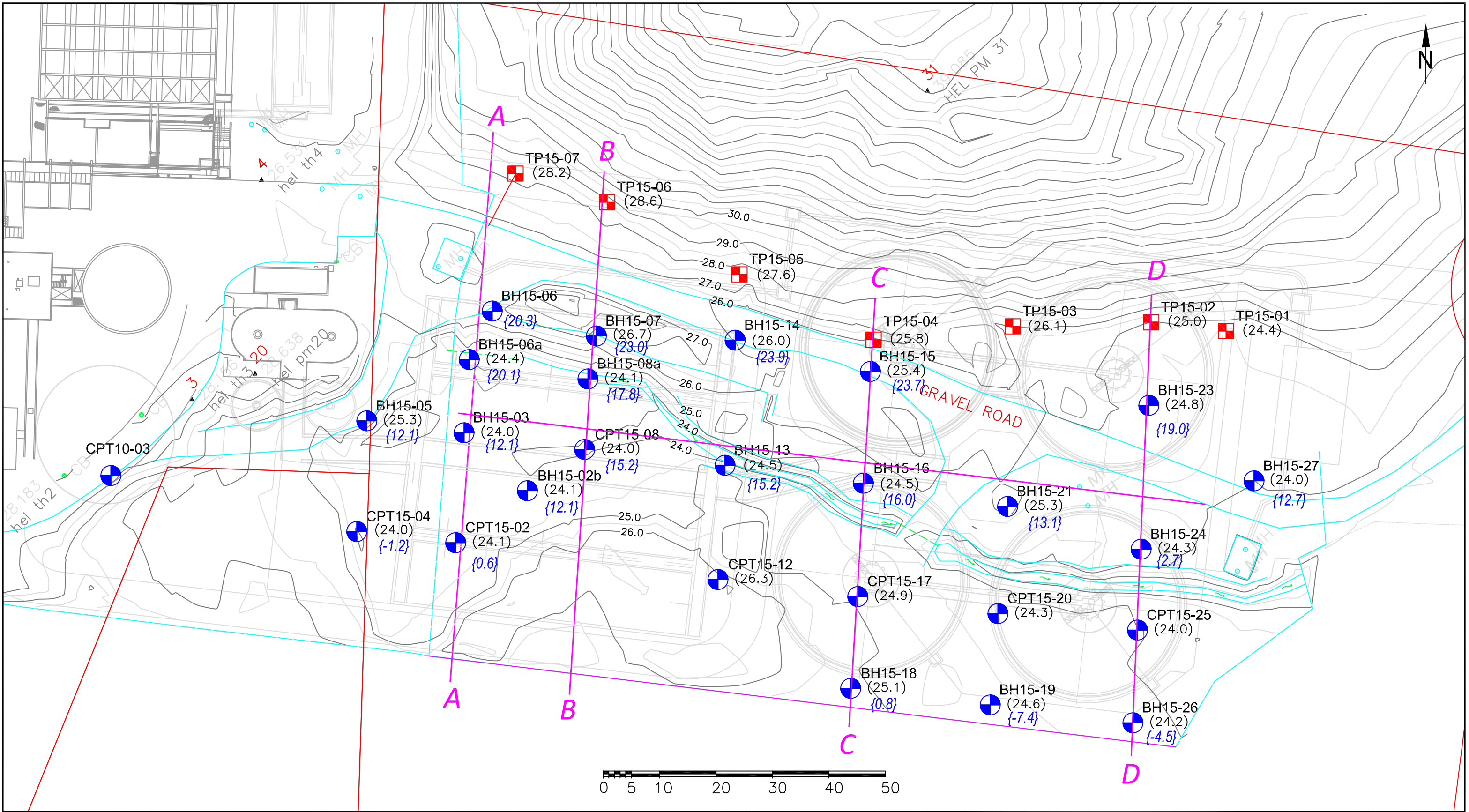
Personal liability

(8) Any person, other than a person described in subsection (2), who provides assistance or advice in taking the measures required by subsection (1) or who takes any measures authorized under subsection (5) is not personally liable either civilly or criminally in respect of any act or omission in the course of providing assistance or advice or taking any measures under those subsections unless it is established that the person acted in bad faith.

* All other sections can be found at <http://laws.justice.gc.ca/en/C-15.31/index.html>, or accessed through ISOsoft.

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APPENDIX B
GEOTECHNICAL BOREHOLE LOGS
(Levelton consultants Ltd. 2015)



BASE PLAN PROVIDE BY AECOM

- BOREHOLE
- TEST PIT

REV. :	DESCRIPTION:	DATE : (M/D/YR)

PROJECT:	SECONDARY TREATMENT PLANT UPGRADE GREATER NANAIMO POLLUTION CONTROL CENTER
CLIENT:	AECOM
TITLE:	BOREHOLE AND TEST PIT LOCATION PLAN
THIS DRAWING IS THE SOLE PROPERTY OF LEVELTON CONSULTANTS LTD. AND CANNOT BE USED OR DUPLICATED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN CONSENT OF LEVELTON. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES OR OMISSIONS TO LEVELTON.	

DATE:	MAY 2015
DESIGN BY:	DEK
DRAWN BY:	DEK
CHECKED BY:	CM
SCALE:	AS SHOWN
PROJECT No.:	R715-0626




FIGURE NO.:
2

APPENDIX 2
BH, CPT LOGS AND LABORATORY RESULTS



Levelton

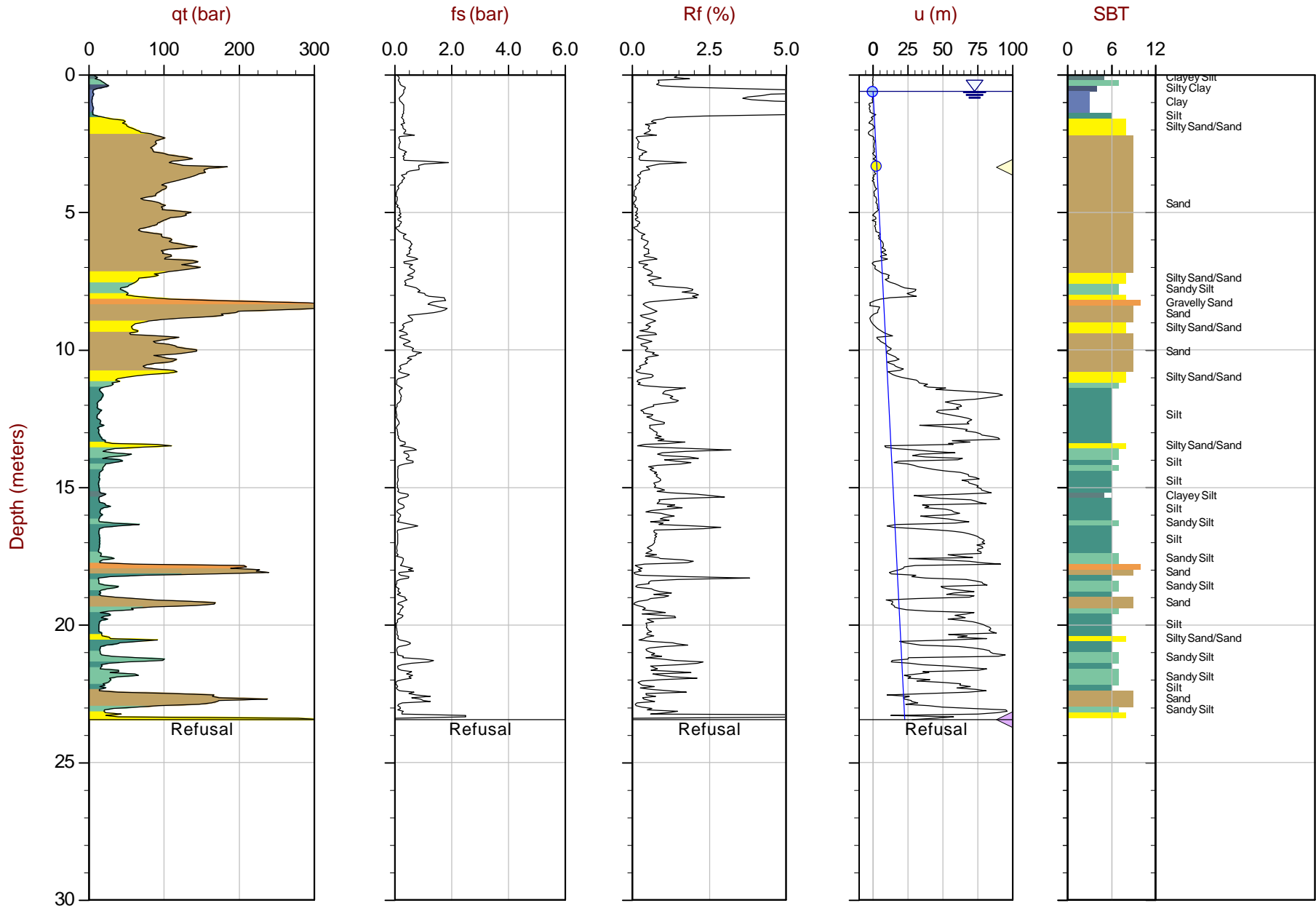
Job No: 15-02035

Date: 04:27:15 13:44

Site: Greater Nanaimo Pollution Control Centre

Sounding: CPT15-02

Cone: 408:T1500F15U500



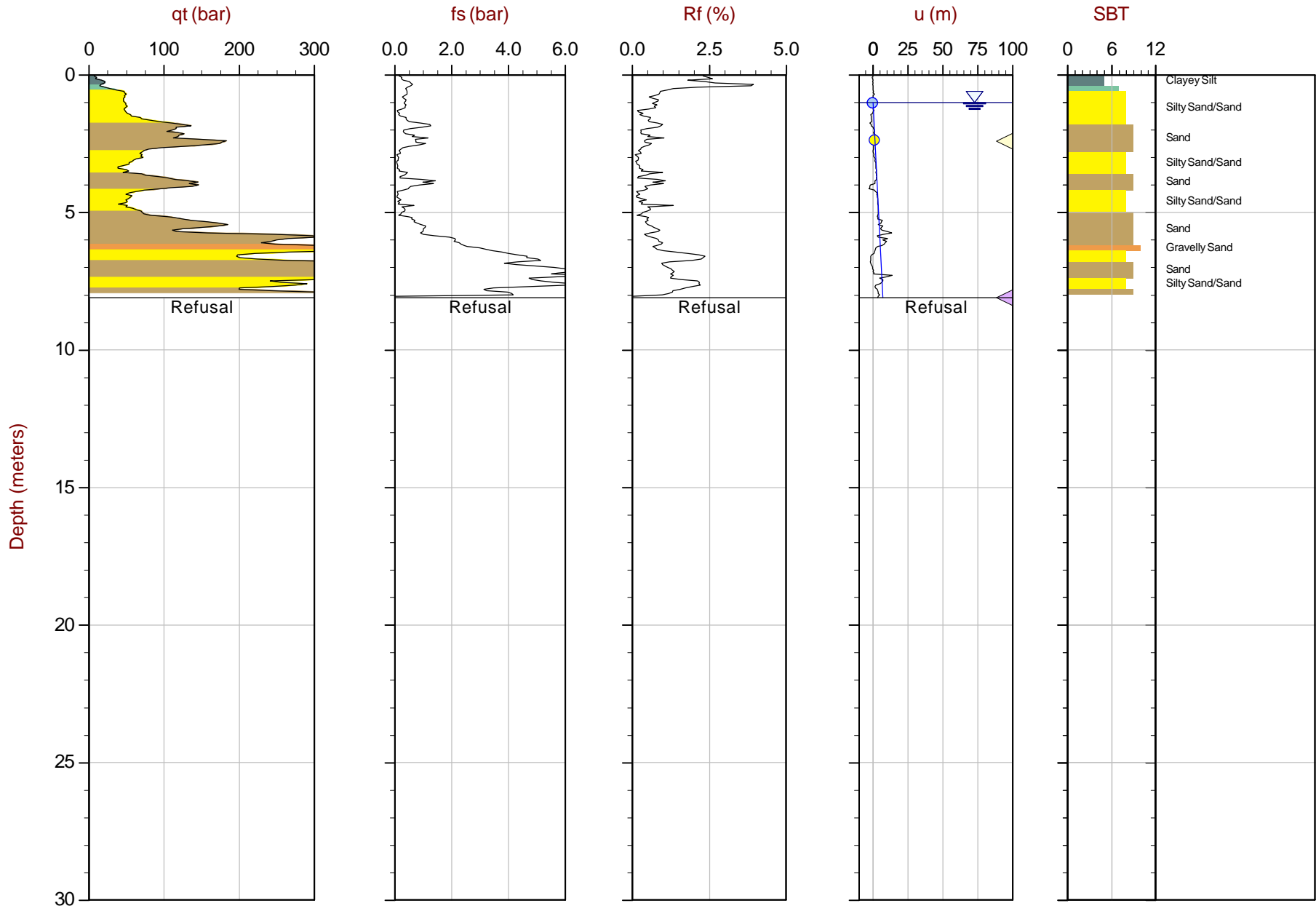
Max Depth: 23.450 m / 76.93 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200 m

File: 15-02035_CP02.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453642mE: 429246m

● Ueq — Hydrostatic Line ▲ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Max Depth: 8.100 m / 26.57 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200m

File: 15-02035_CP08.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453649m E: 429282m

● Ueq — Hydrostatic Line ▲ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Levelton

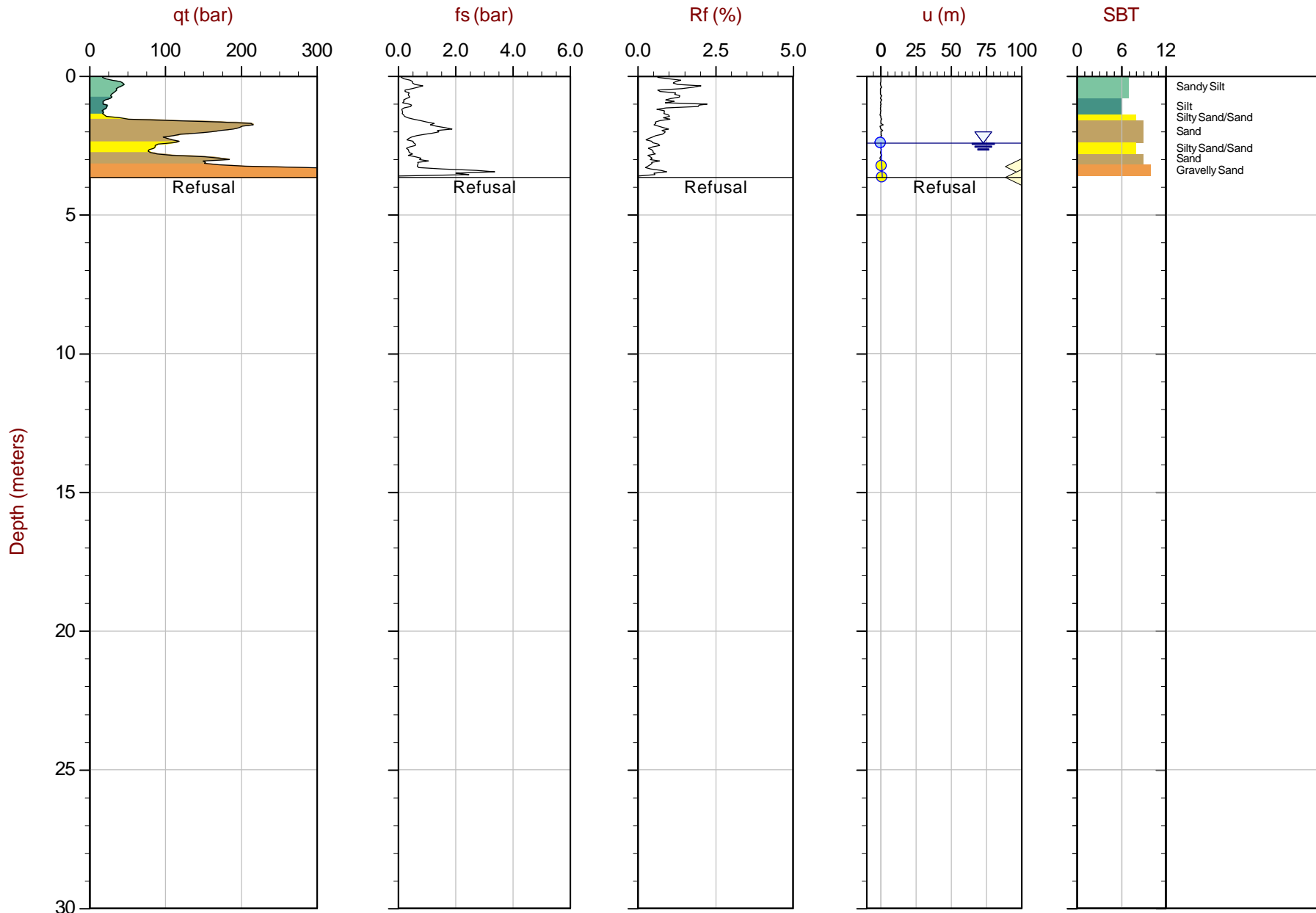
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Date: 04:28:15 16:21

Site: Greater Nanaimo Pollution Control Centre

Sounding: CPT15-12

Cone: 408:T1500F15U500



Max Depth: 3.650 m / 11.97 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200 m

File: 15-02035_CP12.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453628m E: 429290m

● Ueq — Hydrostatic Line ◀ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Levelton

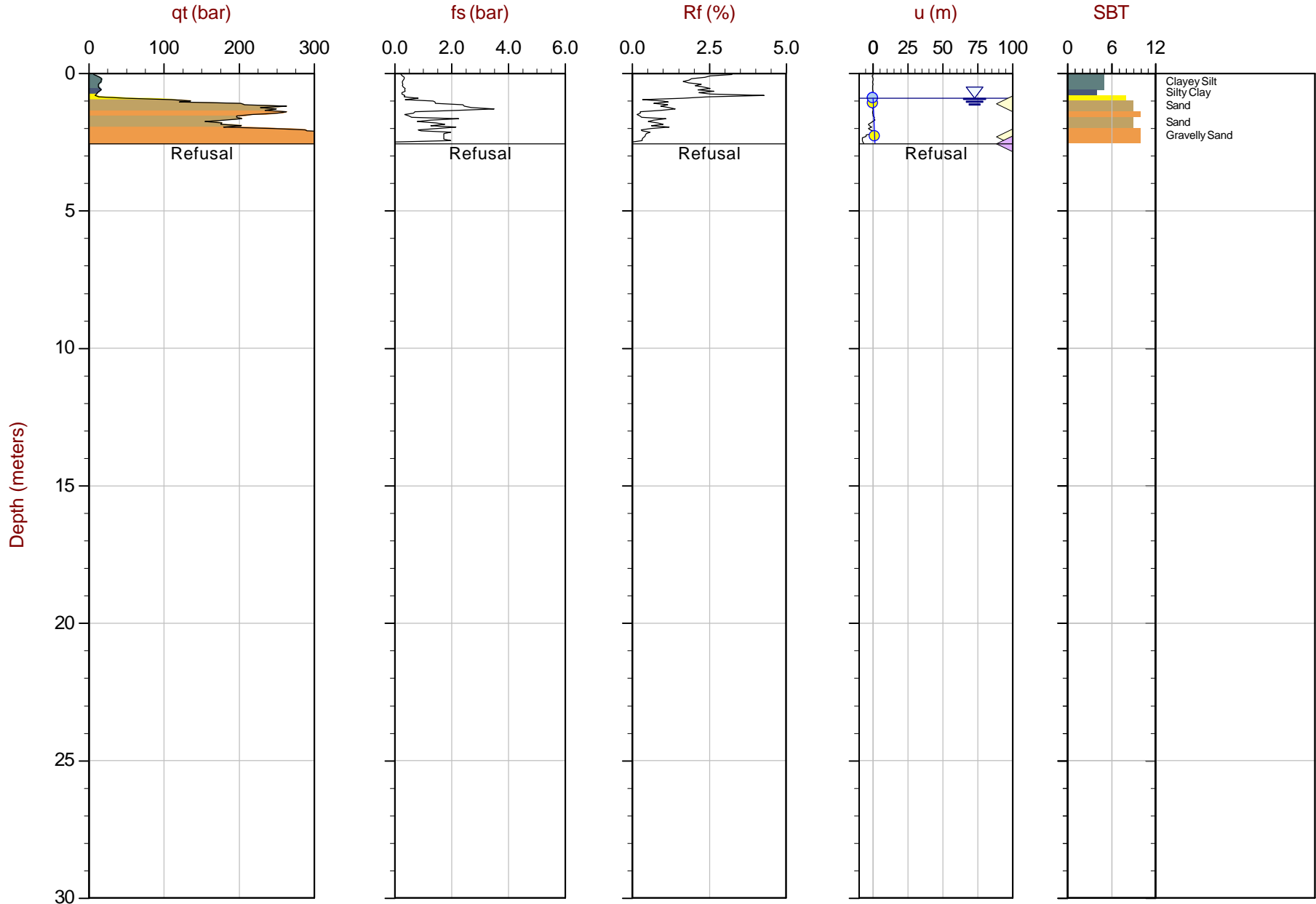
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Date: 04:27:15 16:20

Site: Greater Nanaimo Pollution Control Centre

Sounding: CPT15-20

Cone: 408:T1500F15U500



Max Depth: 2.550 m / 8.37 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200 m

File: 15-02035_CP20.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453624m E: 429340m

● Ueq — Hydrostatic Line ◀ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Levelton

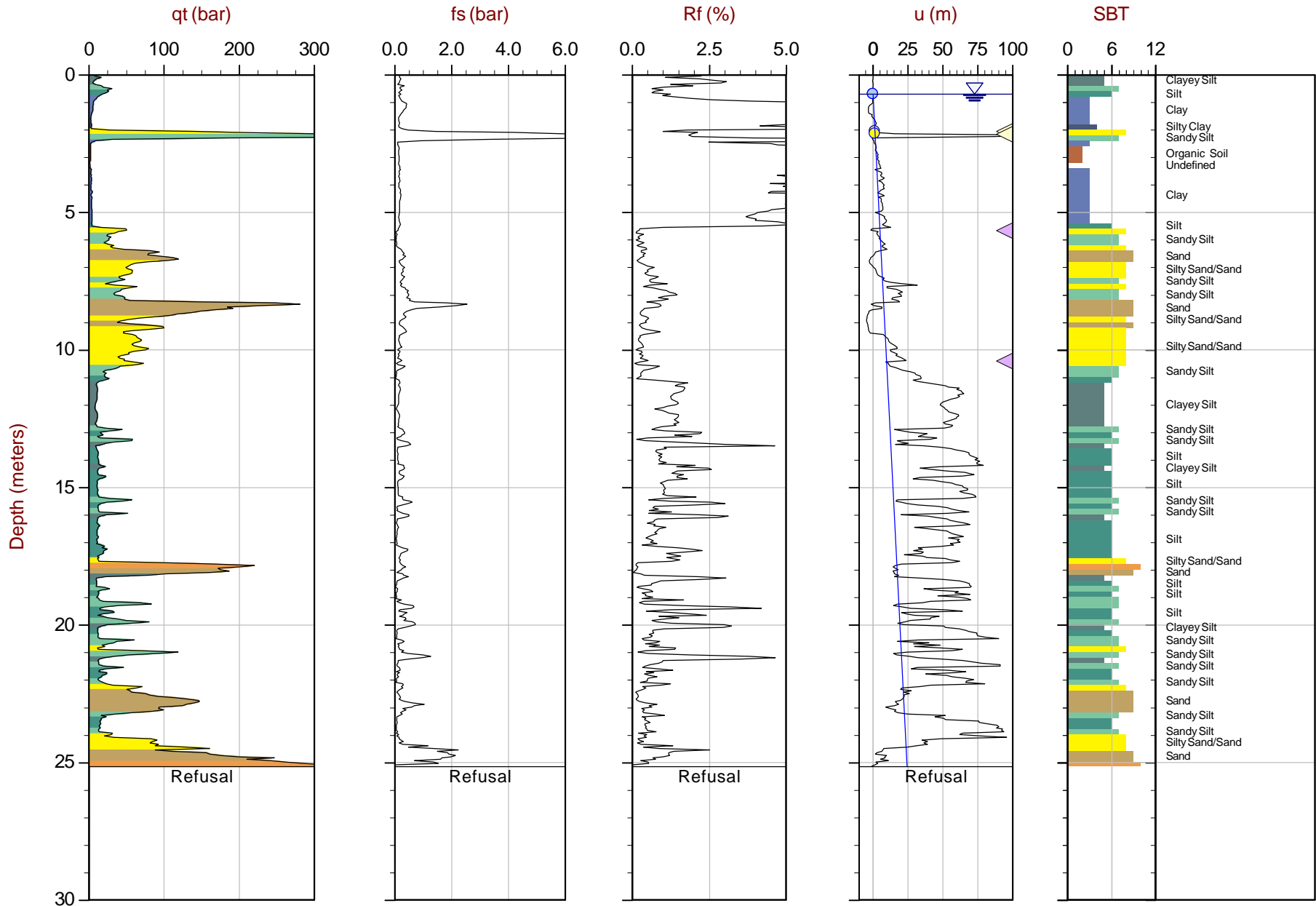
Job No: 15-02035

Date: 04:27:15 10:11

Site: Greater Nanaimo Pollution Control Centre

Sounding: SCPT15-04

Cone: 408:T1500F15U500



Max Depth: 25.150 m / 82.51 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200 m

File: 15-02035_SP04.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453646mE: 429221m

● Ueq — Hydrostatic Line ▲ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Levelton

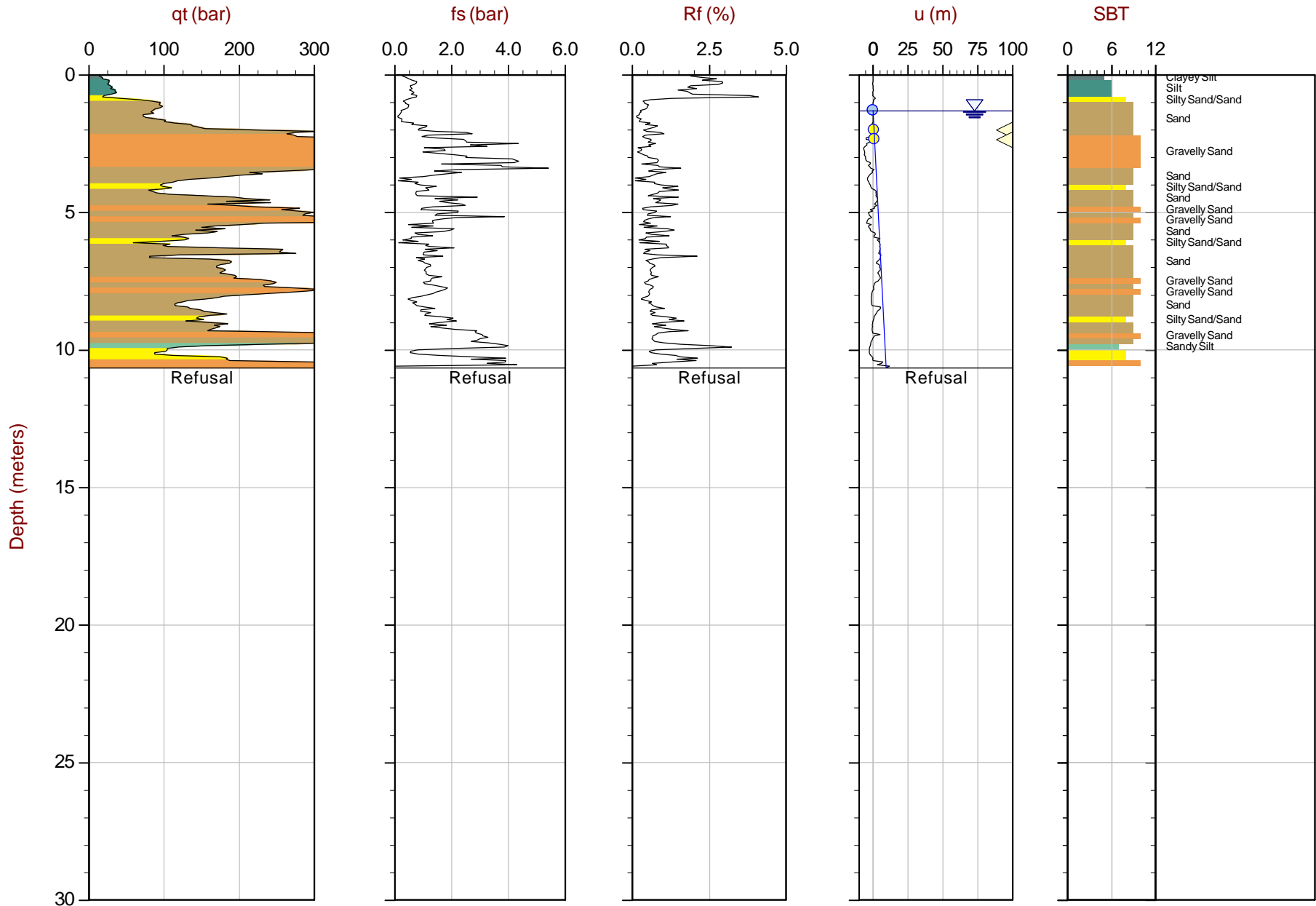
Job No: 15-02035

Date: 04:28:15 09:17

Site: Greater Nanaimo Pollution Control Centre

Sounding: SCPT15-17

Cone: 408:T1500F15U500



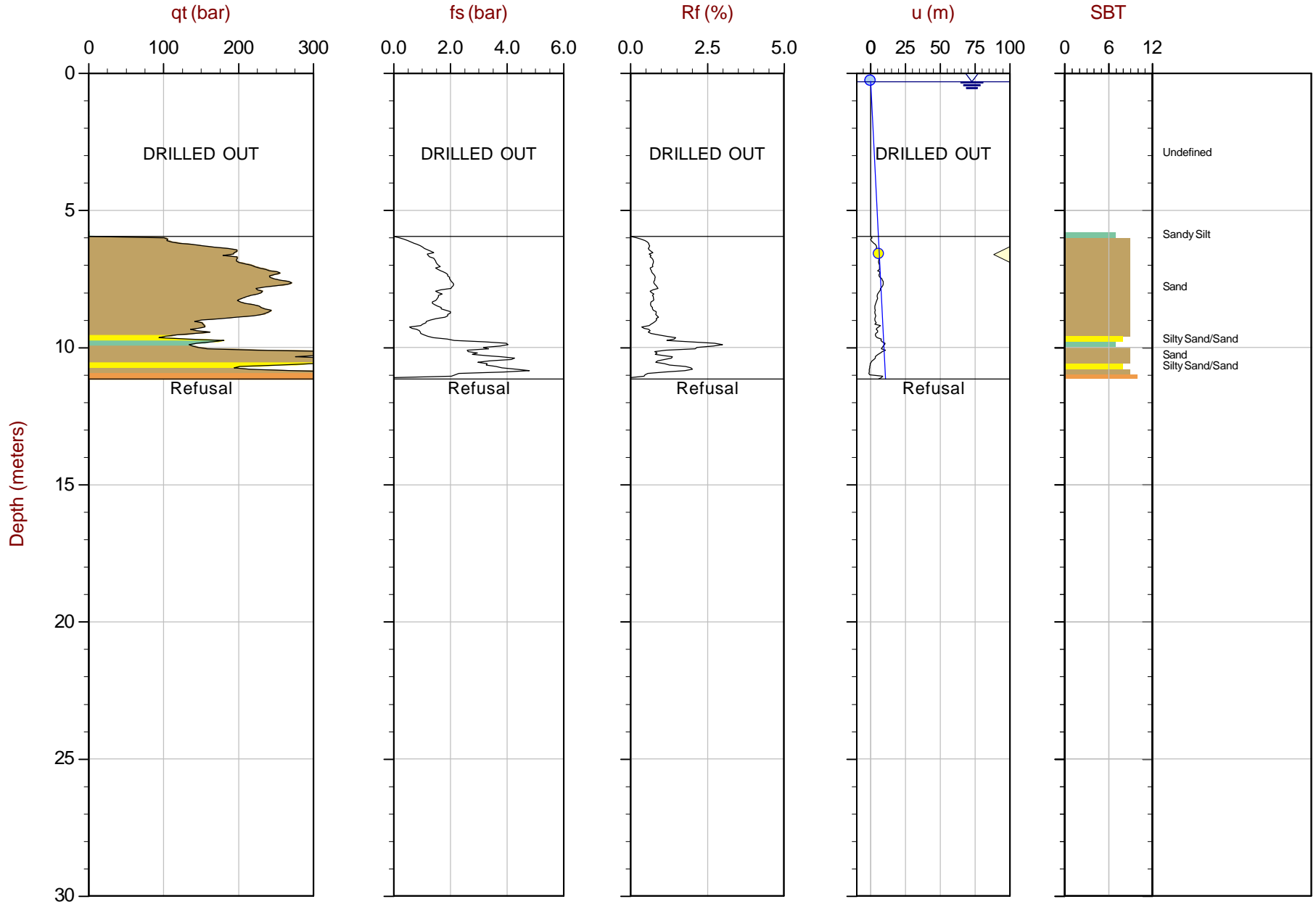
Max Depth: 10.650 m / 34.94 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200m

File: 15-02035_SP17.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453629m E: 429314m

● Ueq — Hydrostatic Line ▲ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Max Depth: 11.150 m / 36.58 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200m

File: 15-02035_SP25B.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453612m E: 429365m

● Ueq — Hydrostatic Line ◀ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Levelton

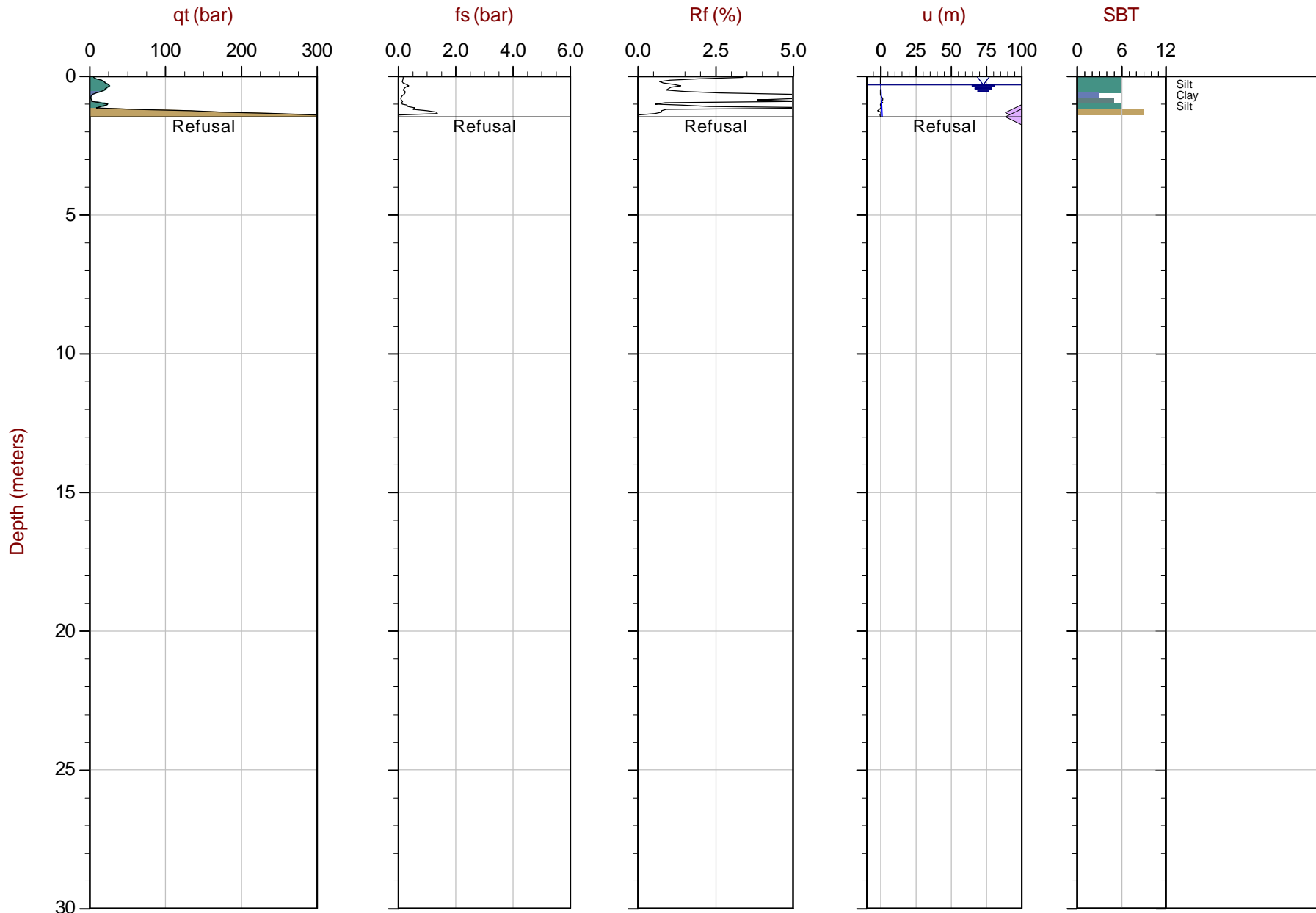
Job No: 15-02035

Date: 04:28:15 12:41

Site: Greater Nanaimo Pollution Control Centre

Sounding: SCPT15-25

Cone: 408:T1500F15U500



Max Depth: 1.450 m / 4.76 ft
 Depth Inc: 0.050 m / 0.164 ft
 Avg Int: 0.200 m

File: 15-02035_SP25.COR
 Unit Wt: SBT Chart Soil Zones

SBT: Lunne, Robertson and Powell, 1997
 Coords: UTM10N: 5453612m E: 429366m

● Ueq — Hydrostatic Line ◀ Dissipation, Ueq not achieved ◁ Dissipation, Ueq achieved

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.



Depth (m) (ft)	Description	C	N	Type	Water Level	Moisture Content %															
						10	20	30	40	50	60	70	80	90							
0 - 1.5	Compact, rusty brown, SAND AND GRAVEL (FILL) , damp.																				
1.5 - 3.1	Compact to dense, SAND AND GRAVEL , some silt, trace clay, damp. - turning grey, increased silt, clay and moisture with depth - saturated below 3.1m.																				
3.1 - 6.0	Loose, black, clayey, PEAT , fibrous, wet.																				
6.0 - 7.6	Silty, clayey, SAND , fine grained.																				
7.6 - 8.0																					
8.0 - 15.9																					
15.9 - 16.0	Bottom of hole at 15.9 metres due to effective refusal																				

C: Condition of Sample
 Good
 Disturbed
 No Recovery

Type: Type of Sampler
 SPT : 2 in. standard
 S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▽ Ground Water Level
- ⊗ Shear strength in kPa (Torvane or Penetrometer)
- ✕ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

Drill Method:
 Solid Stem Auger
 Date Drilled: 24/04/2015
 By: SJ

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Depth (m) (ft)	Description	C	N	Type	Water Level															
						10	20	30	40	50	60	70	80	90						
0	Loose, rusty brown, SAND AND GRAVEL (FILL) , well graded, damp.																			
5	Compact, brown, silty, SAND AND GRAVEL , moist.																			
2	- turning olive at 1.8m depth.																			
10																				
4	Compact, silty, SAND , medium to fine grained, moist.																			
15	Compact, silty, SAND , medium to fine grained, trace shells and clay, moist to wet.																			
6	- wetter with depth																			
20	- increased clay observed with depth.																			
25	Bottom of hole at 6.7 metres due to effective refusal																			
8	Sloughing observed at 2.7m																			
10																				
35																				
12																				
40																				
45																				
14																				
50																				
16																				
55																				
18																				
60																				

C: Condition of Sample
 Good
 Disturbed
 No Recovery

Type: Type of Sampler
 SPT : 2 in. standard
 S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

● Moisture Content %
 ▲ Plastic Limit
 ▼ Liquid Limit
 ▽ Ground Water Level
 ⊗ Shear strength in kPa (Torvane or Penetrometer)
 ⊗ Shear strength in kPa (Unconfined)
 ⊗ Shear strength in kPa (field vane)
 ⊗ Remolded strength in kPa
 ■ Percent Passing # 200 sieve

Drill Method:
 Solid Stem Auger
 Date Drilled: 23/04/2015
 By: SJ

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Project No: R715-0626-00

Depth		Description	C	N	Type	Water Level														
(m)	(ft)						10	20	30	40	50	60	70	80	90					
		Black, ORGANIC , wet.																		
5																				
2																				
10																				
4		Bottom of hole at 0.3 metres Seepage observed at 1.2m																		
15																				
6																				
20																				
8																				
25																				
30																				
10																				
35																				
12																				
40																				
14																				
45																				
50																				
16																				
55																				
18																				
60																				

- 100 Blows = 102mm Advancement
- Second DCPT done with same results

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C: Condition of Sample Good Disturbed No Recovery 	Type: Type of Sampler SPT : 2 in. standard S : Shelby FP : Fixed Piston G : Grab CORE	N: Number of Blows WH : Weight of Hammer WR : Weight of Rod Standard Penetration Test : ASTM D1586 Hammer Type: Trip Hammer DYNAMIC CONE PENETRATION TEST: Blow count no. of blows of a 140 lb (64 kg) hammer dropped 30in. (750mm) to produce 12in (300mm) of a 2in (50mm) diameter cone.	● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▲ Ground Water Level ⊗ Shear strength in kPa (Torvane or Penetrometer) ⊗ Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊗ Remolded strength in kPa ■ Percent Passing # 200 sieve	Drill Method: Solid Stem Auger / DCPT Date Drilled: <u>22/04/2015</u> By: <u>SJ</u>				
					<p align="center">THIS LOG IS FOR GEOTECHNICAL PURPOSES ONLY THIS LOG IS THE SOLE PROPERTY OF LEVELTON CONSULTANTS LTD AND CANNOT BE USED OR DUPLICATED IN ANY WAY WITHOUT EXPRESS WRITTEN PERMISSION.</p>			



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Project No: R715-0626-00

Depth (m) (ft)	Description	C	N	Type	Water Level	Soil Properties																	
						10	20	30	40	50	60	70	80	90									
0 2 4 6 8 10 12 14 16 18 60	0-1.5: Loose, black, sandy, clayey, SILT with organics, damp.			G																			
	1.5-2.5: Very soft, brown, sandy, SILT , trace to gravelly sizes to 75mm diameter, damp.																						
	2.5-4.0: Grey brown, SAND AND GRAVEL , well graded.																						
	4.0-4.5: Loose, grey brown, silty, SAND , medium to fine grained, wet to saturated.																						
	4.5-3.7: Loose, grey, silty, clayey, SAND , trace coarse grained sand, wet. Bottom of hole at 3.7 metres due to effective refusal																						

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C: Condition of Sample
 Good [Solid Black] **Type: Type of Sampler**
 Disturbed [Hatched] SPT : 2 in. standard
 No Recovery [White] S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

● Moisture Content %
 ▲ Plastic Limit
 ▼ Liquid Limit
 ▽ Ground Water Level
 ⊗ Shear strength in kPa (Torvane or Penetrometer)
 ✕ Shear strength in kPa (Unconfined)
 ⊗ Shear strength in kPa (field vane)
 ⊠ Remolded strength in kPa
 ■ Percent Passing # 200 sieve

Drill Method:
 Solid Stem Auger
 Date Drilled: 22/04/2015
 By: SJ

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BH15-08

Pg 1 of 1

Project No: R715-0626-00

Depth (m) (ft)	Description	C	N	Type	Water Level																
						10	20	30	40	50	60	70	80	90							
0	HOG FUEL (IMPORTED).																				
5	Soft, black, silty, CLAY , highly organic, wet.																				
2	- grey, SAND AND GRAVEL mixed with above.																				
10	Grey, silty, SAND AND GRAVEL , saturated.																				
4	Loose to compact, silty, SAND , medium to fine grained, wet to saturated. Compact to dense, silty, SAND , fine grained, moist.																				
15																					
6	Compact, grey, silty, SAND , medium to fine grained, wet.																				
20																					
8	Bottom of hole at 8.8 metres due to effective refusal Seepage observed at 1.4m Sloughing observed >at 4.3m																				
25																					
10																					
35																					
12																					
40																					
45																					
14																					
50																					
16																					
55																					
18																					
60																					

C: Condition of Sample

Good 
Disturbed 
No Recovery 

Type: Type of Sampler

SPT : 2 in. standard
S : Shelby
FP : Fixed Piston
G : Grab
CORE

N: Number of Blows

WH : Weight of Hammer
WR : Weight of Rod
Standard Penetration Test : ASTM D1586
Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▽ Ground Water Level
- ⊗ Shear strength in kPa (Torvane or Penetrometer)
- ✕ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

Drill Method:
Solid Stem Auger
Date Drilled: 23/04/2015
By: SJ

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Project No: R715-0626-00

Depth (m) (ft)	Description	C	N	Type	Water Level	Soil Parameters															
						10	20	30	40	50	60	70	80	90							
0 - 1	Silty, gravelly, SAND (FILL).																				
1 - 1.5	PEAT.																				
1.5 - 5	Grey, silty, SAND AND GRAVEL , wet to saturated.			G																	
5 - 10	Loose, grey, silty, SAND , trace clay, saturated.			G																	
10 - 15	Soft, grey, silty, CLAY and ?? sand lenses, saturated.			G																	
15 - 20	Grey, silty, clayey, gravelly, SAND (TILL-LIKE) , wet to saturated.			G																	
20 - 6.3	- moist at 6.1m. Bottom of hole at 6.3 metres due to effective refusal			G																	
6.3 - 60																					

C: Condition of Sample

- Good
- Disturbed
- No Recovery

Type: Type of Sampler

- SPT : 2 in. standard
- S : Shelby
- FP : Fixed Piston
- G : Grab
- CORE

N: Number of Blows

- WH : Weight of Hammer
- WR : Weight of Rod
- Standard Penetration Test : ASTM D1586
- Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▽ Ground Water Level
- ⊗ Shear strength in kPa (Torvane or Penetrometer)
- ⊗ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊗ Remolded strength in kPa
- Percent Passing # 200 sieve

Drill Method:
 Solid Stem Auger
 Date Drilled: 23/04/2015
 By: SJ

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Project No: R715-0626-00

Depth (m) (ft)	Description	C	N	Type	Water Level															
						10	20	30	40	50	60	70	80	90						
0	SAND AND GRAVEL AND TOPSOIL mixed with rootlets.																			
5	Dense, olive brown, silty, SAND AND GRAVEL, trace clay, damp to moist.			G																
10				G																
15																				
20	Compact, silty, SAND, medium to fine grained, wet.			G																
25																				
30	- shells below 7.6m.			G																
35																				
40	Bottom of hole at 9.3 metres due to effective refusal Seepage observed at 1.7m Sloughing observed >3.7m																			
45																				
50																				
55																				
60																				

C: Condition of Sample

- Good
- Disturbed
- No Recovery

Type: Type of Sampler

- SPT : 2 in. standard
- S : Shelby
- FP : Fixed Piston
- G : Grab
- CORE

N: Number of Blows

- WH : Weight of Hammer
- WR : Weight of Rod
- Standard Penetration Test : ASTM D1586
- Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▽ Ground Water Level
- ⊗ Shear strength in kPa (Torvane or Penetrometer)
- ✕ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

Drill Method:
Solid Stem Auger
Date Drilled: 23/04/2015
By: SJ

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Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level														
							10	20	30	40	50	60	70	80	90					
0	HOG FUEL (IMPORTED).																			
5	Compact, brown to grey, gravelly, SAND , gravel sizes to 75mm diameter, moist.																			
2	Mottled brown and rusty brown, SILT AND SAND , trace clay pebbles, moist.			20	SPT G															
	Bottom of hole at 2.1 metres due to effective refusal																			
10																				
4																				
15																				
6																				
20																				
8																				
25																				
10																				
35																				
12																				
40																				
14																				
45																				
16																				
50																				
18																				
55																				
60																				

- refusal at 1.5m moved east 1m and resumed drilling
● 50mm advancement (bouncing) @ 1.5m

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C: Condition of Sample Good Disturbed No Recovery	Type: Type of Sampler SPT : 2 in. standard S : Shelby FP : Fixed Piston G : Grab CORE	N: Number of Blows WH : Weight of Hammer WR : Weight of Rod Standard Penetration Test : ASTM D1586 Hammer Type: Trip Hammer	● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▽ Ground Water Level ⊗ Shear strength in kPa (Torvane or Penetrometer) ✕ Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊠ Remolded strength in kPa ■ Percent Passing # 200 sieve	Bentonite/Grout Plug Solid Pipe Cuttings Slotted Pipe Sand/Pea-Gravel
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Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level														
							10	20	30	40	50	60	70	80	90					
0	HOG FUEL (IMPORTED).																			
0	Grey, gravelly, SAND.																			
5	Grey, SAND , wet.																			
2	Bottom of hole at 1.7 metres due to effective refusal			36	SPT SPT															

C: Condition of Sample Good Disturbed No Recovery	Type: Type of Sampler SPT : 2 in. standard S : Shelby FP : Fixed Piston G : Grab CORE	N: Number of Blows WH : Weight of Hammer WR : Weight of Rod Standard Penetration Test : ASTM D1586 Hammer Type: Trip Hammer	● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▽ Ground Water Level ⊗ Shear strength in kPa (Torvane or Penetrometer) ✕ Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊠ Remolded strength in kPa ■ Percent Passing # 200 sieve	Bentonite/Grout Plug Solid Pipe Cuttings Slotted Pipe Sand/Pea-Gravel
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Depth (m) (ft)	Description	C	N	Type	Water Level																
						10	20	30	40	50	60	70	80	90							
0	Brown, clayey, SAND AND GRAVEL (FILL) , organics.																				
5	Loose, olive brown, silty, clayey, SAND AND GRAVEL , trace rootlets, wet.																				
2	Loose, grey, silty, SAND AND GRAVEL , wet, saturated.																				
10	Loose, grey, silty, SAND AND GRAVEL , wet, saturated.																				
4	Loose, grey, silty, SAND , saturated.																				
15																					
6																					
20																					
8	Grey, sandy, silty, GRAVEL (TILL-LIKE) , moist.																				
25																					
30	Bottom of hole at 8.5 metres due to effective refusal Seepage observed at 1.4m Sloughing observed >at 1.4m																				
10																					
35																					
12																					
40																					
14																					
45																					
50																					
16																					
55																					
18																					
60																					

<p>C: Condition of Sample</p> <p>Good </p> <p>Disturbed </p> <p>No Recovery </p>	<p>Type: Type of Sampler</p> <p>SPT : 2 in. standard</p> <p>S : Shelby</p> <p>FP : Fixed Piston</p> <p>G : Grab</p> <p>CORE</p>	<p>N: Number of Blows</p> <p>WH : Weight of Hammer</p> <p>WR : Weight of Rod</p> <p>Standard Penetration Test : ASTM D1586</p> <p>Hammer Type: Trip Hammer</p>	<ul style="list-style-type: none"> ● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▽ Ground Water Level ⊗ Shear strength in kPa (Torvane or Penetrometer) ✕ Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊠ Remolded strength in kPa ■ Percent Passing # 200 sieve 	<p>Drill Method: Solid Stem Auger</p> <p>Date Drilled: <u>22/04/2015</u></p> <p>By: <u>SJ</u></p>
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Project No: R715-0626-00

Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level	Moisture Content (%)													
							10	20	30	40	50	60	70	80	90					
0	Very loose, silty, ORGANIC SAND , some gravel sizes, dry to damp. Loose, silty, SAND AND GRAVEL , damp. - increased gravel sizes and saturated at 1.5m.	[Pattern]	[Pattern]		G															
5																				
2		[Pattern]	[Pattern]		G															
10																				
4		[Pattern]	[Pattern]		G															
15																				
6	Brown, silty, SAND , medium to fine grained, wet. - odd gravel size in sand at 7.9m.	[Pattern]	[Pattern]		G															
20																				
8		[Pattern]	[Pattern]		G															
25																				
10		[Pattern]	[Pattern]		G															
30																				
12		[Pattern]	[Pattern]		G															
35																				
14		[Pattern]	[Pattern]		G															
45																				
16		[Pattern]	[Pattern]		G															
55																				
18		[Pattern]	[Pattern]		G															
60																				

C: Condition of Sample
 Good [Pattern]
 Disturbed [Pattern]
 No Recovery [Pattern]

Type: Type of Sampler
 SPT : 2 in. standard
 S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

● Moisture Content %
 ▲ Plastic Limit
 ▼ Liquid Limit
 ▽ Ground Water Level
 ⊗ Shear strength in kPa (Torvane or Penetrometer)
 × Shear strength in kPa (Unconfined)
 ⊗ Shear strength in kPa (field vane)
 ⊠ Remolded strength in kPa
 ■ Percent Passing # 200 sieve

Bentonite/Grout Plug [Pattern]
 Solid Pipe [Pattern]
 Cuttings [Pattern]
 Slotted Pipe [Pattern]
 Sand/Pea-Gravel [Pattern]

Drill Method:
 Solid Stem Auger
 Date Drilled: 22/04/2015
 By: SJ

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Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level										
							10	20	30	40	50	60	70	80	90	
65	Brown, silty, SAND , medium to fine grained, wet. (continued)	[Cross-hatched pattern]														
70																
75	Dark grey, silty, CLAY , wet.	[Diagonal hatching]														
80																
85	- very hard at 25.6m.															
85	Bottom of hole at 25.9 metres due to effective refusal Seepage observed at 1.7m Sloughing observed >at 1.7m	[Cross-hatched pattern]														
90																
95																
100																
105																
110																
115																
120																

C: Condition of Sample

- Good
- Disturbed
- No Recovery

Type: Type of Sampler

- SPT : 2 in. standard
- S : Shelby
- FP : Fixed Piston
- G : Grab
- CORE

N: Number of Blows

- WH : Weight of Hammer
- WR : Weight of Rod
- Standard Penetration Test : ASTM D1586
- Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▽ Ground Water Level
- ∞ Shear strength in kPa (Torvane or Penetrometer)
- ✕ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

- Bentonite/Grout Plug
- Solid Pipe
- Cuttings
- Slotted Pipe
- Sand/Pea-Gravel

Drill Method:
Solid Stem Auger
Date Drilled: 22/04/2015
By: SJ

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Depth (m) (ft)	Description	C	N	Type	Water Level	10	20	30	40	50	60	70	80	90	
5 2 10 4 15 6 20 8 25 10 35 12 40 14 45 16 50 18 55 60	Loose, dark brown, silty, SAND AND GRAVEL , trace clay, moist.			G			●								
	Compact, olive, silty, SAND AND GRAVEL , trace clay, moist. - saturated below 1.5m depth.			G		●									
	Compact, grey, SAND AND GRAVEL , some silt, trace clay, saturated. - decreased drilling resistance observed below 3.4m - trace grey sand at 7.0m.														
	Compact, brown, silty, SAND , fine grained, moist to wet.				G			●							

1 LOG PER PAGE R715-0626-00.GPJ LEVELTON.GDT 1/5/15

C: Condition of Sample
 Good
 Disturbed
 No Recovery

Type: Type of Sampler
 SPT : 2 in. standard
 S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

● Moisture Content %
 ▲ Plastic Limit
 ▼ Liquid Limit
 ▽ Ground Water Level
 ⊗ Shear strength in kPa (Torvane or Penetrometer)
 ✕ Shear strength in kPa (Unconfined)
 ⊗ Shear strength in kPa (field vane)
 ⊠ Remolded strength in kPa
 ■ Percent Passing # 200 sieve

Drill Method:
 Solid Stem Auger
 Date Drilled: 24/04/2015
 By: SJ

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

BH15-19

Pg 2 of 2

Project No: R715-0626-00

Depth (m) (ft)	Description	C	N	Type	Water Level	10	20	30	40	50	60	70	80	90	
20 65	Compact, brown, silty, SAND , fine grained, moist to wet. (continued)														
70															
22 75															
24 80															
26 85															
28 90		- increased drilling resistance at 27.8m.													
30 95															
32 105		Bottom of hole at 32.0 metres due to effective refusal Seepage observed at 1.3m Sloughing observed >at 1.5m													
34 110															
36 115															
120															

1 LOG PER PAGE R715-0626-00.GPJ LEVELTON.GDT 1/5/15

C: Condition of Sample
 Good 
 Disturbed 
 No Recovery 

Type: Type of Sampler
 SPT : 2 in. standard
 S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▼ Ground Water Level
- ∞ Shear strength in kPa (Torvane or Penetrometer)
- ✘ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

Drill Method:
 Solid Stem Auger
 Date Drilled: 24/04/2015
 By: SJ

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Geotechnical Assessment

BH15-21

Pg 1 of 1

Project No: R715-0626-00

Depth (m) (ft)	Description	C	N	Type	Water Level															
						10	20	30	40	50	60	70	80	90						
0	Dark brown, silty, SAND AND GRAVEL (FILL) .																			
0	Dark brown, ORGANIC SILT AND SAND , rootlets.																			
0	Brown, silty, gravelly, CLAY , trace rootlets, wet.																			
2	Compact to dense, olive brown, silty, SAND AND GRAVEL , trace clay, damp. - wetter with depth.			G																
10	Compact, grey, SAND AND GRAVEL , some silt, trace clay, saturated.			G																
15	Grey, SAND , medium to fine grained, some silt, wet. - increased silt with depth - shells below 6.4m.			G																
25	Brown, silty, SAND , medium to fine grained, wet. - some rusty stains observed below 9.8m - TILL-LIKE at 11.3m - crunchy at 11.9m depth.			G																
30	Bottom of hole at 12.2 metres due to effective refusal Seepage observed at 1.7m Sloughing observed >at 2.9m																			

C: Condition of Sample

Good
Disturbed
No Recovery

Type: Type of Sampler

SPT : 2 in. standard
S : Shelby
FP : Fixed Piston
G : Grab
CORE

N: Number of Blows

WH : Weight of Hammer
WR : Weight of Rod
Standard Penetration Test : ASTM D1586
Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▽ Ground Water Level
- ⊗ Shear strength in kPa (Torvane or Penetrometer)
- ✕ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

Drill Method:
Solid Stem Auger
Date Drilled: 23/04/2015
By: SJ

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Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level	SPT													
							10	20	30	40	50	60	70	80	90					
0	HOG FUEL.																			
0.5	Very boney, brown, SAND AND GRAVEL , damp.																			
5																				
2	Firm, rusty brown, sandy, SILT , trace gravel, damp.		■	12.0	SPT															
10																				
4	Grey, SAND , saturated. - two gravel pieces - increased drilling resistance observed at 4.0m.		■	13.7	SPT															
15																				
6	Grey, sandy, SILT , wet. - very hard drilling and grinding observed at 5.5m.		■	12.7	SPT SPT															
20	Bottom of hole at 5.8 metres due to effective refusal Seepage observed at 3.8m Sloughing observed >at 4.3m																			
25																				
8																				
30																				
10																				
35																				
12																				
40																				
45																				
14																				
50																				
16																				
55																				
18																				
60																				

C: Condition of Sample Good Disturbed No Recovery	Type: Type of Sampler SPT : 2 in. standard S : Shelby FP : Fixed Piston G : Grab CORE	N: Number of Blows WH : Weight of Hammer WR : Weight of Rod Standard Penetration Test : ASTM D1586 Hammer Type: Trip Hammer DYNAMIC CONE PENETRATION TEST: Blow count no. of blows of a 140 lb (64 kg) hammer dropped 30in. (750mm) to produce 12in (300mm) of a 2in (50mm) diameter cone.	● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▽ Ground Water Level ∞ Shear strength in kPa (Torvane or Penetrometer) X Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊠ Remolded strength in kPa ■ Percent Passing # 200 sieve	Bentonite/Grout Plug Solid Pipe Cuttings Slotted Pipe Sand/Pea-Gravel

1 LOG PER PAGE R715-0626-00.GPJ LEVELTON.GDT 1/5/15



Depth (m) (ft)	Description	Piezo 1	C	N	Type	Water Level	SPT Blows													
							10	20	30	40	50	60	70	80	90					
5	Brown, clayey, sandy, gravelly, SILT (ALMOST TILL-LIKE) , moist to wet.																			
2				13	SPT															
10	Grey, SAND AND GRAVEL , some silt, saturated.																			
4				17	SPT															
15	Gravelly, SAND , coarse to fine grained, trace silt, wet.																			
6				17	SPT															
20	Compact to dense, grey, SAND , medium to fine grained, trace silt, wet.																			
8				15	SPT															
25	Dense, grey, SAND , mostly fine grained, trace silt, wet.																			
8				27	SPT															
30	Compact, SAND AND SILT , fine grained, trace clay, wet.																			
10				21	SPT															
35																				
12				21	SPT															
40	Loose to compact, brown, SAND AND SILT , fine grained, wet. - grey in tip of auger - increased silt content with depth.																			
14				20	SPT															
45	Very loose, grey, silty, SAND , fine grained, wet. - grey, silty, CLAY in tip of auger.																			
14				5	SPT															
50	Soft, grey, silty, CLAY , trace fine grained sand, wet.																			
16				9	SPT															
55																				
18																				
60	- interbedded with grey, silty, CLAY AND coarse grained SAND , wet - drilling resistance observed at 17.9m - silty CLAY with sand lense below 17.9m.																			
					SPT															
					SPT															

C: Condition of Sample Good Disturbed No Recovery	Type: Type of Sampler SPT : 2 in. standard S : Shelby FP : Fixed Piston G : Grab CORE	N: Number of Blows WH : Weight of Hammer WR : Weight of Rod Standard Penetration Test : ASTM D1586 Hammer Type: Trip Hammer DYNAMIC CONE PENETRATION TEST: Blow count no. of blows of a 140 lb (64 kg) hammer dropped 30in. (750mm) to produce 12in (300mm) of a 2in (50mm) diameter cone.	● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▽ Ground Water Level ⊗ Shear strength in kPa (Torvane or Penetrometer) ⊗ Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊗ Remolded strength in kPa ■ Percent Passing # 200 sieve	Bentonite/Grout Plug Solid Pipe Cuttings Slotted Pipe Sand/Pea-Gravel

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Depth (m) (ft)	Description	Piezo 1	C	N	Type	Water Level	10 20 30 40 50 60 70 80 90
65	Loose, grey, silty, SAND , some coarse grained, wet.				SPT		●
70	- silty and medium grained at 21.5m.			65	SPT		●
22	Bottom of hole at 21.6 metres due to effective refusal Seepage observed at 2.3m Sloughing observed >at 2.3m						

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<p>C: Condition of Sample</p> <p>Good </p> <p>Disturbed </p> <p>No Recovery </p>	<p>Type: Type of Sampler</p> <p>SPT : 2 in. standard</p> <p>S : Shelby</p> <p>FP : Fixed Piston</p> <p>G : Grab</p> <p>CORE</p>	<p>N: Number of Blows</p> <p>WH : Weight of Hammer</p> <p>WR : Weight of Rod</p> <p>Standard Penetration Test : ASTM D1586</p> <p>Hammer Type: Trip Hammer</p> <p>DYNAMIC CONE PENETRATION TEST: </p> <p>Blow count no. of blows of a 140 lb (64 kg) hammer dropped 30in. (750mm) to produce 12in (300mm) of a 2in (50mm) diameter cone.</p>	<p>● Moisture Content %</p> <p>▲ Plastic Limit</p> <p>▼ Liquid Limit</p> <p>▼ Ground Water Level</p> <p>∞ Shear strength in kPa (Torvane or Penetrometer)</p> <p>✕ Shear strength in kPa (Unconfined)</p> <p>⊗ Shear strength in kPa (field vane)</p> <p>⊠ Remolded strength in kPa</p> <p>■ Percent Passing # 200 sieve</p>	<p>Bentonite/Grout Plug </p> <p>Solid Pipe </p> <p>Cuttings </p> <p>Slotted Pipe </p> <p>Sand/Pea-Gravel </p> <p>Drill Method: Hollow Stem Auger / DCPT</p> <p>Date Drilled: 20/04/2015</p> <p>By: SJ</p>
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Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level	Moisture Content %														
							10	20	30	40	50	60	70	80	90						
0 - 0.5	Brown, silty, clayey, TOPSOIL , organic.																				
0.5 - 1.8	Compact, brown to olive, silty, clayey, SAND AND GRAVEL , trace rootlets, wet to saturated.				G																
1.8 - 3.8	Dense to very dense, grey, SAND AND GRAVEL , some silt, trace clay, saturated. - very hard drilling below 1.8m																				
3.8 - 4.0	- decreased drilling resistance observed at 3.8m.																				
4.0 - 25	Compact, silty, SAND , medium to fine grained, trace clay, saturated.																				
25 - 35	Brown, SAND .																				
35 - 60	Compact, brown, SAND , medium to fine grained, some silt, wet.				G																

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C: Condition of Sample
 Good
 Disturbed
 No Recovery

Type: Type of Sampler
 SPT : 2 in. standard
 S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▽ Ground Water Level
- ⊗ Shear strength in kPa (Torvane or Penetrometer)
- ✕ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

Bentonite/Grout Plug
 Solid Pipe
 Cuttings
 Slotted Pipe
 Sand/Pea-Gravel

Drill Method:
 Solid Stem Auger
 Date Drilled: 24/04/2015
 By: SJ

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Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level														
							10	20	30	40	50	60	70	80	90					
65	Compact, brown, SAND , medium to fine grained, some silt, wet. (continued)																			
70																				
75																				
80																				
85																				
90																				
95																				
100																				
105																				
110																				
115	Bottom of hole at 28.7 metres due to effective refusal Seepage observed at 0.9m Sloughing observed at 1.1m																			
120																				

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C: Condition of Sample
 Good
 Disturbed
 No Recovery

Type: Type of Sampler
 SPT : 2 in. standard
 S : Shelby
 FP : Fixed Piston
 G : Grab
 CORE

N: Number of Blows
 WH : Weight of Hammer
 WR : Weight of Rod
 Standard Penetration Test : ASTM D1586
 Hammer Type: Trip Hammer

- Moisture Content %
- ▲ Plastic Limit
- ▼ Liquid Limit
- ▼ Ground Water Level
- ∞ Shear strength in kPa (Torvane or Penetrometer)
- ✕ Shear strength in kPa (Unconfined)
- ⊗ Shear strength in kPa (field vane)
- ⊠ Remolded strength in kPa
- Percent Passing # 200 sieve

Bentonite/Grout Plug

Solid Pipe

Cuttings

Slotted Pipe

Sand/Pea-Gravel

Drill Method:
 Solid Stem Auger
 Date Drilled: 24/04/2015
 By: SJ

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Depth (m) (ft)	Description	Closure 1	C	N	Type	Water Level	SPT Chart													
							10	20	30	40	50	60	70	80	90					
5	Brown, SAND AND GRAVEL , cuttings, dry to damp.				G		●													
2	Brown, SAND AND GRAVEL , dry to damp.			34	SPT		●													
10	- grey, saturated at 3.1m.			8	SPT		●													
4				8	SPT			●												
15	Grey, SAND , clean, coarse to fine grained, saturated.			8	SPT			●												
6	- rock observed at 6.1m.			9	SPT			●												
20				9	SPT			●												
25	Grey, SAND , medium to fine grained, trace silt, gravel sizes, saturated.			26	SPT			●												
8				26	SPT			●												
30	- brown and rusty brown at 9.1m - increased silt content with depth.			26	SPT			●												
10				26	SPT			●												
35	Dense, grey, sandy, SILT (TILL-LIKE) , gravel sizes, trace clay, moist.			57	SPT			●												
12	Bottom of hole at 11.3 metres due to effective refusal Seepage observed at 6.1m Sloughing observed at 2.3m																			
40																				
14																				
45																				
50																				
16																				
55																				
18																				
60																				

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C: Condition of Sample Good Disturbed No Recovery	Type: Type of Sampler SPT : 2 in. standard S : Shelby FP : Fixed Piston G : Grab CORE	N: Number of Blows WH : Weight of Hammer WR : Weight of Rod Standard Penetration Test : ASTM D1586 Hammer Type: Trip Hammer	● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▽ Ground Water Level ⊗ Shear strength in kPa (Torvane or Penetrometer) ✕ Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊠ Remolded strength in kPa ■ Percent Passing # 200 sieve	Bentonite/Grout Plug Solid Pipe Cuttings Slotted Pipe Sand/Pea-Gravel
THIS LOG IS FOR GEOTECHNICAL PURPOSES ONLY <small>THIS LOG IS THE SOLE PROPERTY OF LEVELTON CONSULTANTS LTD AND CANNOT BE USED OR DUPLICATED IN ANY WAY WITHOUT EXPRESS WRITTEN PERMISSION.</small>			Drill Method: Hollow Stem Auger Date Drilled: 20/04/2015 By: SJ	



Depth (m) (ft)	Description	C	N	Type	Water Level	Moisture Content %														
						10	20	30	40	50	60	70	80	90						
0	HOG FUEL (IMPORTED).																			
5	Black, silty, CLAY , highly organic, wet.																			MC = 179.2%
2	Compact, grey, SAND AND GRAVEL , some silt, saturated.																			
10	Compact, silty, SAND , medium to fine grained, wet.																			
4																				
15																				
6	Compact, silty, SAND , medium to fine grained, wet.																			
20	Compact, brown, silty, SAND , fine grained, damp.																			
25																				
8																				
30	Grey, silty, SAND , fine grained, wet.																			
10	Firm, grey, silty, CLAY , sand lenses, wet.																			
35	Compact, grey, silty, clayey, SAND , wet.																			
12																				
40																				
14	Firm, grey, silty, CLAY , sand lenses, wet.																			
45	Bottom of hole at 15.7 metres due to effective refusal Seepage observed at 0.9m																			
50																				
16																				

<p>C: Condition of Sample</p> <p>Good </p> <p>Disturbed </p> <p>No Recovery </p>	<p>Type: Type of Sampler</p> <p>SPT : 2 in. standard</p> <p>S : Shelby</p> <p>FP : Fixed Piston</p> <p>G : Grab</p> <p>CORE</p>	<p>N: Number of Blows</p> <p>WH : Weight of Hammer</p> <p>WR : Weight of Rod</p> <p>Standard Penetration Test : ASTM D1586</p> <p>Hammer Type: Trip Hammer</p>	<ul style="list-style-type: none"> ● Moisture Content % ▲ Plastic Limit ▼ Liquid Limit ▽ Ground Water Level ⊗ Shear strength in kPa (Torvane or Penetrometer) ✕ Shear strength in kPa (Unconfined) ⊗ Shear strength in kPa (field vane) ⊠ Remolded strength in kPa ■ Percent Passing # 200 sieve 	<p>Drill Method: Solid Stem Auger</p> <p>Date Drilled: 23/04/2015</p> <p>By: SJ</p>
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AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment
 Sample Location BH15-05, 25' to 27' (7.6 m to 8.2 m)
Sampled from borehole shelby tube

File No.: R715-0626-00
 Report No.: 1

Date: 06-May-15

SAMPLING INFORMATION:

Material: Sandy Silt
Specification: _____

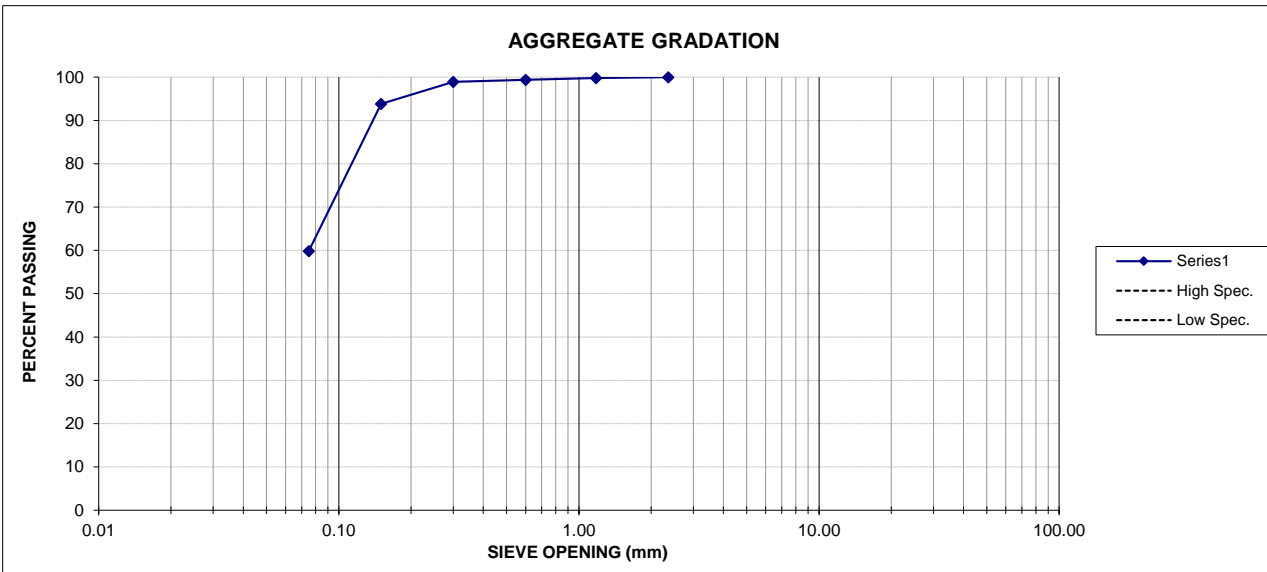
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis	
Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	100.0
2.36	100.0
1.18	99.8
0.600	99.3
0.300	98.9
0.150	93.8
0.075	59.8

Date Sampled 01-May-15
Date Tested 06-May-15
Sample No: _____
Fracture by mass _____
Supplier: _____
Sampled by: SJ
Tested by: AM

40.1

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

LEVELTON CONSULTANTS LTD.

per: _____



760 Enterprise Crescent
 Victoria, BC
 Canada V8Z 6R4
 Tel.: 250-475-1000
 Fax.: 250-475-2211
 E-mail: victoria@levelton.com

AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-2B at 7.5' (2.3m)
Grab sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 2

Date: 08-May-15

SAMPLING INFORMATION:

Material: Light grey sandy GRAVEL, trace fines
Specification: N/A

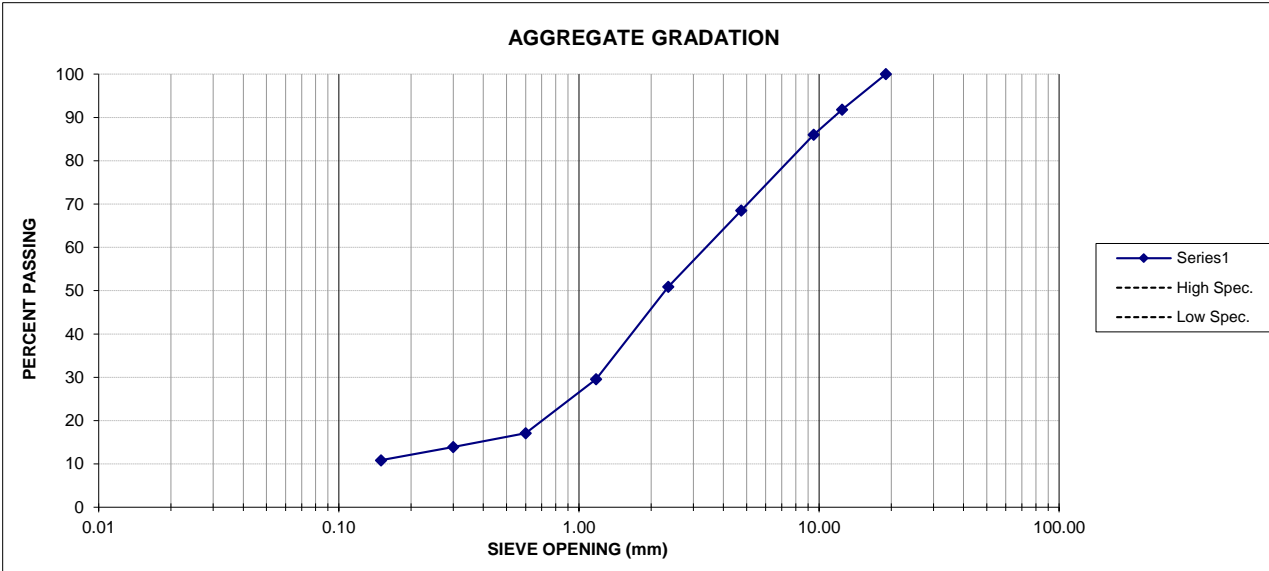
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	91.8
9.5	86.0
4.75	68.5
2.36	50.9
1.18	29.6
0.600	17.1
0.300	13.9
0.150	10.9
0.075	7.7

Date Sampled 23-Apr-15
Date Tested 08-May-15
Sample No: 4064A
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

LEVELTON CONSULTANTS LTD.

per: _____



760 Enterprise Crescent
 Victoria, BC
 Canada V8Z 6R4
 Tel.: 250-475-1000
 Fax.: 250-475-2211
 E-mail: victoria@levelton.com

AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-2B at 19.0' (5.8m)
Grab sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 3

Date: 08-May-15

SAMPLING INFORMATION:

Material: Light grey SAND AND CLAY/SILT, trace gravel
Specification: N/A

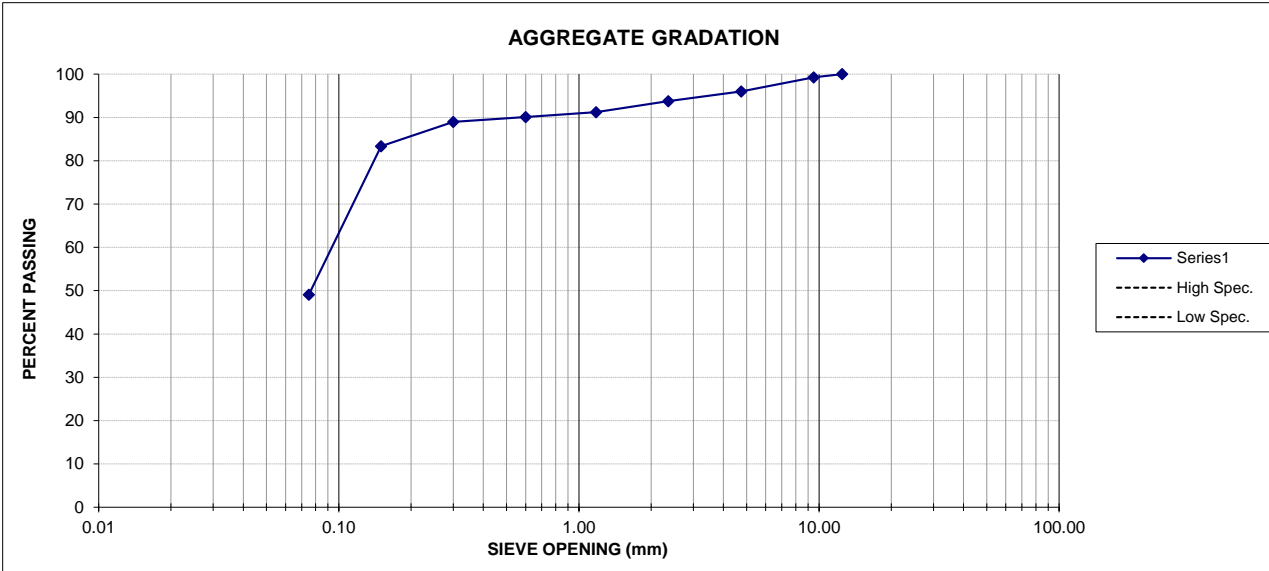
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	99.3
4.75	96.0
2.36	93.7
1.18	91.2
0.600	90.1
0.300	89.0
0.150	83.3
0.075	49.1

Date Sampled 23-Apr-15
Date Tested 08-May-15
Sample No: 4064B
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

LEVELTON CONSULTANTS LTD.

per: _____



AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-24 at 37.0' (11.3m)
SPT tip sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 10

Date: 08-May-15

SAMPLING INFORMATION:

Material: Light grey CLAY/SILT AND SAND
Specification: N/A

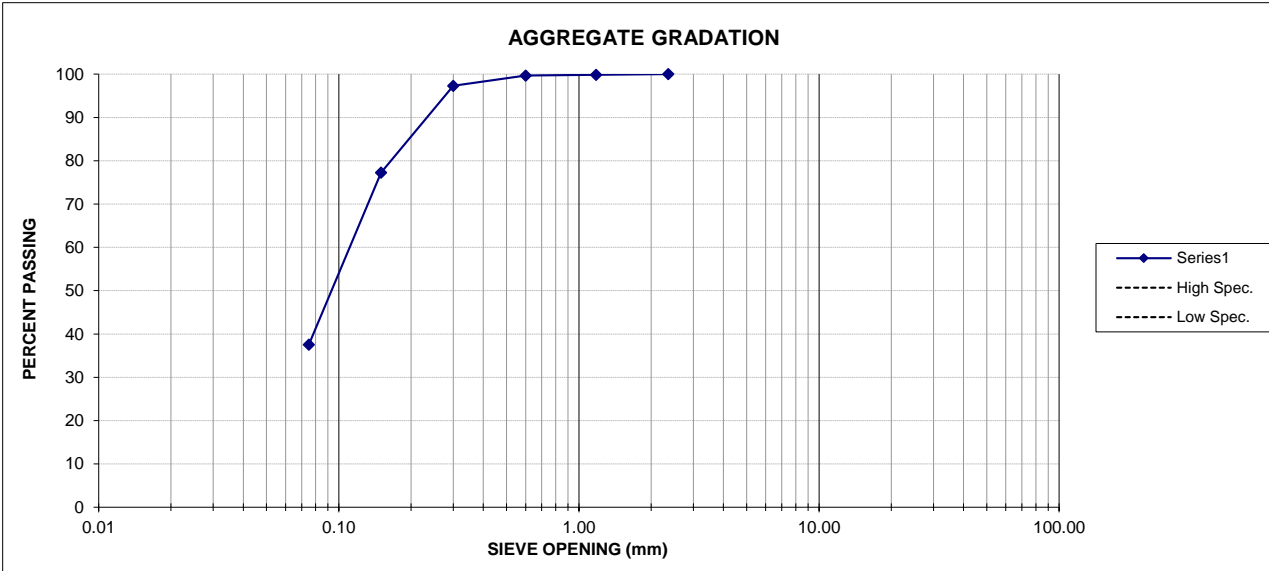
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	100.0
2.36	100.0
1.18	99.8
0.600	99.7
0.300	97.3
0.150	77.3
0.075	37.5

Date Sampled 20-Apr-15
Date Tested 08-May-15
Sample No: 4064H2
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

LEVELTON CONSULTANTS LTD.

per: _____



AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-2B at 24.0' (7.3m)
Grab sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 4

Date: 11-May-15

SAMPLING INFORMATION:

Material: Light brown SAND AND SILT/CLAY
Specification: N/A

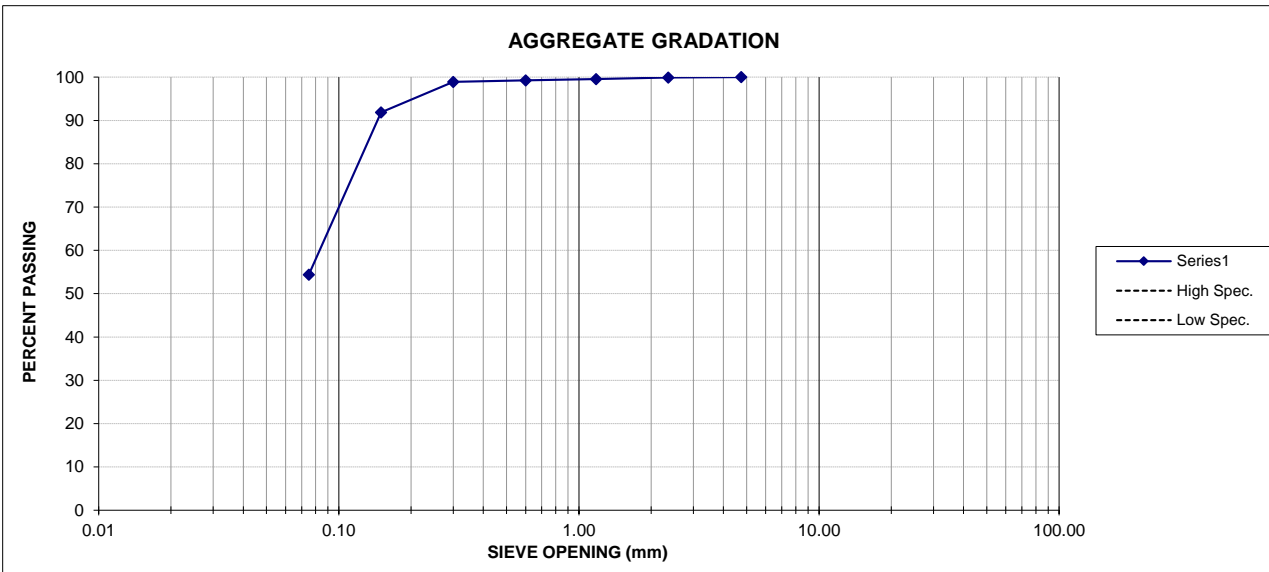
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	100.0
2.36	99.9
1.18	99.6
0.600	99.2
0.300	98.9
0.150	91.9
0.075	54.4

Date Sampled 23-Apr-15
Date Tested 11-May-15
Sample No: 4064C
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG/EL

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

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per: _____



AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-24 at 10.0'-12.0' (3.0m-3.7m)
SPT sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 5

Date: 11-May-15

SAMPLING INFORMATION:

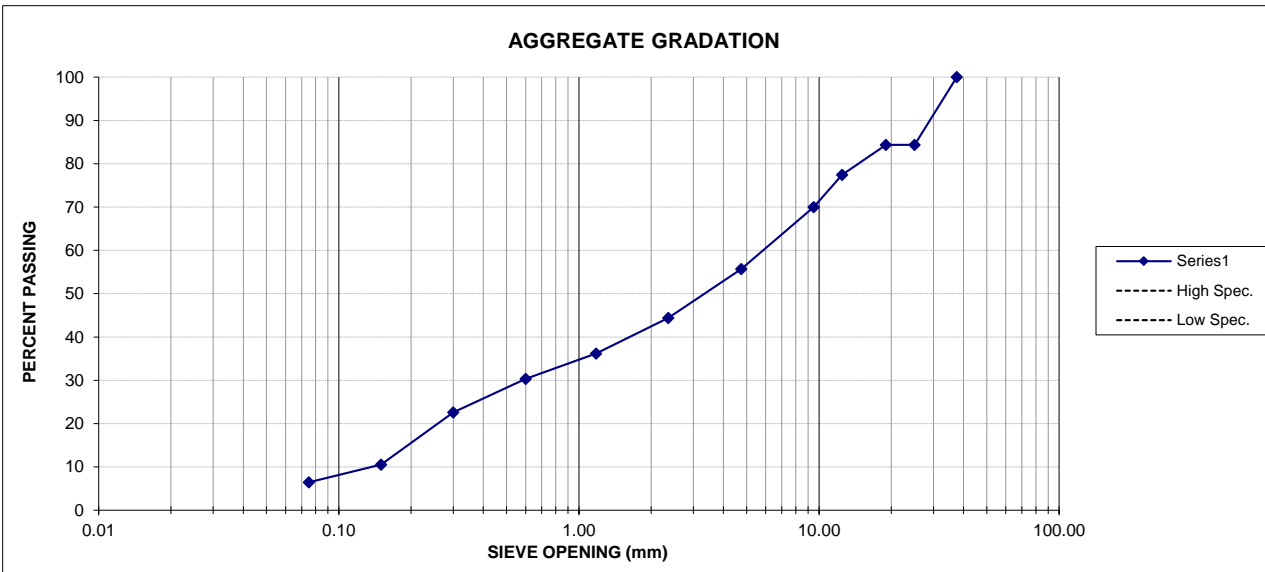
Material: Light grey sandy GRAVEL, trace fines
Specification: N/A

Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis	
Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	84.4
19.0	84.4
12.5	77.4
9.5	70.0
4.75	55.7
2.36	44.4
1.18	36.2
0.600	30.4
0.300	22.6
0.150	10.6
0.075	6.4

Date Sampled 20-Apr-15
 Date Tested 11-May-15
 Sample No: 4064D
 Fracture by mass 0.0%
 Supplier: N/A
 Sampled by: SJ
 Tested by: CG/EL

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

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AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-24 at 20.0'-22.0' (6.1m-6.7m)
SPT sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 6

Date: 11-May-15

SAMPLING INFORMATION:

Material: Light grey medium to fine SAND, some fines to silty/clayey
Specification: N/A

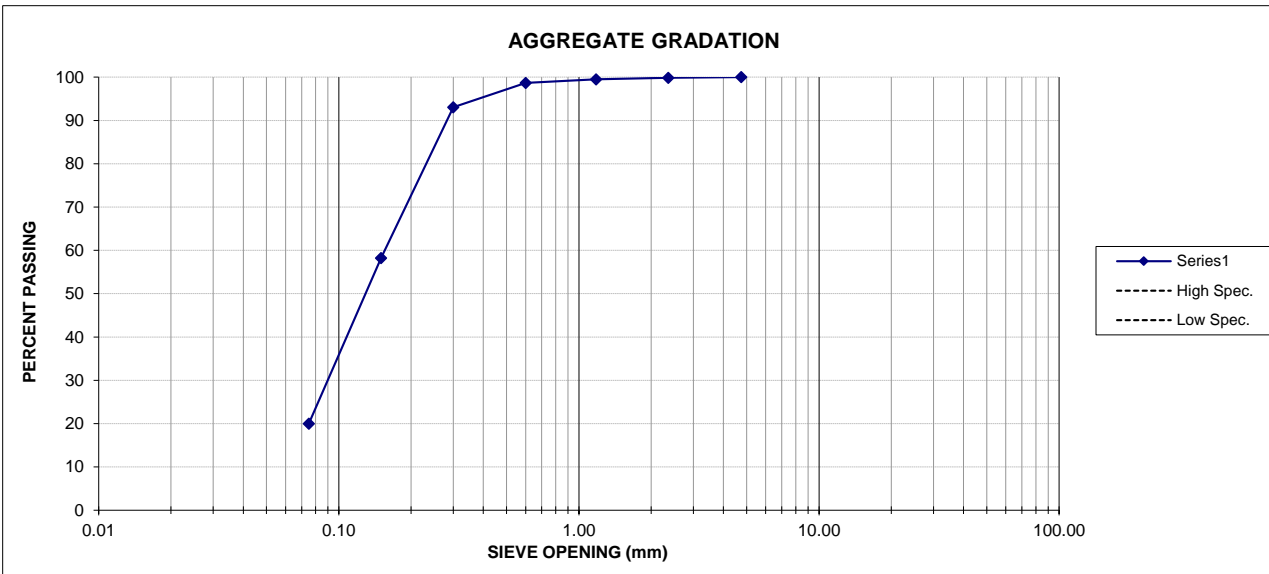
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	100.0
2.36	99.8
1.18	99.5
0.600	98.7
0.300	93.1
0.150	58.3
0.075	20.0

Date Sampled 20-Apr-15
 Date Tested 11-May-15
 Sample No: 4064E
 Fracture by mass 0.0%
 Supplier: N/A
 Sampled by: SJ
 Tested by: CG/EL

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

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AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-24 at 25.0'-27.0' (7.6m-8.2m)
SPT sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 7

Date: 11-May-15

SAMPLING INFORMATION:

Material: Light grey silty/clayey SAND
Specification: N/A

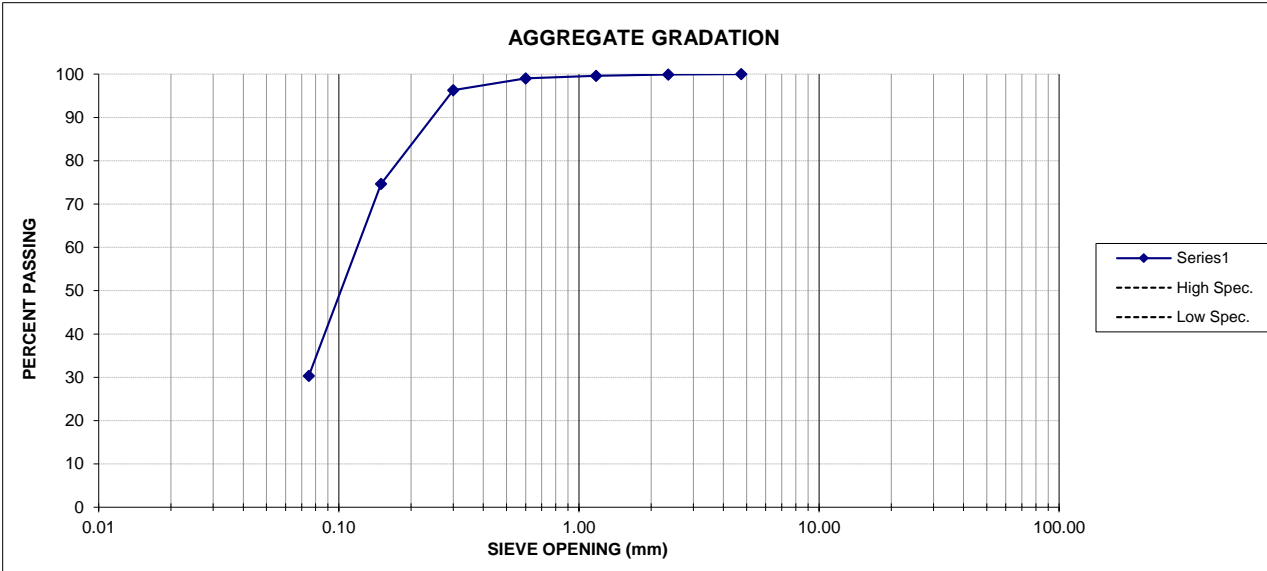
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	100.0
2.36	99.9
1.18	99.6
0.600	99.0
0.300	96.3
0.150	74.7
0.075	30.3

Date Sampled 20-Apr-15
Date Tested 11-May-15
Sample No: 4064F
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG/EL

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

LEVELTON CONSULTANTS LTD.

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AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-24 at 30.0'-32.0' (9.1m-9.8m)
SPT sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 8

Date: 11-May-15

SAMPLING INFORMATION:

Material: Light brown SAND and CLAY/SILT
Specification: N/A

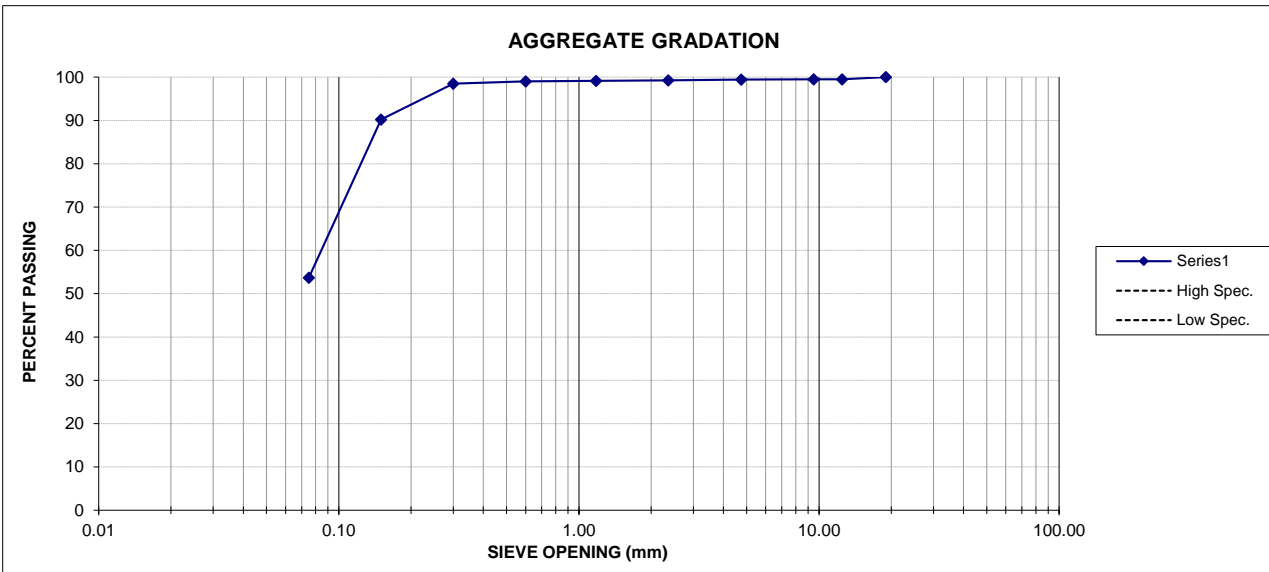
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	99.5
9.5	99.5
4.75	99.4
2.36	99.3
1.18	99.1
0.600	99.0
0.300	98.5
0.150	90.2
0.075	53.7

Date Sampled 20-Apr-15
Date Tested 11-May-15
Sample No: 4064G
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG/EL

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

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AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-24 at 35.0'-37.0' (10.7m-11.3m)
SPT sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 9

Date: 11-May-15

SAMPLING INFORMATION:

Material: Light brown silty/clayey SAND
Specification: N/A

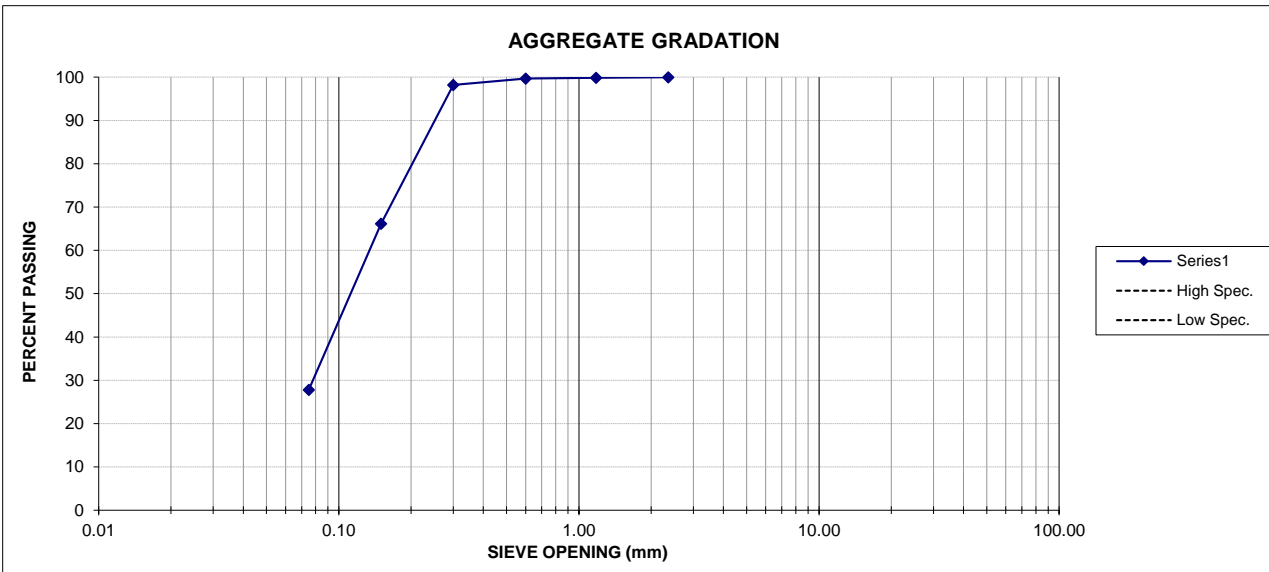
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	100.0
2.36	100.0
1.18	99.9
0.600	99.7
0.300	98.2
0.150	66.2
0.075	27.8

Date Sampled 20-Apr-15
Date Tested 11-May-15
Sample No: 4064H1
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG/EL

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

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AGGREGATE GRADATION CHART

IDENTIFICATION:

Client AECOM
 Project RDN Wastewater Treatment - Engineering
 Sample Location BH15-24 at 40.0'-42.0' (12.2m-12.8m)
SPT sample from Solid Stem Auger drilling

File No.: R715-0626-00
 Report No.: 11

Date: 11-May-15

SAMPLING INFORMATION:

Material: Light brown/grey silty/clayey SAND
Specification: N/A

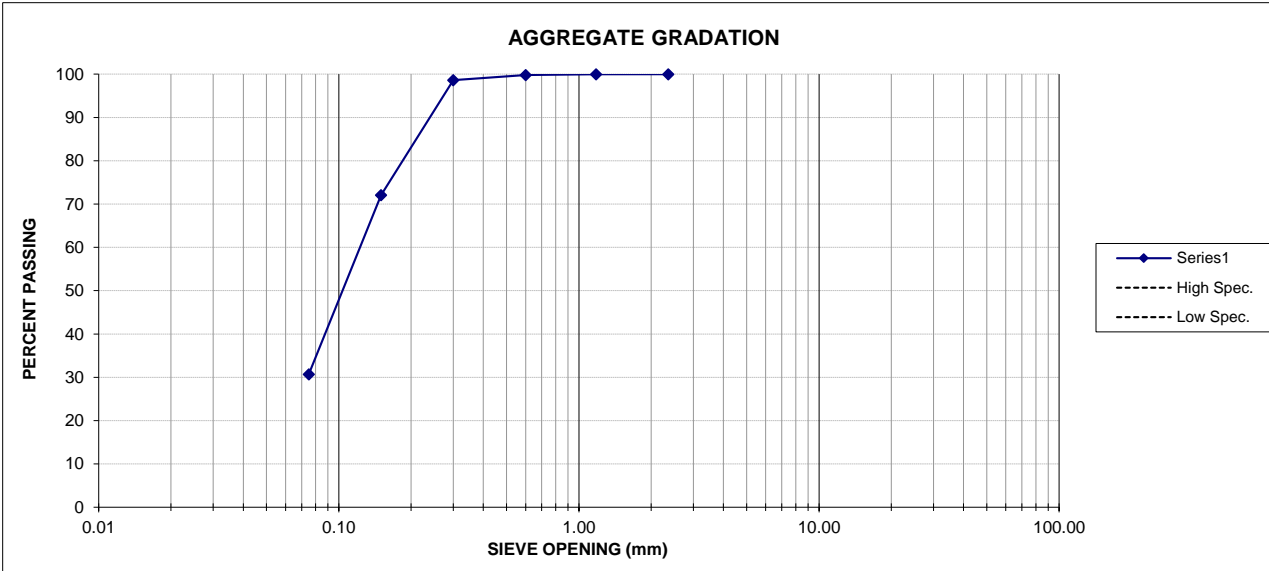
Material Specification
 Sieve High Spec. Low Spec.

Sieve Analysis

Sieve	% Passing
75.0	
63.0	
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	100.0
2.36	100.0
1.18	99.9
0.600	99.8
0.300	98.6
0.150	72.1
0.075	30.7

Date Sampled 20-Apr-15
Date Tested 11-May-15
Sample No: 4064I
Fracture by mass 0.0%
Supplier: N/A
Sampled by: SJ
Tested by: CG/EL

AGGREGATE GRADATION:



REMARKS: Tested according to ASTM C-: 136 and C-117

REPORTS TO: AECOM Canada Ltd. - ken.moysiuk@aecom.com

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