

**ARCHITECTURAL
SPECIFICATIONS
TENDER #12187Q**

**WASHROOM ALTERATIONS
ROOMS 131 & 135**

**ANDREW HUNTER
ELEMENTARY SCHOOL**

February 5, 2019



Contractors shall carefully examine and study all of the Contract Documents and shall visit the site of proposed work in order to satisfy themselves by examination as to all conditions relevant to the scope of work.

**McKnight Charron Limited
Architects**

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1. INTRODUCTION

1.1 INVITATION

- 1.1.1 Simcoe County District School Board (the “**Owner**”) is soliciting Bids from prequalified general contractors to perform the work described in the Bid Documents (the “**Work**”) at **Andrew Hunter Elementary School** located at **59 Lampman Lane, Barrie, Ontario**. (the “**Place of the Work**”).

1.2 KEY INFORMATION

- 1.2.1 This Section provides a summary of some key information contained in the Bid Documents and is provided solely as a convenience. Bidders are urged to read all of the Bid Documents carefully and thoroughly to ensure they fully understand all of the terms and conditions, including all Contract requirements.
- (a) The Owner has scheduled a mandatory site meeting at **Andrew Hunter Elementary School** on **Thursday, February 7, 2019**, commencing at **8:15 AM**.
 - (b) The Owner requires that all Bidders attend the mandatory site meeting.
 - (c) The deadline for submitting questions (the “**Question Deadline**”) is 2 working days before the Submission Deadline.
 - (d) Bids must be submitted online through the Portal BEFORE 1:30:00PM Local Time on **Friday, February 15, 2019** (the “**Submission Deadline**”).
 - (e) Bids must be irrevocable for a period of thirty (30) days starting from the day after the Submission Deadline (the “**Irrevocability Period**”).
 - (f) Bid security is not required for this tender.
 - (g) The successful Bidder is permitted to commence work on site on **Friday, March 8, 2019 at 4:00 PM**.
 - (i) Please note that the school will be vacant during the week of Monday, March 11, 2019 to Friday, March 15, 2019 for March Break and contractors are permitted to work throughout the day during this week.
 - (ii) All work between Monday, March 18, 2019 and Friday, March 22, 2019 is to be after hours (3:30 PM to 8:30 AM).
 - (h) The successful Bidder will be required to achieve Substantial Performance of the Work by **Monday, March 25, 2019**.
 - (i) The Bid Coordinator is Justin Apokremiotis, Purchasing Supervisor, at “japokremiotis@scdsb.on.ca”.

1.3 PREQUALIFICATION

- 1.3.1 The following contractors are prequalified to submit a Bid (each a “**Prequalified Contractor**”):
- (a) [Anacond Contracting Inc.](#);
 - (b) [Aquicon Construction](#);
 - (c) [Bertram Construction \(Ontario\) Ltd](#);

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- (d) [Brown Daniels Associates Inc.;](#)
- (e) [Dawson Contracting \(Barrie\) Ltd.;](#)
- (f) [Deciantis Construction Ltd.;](#)
- (g) [Devlan Construction Ltd.;](#)
- (h) [Everstrong Construction Ltd.;](#)
- (i) [Gateman-Milloy Inc.;](#)
- (j) [Greystone Project Management Inc.;](#)
- (k) [JR Certus Construction Co. Ltd.;](#)
- (l) [Les Bertram & Sons \(1985\) Ltd.;](#)
- (m) [Lisgar Construction Company;](#)
- (n) [M.J. Dixon Construction Ltd.;](#)
- (o) [Percon Construction Ltd.;](#)
- (p) [Pre-Eng Contracting Ltd.;](#)
- (q) [Quad Pro Construction Inc.;](#)
- (r) [Quinan Construction Ltd.;](#)
- (s) [R.J.B. Construction \(1989\) Ltd.;](#)
- (t) [Rutherford Contracting Ltd.;](#)
- (u) [Shertine Construction Ltd.;](#)
- (v) [Silver Birch Contracting Ltd.;](#)
- (w) [Steelcore Construction Ltd.;](#)
- (x) [Tambro Construction Ltd.;](#)
- (y) [W.E. Marshall Construction \(1986\) Ltd.;](#)
- (z) [W.S. Morgan Construction Ltd.](#)

1.3.2 Not used.

1.3.3 Not used.

1.3.4 Not used.

1.3.5 The Owner reserves the right to issue one or more addenda naming additional Prequalified Contractors and/or additional prequalified Subcontractors.

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1.3.6 Only Prequalified Contractors are eligible to participate in this Bid Process and to submit a Bid. Submissions received from those who are not a Prequalified Contractor will not be considered.

1.4 THE BID CONTRACT

1.4.1 The Bidders and the Owner acknowledge it is their intention to create a process contract, sometimes referred to as “Contract A” (the “**Bid Contract**”), between the Owner and each Bidder whose Bid meets all Mandatory Requirements. The Bidders and the Owner further acknowledge that if a Bid Contract is created between the Owner and one or more Bidders, the terms of the Bid Contract are represented by the Bid Documents and include an obligation on the successful Bidder, if any, to sign the Contract.

1.5 BIDDERS’ EXPENSES

1.5.1 Bidders shall bear all costs and expenses incurred by them in any way related to any aspect of their participation or intended participation in this Bid Process including, without limitation, all costs and expenses related to a Bidder’s involvement in:

- (a) due diligence, investigations, and information gathering processes;
- (b) attendances and/or participation at any and all site visits and/or meetings;
- (c) the preparation and submission of a Bid and responding to Requests for Additional Information.

2. DEFINITIONS

Capitalized terms used in the Instructions to Bidders and not otherwise defined in this Article or elsewhere in these Instructions to Bidders shall have the meanings ascribed to them in the Definitions to the Contract. All references in the Instructions to Bidders to “Article”, “Section” or “paragraph” shall, unless specifically indicated otherwise, refer to an Article, Section or paragraph of these Instructions to Bidders.

- 2.1.1 “**Adjusted Bid Price**” has the meaning set out in the table in paragraph 10.4.1.
- 2.1.2 “**Bid**” means all documents and information submitted through and/or uploaded to the Portal by a Bidder in response to and in accordance with these Instructions to Bidders, together with the documents and information specified in Section 9.4 and Section 10.2, where applicable.
- 2.1.3 “**Bidder**” means a Prequalified Contractor that participates in this Bid Process, whether or not it submits a Bid. The term “**Bidder**” also includes a Prequalified Contractor prior to the submission of its Bid.
- 2.1.4 “**Bid Contract**” means the contract described in paragraph 1.4.1 for the evaluation of Bids and the execution of the Contract, if any.
- 2.1.5 “**Bid Coordinator**” is the person identified as such in paragraph 1.2.1(i).
- 2.1.6 “**Bid Documents**” means the documents listed in paragraph 3.2.1.
- 2.1.7 “**Bid Price**” has the meaning set out in paragraph 9.2.1.
- 2.1.8 “**Bid Process**” means the procurement process described in the Bid Documents which commences with the issuance of these Instructions to Proponents and ends on the earliest of the following:
 - (a) the date on which the Contract is signed;
 - (b) the date on which the Bid Process is cancelled;

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- (c) the day after the expiry of the Irrevocability Period.
- 2.1.9 **“Board”** means the Board of Trustees of the Owner.
- 2.1.10 **“Conflict of Interest”** has the meaning set out in paragraph 13.2.1.
- 2.1.11 **“Contract”** means the written agreement to be signed between the Owner and the successful Bidder, in the form of CCDC 2 – 2008 stipulated price contract, as amended by Supplementary Conditions.
- 2.1.12 **“Evaluation Score”** has the meaning set out in paragraph 10.4.1.
- 2.1.13 **“Irrevocability Period”** has the meaning set out in paragraph 1.2.1(e).
- 2.1.14 **“Local Time”** means the time measured and recorded on the Portal.
- 2.1.15 **“Mandatory Requirements”** means the mandatory requirements listed in paragraph 10.3.1.
- 2.1.16 **“MFIPPA”** means the *Municipal Freedom of Information and Protection of Privacy Act* (Ontario).
- 2.1.17 **“Owner”** means Simcoe County District School Board and includes its employees, agents, trustees, officers and directors, whether involved with the Bid Process or not, and includes the Board.
- 2.1.18 **“Place of the Work”** has the meaning set out in paragraph 1.1.1.
- 2.1.19 **“Portal”** has the meaning set out in paragraph 3.1.1.
- 2.1.20 **“Prequalified Contractor”** has the meaning set out in paragraph 1.3.1.
- 2.1.21 **“Question Deadline”** is the date identified as such in paragraph 1.2.1(c).
- 2.1.22 **“Reports”** has the meaning set out in paragraph 4.1.1.
- 2.1.23 **“Request for Additional Information”** has the meaning set out in paragraph 10.2.1.
- 2.1.24 **“Security Documents”** has the meaning set out in paragraph 9.3.1.
- 2.1.25 **“Submission Deadline”** is the date and time identified as such in paragraph 1.2.1(d).
- 2.1.26 **“Supplementary Conditions”** means the Supplementary Conditions for the CCDC 2 – 2008 stipulated price contract included on the Portal.
- 2.1.27 **“Work”** means the total construction and related services described in the Bid Documents.

3. BID DOCUMENTS

3.1 ACCESS TO THE BID DOCUMENTS

- 3.1.1 The Bid Documents will be made available to Bidders through the online digital bidding system established for this Bid Process on the website hosted by eSolutions Group Limited at “www.bidsandtenders.ca” (the **“Portal”**). The Portal will include all Bid Documents as well as Reports and other relevant notices, information and communications.
- 3.1.2 Each Bidder is solely responsible to ensure that it:
 - (a) registers with and obtains access to the Portal; and
 - (b) has the appropriate software to access, input, download and upload contents from and to the Portal; and

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- (c) visits and reviews the Portal as frequently as is necessary to ensure that it has the most current information, documents and addenda.

Bidders are solely responsible for visiting and checking the Portal for new content and the Owner accepts no responsibility for any Bidder lacking any documents or information posted to the Portal.

- 3.1.3 If there is a conflict or inconsistency between an electronic version of any document included or posted to the Portal and any other version of the same document, whether in electronic or paper form, the electronic version on the Portal shall govern.

3.2 THE BID DOCUMENTS

- 3.2.1 Bidders should ensure they have and/or have access to all of the documents listed below (collectively the **"Bid Documents"**). A Bid will be deemed to have been prepared on the basis of all Bid Documents issued and posted to the Portal prior to the Submission Deadline, and the Owner accepts no responsibility for any Bidder lacking or not being able to access any part of the Bid Documents.

- (a) Instructions to Bidders (this document).
- (b) Supplementary Conditions.
- (c) Specifications prepared by the Consultants.
- (d) Drawings prepared by the Consultants.
- (e) Addenda, if any.

- 3.2.2 Bidders should inform the Bid Coordinator immediately if any documents are missing or incomplete and/or upon finding any discrepancies or omissions in the Bid Documents.

- 3.2.3 The Bid Documents are made available only for the purpose of submitting Bids for the Work. Availability and/or use of the Bid Documents does not confer a license or grant for any other purpose.

4. BIDDERS' DUE DILIGENCE

- 4.1.1 In addition to the Bid Documents, the Portal may include the Owner's information, data and environmental, geotechnical or other reports prepared or obtained with respect to the Place of the Work (collectively the **"Reports"**). The Reports should not be considered a representation of the conditions of the entire Place of the Work and are provided for general information and guidance purposes only. The Owner does not guarantee the accuracy or completeness of the Reports nor assumes any responsibility for any interpretations or conclusions that Bidders may make or draw from the Reports.

- 4.1.2 Nothing in this Bid Process or in the Bid Documents or in the Reports is intended to relieve Bidders from undertaking their own research, investigations or other due diligence, or forming their own opinions and conclusions with respect to the Work, the Place of the Work, the Bid Documents, the Contract, and all other matters related to this Bid Process. The Owner (a) does not accept or assume any responsibility for any interpretations or conclusions that Bidders may make or draw from the Bid Documents or the Reports, (b) does not represent, warrant or guarantee that the Bid Documents or the Reports are complete, accurate or comprehensive or exhaustive, and (c) assumes no responsibility for the completeness or accuracy of the Bid Documents or the Reports, or anything else provided or made available by the Owner during this Bid Process.

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- 4.1.3 No allowances will be made for additional costs and no claims will be entertained in connection with:
- (a) conditions which could reasonably have been ascertained by the Bidders through investigation or other due diligence undertaken prior to the Submission Deadline; and/or
 - (b) Work which is required and which is reasonably inferable from the Bid Documents and/or the Reports as being necessary.

5. COMMUNICATIONS, QUESTIONS AND ADDENDA

5.1 COMMUNICATIONS

- 5.1.1 Except as may be permitted in the Bid Documents, Bidders are not to communicate with or otherwise contact the Owner regarding this Bid Process at any time before execution of the Contract, if any. A Bidder's failure to comply with this paragraph may result in the disqualification of the Bidder and the rejection of its Bid.
- 5.1.2 Except where provided otherwise in these Instructions to Bidders, all communications with the Owner permitted by this Bid Process are to be in writing and:
- (a) if sent before the Submission Deadline, are to be submitted online through the Portal; and
 - (b) if sent after the Submission Deadline, are to be sent by e-mail to the Bid Coordinator and are to identify the Bid Process in the subject line.

5.2 BIDDERS' QUESTIONS

- 5.2.1 Bidders are encouraged to ask questions or request clarification with respect to any part of this Bid Process or any Bid Documents which do not appear to be clear. Questions received by the Question Deadline will be reviewed and if the Owner believes that a response is warranted, it will include the question and its answer in an addendum. Questions received after the Question Deadline may not be considered and may not be answered, although the Owner reserves the discretion, but has no obligation, to consider and respond to questions received after the Question Deadline. In responding to questions the Owner may answer similar questions from different Bidders only once, may edit or rephrase the questions, and may ignore questions which, in the Owner's opinion, do not require a response.

5.3 ADDENDA

- 5.3.1 This Bid Process and the Bid Documents may be amended only by written addendum posted to the Portal. Answers, responses, clarifications, instructions or any other information provided by any other means, by any person, in whatever context or setting, will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon by any Bidder, unless and until they are posted to the Portal in the form of an addendum.
- 5.3.2 Addenda will be posted on the Portal only and will not be sent or otherwise distributed to the Bidders. Bidders are solely responsible:
- (a) to visit and review the Portal for addenda, and the Owner shall not be responsible if any addenda are not obtained by a Bidder;
 - (b) to ensure they have received and that their Bid incorporates all addenda issued and posted to the Portal before the Submission Deadline and takes into account all resulting costs.

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Bidders will be required to confirm their Bid incorporates all addenda by so indicating in their Bid.

6. MANDATORY SITE MEETING

6.1 MANDATORY ATTENDANCE

6.1.1 The Owner has scheduled a mandatory site meeting at the location, date and time specified in paragraph 1.2.1(a). The purpose of the meeting is to review the Bid Process and to provide those in attendance an opportunity to ask questions and tour the Place of the Work.

6.1.2 Attendance at the site meeting is mandatory:

- (a) for Bidders;
- (b) Not used.

All persons attending the site meeting will be required to sign an attendance log to confirm their attendance.

6.2 CONSEQUENCES OF FAILING TO ATTEND THE MANDATORY SITE MEETING

6.2.1 Bids received from Bidders who fail to attend the mandatory site meeting, as determined from the attendance log, will not be considered.

6.2.2 Where the Owner has required that prequalified Subcontractors attend the mandatory site meeting, as indicated in paragraph 6.1.2(b), then, Bids that fail to carry a prequalified Subcontractor that attended the mandatory site meeting, as determined from the attendance log, will not be considered.

6.3 INFORMATION OBTAINED AT THE MANDATORY SITE MEETING

6.3.1 Each Bidder acknowledges and agrees that:

- (a) notwithstanding the Owner may give answers and may provide information during the site meeting, such answers and information, whether in verbal or in written form, will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon in any way by a Bidder, except and only to the extent expressly confirmed in an addendum;
- (b) anything said, written or done by the Owner or any other person, and any views or comments expressed in response to anything said or done during the site meeting, will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon in any way by a Bidder except and only to the extent expressly confirmed in an addendum.

7. SITE INVESTIGATION BY BIDDERS

7.1.1 Each Bidder is solely responsible, at its own cost and expense, to carry out its own independent research and due diligence and to perform any investigations considered necessary by the Bidder to satisfy itself as to the existence and/or locations of utilities and underground services and all other existing conditions, circumstances and limitations affecting the Place of the Work, the Work, the Bid Documents, the Contract, and all other matters related to this Bid Process. The Bidders'

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obligations set out in this paragraph apply irrespective of the information contained in the Bid Documents or the Reports or that is made available to the Bidders during this Bid Process.

7.1.2 Bidders shall not undertake any investigation activities at the Place of the Work except as provided in this Article 7.

7.1.3 Bidders who would like an opportunity to undertake an investigation of the Place of the Work must submit an e-mail request to the Bid Coordinator. Such request must be received at least 2 business days before the Bidder's proposed date for the proposed investigation, provided that all investigations must be completed by the Question Deadline. The request must include:

- (a) the proposed date and time and alternate date and time for the proposed investigation;
- (b) the anticipated duration of the proposed investigation;
- (c) names, titles and contact information of who will be attending;
- (d) details of the proposed investigation, including who is proposed to carry out the investigation;
- (e) area(s) of the Place of the Work for which access is requested;
- (f) such other information as the Owner may reasonably require.

A Bidder's request will not be complete and an appointment for the investigation will not be scheduled until all of the required information has been provided.

7.1.4 If the Owner approves a Bidder's request to investigate the Place of the Work, the Owner will issue a written notification of the date and time on which the Bidder may attend at the Place of the Work, as well as the investigation activity(ies) which the Bidder is authorized to undertake, and the duration of such activity(ies). A representative of the Owner may attend to monitor the Bidder's activities.

7.1.5 Bidders acknowledge that unforeseen circumstances may arise and the Owner may, in its sole discretion, cancel, reschedule and/or modify the Bidder's visit and/or investigation activities on short notice or no notice to the Bidder.

7.1.6 Each Bidder acknowledges and agrees:

- (a) that anything said, written or done by the Owner or its representatives, and any views or comments expressed in response to anything said or done during the investigation of the Place of the Work will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon by any Bidder;
- (b) to waive any and all right to contest, claim, complain, protest and/or dispute this Bid Process based on the fact that findings, information, results or data may have been obtained by another Bidder as a result of that Bidder's investigation of the Place of the Work, that were not obtained by, shared with, or provided to other Bidders.

7.1.7 Bidders shall, for their own forces and for their agents, consultants, contractors, subcontractors and all others attending at the Place of the Work with them or on their behalf:

- (a) assume overall responsibility for compliance with all aspects of the applicable workers' compensation and health and construction safety legislation and all related rules, regulations and practices, and shall ensure that appropriate occupational health and safety instruction and training are provided to all those attending the Place of the Work;

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- (b) perform only investigations authorized by the Owner;
- (c) avoid disturbing and take all reasonable steps necessary to promote and maintain the safety of the occupants of the Place of the Work and any adjacent properties and the public in general;
- (d) respect and comply with local regulations and the Owner's requirements regarding permitted work hours and noise levels;
- (e) indemnify and save the Owner harmless from, and be responsible for, all claims, demands, losses, costs or damages related to or arising from any activities performed by the Bidder or anyone attending with or on behalf of the Bidder at the Place of the Work, whether or not authorized by the Bidder or the Owner.

8. DESIGNATED SUBSTANCES

- 8.1 Without limiting the obligations of the bidders set out in Article 5, where the Place of the Work is within or part of an existing building, bidders should note they may encounter designated substances such as lead, mercury, silica, asbestos-containing material ("ACM"), benzene, arsenic, etc. If applicable, a list of designated substances present at the Place of the Work has been provided to all bidders and, if ACM is included in the list of designated substances, a report has also been provided indicating the condition and location of any ACM that may be present at the Place of the Work (collectively the "OHS Reports").
- 8.2 In carrying out the Work under the Contract, bidders shall ensure they do not handle, deal with, disturb or remove any designated substance whether identified in the OHS Reports or not, unless included in the Work required by the Bid Documents. Should a bidder determine, prior to the Closing Date, that the Work cannot be completed without handling, dealing with, disturbing or removing any designated substance identified in the OHS Reports (and the Work does not otherwise require the bidder to handle, deal with, disturb and/or remove such substance), it shall immediately notify the Owner and the Consultant in writing so that, if necessary, instructions and/or clarifications may be issued in the form of an addendum.
- 8.3 All information provided to or obtained by bidders in connection with this bid process, including all Reports, Data and the OHS Reports, are and shall remain the property of the Owner and must be treated as confidential whether or not a contract is awarded, and which confidentiality obligations shall survive termination of the bid process. Such information is not to be used for any purpose other than submitting a Bid.

9. INSTRUCTIONS FOR BID COMPLETION

9.1 BID COMPLETION

- 9.1.1 Bids which are completed and/or submitted by any means other than as set out in this Article 9 will not be considered.
- 9.1.2 Bidders shall:
- (a) provide, input, post and/or upload all requested information and shall fill in all spaces and blanks on the Portal, as provided in Section 9.2; and
 - (b) submit the Security Documents described in Section 9.3 in accordance with and as provided in Section 9.4.

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9.1.3 Bidders shall ensure all required information and documents are submitted through and uploaded / posted to the Portal BEFORE the Submission Deadline. Bidders who fail to do so before the Submission Deadline will be unable to submit their Bid.

9.2 INSTRUCTIONS

9.2.1 Bid Price. Bidders shall input in the space provided on the Portal the fixed, all-inclusive lump sum price for the Work (the “**Bid Price**”). The Bid Price shall exclude the Harmonized Sales Tax (HST) but shall include all other applicable taxes and duties.

9.2.2 Listing Subcontractors.

- (a) If required, Bidders shall input a list of the Subcontractors proposed to perform or supply an item of the Work identified on the Portal. Failure to do so may result in the Bid being declared non-compliant.
- (b) Where the Owner has prequalified one or more Subcontractors to perform or supply an identified item of the Work, Bidders shall select only a prequalified Subcontractor to perform or supply that item of Work. Failure to do so may result in the Bid being declared non-compliant.
- (c) Where the Owner has required that prequalified Subcontractors attend the mandatory site meeting, as indicated in paragraph 6.1.2(b), Bidders shall select and carry only a prequalified Subcontractor that attended the mandatory site meeting, as determined from the attendance log. Failure to do so will result in the Bid being declared non-compliant.
- (d) Where a Bidder lists “own forces” in place of a Subcontractor, the Bidder shall perform such item of the Work with its own forces. In such case the Owner reserves the right to obtain information from the Bidder and from third parties respecting the qualifications and experience of the Bidder’s own forces for such item of the Work. If the Owner determines, acting reasonably, that the Bidder’s own forces are not qualified or experienced to perform such item of the Work, the Owner may declare the Bid non-compliant.


9.2.3 Unit, Separate, Itemized and Alternative Prices. If required, Bidders shall submit the following prices, all of which shall exclude the Harmonized Sales Tax (HST) but shall include all other applicable taxes and duties:

- (a) unit prices;
- (b) separate prices for work, if any, which is not included in the Bid Price and which the Owner may add for the amount(s) indicated;
- (c) itemized prices for Work, if any, which is included in the Bid Price and which the Owner may delete for the amount(s) indicated;
- (d) alternative prices for work, if any, which is not included in the Bid Price and which the Owner may substitute for Work which is included in the Bid Price for the amount(s) indicated.

The Owner reserves the right to accept or reject any or all unit, separate, itemized and alternative prices submitted, and such prices shall remain in effect for the duration of the Contract.

9.3 SECURITY DOCUMENTS

9.3.1 Each Bidder shall submit the form of bid security specified or permitted in paragraph 1.2.1(f), as further described in paragraph 9.3.2. Where applicable, Bidders shall also submit the agreement

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to bond / surety's consent specified in paragraph 9.3.3 (the bid security and, where applicable, the agreement to bond / surety's consent are collectively referred to as the "Security Documents").

9.3.2 Bid Security. Bidders are not required to submit any form of bid security for this tender.

- (a) Not used.
- (b) Not used.
- (c) Not used.

9.3.3 Agreement to Bond / Surety's Consent. Each Bidder shall submit an agreement to bond or surety's consent issued by a surety licensed to conduct surety and insurance business in Canada, undertaking to provide a performance bond and a labour and material payment bond, each in the amount of fifty percent (50%) of the Bid Price. The agreement to bond / surety's consent shall remain valid for at least the duration of the Irrevocability Period.

9.3.4 Bidders shall include the costs of all Security Documents in their Bid Price.

9.4 DELIVERY OF THE SECURITY DOCUMENTS

9.4.1 Each Bidder shall upload or post to the Portal a digital agreement to bond or surety's consent. Scanned copies are not acceptable, it must be a digitally executed document.

9.4.2 Not used.

9.4.3 Bids that do not comply with this Section 9.4 will be declared non-compliant.

9.5 BID IRREVOCABILITY

9.5.1 Each Bid shall be irrevocable and shall remain open for consideration by the Owner for the duration of the Irrevocability Period.

10. EVALUATING BIDS

10.1 GENERAL

10.1.1 Bids will be reviewed and evaluated by the Owner in private.

10.1.2 Notwithstanding anything else contained in the Bid Documents, the award of the Contract, if any, shall be subject to the approval of the Board, in its sole and unfettered discretion. Bidders shall have no claims whatsoever against the Owner or the Board arising out of the exercise of authority by the Board, and/or in the event the Owner, in its sole and unfettered discretion, and for any or no reason, decides not to award the Contract.

10.2 REQUESTS FOR ADDITIONAL INFORMATION

10.2.1 The Bid Coordinator, on behalf of the Owner, may contact any one or more Bidders to request clarification of any information or documents submitted as part of a Bid, or to request supplementary information (collectively, "Request for Additional Information"), without any obligation to make the same or any Request for Additional Information of any other Bidder. Notwithstanding the preceding sentence, the Owner has no obligation to make any Request for Additional Information.

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10.2.2 Bidders shall respond to all Requests for Additional Information within the time and in the manner stipulated in each Request for Additional Information, and any response received will form an integral part of a Bidder's Bid. If a Bidder fails to respond to a Request for Additional Information, its Bid will be considered and evaluated based solely on the original Bid contents submitted.

10.2.3 A Bidder's response to a Request for Additional Information shall not be an opportunity for the Bidder to either correct errors or to change its Bid in any substantive manner. Subject to that, information, prices, rates and documents submitted in response to a Request for Additional Information shall form part of a Bidder's Bid.

10.3 MANDATORY REQUIREMENTS

10.3.1 Subject to paragraph 10.3.2, only Bids which are submitted through the Portal before the Submission Deadline and which meet all of the mandatory requirements listed below (collectively, the "**Mandatory Requirements**") on a "pass/fail" basis will be eligible for evaluation and award of the Contract:

- (a) the Bidder is a Prequalified Contractor; and
- (b) the Bidder attended the mandatory site meeting, as determined from the attendance log; and
- (c) where the Owner has required that prequalified Subcontractors attend the mandatory site meeting, as indicated in paragraph 6.1.2(b), the Bid includes prequalified Subcontractor(s) that attended the mandatory site meeting, as determined from the attendance log;
- (d) the Bid includes the specified Security Documents and complies with Section 9.4; and
- (e) the Bid substantially complies with the requirements of the Bid Documents. In this respect, the Owner reserves the right, in its sole and unfettered discretion, to waive minor errors and matters of non-compliance contained in a Bid.

10.3.2 If all Bids fail at least one of the Mandatory Requirements the Owner, in its sole discretion, may:

- (a) evaluate one or more Bids and proceed with the Bid Process and treat such Bid(s) as having met all of the Mandatory Requirements; and/or
- (b) negotiate a Contract for the whole or any part of the Work with any Bidder; and/or
- (c) take any action in accordance with paragraph 12.2.1.

10.4 EVALUATION

10.4.1 Only Bids which pass all of the Mandatory Criteria or that are selected in accordance with paragraph 10.3.2(a) will be awarded points based on criteria set out below. The points awarded to each Bid will be its "**Evaluation Score**".

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Evaluation Criteria	Points Available
Bid Price offered, as it may be adjusted by the amount of any separate, itemized and/or alternative price(s) which the Owner, in its discretion, decides to accept (" Adjusted Bid Price "). For certainty, where the Owner does not accept any separate, itemized or alternative prices, the Adjusted Bid Price will be the same as the Bid Price.	100
MAXIMUM POINTS AVAILABLE	100

10.4.2 A Bidder's Evaluation Score will be calculated in accordance with the formula below:

- (a) the Bidder with the lowest Adjusted Bid Price will be awarded 100 points;
- (b) the points to be awarded to each of the other Bidders will be calculated as follows:

$$\frac{\text{lowest Adjusted Bid Price}}{\text{other Bidder's Adjusted Bid Price}} \times 100 = \text{points awarded}$$

10.4.3 If there is a tie in the Evaluation Score of two or more Bids, the tie will be broken by a coin toss or by the drawing of lots performed by the Owner in the presence of the tied Bidders.

11. AWARD OF THE CONTRACT, DOCUMENTS TO BE DELIVERED, AND SIGNING THE CONTRACT

11.1 AWARD OF THE CONTRACT

11.1.1 Subject to receiving the approval of the Board, and subject to the other provisions of the Bid Documents, if the Owner decides to award the Contract it will issue an award letter to the Bidder that submitted the Bid which received the highest Evaluation Score.

11.2 DOCUMENTS TO BE DELIVERED

11.2.1 Within 10 business days of receiving an award letter from the Owner the successful Bidder shall deliver to the Owner:

- (a) where the Bidder submitted an agreement to bond / surety's consent, the Bidder shall deliver the performance bond and the labour and material payment bond described in the Bid Documents, the forms of such bonds to comply with the requirements of the Contract;
- (b) certified true copies of the insurance policies required by the Contract or certificates of insurance, at the option of the Owner;
- (c) the Bidder's current WSIB clearance certificate;
- (d) the Bidder's health and safety policy for the Work; and
- (e) a copy of the notice of project issued by the Ministry of Labour naming the Bidder as the "constructor" for the Work.

11.2.2 A Bidder's failure to comply with paragraph 11.2.1 will constitute a breach of the Bid Contract.

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11.3 SIGNING THE CONTRACT

11.3.1 The successful Bidder shall sign the Contract and shall deliver the signed original to the Owner within 10 business days of the Bidder's receipt of the execution copy of the Contract. A Bidder's failure to comply with this paragraph will constitute a breach of the Bid Contract.

12. OWNER'S RIGHTS

12.1 GENERAL

12.1.1 In addition to any other express rights contained in the Bid Documents or any other rights which may be implied in the circumstances, the Owner reserves the right to exercise any or all or a combination of the rights described in this Article. The Owner shall not be liable for any costs, expenses or damages incurred or claimed by a Bidder resulting from the Owner's exercise of any of its rights.

12.1.2 A Bidder's submission or the Owner's evaluation of any Bid, even where only one Bid is submitted before the Submission Deadline and even where only one Bid meets all Mandatory Requirements, will not obligate the Owner to accept any Bid, award the Contract, or proceed further with this Bid Process.

12.2 THE OWNER'S RIGHTS

12.2.1 The Owner may, in its sole discretion, and for any or no reason:

- (a) reject any or one or more or all Bids, even if only one Bid is received;
- (b) reject the whole or any part of any Bid;
- (c) accept the whole or any part of a Bid;
- (d) if only one Bid meets all of the Mandatory Requirements, elect to accept or reject all or any part of it;
- (e) cancel this Bid Process at any time before the award of the Contract;
- (f) cancel this Bid Process at any time before the award of the Contract and issue a new procurement process for work which is same or similar to the Work, with the same or different participants.

12.2.2 The Owner reserves the right to:

- (a) waive minor errors and matters of non-compliance contained in a Bid;
- (b) adjust an Evaluation Score or reject a Bid on the basis of information received in response to a Request for Additional Information;
- (c) disqualify any Bidder whose Bid contains misrepresentations or any other inaccurate or misleading information relating to matters which the Owner, in its sole discretion, considers material;
- (d) where the Owner has accepted any separate, itemized and/or alternative price(s) offered by the Bidders, the Owner reserves the right to award the Contract to other than the Bidder with the lowest Bid Price.

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13. GENERAL

13.1 PROHIBITION ON LOBBYING AND COLLUSION

13.1.1 Bidders and their directors, officers, employees, consultants, agents, advisors and other representatives are strictly prohibited from engaging in conduct which is or could reasonably be considered as any form of political or other lobbying, or as an attempt to influence the outcome of this Bid Process. Without limiting the generality of the foregoing, and except as provided in the Bid Documents, no such person shall contact, communicate with or attempt to contact or communicate with, directly or indirectly and in any manner whatsoever, any staff, personnel or representative of the Owner or the Board in connection with this Bid Process, including for the purpose of:

- (a) commenting on, or attempting to influence the views on, the merits of the Bidder's Bid, or in relation to the Bids of other Bidders;
- (b) influencing or attempting to influence the evaluation of the Bids;
- (c) promoting the Bidder or its interests, including in preference to that of other Bidders;
- (d) commenting on or criticizing aspects of this Bid Process, the Bid Documents, the Work, or the Contract, including in a manner which may give the Bidder a competitive or other advantage over other Bidders;
- (e) criticizing other Bidders or the Bids of other Bidders.

13.1.2 Bidders and their directors, officers, employees, consultants, agents, advisors and other representatives are prohibited from communicating with or attempting to contact or communicate with, directly or indirectly and in any manner whatsoever, any information whatsoever regarding the preparation of a Bid to any other Bidder.

13.1.3 Failure of a Bidder to comply with this Section may result in the disqualification of the Bidder and the rejection of its Bid.

13.2 CONFLICT OF INTEREST

13.2.1 Bidders shall disclose all perceived, potential and actual Conflicts of Interest. For the purposes of this Bid Process, "**Conflict of Interest**" includes:

- (a) any situation or circumstances where, in relation to this Bid Process, the Work, and/or the Contract, the Bidder's other commitments, relationships or financial interests could or could be perceived to exert an improper influence over the objective, unbiased and impartial exercise of independent judgment by any member or representative of the Owner or the Board;
- (b) any situation or circumstances where any person employed by the Owner in any capacity:
 - (i) has a direct or indirect financial or other interest in any Bidder;
 - (ii) is an employee or a consultant to or under contract to any Bidder;
 - (iii) is negotiating or has an arrangement concerning future employment or contracting with any Bidder;
 - (iv) has an ownership interest in or is an officer or director or partner of any Bidder.

13.2.2 If a Bidder discovers, before or after the Submission Deadline, any perceived, potential or actual Conflict of Interest, the Bidder shall immediately send a written statement to the Bid Coordinator

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describing the perceived, potential or actual Conflict of Interest, along with a written proposal that, if implemented, would address the identified perceived, potential or actual Conflict of Interest. The Owner will review the Bidder's written statement and proposal and, without limiting the generality of Article 12, the Owner may, in its sole discretion:

- (a) disqualify the Bidder from participating in this Bid Process and reject its Bid;
- (b) waive any and all perceived, potential or actual Conflict of Interest upon such terms and conditions as the Owner, in its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately managed, mitigated and minimized.

13.2.3 Failure of a Bidder to comply with this Section may result in the disqualification of the Bidder and the rejection of its Bid.

13.3 CONFIDENTIALITY, DISCLOSURE AND MFIPPA

13.3.1 All information provided by or obtained from the Owner in connection with this Bid Process, the Work, and/or the Contract, including all Reports, is and shall remain the property of the Owner and must be treated as confidential, and such confidentiality obligations shall survive the Bid Process. Such information is not to be used for any purpose other than responding to this Bid Process and, upon conclusion of this Bid Process, if requested by the Owner, Bidders shall return all such information.

13.3.2 Bidders acknowledge that the contents of their Bids will be disclosed within the Owner's organization and/or to the Owner's consultants and advisors. The Owner will use reasonable efforts to protect sensitive and confidential information provided by the Bidders, however, the Owner shall not be liable in any way whatsoever if such information, or any part of it, is disclosed, even if the Owner, its consultants, advisors, staff or any other person associated with them may have been negligent with respect to such disclosure. By submitting a Bid each Bidder agrees to such disclosure and releases the Bid Coordinator and the Owner from any liability for the same.

13.3.3 The Owner may be required to disclose parts or all of a Bid pursuant to the provisions of MFIPPA or other legislation. Subject to the provisions of such legislation, the Owner will use reasonable efforts to safeguard the confidentiality of any information identified by a Bidder as confidential, however, the Owner shall not be liable in any way whatsoever if such information is disclosed based on an order or decision made under such legislation or any other applicable law. By submitting a Bid each Bidder agrees to such disclosure and releases the Bid Coordinator and the Owner from any liability for the same.

13.4 DEBRIEFING

13.4.1 Following the conclusion of this Bid Process, and provided the Contract has been signed, the Owner will offer separate debriefings to unsuccessful Bidders, but only if requested in accordance with paragraph 13.4.2. Debriefings will be held in person or by telephone conference call, at the Owner's discretion, and will be scheduled on a date and time and for a duration to be confirmed by the Owner.

13.4.2 If an unsuccessful Bidder desires a debriefing it shall submit a written e-mail request to the Bid Coordinator within sixty (60) days after the expiry of the Irrevocability Period, failing which no debriefing will be provided.

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13.4.3 Evaluations and scoring of Bids are confidential and during a debriefing the Owner will not provide critiques or discuss the scores or the merits of any Bid other than the Bid submitted by the Bidder that requested the debriefing.

13.5 PUBLIC STATEMENTS

13.5.1 Bidders shall not publish, issue, advertise, distribute or make any statements, postings, blogs or releases, electronic or otherwise, concerning their or any other Bid, the Bid Process, the Contract, the evaluation of Bids, or the award of the Contract, without the Owner's prior express written consent. A Bidder's failure to comply with this paragraph may result in the disqualification of the Bidder and the rejection of its Bid.

13.6 AWARD DOES NOT CONSTITUTE ENDORSEMENT

13.6.1 The Owner's award of the Contract, if any, does not constitute a general endorsement of the successful Bidder's work or services.

13.7 LIMIT OF LIABILITY

13.7.1 Each Bidder agrees that the liability of the Owner to any Bidder and the aggregate amount of damages recoverable against the Owner for any and all claims relating to or arising from this Bid Process including:

- (a) claims arising from negligence, wilful misconduct or other conduct; and/or
- (b) claims arising from a breach of the Bid Contract or any other contractual or other relationship or obligation that may arise as a result of a Bidder's participation in this Bid Process and/or submission of a Bid,

shall be limited to the Bidder's reasonable demonstrated costs of preparing its Bid.

13.8 DISPUTES

13.8.1 If a dispute arises in connection with this Bid Process including, without limitation, a dispute concerning the existence of the Bid Contract or a breach of the Bid Contract, or a dispute as to whether a Bid meets the Mandatory Requirements, the parties to the dispute agree:

- (a) to use their best efforts to resolve the dispute through amicable and good faith negotiations for a period of at least fifteen (15) days, having such written and oral communications and meetings as appropriate;
- (b) if the dispute is not resolved through negotiations the Owner, in its unqualified subjective discretion, may refer the dispute to confidential final binding arbitration before a single arbitrator, selected by the Owner, to be held at Barrie, Ontario pursuant to the *Arbitration Act, 1991* (Ontario), as amended. If the Owner refers the dispute to arbitration, each Bidder agrees that it is bound to arbitrate such dispute. Unless the Owner refers such dispute to arbitration, there shall be no arbitration of such dispute.

13.8.2 The Owner may give notice of a dispute to one or more Bidders, each of whom shall be a party to and shall be entitled to participate in the negotiation and/or arbitration, as the case may be and, in the case of arbitration, each of whom shall be bound by the arbitrator's award, whether or not they participated in the arbitration.

13.8.3 If the Owner refers a dispute to arbitration, the parties to the arbitration shall exchange brief statements of their respective positions on the dispute, together with the relevant documents, and

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submit to an arbitration hearing which shall last no longer than two (2) days, subject to the discretion of the arbitrator to increase such time. The parties to the arbitration further agree that the arbitrator's award shall be final and binding and shall not be subject to appeal. The costs of the arbitrator and the venue shall be shared equally among the parties to the arbitration.

END OF DOCUMENT

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

These Supplementary Conditions modify, delete and/or add to the Agreement between Owner and Contractor, the Definitions and the General Conditions of the Stipulated Price Contract, Standard Construction Document CCDC 2 – 2008.

Where any article or paragraph in the CCDC 2 – 2008 document is supplemented by one of the following, the provisions of such article or paragraph shall remain in effect and the supplemental provisions shall be considered as added thereto. Where any article or paragraph in the CCDC 2 – 2008 document is amended, deleted, or superseded by any of the following, the provisions of such article or paragraph not so amended, deleted or superseded shall remain in effect.

The CCDC 2 – 2008 document is amended as follows:

SC1. AGREEMENT BETWEEN OWNER AND CONTRACTOR

SC1.1 ARTICLE A-5 PAYMENT

- 1.1.1 Amend paragraph 5.1.3, in the first line, by deleting the words “the issuance of the” and replacing them with “receipt of the Consultant’s”.
- 1.1.2 Amend paragraph 5.3.1 as follows:
 - (a) Delete “2%” and replace it with “0%” in paragraph 5.3.1(1); and
 - (b) Delete “4%” and replace it with “2%” in paragraph 5.3.1(2).

SC1.2 ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

- 1.2.1 Amend paragraph 6.1 by deleting the words “or other form of electronic communication” in the second and seventh lines.

SC1.3 ARTICLE A-9 TIME IS OF THE ESSENCE

- 1.3.1 Add a new Article A-9 as follows:

“ARTICLE A-9 TIME IS OF THE ESSENCE

- 9.1 The Contractor represents and warrants that it will attain Substantial Performance of the Work by the date stipulated in paragraph 1.3 of Article A-1 – THE WORK and acknowledges that it has been advised by the Owner that it is critical to the Owner that Substantial Performance of the Work is attained by such date. The Contractor agrees that time shall be of the essence in the performance of the Contractor’s obligations under this Contract.”

SC2. DEFINITIONS

SC2.1 Definitions

- 2.1.1 Amend Definition 4, “Consultant”, by adding the following to the end of that definition:

“For purposes of this Contract, the terms “Consultant”, “Architect” and “Engineer”, wherever used in the Contract Documents, shall be considered synonymous
- 2.1.2 Amend Definition 6, “Contract Documents”, by adding the words “in writing” after the word “upon” in the second line.
- 2.1.3 Amend Definition 12, “Owner”, by adding the following to the end of that Definition:

“For purposes of the Contract, the terms “Owner”, “SCDSB” and the “Board” shall be considered synonymous.”

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2.1.4 Amend Definition 16, “Provide”, by adding the following to the end of that Definition:

“Provide has this meaning whether or not the first letter is capitalized.”

2.1.5 Add the following new Definitions:

27. As-Built Drawings

As-Built Drawings means drawings prepared by the Contractor by marking on a copy of the Drawings the changes from the Drawings which occur during construction including, but not limited to, the exact location of major building components and structures that were shown generally on the Drawings. For certainty, As-Built Drawings shall be in computer-aided design (CAD) format, as well as in hard copy and pdf formats.

28. Construction Schedule

Construction Schedule means the schedule for the performance of the Work provided by the Contractor pursuant to GC 3.5 – CONSTRUCTION SCHEDULE, including any amendments to the Construction Schedule made pursuant to the Contract Documents.

29. Environmental Programs

Environmental Programs means the environmental plans, programs, procedures and requirements of the Owner. The Environmental Programs include Owner’s asbestos control program, its mould program and a program for controlling and handling designated substances.

30. Install

Install means install and connect. Install has this meaning whether or not the first letter is capitalized.

31. Labour Dispute

Labour Dispute means any lawful or unlawful labour problems, work stoppage, labour disruption, strike, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractor’s association of which the Contractor is a member or to which the Contractor is otherwise bound), job action, slow down, picketing, refusal to work or continue to work, refusal to supply materials, cessation or work or other labour controversy which does, or might, affect the Work.

32. OHS

OHS means the Occupational Health and Safety Act (Ontario), as amended, and all rules and regulations made thereunder.

33. WSIB

WSIB means the Ontario Workplace Safety & Insurance Board.”

SC3. GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

SC3.1 GC 1.1 CONTRACT DOCUMENTS

3.1.1 Amend paragraph 1.1.1 by adding the following to the end of that paragraph:

“If the Contractor finds discrepancies in, or omissions from, or has any doubt about the meaning or intent of any of the Contract Documents, the Contractor shall at once notify the Consultant.”

3.1.2 Amend paragraph 1.1.3 by adding the following to the end of that paragraph:

“The intent of the Contract Documents is to include all labour, Products, materials, Construction Equipment and services necessary or normally considered necessary for the performance of the Work in accordance with the Contract Documents. Any item of Work mentioned in the Contract Documents or reasonably inferable from the Contract Documents but not otherwise shown or described shall be provided by the Contractor as if shown or otherwise described or inferable. Any items omitted from the Contract Documents which are reasonably necessary or inferable for the completion of the Work, or

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related work, shall be considered a portion of the Work and included in the scope of Work to be performed under this Contract.”

3.1.3 Amend paragraph 1.1.6 by adding new paragraphs 1.1.6.1 and 1.1.6.2:

“1.1.6.1 The Specifications shall be read as a whole and are the minimum construction requirements. Neither the organization nor the division of the Specifications nor anything else contained in the Contract Documents will be construed to place responsibility on the Consultant to settle disputes among the Subcontractors and Suppliers in respect to such organization or division.

1.1.6.2 The Drawings are, in part, diagrammatic and are intended to convey the scope of the Work and indicate elevations and general and approximate locations, arrangement and sizes of fixtures, equipment, outlets, utilities and underground services. The Contractor shall obtain more accurate information and shall satisfy itself as to the conditions of the pre-grade elevations and the locations, arrangement and sizes of fixtures, equipment, outlets, utilities and underground services from study and coordination of the Drawings, including Shop Drawings, and shall satisfy itself and become familiar with conditions and spaces affecting these matters before proceeding with the Work. Where site conditions require reasonable minor changes in indicated locations and arrangements, the Contractor shall make such changes at no additional cost to the Owner. Similarly, where known conditions or existing conditions interfere with new installation and require relocation, the Contractor shall include such relocation in the Work. The Contractor shall arrange and install fixtures and equipment in such a way as to conserve as much headroom and space as possible.”

3.1.4 Amend paragraph 1.1.7 by adding the following at the end of the paragraph:

“Notwithstanding the foregoing, if there is a conflict or discrepancy between Drawings or between Drawings and Specification or any other Contract Documents in relation to the Products to be supplied or the amount of labour or materials required to complete a particular item of Work, the Contractor shall supply and shall include in the Work the Products, labour and materials which would provide the greatest benefit to the Owner, as determined by the Owner.”

3.1.5 Delete paragraph 1.1.8 and replace it with the following:

“1.1.8 The Owner shall provide the Contractor, without charge, 6 copies of the Contract Documents. Additional copies of the Contract Documents may be obtained from the Consultant at a reasonable cost.”

SC3.2 GC 1.3 RIGHTS AND REMEDIES

3.2.1 Add a new paragraph 1.3.3 as follows:

“1.3.3 To be effective, a waiver of a right, remedy, duty or obligation under this Contract must be expressly written by an authorized representative of the party. For greater certainty, actions of the Owner which shall not constitute a waiver include, but are not limited to, the following:

- .1 making payments to the Contractor;
- .2 any partial or entire use or occupancy of the Project by the Owner;
- .3 final acceptance of the Work by the Owner;
- .4 failure of the Owner or its representatives to object to known defects;
- .5 specifying a list of defects will not be held a waiver of defects not listed.”

SC3.3 GC 2.2 ROLE OF THE CONSULTANT

3.3.1 Amend paragraph 2.2.7 by deleting the words “Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER” from the beginning of the paragraph.

3.3.2 Amend paragraph 2.2.13 by adding the following to the end of that paragraph:

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"If, in the opinion of the Contractor, a Supplemental Instruction involves an adjustment in the Contract Price or the Contract Time, the Contractor shall, within five (5) Working Days of receipt of the Supplemental Instruction, provide the Consultant with a written notice to that effect and shall await further instructions. The Contractor's failure to provide such written notification within the time stipulated in this paragraph shall be deemed an acceptance of the Supplemental Instruction by the Contractor without adjustment in the Contract Price or Contract Time. Without limiting the generality of the foregoing, every item on the Drawings shall be deemed to be included within the scope of the Work, unless noted 'not in contract'."

3.3.1 Add a new paragraph 2.2.19 as follows:

"2.2.19 Neither the Contractor nor any Subcontractor or Supplier shall have any claim against the Consultant as a result of the performance or non-performance of the Consultant's services. The Contractor shall include this provision in any contracts it makes with its Subcontractors and Suppliers, and shall require such Subcontractors and Suppliers to include the same term in their contracts with their subcontractors and suppliers."

SC3.4 GC 2.3 REVIEW AND INSPECTION OF THE WORK

3.4.1 Amend paragraph 2.3.5 by adding the following to the end of the second sentence:

“, and there shall be no extensions of the Contract Time resulting from any delay caused by such examination and correction.”

SC3.5 GC 2.4 DEFECTIVE WORK

3.5.1 Add new paragraphs 2.4.1.1 and 2.4.1.2 as follows:

"2.4.1.1 The Contractor shall rectify, in a manner acceptable to the Owner and the Consultant, all defective Work and deficiencies throughout the Work, whether or not they are specifically identified by the Owner or the Consultant.

2.4.1.2 The Contractor shall prioritize the correction of any defective Work which, in the sole discretion of the Owner, adversely affects the day to day operations of the Owner."

SC3.6 GC 3.0 PRE-CONSTRUCTION SUBMITTALS

3.6.1 Add a new GC 3.0 as follows:

"GC 3.0 PRE-CONSTRUCTION SUBMITTALS

3.0.1 Prior to site mobilization, the Contractor shall submit to the Owner:

- .1 a current WSIB clearance certificate;
- .2 certified true copies of the Contractor's insurance policies having application to the Project or certificates of insurance, at the option of the Owner;
- .3 the bonds described in GC 11.2 – CONTRACT SECURITY;
- .4 documentation of the Contractor's in-house safety program to be implemented for the Project;
- .5 a copy of the Notice of Project filed with the appropriate Ministry naming the Contractor as "constructor" under the OHSA; and
- .6 the Construction Schedule referred to in paragraph 3.5.1.1 of GC 3.5 – CONSTRUCTION SCHEDULE."

SC3.7 GC 3.1 CONTROL OF THE WORK

3.7.1 Add new paragraphs 3.1.3 to 3.1.6 as follows:

"3.1.3 Notwithstanding paragraphs 3.1.1 and 3.1.2, the Contractor agrees that it shall fully incorporate and comply with all policies and procedures of the Owner which are relevant to

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any activity to be performed under the Contract. The Contractor shall inquire from the Owner if such policies or procedures exist and the Owner agrees that it will use reasonable efforts to communicate to the Contractor all relevant policies or procedures.

- 3.1.4 Prior to commencing fabrication and construction activities, the Contractor shall verify all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the Work and shall further carefully compare such field measurements and conditions with the requirements of the Contract Documents. Where dimensions are not included or exact locations are not apparent, the Contractor shall immediately notify the Consultant in writing and shall obtain written instructions from the Consultant before proceeding with any part of the affected Work.
- 3.1.5 The Contractor shall be entirely responsible for the proper laying out of the whole of the Work. The Contractor shall employ an experienced and licensed land surveyor to establish and check grades, benchmarks, references, elevations, points and lines as from time to time may be required for the purposes of the Work, or layout of same, and the Contractor shall at every appropriate stage of the Work take all proper steps to have all proper checks and surveys made so as to ensure that the Work and all components thereof will be wholly within the boundaries of the Project site and in the exact position (or respective positions) established for such Work, and shall assume full responsibility for the correctness of all such lines, levels and measurements.
- 3.1.6 The Contractor shall perform the Work in accordance with modern practice and shall employ only good workmanship in accordance with the Contract Documents, applicable laws, ordinances, rules, regulations, or codes relating to the performance of the Work. Without limiting the generality of the foregoing, the Contractor is responsible for the coordination of the various parts of the Work so that no part shall be left in an unfinished or incomplete condition owing to any disagreement between Subcontractors, or between any of the Subcontractors and the Contractor as to where the Work of one begins or ends with relation to the Work of the other.”

SC3.8 GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

- 3.8.1 Delete paragraphs 3.2.2.1 and 3.2.2.2.
- 3.8.2 Amend paragraph 3.2.3.2 by deleting the semi-colon towards the end of that paragraph and adding the following after the words “schedules and”:
“co-ordinate and schedule the activities and work of other contractors and Owner’s own forces with the Work of the Contractor and connect as specified or shown in the Contract Documents;”
- 3.8.3 Amend paragraph 3.2.3.3 by adding the following to the end of that paragraph:
“Failure by the Contractor to so report shall invalidate any claims against the Owner by reason of the deficiencies in the work of other contractors or Owner’s own forces except those deficiencies not then reasonably discoverable.”
- 3.8.4 Add a new paragraph 3.2.3.4 as follows:
“3.2.3.4 assume overall responsibility for compliance with all aspects of the applicable health and construction safety legislation at the Place of the Work, including all the responsibilities of the “constructor” under the OHSA.”
- 3.8.5 Add a new paragraph 3.2.7 as follows:
“3.2.7 If the Contractor is of the view that the work of other contractors or the work of the Owner’s own forces will compromise, void or nullify any of the warranties to be provided pursuant to this Contract, the Contractor shall give Notice in Writing to the Owner as soon as reasonably possible and shall include in such notice the reasons why, in the Contractor’s view, a warranty or warranties will be compromised, voided or nullified, together with the Contractor’s recommendations for avoiding such result.”

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SC3.9 GC 3.4 DOCUMENT REVIEW

3.9.1 Amend paragraph 3.4.1 by deleting the second and third sentences of that paragraph and replacing them with the following:

“Such review by the Contractor shall meet the standard of care described in GC 3.14 – STANDARD OF CARE. Except for the obligation to make such review and report the result, the Contractor does not assume any responsibility to the Owner or the Consultant for the accuracy of the Contract Documents. Provided it has exercised the degree of care and skill described in this paragraph, the Contractor shall not be liable for damages or costs resulting from such errors, inconsistencies, or omissions in the Contract Documents, which the Contractor did not discover.”

3.9.2 Add new paragraphs 3.4.2 and 3.4.3 as follows:

“3.4.2 Notwithstanding the foregoing, errors, inconsistencies, discrepancies and/or omissions shall not include lack of reference on the Drawings or in the Specifications to labour and/or Products that are required or normally recognized within respective trade practices as being necessary for the complete execution of the Work.

3.4.3 If the Contractor finds discrepancies in and/or omissions from the Contract Documents or has any doubt as to the meaning or intent of any part thereof, the Contractor must immediately notify the Consultant, who will provide written instructions or explanations. Neither the Owner nor the Consultant will be responsible for oral instructions.”

SC3.10 GC 3.5 CONSTRUCTION SCHEDULE

3.10.1 Delete paragraph 3.5.1 and replace it with the following:

“3.5.1 The Contractor shall:

- .1 within ten (10) Working Days of signing this Contract submit to the Owner, for the Owner’s approval, a Construction Schedule that indicates the timing of major activities and critical milestone dates for the Project, demonstrating that the Work will be performed in conformity with the Contract Time. Such schedule:
 - (A) shall be in editable electronic format approved by the Owner and shall include and show all logic links between activities; and
 - (B) shall be prepared in collaboration with, and supported by, the Subcontractors and Suppliers whose activities affect the critical path of the Work, and
 - (C) shall include and make provision for statutory holidays, the rectification of defects and deficiencies, and all warranty obligations, and
 - (D) shall provide sufficient detail of the critical events and their inter-relationship and shall include a baseline schedule indicating the critical path for the Project; and
- .2 provide the expertise and resources, including manpower and Construction Equipment, as are necessary to maintain progress under the Construction Schedule or any successor or revised schedule approved by the Owner; and
- .3 monitor the progress of the Work relative to the Construction Schedule or any successor or revised schedule approved by the Owner and update the Construction Schedule on a monthly basis or at such other interval as instructed by the Owner and/or the Consultant; and
- .4 advise the Consultant and the Owner in writing of any variation from the baseline or slippage in the Construction Schedule within 24 hours of such variation or slippage becoming apparent; and
- .5 at each site meeting, provide (in writing or verbally to be recorded in minutes) to the Owner and the Consultant a look-ahead schedule indicating the major activities to be undertaken or constructed in the next month.”

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3.10.2 Add new paragraphs 3.5.2, 3.5.3 and 3.5.4 as follows:

- “3.5.2 If at any time it should appear to the Owner or the Consultant that the actual progress of the Work is behind the Construction Schedule or any other schedule or is likely to fall behind schedule, based on critical path methodology, or if the Contractor has so advised the Consultant pursuant to paragraph 3.5.1.3, the Contractor shall take appropriate steps to cause the actual progress of the Work to conform to the Construction Schedule and shall produce and present to the Owner and the Consultant a recovery plan demonstrating how the Contractor will achieve the recovery of the Construction Schedule. If the Contractor intends to apply for a change in the Contract Price in relation to a schedule recovery plan, the Contractor shall proceed pursuant to GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 3.5.3 If after applying the expertise and resources required under paragraphs 3.5.1 and 3.5.2 the Contractor forms the opinion that the slippage in the Construction Schedule or any other schedule cannot be recovered by the Contractor, it shall give Notice in Writing to the Consultant and the Owner if the Contractor intends to apply for an extension of Contract Time.
- 3.5.4 Without limiting the other obligations of the Contractor under GC 3.5, the Contractor shall not amend the Construction Schedule without the prior written consent of the Owner. In addition, at each site construction meeting, the Contractor shall provide to the Owner and the Consultant a two (2) week look-ahead schedule indicating the major activities to be undertaken or constructed in such two (2) week period.”

SC3.11 GC 3.6 SUPERVISION

3.11.1 Amend paragraph 3.6.1 by adding the following to the end of that paragraph:

“, and upon the Contractor obtaining the Owner’s prior written consent, which consent will not be unreasonably withheld.”

3.11.2 Add a new paragraph 3.6.3 as follows:

“3.6.3 The Owner, acting reasonably, shall have the right to order the Contractor to remove from the Project any representative or employee of the Contractor, Subcontractors or Suppliers who, in the opinion of the Owner, are a detriment to the Project.”

SC3.12 GC 3.7 SUBCONTRACTORS AND SUPPLIERS

3.12.1 Add new paragraph 3.7.1.4 as follows:

“3.7.1.4 ensure that all Subcontractors and Suppliers, and anyone employed or engaged by them directly or indirectly, have the qualifications, technical skills, levels of experience and knowledge required (including with respect to all applicable health and construction safety rules and regulations), and all applicable permits, licenses and approvals necessary, to discharge the work to be performed by them in accordance with the terms of the Contract.”

3.12.2 Amend paragraph 3.7.2 by adding the following to the end of that paragraph:

“The Contractor agrees not to change Subcontractors without the prior written consent of the Owner, which consent will not be unreasonably withheld.”

3.12.3 Amend paragraph 3.7.3 by deleting the words “before the Owner has signed the Contract” in the first line of that paragraph.

3.12.4 Add a new paragraph 3.7.7 as follows:

“3.7.7 Notwithstanding paragraph 3.7.5, the Owner may assign to the Contractor, and the Contractor agrees to accept, the assignment of any contract procured by the Owner for Work or services

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or Products required on the Project that has been pre-tendered or pre-negotiated by the Owner.”

SC3.13 GC 3.8 LABOUR AND PRODUCTS

3.13.1 Amend paragraph 3.8.1 by adding the following sentence to the end of that paragraph:

“The Contractor represents and warrants that the Products provided in accordance with the Contract Documents are not subject to any conditional sales contracts and are not subject to any security rights claimed or obtained by any third party which may subject any of the Products to seizure and/or removal from the Place of the Work.”

3.13.2 Delete paragraph 3.8.2 and replace it with the following:

“3.8.2 Products provided shall be new and shall conform to all current applicable specifications of the Canadian Standards Association, Canadian Standards Board or General Standards Board, ASTM, National Building Code, Ontario Building Code and all governmental authorities having jurisdiction at the Place of the Work, unless otherwise specified. Products which are not specified shall be of a quality consistent with those specified and their use acceptable to the Consultant. Products brought on to the Place of the Work by the Contractor shall be deemed to be the property of the Owner, but the Owner shall be under no liability for loss thereof or damage thereto arising from any cause whatsoever, and such Products shall be brought to the Place of the Work at the sole risk of the Contractor”

3.13.3 Amend paragraph 3.8.3 by adding the words “, agents, Subcontractors and Suppliers” after the word “employees” toward the end of the first line.

3.13.4 Add new paragraphs 3.8.4 to 3.8.7 as follows:

“3.8.4 The Contractor is responsible for the safe on-site storage of Products and their protection (including Products supplied by the Owner and other contractors to be installed under the Contract) in such ways as to avoid dangerous conditions or contamination to the Products or other persons or property and in locations at the Place of the Work to the satisfaction of the Owner and the Consultant.

3.8.5 The Contractor shall cooperate with the Owner and shall take all reasonable and necessary actions to maintain stable and harmonious labour relations with respect to the Work, including cooperation to attempt to avoid work stoppages, trade union jurisdictional disputes, and other Labour Disputes. The Contractor shall not, and shall ensure that its Subcontractors and Suppliers do not, employ any persons on the Project whose labour affiliation, or lack thereof, is incompatible with other labour employed in connection with the Work. Any costs arising from Labour Disputes as a result of the employment of any such person by the Contractor, its Subcontractors or Suppliers, shall be the sole expense of the Contractor.

3.8.6 Without in any way limiting the Contractor’s obligations under this Contract, the Contractor shall prepare and implement job site rules more particularly described in the Contract Documents. If no job site rules are described in the Contract Documents, the Contractor shall draft job site rules for the review and approval of the Owner. Such job site rules shall be consistent with the Contractor’s duties and obligations under the OHSA, and shall include provisions making smoking and the consumption of alcohol or non-prescription drugs on the Project the subject of discipline proceedings and/or termination of employment.

3.8.7 The Owner, acting reasonably, shall have the right to order the Contractor to remove from the Project, without cost to the Owner, any representative or employee of the Contractor or any representative or employee of any Subcontractor or Supplier who, in the opinion of the Owner, is a detriment to the Project. In addition, where the Work is being carried out at or near an existing school during the school year, the Contractor shall, upon the Owner’s request, provide to the Owner criminal background checks on all of the Contractor’s employees who will be providing work or services at the Place of the Work, and the Contractor shall require its Subcontractors and Suppliers to provide criminal background checks on any of their employees who will be providing work or services at the Place of the Work. Where such

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background checks indicate that an employee of the Contractor or any Subcontractor or Supplier has a criminal record, the Owner shall be entitled to cause the removal of that person from the Project.”

SC3.14 GC 3.9 DOCUMENTS AT THE SITE

3.14.1 Delete paragraph 3.9.1 and replace it with the following:

“3.9.1 The Contractor shall keep one copy of the current Contract Documents, As-Built Drawings, Supplemental Instructions, contemplated change orders, Change Orders, Change Directives, cash allowance disbursement authorizations, reviewed Shop Drawings, Submittals, reports and records of meetings at the Place of the Work, in good order and available to the Owner and Consultant.”

SC3.15 GC 3.10 SHOP DRAWINGS

3.15.1 Delete paragraph 3.10.3 in its entirety and replace it with the following:

“3.10.3 The Contractor shall prepare a Shop Drawing schedule acceptable to the Owner and the Consultant prior to the first application for payment. A draft of the proposed Shop Drawing schedule shall be submitted by the Contractor to the Consultant and the Owner for approval. The draft Shop Drawing schedule shall clearly indicate the phasing of Shop Drawing submissions.”

3.15.2 Add new paragraphs 3.10.13 to 3.10.16 as follows:

“3.10.13 Reviewed Shop Drawings shall not authorize a change in the Contract Price and/or the Contract Time.

3.10.14 The Contractor shall not use the term “by others” on Shop Drawings or other submittals, but shall identify the responsible trade, Subcontractor or Supplier where such work is within the scope of the Work.

3.10.15 Where Specifications require the Shop Drawings to bear the seal and signature of a professional engineer, such professional engineer shall be registered in the jurisdiction of the Place of the Work and shall have expertise in the area of practice reflected in the Shop Drawings.

3.10.16 The Owner's approval of Shop Drawings will be an approval of general detail and arrangement only. The Owner's approval shall not relieve the Contractor from its responsibility for deviations from the Contract Documents, unless the Contractor in writing has notified the Owner of such deviations at the time of submission of the Shop Drawings and the Owner has given written approval to the specific deviations. The Owner's approval also shall not relieve the Contractor from responsibility for defective Work resulting from errors or omissions of any kind on the approved Shop Drawings and shall not constitute authorization to the Contractor to perform additional Work or changed Work. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes, or techniques of construction and installation.”

SC3.16 GC 3.11 USE OF THE WORK

3.16.1 Add new paragraphs 3.11.3 and 3.11.4:

“3.11.3 The Owner or its contractors shall have the right to enter or occupy the Place of the Work, in whole or part, and whether partially or entirely completed, for the purpose of installing, testing or storing fixtures, equipment or machinery before the issuance of a final certificate for payment if such entry and occupancy does not materially interfere with the Contractor in the performance and completion of this Contract within the Contract Time. Such entry or occupancy shall not be considered as acceptance of the Work, in whole or in part, nor shall it relieve the Contractor of its responsibility to complete the Contract.

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- 3.11.4 The Owner reserves the right to take possession of and use for any intended purpose any portion or all of the undelivered portion of the Project, even though Substantial Performance of the Work may not have been attained, provided that such taking of possession and use will not interfere, in any material way, with the progress of the Work. The taking of possession or use of any such portion of the Project shall not be deemed to be the Owner's acknowledgement or acceptance of the Work or the Project, nor shall it relieve the Contractor of any of its obligations under the Contract. In particular, the Contractor's obligations respecting construction health and safety, including all duties of the "constructor" under the OHSA, shall continue to apply notwithstanding such taking of possession and use."

SC3.17 GC 3.13 CLEANUP

- 3.17.1 Amend paragraph 3.13.1 by adding the following to the end of that paragraph:

"The Contractor shall ensure the Place of the Work is cleaned and left in a tidy condition on a daily basis. In the event that the Contractor fails to remove waste and debris as provided in this GC 3.13, then, the Owner or the Consultant may give the Contractor twenty-four (24) hours' written notice to meet its obligations respecting clean up. Should the Contractor fail to meet its obligations pursuant to this GC 3.13 within the twenty-four (24) hour period next following delivery of the notice, the Owner may remove such waste and debris and deduct from payments otherwise due to the Contractor the Owner's costs for such clean up, including a reasonable mark-up for administration."

SC3.18 GC 3.14 STANDARD OF CARE

- 3.18.1 Add new GC 3.14 as follows:

"GC 3.14 STANDARD OF CARE

- 3.14.1 In performing this Contract the Contractor shall exercise a standard of care, skill and diligence that would normally be exercised by an experienced and prudent contractor supplying similar services for similar projects. The Contractor acknowledges and agrees that throughout the Contract, the Contractor's obligations, duties and responsibilities shall be interpreted in accordance with this standard. The Contractor shall exercise the same standard of care, skill and diligence in respect of any Products, Subcontractors, Suppliers, personnel, or procedures which it may recommend to the Owner or employ on the Project.
- 3.14.2 The Contractor represents, covenants and warrants to the Owner that:
- .1 the personnel it assigns to the Project are appropriately experienced;
 - .2 it has a sufficient staff of qualified and competent personnel to replace its designated supervisor and project manager, subject to the Owner's approval, in the event of death, incapacity, removal or resignation; and
 - .3 there are no pending, threatened or anticipated claims that would have a material effect on the financial ability of the Contractor to perform this Contract.
- 3.14.3 The Contractor shall perform the Work so as to avoid disturbing the occupants of the Place of the Work and any adjacent structures or the public in general, and shall perform the Work in the least intrusive manner possible and shall respect and comply with local regulations and requirements regarding permitted work hours, noise levels and work conditions. The Contractor, without in any way limiting its responsibilities under this Contract, shall take all reasonable steps to avoid interference with fire exits, building access and egress, continuity of electric power and all other utilities, to suppress dust and noise, to avoid conditions likely to propagate mould or fungus of any kind, and shall take all other steps reasonably necessary to promote and maintain the safety and comfort of the occupants of the Place of the Work and any adjacent structures and the public in general, and/or to maintain access to and the operation of the same. Without Owner's prior approval, the Contractor shall not permit any personnel, workers or Subcontractors to use any existing facilities including, without limitation, elevators, lavatories, toilets, entrances and parking areas other than those designated by the Owner."

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SC3.19 GC 3.15 CONTRACTOR'S USE OF PERMANENT EQUIPMENT OR SYSTEMS

3.19.1 Add a new GC 3.15 as follows:

"GC 3.15 CONTRACTOR'S USE OF PERMANENT EQUIPMENT OR SYSTEMS

3.15.1 Upon receiving the Contractor's written request the Owner may, but is under no obligation to, permit the Contractor to make use of elements of the mechanical and electrical systems or equipment comprising a permanent part of the Work for the purpose of completing the Project. In such event the Contractor shall:

- .1 perform all preventative maintenance services on such systems and equipment as and when specified by the manufacturer;
- .2 prior to applying for the certificate of Substantial Performance of the Work, clean and make good, to the satisfaction of the Consultant, all such systems and equipment;
- .3 pay any and all costs associated with such use, preventative maintenance services, cleaning and making good.

3.15.2 Where the Contractor has made use of elements of the mechanical and electrical systems or equipment comprising a permanent part of the Work, as described in paragraph 3.15.1, the Contractor shall obtain, from the manufacturer or Supplier of the systems or equipment used, a confirmation from such manufacturer or Supplier that the warranty on such systems or equipment begins on the date of Substantial Performance of the Work and is not impaired in scope or reduced in time by virtue of the Contractor's use of such systems or equipment."

SC3.20 GC 4.1 CASH ALLOWANCES

3.20.1 Delete paragraphs 4.1.4 and 4.1.5 and replace them with the following:

"4.1.4 Where the actual cost of the Work under any cash allowance exceeds or is expected to exceed the amount of the allowance, the Contractor shall notify the Owner in writing indicating the amount of additional funds required and, in such case, the Contractor shall not proceed with the cash allowance work until the Contractor receives written instructions from the Owner. Unexpended amounts from other cash allowances may be reallocated at the Consultant's direction to cover the shortfall and, in that case, the Contractor is not entitled to any amount for overhead and profit. Where no such direction is given, or where the actual cost exceeds the allowance even after reallocation of unexpended amounts from other cash allowances, the Contractor shall be compensated for the excess incurred and substantiated, plus an amount for overhead and profit as set out in the Contract Documents, but on the excess only.

4.1.5 The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the Contract Price by Change Order without any adjustment for the Contractor's overhead and profit on such amount."

3.20.2 Add new paragraphs 4.1.8 and 4.1.9 as follows:

"4.1.8 Purchases from cash allowances must be authorized by written instructions issued by the Consultant and the form and methods of accounting for costs shall be agreed to by the Consultant and the Contractor before proceeding with the purchase.

4.1.9 The Owner reserves the right to call, or to have the Contractor call, for competitive bids for portions of the Work to be paid for from cash allowances."

SC3.21 GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

3.21.1 Delete GC 5.1.

SC3.22 GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

3.22.1 Amend paragraph 5.2.3 by adding the following to the end of that paragraph:

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"No amount claimed shall include Products delivered to the Place of the Work unless the Products are free and clear of all security interests, liens, and other claims of third parties."

3.22.2 Amend paragraph 5.2.7 by adding the following to the end of that paragraph:

"Any Products delivered to the Place of the Work but not yet incorporated into the Work shall remain at the risk of the Contractor notwithstanding that title has passed to the Owner pursuant to GC 13.1 – OWNERSHIP OF MATERIALS."

3.22.3 Add new paragraphs 5.2.8 and 5.2.9 as follows:

"5.2.8 As a condition of receiving each progress payment the Contractor shall include with each application for payment:

- .1 a CCDC 9 Statutory Declaration attesting to the truth of the statements made therein;
- .2 a current WSIB clearance certificate; and
- .3 in respect of any subcontract whose value exceeds \$100,000, a statutory declaration in form CCDC 9B – 2001."

SC3.23 GC 5.3 PROGRESS PAYMENT

3.23.1 Amend paragraph 5.3.1.2 by deleting the words "calendar days" in the first line and replacing them with "Working Days".

3.23.2 Delete paragraph 5.3.1.3 and replace it 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 15 Working Days after the Owner's receipt of a certificate of payment issued by the Consultant."

3.23.3 Add new paragraphs 5.3.2 and 5.3.3 as follows:

"5.3.2 If the Contractor fails to provide the necessary supporting documentation with each application for progress payment in accordance with GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT, the Owner reserves the right to withhold payment to the Contractor until such time as the supporting documentation is provided.

5.3.3 Payment by the Owner shall not preclude the Owner from thereafter disputing any of the items for which payment was made and shall not be construed as acceptance of any part of the Work."

SC3.24 GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

3.24.1 Delete paragraph 5.4.3 and replace it with the following:

"5.4.3 Immediately after the issuance of the certificate of Substantial Performance of the Work, the Contractor, in consultation with the Consultant, shall establish reasonable dates for finishing the Work and correcting deficiencies.

5.4.4 Before submitting the written application referred to in paragraph 5.4.1, the Contractor shall submit to the Consultant all:

- .1 guarantees, warranties and certificates;
- .2 testing and balancing reports and spare parts;
- .3 distribution system diagrams and Shop Drawings;
- .4 maintenance and operational manuals, instructions and materials;
- .5 existing reports and correspondence from authorities having jurisdiction,

and other close-out materials or documentation required to be submitted under the Contract, together with written proof acceptable to the Owner and the Consultant that the Work has been performed in conformance with the requirements of municipal, governmental, and utility

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authorities having jurisdiction at the Place of the Work. The Contractor shall deliver the materials and documentation listed in this paragraph in an electronic format that is readable on the Owner's information technology infrastructure.

- 5.4.5 Within thirty (30) days of the date of Substantial Performance of the Work the Contractor shall deliver to the consultant final As-Built Drawings, failing which the Consultant may assign a reasonable amount to cover the cost the Owner would incur to prepare the As-Built Drawings or, where applicable, an amount specified in the Contract Documents, and retain that amount from any future amount owing to the Contractor, until the final As-Built Drawings are delivered.
- 5.4.6 If the Contractor fails to deliver the documents and materials described in paragraph 5.4.4, then, provided that none of the missing documents and materials interferes with the use and occupancy of the Project in a material way, the failure to deliver shall not be grounds for the Consultant to refuse to certify Substantial Performance of the Work. The Consultant may assign a reasonable amount or, where applicable, an amount specified in the Contract Documents, and retain that amount from the written application for Substantial Performance of the Work, until the required materials are delivered.
- 5.4.7 Should any documents or materials not be delivered in accordance with paragraph 5.4.4 or 5.4.5 by the earlier of: (1) forty-five (45) days following the issuance of the certificate of Substantial Performance of the Work, and (2) the Contractor's application for final payment under paragraph 5.7.1 of GC 5.7 – FINAL PAYMENT, then the amount(s) previously retained pursuant to paragraphs 5.4.5 and/or 5.4.6 shall be forfeited to the Owner as compensation for the damages deemed to have been incurred by the Owner, and not as a penalty, arising from the Contractor's failure to deliver the specified documents or materials, and the Contract Price shall be reduced accordingly."

SC3.25 GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

- 3.25.1 Amend paragraph 5.5.2 by adding the following sentence to the end of that paragraph:
"A reserve fund may be retained by the Owner to secure the correction of deficiencies, the amount of such reserve fund to be based on the Consultant's reasonable estimate of the cost of correcting deficient items."
- 3.25.2 Delete paragraph 5.5.3.
- 3.25.3 Amend paragraph 5.5.4 by deleting the word "first" in the second line of that paragraph and replacing it with the word "fifth".

SC3.26 GC 5.7 FINAL PAYMENT

- 3.26.1 Amend paragraph 5.7.1 by adding the following to the end of that paragraph:
"The Contractor's application for final payment shall be accompanied by any documents or materials not yet delivered pursuant to paragraphs 5.4.4 and 5.4.5 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK."
- 3.26.2 Amend paragraph 5.7.2 as follows:
- (a) by deleting the words "10 calendar days" in the first line of that paragraph and replacing them with "10 Working Days"; and
 - (b) by adding the following to the end of that paragraph:
"The application will not be considered valid until Products installed are tested and conform to the requirements specified in the Contract Documents and all documentation required by the Contract Documents including but not limited to the documents and materials listed in paragraphs 5.4.4 and

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5.4.5 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK have been received and accepted by the Consultant.”

- 3.26.3 Amend paragraph 5.7.4 by deleting the words “5 calendar days after the issuance” and substituting the words “15 Working Days after receipt” in the second line.

SC3.27 GC 5.8 WITHHOLDING OF PAYMENT

- 3.27.1 Add new paragraphs 5.8.2 and 5.8.3 as follows:

“5.8.2 Notwithstanding any provision in the Contract Documents to the contrary, the Owner may withhold payment on any certificate for payment to the extent required to offset any previous over-payment made to the Contractor, damages or costs incurred by the Owner, or to the extent as may be necessary to protect the Owner from loss or damage as a result of:

- .1 Contractor’s failure to perform any of its material obligations, or where the Contractor is otherwise in default under the Contract Documents and any such default is continuing;
- .2 defective Work not remedied;
- .3 damage done by the Contractor to work carried out by other contractors or by Owner’s forces;
- .4 Contractor’s failure to make prompt payment to its Subcontractors and Suppliers respecting Work for which the Owner has made payment to the Contractor;
- .5 claims or reasonable evidence indicating possible commencement of claims for which the Contractor may be responsible to indemnify the Owner;
- .6 there is a reasonable indication that the Work will not be substantially performed in accordance with the Construction Schedule or within the Contract Time;
- .7 Contractor’s failure to remove liens arising from the Work or otherwise to satisfy its obligations under GC 13.4 – LIENS AND ACTIONS.

5.8.3 Where the Owner has withheld payment to the Contractor pursuant to the provisions of this Contract, the Owner shall be entitled to apply the funds withheld toward the cost of any required remedial work, or toward damages or losses suffered and for which the Owner is entitled to compensation under the Contract.”

SC3.28 GC 6.1 OWNER’S RIGHT TO MAKE CHANGES

- 3.28.1 Amend paragraph 6.1.2 by adding the following to the end of that paragraph:

“This requirement is of the essence and it is the express intention of the parties that any claims by the Contractor for a change in the Contract Price, Contract Time and/or the Contract shall be barred unless there has been strict compliance with PART 6 – CHANGES IN THE WORK. No course of conduct or dealing between the parties, no express or implied acceptance of alterations or additions to the Work, and no claims that the Owner has been unjustly enriched by any alteration or addition to the Work, whether in fact there is any such unjust enrichment or not, shall be the basis of a claim for additional payment under this Contract or a claim for any extension of the Contract Time, or a claim for an amendment to the Contract. Without limiting the generality of the foregoing, under circumstances of expediency, the Contractor may proceed with a change in the Work without first obtaining a Change Order or a Change Directive where it has received from the Owner or the Owner’s authorized representative some form of written or electronic direction agreeing to a change in the Contract Price, the Contract Time or the Contract, in which case such change, and the value of such change, if any, will be determined pursuant to GC 6.2 or GC 6.3, at the option of the Owner.”

- 3.28.2 Add a new paragraph 6.1.3 as follows:

“6.1.3 The Contractor agrees that changes resulting from construction coordination including but not limited to site surface conditions, site coordination and Subcontractor and Supplier coordination, are included in the Contract Price and shall not entitle the Contractor to claim any increase to the Contract Price in relation to coordination.”

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SC3.29 GC 6.2 CHANGE ORDER

3.29.1 Amend paragraph 6.2.1 by adding the following sentence to the end of that paragraph:

“Such adjustments and method of adjustment must be submitted by the Contractor to the Consultant in sufficient time to prevent interruption of the orderly process of construction and, in any event, no later than ten (10) days from the Contractor’s receipt of the proposed change in the Work.”

3.29.2 Add new paragraphs 6.2.3 to 6.2.6 as follows:

“6.2.3 The value of a change shall be determined in one or more of the following methods as directed by the Owner:

- .1 by estimate and acceptance of a lump sum. The lump sum shall include overhead, profit and other reasonable charges of the Contractor and shall be the total cost to the Owner;
- .2 by unit prices established in the Contract or subsequently agreed upon. Unit prices shall include overhead, profit, and other reasonable charges of the Contractor and shall be the total cost to the Owner. Adjustment to the Contract Price shall be based on a net quantity difference from the original quantity.
- .3 by the amount, net of all credits, of time, materials and Products expended:
 - (A) by a Subcontractor, applying the labour charge out rates set out in the wage schedule in the Contract Documents together with the actual costs, without mark-up, of materials and Products utilized in the change, plus the Subcontractor’s mark-up disclosed in Column A of the table below which applies to material and Product costs only;
 - (B) by the Contractor, applying the labour charge out rates set out in the wage schedule in the Contract Documents together with the actual costs, without mark-up, of materials and Products utilized in the change, plus the mark-up disclosed in Column B of the table below which applies to material and Product costs only. For greater certainty, the Contractor is not entitled to a mark-up disclosed in Column B of the table below on self-performed additional work.

The Contractor shall also be entitled to the mark-up disclosed in Column B of the table below, on the value of additional work performed by Subcontractors.

Value of Additional Work	<u>Column A</u> Subcontractor Mark-Up on Material and Products only	<u>Column B</u> Contractor Mark-Up on Material and Products Supplied by the Contractor, and on Subcontractor work
\$0 to no more than \$25,000	10%	10%
\$0 to no more than \$50,000	10%	7.5%
\$0 to in excess of \$50,000	5%	5%

Interpretive Note: The mark-ups disclosed in the above table are flat not graduated. For example, a Subcontractor performed change valued at \$35,000 attracts a mark-up of 10% for the Subcontractor (on the cost of material and Products only) and 7.5% for the Contractor. The table is not intended to provide one set of mark-ups for the first \$25,000 of the change and a different set of mark-ups for the balance.

6.2.4 The mark-ups described in paragraph 6.2.3.3 are intended to cover all general expenses and overhead costs incurred by the Contractor in relation to the change. For greater certainty, the following items are covered by and included in the mark-ups: additional bonding and insurance costs, supervision, project management, general account items, small tools, estimating, safety, preparation of record drawings, coordination and administration and

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warranty costs, and general clean-up and disposal costs necessary to perform the change in the Work.

- 6.2.5 An adjustment to the Contract Time will be considered only when the Contractor demonstrates to the Owner that a change in the Work affects the critical path of the Work. Any costs associated with an adjustment to the Contract Time shall be identified by the Contractor and shall be limited to the reasonable direct costs directly attributable to the adjustment to the Contract Time, excluding the items described in paragraph 6.2.4.
- 6.2.6 The Contractor shall not be entitled to any additional compensation arising out of changes to the Work aside from the amounts determined in accordance with this GC 6.2. In no event shall the Owner be liable to the Contractor for any costs, including indirect, impact or consequential costs, arising out of changes to the Work beyond the agreed upon amount of the Change Order."

SC3.30 GC 6.3 CHANGE DIRECTIVE

3.30.1 Delete paragraph 6.3.3.

3.30.2 Amend paragraph 6.3.7 by inserting the words "Subject to paragraph 6.3.14," at the beginning of that paragraph. Further amend paragraph 6.3.7 as follows:

(a) Delete paragraph 6.3.7.1 and replace it with the following:

"6.3.7.1 salaries, wages and benefits paid to personnel in the direct employ of the Contractor, applying the labour rates set out in the wage schedule in the Contract Documents or as otherwise agreed between the Owner and Contractor for personnel

- (A) carrying out the Work, including necessary supervisory services;
- (B) engaged in the preparation of Shop Drawings, fabrication Drawings, coordination Drawings and As-Built Drawings; or
- (C) including clerical staff engaged in processing changes in the Work."

(b) Delete paragraphs 6.3.7.15 and 6.3.7.17.

3.30.3 Amend paragraph 6.3.12 by adding the following to the beginning of that paragraph:

"An adjustment of the Contract Time will be considered only where the change in the Work affects the critical path of the Work."

3.30.4 Add a new paragraph 6.3.14 as follows:

"6.3.14 Without limitation, the following shall not form part of the cost of performing the work attributable to a Change Directive, and shall not be recoverable by the Contractor:

- .1 head office salaries and benefits and all other overhead or general expenses, except only for the salaries, wages and benefits of personnel described in paragraph 6.3.7.1 and the contributions, assessments or taxes referred to in paragraph 6.3.7.2;
- .2 capital expenses and interest on capital;
- .3 general cleanup, except where the performance of the work attributed to the Change Directive causes specific additional cleanup requirements;
- .4 wages paid for field supervision of Subcontractors;
- .5 wages, salaries, rentals or other expenses that exceed the rates that are standard in the locality of the Place of the Work or that are otherwise deemed unreasonable by the Consultant;
- .6 any costs or expenses attributable to the negligence, improper work, deficiencies, or breaches of contract by the Contractor or any Subcontractor;

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- .7 any costs of quality assurance, such as inspection and testing services, charges levied by authorities having jurisdiction, and any legal fees unless any such costs or fees are pre-approved in writing by the Owner; and
- .8 the costs of the items listed in paragraph 6.2.4.”

SC3.31 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

3.31.1 Add a new paragraph 6.4.0 as follows:

“6.4.0 The Contractor confirms that, before signing the Contract, it carefully investigated and examined the Place of the Work, the Contract Documents and any other documents made available by the Owner, and applied to such investigations and examinations the degree of care, skill and diligence described in paragraph 3.14.1 of GC 3.14 – STANDARD OF CARE. Through such investigations and examinations, the Contractor has satisfied itself as to the conditions, circumstances, limitations and requirements necessary for the Contractor to perform the Work in accordance with the Contract Documents including, but not necessarily limited to, such things as:

- .1 the nature and location of the Work and the Project site, including the availability / restrictions of access to the Project site;
- .2 the character and content of the Work to be done;
- .3 the character and scope of work to be done by other contractors and Owner’s forces;
- .4 the availability of labour, equipment, material, Products and facilities needed for the on-time performance and completion of the Work;
- .5 all labour restrictions, including availability of skilled trades;
- .6 safety hazards and labour contract negotiations which may have an impact on the performance of the Work;
- .7 the location of any required utility service;
- .8 without limiting the generality of the foregoing, any contingency and/or circumstances which may affect the Work.

If the Contractor has not conducted the investigations and examinations described in this paragraph 6.4.0, it is deemed to assume all risk of conditions or circumstances now existing or arising in the course of the Work which could make the Work more expensive or more difficult to perform than was contemplated at the time the Contract was signed. No allowances will be made for additional costs and no claims by the Contractor will be considered for an adjustment in the Contract Price or Contract Time in connection with conditions which were reasonably apparent or which could reasonably have been discovered by such investigations or examinations made before the signing of the Contract.”

3.31.2 Amend paragraphs 6.4.1.1 and 6.4.1.2 by adding the following words to the end of each of those paragraphs:

“and which were concealed from discovery notwithstanding the conduct of the investigations and examinations described in paragraph 6.4.0.”

3.31.3 Amend paragraph 6.4.2 by inserting the words “and were concealed from discovery notwithstanding the conduct of the investigations and examinations described in paragraph 6.4.0” after the word “materially” in the second line.

3.31.4 Delete paragraph 6.4.3 and substitute the following:

“6.4.3 If the Consultant makes a finding pursuant to paragraph 6.4.2 that no change in the Contract Price or Contract Time is justified, the Consultant shall report in writing the reasons for this finding to the Owner and the Contractor.”

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SC3.32 GC 6.5 DELAYS

3.32.1 Amend paragraphs 6.5.1 and 6.5.2 by deleting the last sentence in each paragraph and substituting the following in each case:

“The Contractor shall be reimbursed by the Owner for reasonable direct costs directly flowing from the delay, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity.”

3.32.2 Amend paragraph 6.5.3 by adding the following to the end of that paragraph:

“, in which case the Contractor shall be reimbursed by the Owner for reasonable direct costs directly flowing from the delay, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity.”

3.32.3 Amend paragraph 6.5.4 by adding the following to the end of that paragraph:

“For greater certainty, it is the intention of the parties that an extension for delay will be considered only when the Contractor demonstrates to the Owner that the delay affects the critical path of the Work. Without in any way limiting the generality of the foregoing, it is a condition precedent to the Contractor’s claim for extension of the Contract Time and for additional compensation that the notice provisions in this paragraph be strictly adhered to in each instance, except where the event of delay itself reasonably precludes strict adherence to such notice provisions. If the Contractor fails to comply with such notice provisions, it shall be deemed to have waived the right to claim for the effects of delay.”

3.32.4 Add new paragraphs 6.5.6, 6.5.7, 6.5.8 and 6.5.9 as follows:

“6.5.6 If the Contractor is delayed in the performance of the Work by an act or omission of the Contractor or anyone directly or indirectly employed or engaged by the Contractor, or by any cause within the Contractor’s control, then the Contract Time shall be extended for such reasonable time as the Consultant may decide in consultation with the Owner and the Contractor. The Owner shall be reimbursed by the Contractor for all reasonable costs incurred by the Owner as the result of such delay including, but not limited to, the cost of all additional services required by the Owner from the Consultant or any subconsultants, project managers, or others employed or engaged by the Owner.

6.5.7 The Contractor shall be responsible for the care, maintenance and protection of the Work in the event of any suspension of construction as a result of the delay described in paragraphs 6.5.1, 6.5.2 or 6.5.3. In the event of such suspension, the Contractor shall be reimbursed by the Owner for the reasonable costs incurred by the Contractor for such care, maintenance and protection, but excluding the costs of the Contractor’s head office personnel. The Contractor’s entitlement to costs pursuant to this paragraph, if any, shall be in addition to amounts, if any, to which the Contractor is entitled pursuant to paragraphs 6.5.1, 6.5.2 or 6.5.3.

6.5.8 Without limiting the obligations of the Contractor described in GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS and GC 9.4 – CONSTRUCTION SAFETY, the Owner may, by Notice in Writing, direct the Contractor to stop the Work where the Owner determines that there is an imminent risk to the safety of persons or property at the Place of the Work. In the event that the Contractor receives such notice, it shall immediately stop the Work and secure the Project site. The Contractor shall not be entitled to an extension of the Contract Time or to an increase in the Contract Price unless the resulting delay, if any, would entitle the Contractor to an extension of the Contract Time or the reimbursement of the Contractor’s costs as provided in paragraphs 6.5.1, 6.5.2 or 6.5.3.

6.5.9 If the Contractor is delayed in the performance of the Work by a Labour Dispute, civil disobedience, riot, sabotage, acts of God or any of the events described in paragraphs 6.5.3.1 through 6.5.3.4 for a period of sixty (60) calendar days or longer, the Owner may terminate the Contract by giving Notice in Writing to that effect. In such event, the Owner shall pay for the

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Work performed up to the effective date of termination, including mobilization and demobilization costs, and for such additional costs, if any, directly flowing from such termination which are a reasonable consequence of the termination, but excluding any consequential, indirect or special damages, and any claims for loss of profit or opportunity. The Owner shall not be liable to the Contractor for any other claims, costs or damages whatsoever arising from such termination of the Contract.”

SC3.33 GC 7.1 OWNER’S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR’S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

3.33.1 Delete paragraph 7.1.2 and replace it with the following:

“7.1.2 If the Contractor neglects to prosecute the Work properly, or fails or neglects to maintain the latest approved Construction Schedule, or otherwise fails to comply with the requirements of the Contract in a material way, 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, but without affecting in any respect the liability of the Contractor in respect of earlier defaults.”

3.33.2 Add a new paragraph 7.1.5A immediately after paragraph 7.1.5 as follows:

“7.1.5A The Owner may terminate the Contract at any time for any or no reason. In such event, the Owner shall pay for the Work performed up to the effective date of termination, including demobilization costs, and for such additional costs, if any, directly flowing from such termination which are a reasonable consequence of the termination, but excluding any consequential, indirect or special damages, and any claims for loss of profit or opportunity. The Owner shall not be liable to the Contractor for any other claims, costs or damages whatsoever arising from such termination of the Contract.”

SC3.34 GC 7.2 CONTRACTOR’S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

3.34.1 Amend paragraph 7.2.2, in line 1, by deleting “20” and replacing it with “45”.

3.34.2 Amend paragraph 7.2.3 as follows:

- (a) Delete paragraph 7.2.3.1;
- (b) Amend paragraph 7.2.3.3 by adding the words “, except where the Owner has a bona fide claim for setoff,” after the word “Consultant”;
- (c) Amend paragraph 7.2.3.4 by deleting the words “, except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER”;
- (d) Add the following at the end:

“The foregoing defaults in contractual obligations shall not apply to the withholding of certificates or payments, or both, in accordance with the Contract Documents.”

3.34.3 Delete paragraph 7.2.5 and replace it with the following:

“7.2.5 If the default cannot be corrected within the 5 Working Days specified in paragraph 7.2.4, the Owner shall be deemed to have cured the default if it:

- .1 commences the correction of the default within the specified time, and
- .2 provides the Contractor with an acceptable schedule for such correction, and
- .3 completes the correction in accordance with such schedule.

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- 7.2.6 If the Contractor terminates the Contract under the conditions described in this GC 7.2, the Contractor shall ensure the Place of the Work is left in a safe and secure condition as required by authorities having jurisdiction and the Contract Documents, and shall be entitled to be paid for all Work performed to the date of termination. Subject to the Contractor's obligation to mitigate costs, the Contractor shall also be entitled to recover the costs directly flowing from and which are a reasonable consequence of the termination, including the costs of demobilization and direct losses sustained on Products and Construction Equipment, but excluding the costs of the Contractor's head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity."

SC3.35 GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

- 3.35.1 Amend paragraphs 8.2.6, 8.2.7 and 8.2.8, in the first line of each paragraph, by deleting "10" and replacing it with "20" in each case.

- 3.35.2 Add new paragraphs 8.2.9, 8.2.10, 8.2.11, 8.2.12, 8.2.13 and 8.2.14 as follows:

"8.2.9 Within 10 Working Days of receipt of a Notice in Writing given pursuant to paragraph 8.2.6, the Owner or the Contractor may give the Consultant a Notice in Writing containing:

- .1 a copy of the notice of arbitration;
- .2 a copy of GC 8.2, as amended by these Supplementary Conditions;
- .3 any claims or issues which the Contractor or the Owner, as the case may be, wishes to raise in relation to the Consultant arising out of the issues in dispute in the arbitration.

8.2.10 The Owner and the Contractor agree that, upon giving the Notice in Writing provided in paragraph 8.2.9, the Consultant may elect to become a full party to the arbitration commenced pursuant to paragraph 8.2.6. The Owner and the Contractor acknowledge that, if the Consultant so elects, the Consultant shall be a party to the arbitration within the meaning of the Rules referred to in paragraph 8.2.6 by virtue of the agreement between the Consultant and the Owner.

8.2.11 Failure of the Owner or the Contractor to give the Notice in Writing provided in paragraph 8.2.9 shall not prevent either the Owner or the Contractor from commencing or pursuing an application, action, counterclaim or any other proceeding against the Consultant arising out of the issues in dispute in the arbitration between the Owner and the Contractor brought under paragraph 8.2.6.

8.2.12 If the Consultant is given the Notice in Writing contemplated by paragraph 8.2.9, the Consultant may participate in the appointment of the arbitrator and, notwithstanding the Rules referred to in paragraph 8.2.6, the time period for reaching agreement on the appointment of the arbitrator shall begin to run from the date on which the Consultant receives the notice described in paragraph 8.2.9.

8.2.13 The arbitrator in an arbitration in which the Consultant is a party may:

- .1 determine whether any notice given pursuant to paragraph 8.2.9 is, in substance, sufficient, the notice requirements being interpreted liberally; and,
- .2 make any procedural order considered necessary to facilitate the participation of the Consultant as a party to the arbitration.

8.2.14 The provisions of paragraph 8.2.9 shall apply mutatis mutandis to written notice to be given by the Consultant to any subconsultant, except that the subconsultant is not entitled to any election as outlined in paragraph 8.2.10 and is deemed to be bound by the arbitration proceeding."

SC3.36 GC 9.1 PROTECTION OF WORK AND PROPERTY

- 3.36.1 Amend paragraph 9.1.1.1 by adding the following to the end of that paragraph:

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“, which the Contractor could not reasonably have discovered applying the degree of care and skill described in paragraph 3.4.1 of GC 3.4 – DOCUMENT REVIEW.”

3.36.2 Delete paragraph 9.1.2 in its entirety and replace it with the following:

“9.1.2 Before commencing any Work, the Contractor shall determine the locations of all underground utilities and structures indicated in the Contract Documents or that are discoverable by applying to an inspection of the Place of the Work the degree of care and skill described in GC 3.14 – STANDARD OF CARE.”

3.36.3 Add a new paragraph 9.1.5 as follows:

“9.1.5 Without in any way limiting the Contractor’s obligations under this GC 9.1, should the Contractor or any Subcontractor or Supplier cause loss or damage to property, including roads, buildings, structures, paving, grass, sod, trees or other plantings, whether owned by the Owner or others, and whether at the Place of the Work or adjoining it, the Contractor shall be liable for the cost of making good such damage and for the replacement cost of the grass, sod, trees or other plantings damaged, including the cost of any arborist or other consultant, and such costs may be deducted by the Owner from amounts otherwise owing to the Contractor.”

SC3.37 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

3.37.1 Amend paragraph 9.2.6 by inserting the following after the word “responsible” in line 2 of that paragraph:

“or whether any toxic or hazardous substances already at the Place of the Work and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements were dealt with by the Contractor, or anyone for whom the Contractor is responsible, in a manner which does not comply with legal and regulatory requirements,”

3.37.2 Amend paragraph 9.2.7.3 by inserting the following words after the word “delay” in the second line of that paragraph:

“, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity”

3.37.3 Delete paragraph 9.2.7.4.

3.37.4 Amend paragraph 9.2.8 by inserting the following after the word “responsible” in line 2 of that paragraph:

“or that any toxic or hazardous substances already at the Place of the Work and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements were dealt with by the Contractor, or anyone for whom the Contractor is responsible, in a manner which does not comply with legal and regulatory requirements,”

3.37.5 Add a new paragraphs 9.2.10 and 9.2.11 as follows:

“9.2.10 Without limiting its other obligations under this GC 9.2, the Contractor acknowledges that its obligations under the Contract include compliance with the Environmental Programs. The Contractor acknowledges that the Owner may suffer loss and damage should the Contractor fail to comply with the Environmental Programs and agrees to indemnify and hold harmless the Owner with respect to any loss or damage to which the Owner is exposed by the Contractor’s failure to comply. The Contractor acknowledges that should it fail to comply with the Environmental Programs, such failure will constitute a failure to comply with the Contract to a substantial degree within the meaning of paragraph 7.1.2 of GC 7.1 – OWNER’S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR’S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT.

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- 9.2.11 The Contractor shall indemnify the Owner and the officers, directors, employees and agents of the Owner in respect of any loss, costs or expense or any fine which might be imposed in respect of any failure by the Contractor to satisfy its obligations under this GC 9.2 and, without limiting the general nature of this indemnity, the Contractor shall indemnify the Owner, its officers, directors, employees and agents if the Project is made subject to an order from a court or government agency requiring remediation of any contamination caused as a result of the Work performed by the Contractor or its Subcontractors.”

SC3.38 GC 9.4 CONSTRUCTION SAFETY

- 3.38.1 Amend paragraph 9.4.1 by deleting the first line of that paragraph and replacing it with the following: “The Contractor”.
- 3.38.2 Add new paragraphs 9.4.2 to 9.4.5 as follows:
- “9.4.2 Without limiting the generality of paragraph 9.4.1, the Contractor shall be and shall assume all of the responsibilities of the “constructor” under the OHSA and shall file the “Notice of Project” as “constructor” with the appropriate Ministry.
- 9.4.3 The Contractor represents and warrants to the Owner that appropriate health and construction safety instruction and training have been provided and will be provided to the Contractor’s employees, Subcontractors, Suppliers and all others attending at the Place of the Work. The Contractor also undertakes to provide such health and construction safety instruction and training to the Owner’s representatives, the Owner’s own forces, and other contractors. No comments, suggestions or instructions from the Owner or the Consultant are to be relied upon or assumed to reduce or replace the Contractor’s designation as the “constructor” under the OHSA or its responsibility for construction safety on the Project.
- 9.4.4 The Contractor shall indemnify and save harmless the Owner and its agents, officers, directors, employees, consultants, successors and assigns from and against any and all liability, costs, expenses, fines, damages and all other consequences arising from any and all safety infractions on the Project, including the payment of legal fees and disbursements on a full indemnity basis.
- 9.4.5 The Contractor shall ensure that every “controlled Product” used at the Project site shall meet the labelling requirements and shall have an updated corresponding “Material Safety Data Sheet”, all as required by the WHMIS legislation. The Contractor shall ensure that all Material Safety Data Sheets are and are made available for review at the Project site.”

SC3.39 GC 9.5 MOULD

- 3.39.1 Amend paragraph 9.5.3.3 by inserting the following words after the word “delay,” in line 3 of that paragraph:
- “, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity,”

SC3.40 GC 10.1 TAXES AND DUTIES

- 3.40.1 Amend paragraph 10.1.2 by adding the words “, without any mark-up” to the end of that paragraph.
- 3.40.2 Add new paragraphs 10.1.3, 10.1.4, 10.1.5 and 10.1.6 as follows:
- “10.1.3 Where the Owner is entitled to an exemption or a recovery of sales taxes, customs duties, excise taxes or Value Added Taxes applicable to the Contract, the Contractor shall, at the request of the Owner or the Owner’s representative, assist with application for any exemption, recovery or refund of such taxes and duties and all amounts recovered or exemptions obtained shall be for the sole benefit of the Owner. The Contractor agrees to endorse over to the Owner any cheques received from the federal or provincial governments, or any other taxing authority, as may be required to give effect to this paragraph.

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- 10.1.4 The Contractor shall maintain accurate records of equipment, material and component costs reflecting the taxes, customs duties, excise taxes and Value Added Taxes paid.
- 10.1.5 Any refund of taxes including, without limitation, any government sales tax, customs duty, excise tax or Value Added Tax, whether or not paid, which is found to be inapplicable or for which exemption may be obtained, is the sole and exclusive property of the Owner. The Contractor agrees to cooperate with the Owner and to obtain from all Subcontractors and Suppliers cooperation with the Owner in the application for any refund of any taxes, which cooperation shall include, but not be limited to, making or concurring in the making of an application for any such refund or exemption and providing to the Owner copies, or where required, originals of records, invoices, purchase orders and other documentation necessary to support such applications or exemptions or refunds. All such refunds shall either be paid to the Owner, or shall be a credit to the Owner against the Contract Price, in the Owner's discretion.
- 10.1.6 Customs duties penalties, or any other penalty, fine or assessment levied against the Contractor shall not be treated as a tax or customs duty for purposes of this GC 10.1."

SC3.41 GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 3.41.1 Amend paragraph 10.2.5 by adding the words: "Subject to paragraph 3.4.1 of GC 3.4 – DOCUMENT REVIEW" to the beginning of that paragraph.
- 3.41.2 Amend paragraph 10.2.6 as follows:
- (a) delete the words "performs work knowing it to be" in the second line and substitute "performs work when it knew or ought to have known that such work is"; and
 - (b) delete the words "bear the" in the third line and substitute "indemnify and save the Owner harmless against any"
 - (c) add the following sentence to the end of that paragraph:
"In the event the Owner suffers loss or damage as a result of the Contractor's failure to comply with paragraph 10.2.5, and notwithstanding any limitations described in paragraph 12.1.1 of GC 12.1 – INDEMNIFICATION, the Contractor agrees to indemnify and to hold harmless the Owner and the Consultant from and against all claims, demands, losses, costs, damages, actions, suits or proceedings resulting from such failure by the Contractor."

SC3.42 GC 10.4 WORKERS' COMPENSATION

- 3.42.1 Amend paragraph 10.4.1 by inserting the words "with each application for any progress payment, and" after the word "Work," in the first line of paragraph 10.4.1.

SC3.43 GC 11.1 INSURANCE

The Contractor shall provide, maintain and pay for insurance. The contractor shall supply a Certificate of Insurance confirming insurance that will indemnify the Owner for loss of use of the property and property damage with limits not less than: \$5,000,000.00.

- 3.43.1 Amend paragraph 11.1.1.1 by adding the following sentence to the end of that paragraph:
"To the extent not already described in this paragraph, the Contractor shall provide legal liability coverage for compensatory damages because of bodily injury or property damage to third parties arising from all operations of the insured, including premises and operations, Subcontractors' contingent liability, personal injury resulting from protection of persons / property, contractual liability (blanket), broad form property damage, employees as named insureds, cross liability clause and voluntary medical payments."
- 3.43.2 Add a new paragraph 11.1.1.4A immediately after paragraph 11.1.1.4 as follows:

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“11.1.1.4A In addition to the coverage’s described in CCDC 41, include:

- all risks of direct physical loss including flood;
- full replacement value, as basis for settlement;
- the following deductibles: for flood at \$50,000 and other at \$50,000.”

3.43.3 Amend paragraph 11.1.2 by adding the following to the end of that paragraph:

“11.1.2 The Owner’s acceptance of the Contractor’s delivery of any document evidencing the required policies of insurance does not constitute approval or agreement by the Owner that the insurance requirements have been met or that the insurance policies are in compliance with the requirements of this Contract. Failure of the Owner to identify a deficiency from evidence provided will not be construed as a waiver of the Contractor’s obligation to maintain the insurance policies required by this Contract.”

3.43.4 Add new paragraphs 11.1.9 to 11.1.13 as follows:

“11.1.9 All occurrences and claims shall be reported immediately in writing to the Owner providing at least the following particulars:

- .1 date, time and location of occurrence;
- .2 cause and description of circumstances;
- .3 estimate of loss or damage;
- .4 names and telephone numbers of persons to contact.

11.1.10 Except for policies of automobile insurance, all insurance policies in any way related to the Work and secured and maintained by the Contractor shall include clauses stating each underwriter will waive all rights of recovery, under subrogation or otherwise, against the Owner and the Consultant (except in the event of design related acts errors and omissions).

11.1.11 All insurance policies and coverage required of the Contractor will be primary over any other insurance that might be carried by the Owner.

11.1.12 By requiring insurance, the Owner does not represent that coverage and limits will necessarily be adequate to protect the Contractor. The insurance effected or procured by the Contractor will not reduce or limit the Contractor’s contractual obligation to indemnify and defend the Owner for claims or suits which result from or are connected with the performance of this Contract.

11.1.13 Except for policies of automobile insurance, all insurance policies in any way related to the Work and secured and maintained by the Contractor shall include clauses stating each insurer will waive all rights of recovery, under subrogation or otherwise, against the Owner.”

SC3.44 GC 11.2 CONTRACT SECURITY

3.44.1 Delete paragraphs 11.2.1 and 11.2.2 and replace them with the following:

“11.2.1 The Contractor shall furnish a labour and material payment bond in favour of the Owner, securing payment by the Contractor of all labour and materials to be supplied pursuant to the Contract, in a form satisfactory to the Owner and issued by such surety company as the Owner may approve. The bond shall be for fifty per cent (50%) of the Contract Price.

11.2.2 The Contractor shall furnish a performance bond in favour of the Owner, securing the performance by the Contractor of its obligations under the Contract, including the payment obligations arising thereunder, in a form satisfactory to the Owner and issued by such surety company as the Owner may approve. The bond shall be for fifty per cent (50%) of the Contract Price.

11.2.3 It is the intention of the Contract that the performance bond shall be applicable to all of the Contractor’s obligations under this Contract and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply.

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The Contractor represents and warrants that it has provided its surety with a copy of the Contract prior to the issuance of such performance bond.

11.2.4 All premiums and related charges for all bonds shall be included in the Contract Price.”

SC3.45 GC 12.1 INDEMNIFICATION

3.45.1 Delete paragraphs 12.1.1 through 12.1.5 and replace them with the following:

- “12.1.1 The Contractor shall defend, indemnify and hold harmless the Owner, its agents, employees, trustees, officers, directors and assigns from and against all claims, demands, damages, losses, expenses, costs including legal fees, actions, suits or proceedings (collectively “Claims”) by whomsoever made, brought or prosecuted in any manner, arising out of, resulting from or attributable, directly or indirectly, to the Contractor’s or any Subcontractor’s performance or non-performance of the Contract, including Claims arising out of the condition of the Work, the Project site, adjoining land, driveways, streets or alleys used in connection with the performance of the Work, regardless of whether or not caused in part by a party indemnified hereunder. It is expressly understood that the Contractor will save harmless the Owner from all Claims made by any party other than the Contractor itself, financial or otherwise, relating to labour and materials furnished by the Contractor or by others for the Work.
- 12.1.2 The Owner shall indemnify and hold harmless the Contractor, its agents and employees from and against Claims 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.
- 12.1.3 Notwithstanding the provisions of paragraph 1.1.7 of GC 1.1 – CONTRACT DOCUMENTS, the provisions of GC 12.1 shall govern over the provisions of paragraph 1.3.1 of GC 1.3 – RIGHTS AND REMEDIES.”

SC3.46 GC 12.2 WAIVER OF CLAIMS

3.46.1 Delete paragraphs 12.2.1 through 12.2.10 and replace them with the following:

- “12.2.1 As of the date on which the Owner makes final payment to the Contractor, the Owner expressly waives and releases the Contractor from all claims against the Contractor including without limitation those that might arise from negligence or breach of contract by the Contractor except for one or more of the following:
- .1 those made in writing prior to the date of the final certificate for payment and still unsettled;
 - .2 those arising from the provisions of GC12.1 – INDEMNIFICATION or GC12.3 – WARRANTY;
 - .3 those arising from GC9.2 – TOXIC AND HAZARDOUS SUBSTANCES and arising from the Contractor bringing or introducing any toxic or hazardous substances to the Place of the Work after the Contractor commences the Work;
 - .4 those made by Notice in Writing within a period of six years from the date of Substantial Performance of the Work as set out in the certificate of substantial performance, or within such shorter period as may be prescribed in any limitation statute of the province or territory of the Place of the Work and arising from any liability of the Contractor for damages resulting from the Contractor’s performance of the Contract or substantial defects or deficiencies in the Work for which the Contractor is proven responsible. As used herein, “substantial defects or deficiencies” means those defects or deficiencies in the Work where the reasonable cost of repair of such defects or deficiencies, either individually or in the aggregate, exceeds:
 - (A) if the Contract Price is \$2,000,000 or less, the sum of \$50,000, before Value Added Taxes;

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(B) if the Contract Price exceeds \$2,000,000, the sum of \$100,000, before Value Added Taxes.

12.2.2 As of the date of Substantial Performance of the Work, the Contractor expressly waives and releases the Owner from all claims which it has or reasonably ought to have knowledge of that could be advanced against the Owner including without limitation those that might arise from the negligence or breach of contract by the Owner except:

- .1 those for which Notice in Writing was given prior to the Contractor's application for Substantial Performance of the Work and still unsettled; and
- .2 claims for payment for Work completed after the Contractor's application for Substantial Performance of the Work."

SC3.47 GC 12.3 WARRANTY

3.47.1 Amend paragraph 12.3.1 by adding the following to the end of that paragraph:

"Notwithstanding the foregoing, if an item of Work is not completed at Substantial Performance of the Work, except for extended warranties as described in paragraph 12.3.6, the warranty period for such item of Work shall be one year from the date that such item of Work has been completed and accepted in writing by the Owner."

3.47.2 Amend paragraph 12.3.2 as follows:

- (a) by inserting the words, "Subject to paragraph 3.4.1 of GC 3.4 – DOCUMENT REVIEW" at the beginning of that paragraph; and
- (b) by adding the following to the end of that paragraph:

"If the Contractor has been permitted to make use of permanent equipment or systems, as provided in GC 3.15 – CONTRACTOR'S USE OF PERMANENT EQUIPMENT OR SYSTEMS, such permanent equipment or systems shall be subject to the same warranty as described in this GC 12.3 and shall be judged, for purposes of assessing compliance with the warranty, as though the equipment or system was new, clean and unused by the Contractor, except for normal commissioning and startup activities, prior to the date of Substantial Performance of the Work."

3.47.3 Add the following to the end of paragraph 12.3.4:

"The Contractor shall perform all remedial and warranty work at its own cost and expense and at a time convenient to the Owner, which may be outside of normal working hours. The Owner shall provide reasonable access to those portions of the Project necessary to perform such work, subject to the Owner's operational requirements. Prior to performing the remedial and warranty work, the Contractor shall provide, for the Owner's review and approval, a proposed schedule for the performance of such work."

3.47.4 Add a new paragraph 12.3.7 as follows:

"12.3.7 The Contractor shall assign to the Owner all warranties, guarantees or other obligations for Work, services or Products performed or supplied by any Subcontractor, Supplier or other person in connection with the Work, and such assignment shall be with the consent of the assigning party where required by law or by the terms of that party's contract. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of the Owner under the Contract Documents."

SC3.48 PART 13 – OTHER PROVISIONS

3.48.1 Add new "PART 13 – OTHER PROVISIONS" as follows:

"PART 13 OTHER PROVISIONS

GC 13.1 CONTRACTOR LIABILITY FOR DAMAGES

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- 13.1.1 Notwithstanding any other provision in this Contract, if the Owner, as a result of the Contractor's act or omission or breach of contract, incurs damages, costs, fees or expenses, including costs of additional services performed by the Consultant or any subconsultants and including the Owner's reasonable solicitor and own client costs, whether or not such act, omission or breach results in any lien, lien action or other legal proceeding, and whether or not such act, omission or breach results in the Owner taking any of the steps provided for in GC 7,1, all such damages, costs, fees and expenses shall be charged to the Contractor and the Owner shall be entitled to set off and deduct all such damages, costs, fees and expenses from any amount owing to the Contractor and any security or other funds held by the Owner. If there is no amount owing by the Owner to the Contractor at that time, then the Contractor shall reimburse the Owner for all of the said damages, costs, fees and expenses.

GC 13.2 OWNERSHIP OF MATERIALS

- 13.2.1 Unless otherwise specified, all materials existing at the Place of the Work at the time of execution of the Contract shall remain the property of the Owner. All Work and Products delivered to the Place of the Work by the Contractor shall be the property of the Owner, and shall be free of any encumbrances. The Contractor shall remove all surplus or rejected materials when notified to do so by the Consultant.

GC 13.3 DAILY REPORTS / DAILY LOGS

- 13.3.1 The Contractor shall cause its supervisor, or another competent person, to prepare a daily log or diary reporting on weather conditions, workforce of the Contractor, Subcontractors, Suppliers and any other forces on site and also record the general nature of Project activities. Such log or diary shall also include any extraordinary or emergency events which may occur and also the identities of any persons who visit the site who are not part of the day-to-day workforce.
- 13.3.2 The Contractor shall also maintain records, either at its head office or at the Project site, recording manpower and material resourcing on the Project, including records which document the activities of the Contractor both as planned and actual.
- 13.3.3 Upon request by the Owner or the Consultant, the Contractor shall make available for inspection and copying all of the records generated pursuant to this GC 13.3, along with any other routine Project records ordinarily maintained by the Contractor.

GC 13.4 LIENS AND ACTIONS

- 13.4.1 The Contractor shall save and keep the Owner and the Place of the Work free from all construction liens and all other liens whatsoever arising out of the Work. If any lien is claimed, filed or registered or any written notice of lien is received by reason of labour, services, equipment, materials or any Work supplied or claimed to have been supplied by or through a Subcontractor or Supplier, the Contractor shall, at its own expense, within ten (10) Working Days of being notified of the lien or written notice of lien, secure the discharge, release, vacating or withdrawal of such lien or written notice of lien by payment or by giving security or in such other manner as is or may be required or permitted by law, failing which the Owner may, but shall not be required, take such steps as it, in its absolute discretion, may deem necessary to release, vacate or discharge the lien or written notice of lien.
- 13.4.2 If a lien action or any other action or legal proceeding arising out of the Project is commenced, the Contractor shall take all reasonable steps to remove the Owner from such action or legal proceeding, and shall indemnify the Owner and hold it harmless in such action or legal proceeding.
- 13.4.3 All amounts, including solicitor and own client costs, disbursements, interest, borrowing and premium or other bonding costs and/or charges incurred by the Owner in releasing, vacating, discharging or otherwise dealing with a lien, written notice of lien and/or defending or otherwise dealing with an action or legal proceeding, shall be charged to the Contractor and shall be set off and deducted from any amount owing to the Contractor. If there is no amount owing by the Owner to the Contractor at that time, then the Contractor shall reimburse the Owner for all of the said costs and associated expenses.

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GC 13.5 ADVERTISING AND PUBLIC STATEMENTS

13.5.1 The Contractor shall not publish, issue or make any statements or news release, electronic or otherwise, concerning the Contract, the Work, or the Project, and shall not use the Owner's name or logo without the prior express written consent of the Owner. For greater certainty, the Contractor shall obtain the prior written approval of the Owner for any public advertising, written public sales promotions, press release or other general publicity matter, in which the name or logo of the Owner is mentioned or used, or in which words are used from which any connection with the Owner may be inferred. The Contractor will not erect or permit the erection of any sign or advertising without the prior written approval of the Owner.

GC 13.6 AMENDMENTS TO THE CONTRACT

13.6.1 No alteration or amendment to this Contract, no course of conduct or dealing between the parties, and no express or implied acceptance of alterations or amendments to the Contract shall be binding unless it is in writing and signed by each party.

13.6.2 No waiver by or on behalf of a party of any breach of a provision of this Contract shall be binding upon the party unless it is expressed in writing and duly executed by the party or signed by its fully authorized representatives, and such a waiver shall not operate as a waiver of any future breach, whether of a like or different character. No waiver shall be inferred from or implied by the conduct of any party."

END OF SUPPLEMENTARY CONDITIONS

PART 1 - GENERAL

1.1 Contract Documents

- .1 Work will be performed under one Contract; the Contract will be in the form of the Agreement between Owner and Contractor (attached), integral with General Conditions, Section 00800.

1.2 General Conditions

- .1 The General Conditions, Section 00800, will govern the performance of each Section of the Specifications.

1.3 Specifications

- .1 Division 1, General Requirements, of the Specifications generally specifies work and co-ordination that is the direct responsibility of the Contractor, but shall not be interpreted to define absolutely the limits of responsibility that must be established between the Contractor and his Subcontractors by their separate agreements.
- .2 Ensure that Subcontractors understand that the General Conditions of the Contract, Supplementary Conditions, and Division 1, General Requirements, apply to Sections of the Specifications governing their work.
- .3 Work in the Specifications is divided into descriptive Sections which are not intended to identify absolute contractual limits between Subcontractors, nor between the Contractor and his Subcontractors. The Contractor shall organize division of labour and supply of materials essential to complete the Project in all its parts.
- .4 The provisions of all Sections of Division 1 shall apply to each Section of Divisions 2 to 17, inclusive, which are included in the Specifications.
- .5 Where the word "provide" is used in these Contract Documents, it shall mean "supply and install" unless specifically and clearly indicated otherwise.
- .6 Wherever words "acceptable", "approved", "reviewed", "satisfactory", "directed", "selected", "designated", "required", "submit", "instructed", "permitted" or similar words or phrases are used in Contract Documents or referenced standards, it shall be understood, that "by" or "to" "the Consultant" follows, unless context clearly provides otherwise.
- .7 Wherever in the Contract Documents the word "include" is used in any form, the items of work listed following shall not be interpreted to be restricted to only those items that are listed.
- .8 Wherever in the Contract Documents the words "indicated" or "shown" are used they shall apply as meaning "indicated on Drawings and/or Schedules" or "shown on Drawings and/or Schedules" unless the context expresses another meaning.
- .9 Wherever in the Specifications it is specified that work to which reference is made shall proceed or shall meet approval, direction, selection or request of jurisdictional authorities or others, such approval, direction, selection or request shall be in writing.
- .10 Wherever in the Specifications it is specified that work shall be repaired, made good or replaced, it shall be performed without any additional cost to the Owner.
- .11 Wherever in the Contract Documents the terms "make good" or "made good" are used, such making good shall mean that new or existing work shall be restored after being damaged or cut

or patched using materials identical to the original materials, with visible surfaces matching the appearance of the original surfaces in all details, and with non-apparent junctions between new and original surfaces. In the event that identical materials for making good cannot be obtained, materials shall be used that visually match the original materials as closely as possible and only as reviewed with the Consultant. Replaced materials shall perform equally or better than the original materials, providing that their use is not detrimental to the structural integrity of the construction with which they are incorporated.

- .12 Wherever in the Contract Documents the term "recommended" is used, it shall be understood that the work or materials referenced are mandatory to the completion of the contract.

1.4 Examination

- .1 The Contractor shall visit the site and be satisfied as to conditions affecting the work before submitting a tender. Misinterpretation of any requirements of these specifications shall not relieve the Contractor of responsibility. No allowance will be made for any extra expense incurred by the Contractor through failure to do so.

1.5 Permits

- .1 Owner will apply for and obtain the General Building Permit.
- .2 Owner will be responsible for payment for the General Building Permit.
- .3 Apply, obtain and pay for all other permits from all authorities having jurisdiction, including, where required, inspection fees and permits.

1.6 Codes

- .1 Perform work in accordance with Ontario Building Code and National Building Code and any other code of national, provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply. Codes shall be latest edition, including all amendments up to tender closing date.
- .2 Meet or exceed requirements of:
 - .1 contract documents,
 - .2 specified standards, codes and referenced documents.

1.7 Documents Required

- .1 Maintain at job site, one copy each of following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed shop drawings.
 - .5 Change orders.
 - .6 Minutes of meetings.
 - .7 Consultant site visit reports.
 - .8 Other modifications to Contract.
 - .9 Field test reports.
 - .10 Copy of approved work schedule.
 - .11 Manufacturers' installation and application instructions.

1.8 Construction Schedule

- .1 Provide at Pre-Construction Meeting, construction schedule showing anticipated progress stages

and final completion of work within time period required by Contract documents.

1.9 Shop Drawing Schedule

- .1 Provide shop drawing schedule in accordance with Section 01 34 00 indicating dates for Submission of shop drawings, material lists and samples. Prepare schedule in consultation with subcontractors and material and equipment suppliers.
- .2 Contractor shall maintain schedule up-to-date, tracking submission and return dates between suppliers, Contractor, subcontractors, Consultant, Owner and other parties.

1.10 Cost Breakdown

- .1 Before submitting first progress claim submit breakdown of Contract price (Schedule of Values) in detail as directed by Consultant and aggregating contract price. After approval by Consultant cost breakdown will be used as basis for progress payment.

1.11 Preconstruction Meeting

- .1 As soon as possible and no later than 21 days after project award, the Consultant will arrange a meeting between Owner, General Contractor, Subcontractors, Superintendents, Inspection and Testing company representatives, and representatives of others whose coordination is required during construction.
- .2 Purpose of meeting is as follows:
 - .1 Review project communications procedures.
 - .2 Review contract administration requirements including submittals, payment and change order procedures.
 - .3 Review construction schedule and identify all critical points on construction schedule for positive action.
 - .4 Identify any product availability problems and substitution requests.
 - .5 Establish site arrangements and temporary facilities.
 - .6 Identify Consultant's inspection requirements.
 - .7 Review any points which, in Owner's, Consultant's and Contractor's opinion, require clarification.

1.12 Project Meetings

- .1 Attendance at Project Meetings is mandatory by all subtrades. It is the responsibility of subcontractors to be fully prepared for all meetings so that all items on the agenda can be expedited quickly.
- .2 Once a month during or immediately after regular site meeting, Consultant, Owner and Contractor shall review Contractor's application for payment, updated construction schedule, all outstanding Change Notices and Change Orders.
- .3 The Contractor shall be responsible for preparing and distributing the minutes of the meeting.

1.13 Project Coordination

- .1 Contractor shall assume full responsibility for the coordination and cooperation of all trades.
- .2 Ensure that the flow of information and materials and the availability of work forces is adequate for satisfactory and expeditious completion of the work.

- .3 Report to Consultant on progress of work in relation to schedule.
- .4 Employ a qualified superintendent who shall:
 - .1 Be on the site at all times.
 - .2 Have full authority to act on the Consultant's instructions.
 - .3 Control the work throughout.
 - .4 Not be changed for duration of project, without prior approval of Consultant.
- .5 Responsibility as to which sub-trade provides required work to be built-in or supplied rests entirely with the Contractor. Differences in interpretation of Specifications or Drawings as to which trade shall provide certain work shall not be grounds for payment of extras.
- .6 Work not to be included in the Contract shall be as noted "NIC" on the Drawings, and shall be governed by the General Conditions of CCDC.
- .7 The General Contractor will be responsible for coordinating all aspects of the project while the building is occupied. School safety and security must be maintained at all times to meet SCDSB procedures.

1.14 Setting Out of Work

- .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated. Lay out work from control bench marks and verified reference points. Protect and preserve bench marks and reference points.
- .2 Provide devices needed to lay out and construct work.
- .3 Supply stakes and other survey markers required for laying out work.
- .4 Verify grades, lines, levels, and dimensions indicated and report any errors, omissions, or inconsistencies to the Consultant before commencing work. Confirm job dimensions immediately to allow prompt checking of shop and other drawings.
- .5 Ensure that necessary job dimensions are taken and trades are coordinated for the proper execution of the work. Assume complete responsibility for the accuracy and completeness of such dimensions, and for coordination.
- .6 Verify that work, as it proceeds, is executed in accordance with dimensions and positions indicated which maintain levels and clearances to adjacent work, as set out by requirements of the drawings, and ensure that work installed in error is rectified before construction continues.
- .7 Do not scale directly from the drawings. If there is ambiguity or lack of information, immediately inform the Consultant and await his instructions before proceeding. Be fully responsible for rectifying, altering or redoing any work resulting from disregarding this clause. All details and measurements of any work which is to fit or to conform with work installed shall be taken at the site.

1.15 Location of Equipment and Fixtures

- .1 Location, arrangement and size of equipment, fixtures, ducts, piping, conduit and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.

- .3 Inform Consultant of impending installation and obtain his approval for actual location. Any relocation caused by Contractor's failure to consult with Consultant shall be done by Contractor at no extra cost to Contract. Where job conditions require reasonable changes in indicated locations and arrangements, make changes at no additional cost.
- .4 Conserve space and coordinate with work of other Sections to ensure that ducts, pipes and conduits will fit into allocated wall and ceiling spaces.
- .5 Submit field drawings to indicate relative position of various services and equipment when r required by Consultant.
- .6 Where ducts, piping and conduits are permitted to be exposed they shall be neatly and uniformly laid out parallel to adjacent building lines and parallel to each other where they run in the same direction. Review exposed installations with Consultant prior to start of work. At no cost to Owner make changes to exposed work as directed by the Consultant where such work is not installed in accordance with Consultant's prior directions.

1.16 Concealment

- .1 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

1.17 Cutting, and Patching

- .1 Obtain Consultant's written permission before cutting, boring or sleeving load-bearing members.
- .2 Cut and patch as required to make work fit.
- .3 Make cuts with clean, true, smooth edges.
- .4 Make patches invisible in final assembly.
- .5 Coordinate and accurately locate inserts, sleeves, connections and similar items required by all trades, or required by site conditions.
- .6 Cutting and patching of work shall be by trade specializing in work to be cut or patched. Payment shall be by trade requiring cutting and patching work.
- .7 Fit construction tightly to ducts, pipes and conduits to stop air movement completely. The Section performing Work that penetrates a fire, air, vapour, moisture, thermal or acoustic separation of the building shall pack voids tightly with rock wool; seal air, vapour and moisture barriers; and caulk joints as approved by Consultant to ensure that no air movement through the penetration is possible.

1.18 Additional Drawings

- .1 Consultant may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.

1.19 Building Smoking Environment

- .1 Smoking is prohibited on school property.

1.20 Workmanship

- .1 All work performed shall be done by mechanics skilled in their respective trades. Where required

by code or other by-laws and regulations, trades people shall be licensed in their trade. All workmanship shall be of the highest calibre in accordance with the best standard practice.

1.21 Damages

- .1 The Contractor shall be responsible for all or any damages to the building and/or contents, caused by their forces for whatever cause and shall indemnify and save YMCA of Simcoe/Muskoka harmless from injury to all members and employees when working within and around the building, while under contract with YMCA of Simcoe/Muskoka.

1.22 Site Progress Records

- .1 Maintain at site a permanent written record of progress of the Work. Make the record available at all times with copies provided when requested. Include in record each day:
 - .1 Weather conditions with maximum and minimum temperatures.
 - .2 Conditions encountered during excavation.
 - .3 Commencement and completion dates of the work of each trade in each area of Project.
 - .4 Erection and removal dates of formwork in each area of Project.
 - .5 Dates, quantities, and particulars of each concrete pour.
 - .6 Dates, quantities, and particulars of roofing installation.
 - .7 Attendance of Contractor's and Subcontractor's work forces at Project and a record of the work they perform.
 - .8 Visits to site by Owner, Consultant, Subconsultants, jurisdictional authorities, testing companies, Contractor, Subcontractors, and suppliers.
- .2 Maintain a computer-based progress chart in a format approved by Consultant. Show on chart proposed construction schedule and the progress achieved by Contractor and each Subcontractor.

End of Section

PART 1 - GENERAL

1.1 General

- .1 Make submittals specified in this Section to the Consultant unless otherwise noted.
- .2 Ensure that submissions requiring review and comment, or approval, are made to allow sufficient time for review without delaying progress of scheduled construction.
- .3 Be responsible for payment of charges for delivery of submissions and resubmissions to Consultant.

1.2 Before Commencement of Work

- .1 Performance Bonds and Labour and Materials Payment Bonds as specified.
- .2 Insurance policies as specified in the General Conditions and the Supplementary Conditions Section 00 01 20.
- .3 Workers' Compensation Board Certificate of Clearance.
- .4 Construction Schedule as specified in Section 01 13 00 and General Instructions.
- .5 Shop Drawing Schedule as specified in Section 01 34 00.
- .6 Cost Breakdown (Schedule of Values) as specified in Section 01 10 05.
- .7 Permits required for work of Division 15, Mechanical; Division 16, Electrical.
- .8 Permits for temporary structures, hoists, signs and similar items.

1.3 During Construction

- .1 Inspection and testing reports as specified in Section 01 45 00.
- .2 Shop drawings, product data and samples as specified in Section 01 34 00.
- .3 Interference Drawings:
 - .1 Provide drawings to indicate clearances between construction elements such as slabs, beams, drops and ceilings, and to confirm the capability of such clearances to accommodate the various required services.
 - .2 Failure to comply with this requirement and in event that services are in conflict with one another, and or with the construction elements, will result in such work having to be rejected and re-done at no extra cost to the Owner.
- .4 Award separate contracts as may be required by Cash Allowances, Section 01 20 00.
- .5 Mock-ups as specified in Section 01 34 00.
- .6 Progress Records as specified in Section 01 10 05.
- .7 Applications for Payment as specified in General Conditions and the Supplementary Conditions.

- .8 Take progress photographs as specified in this Section.
- .9 Maintain Record Drawings as specified in this Section.

1.4 At Substantial Performance

- .1 Provide one (1) hard copy and one (1) digital copy on USB flash drive of complete Operating and Maintenance Manuals including operating and maintenance data, warranties, certificates of approval, finish hardware schedule, paint schedule, shop drawings, any other reports, charts, diagrams specified in Section 01 73 00. Warranties may be submitted within 14 days of date of Substantial Performance. Manuals are to be submitted prior to Substantial Performance inspection.
- .2 Maintenance materials, special tools and spare parts specified in Section 01 73 00.
- .3 Final and complete Project Record Drawings as specified in this Section.
- .4 Complete the requirements of Section 01 70 00, Contract Closeout.

1.5 Project Record Drawings

- .1 Contractor to obtain a clean set of white prints for project record drawing purposes, either from initial sets provided by Consultant or by Owner expenses.
- .2 Provide as-built drawings of the completed Work which shall record, as the Work progresses, work constructed differently than shown on Contract Documents. Record all changes in the Work caused by site conditions; by Owner, Consultant, Subconsultant, Contractor, and Subcontractor originated changes; and by site instructions, supplementary instructions, field orders, change orders, addenda, correspondence, and directions of jurisdictional authorities. Accurately record location of concealed structure, and mechanical and electrical services, piping, valves, conduits, pull boxes, junction boxes and similar work not clearly in view, the position of which is required for maintenance, alteration work, and future additions. Do not conceal critical work until its location has been recorded.
- .3 Record changes in the Work on white prints in red ink.
- .4 Record following information:
 - .1 Depths of various elements of foundation in relation to first floor level.
 - .2 Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface feature.
 - .3 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
- .5 Dimension location of concealed work in reference to building walls, and elevation in reference to floor elevation. Indicate at which point dimension is taken to concealed work. Dimension all terminations and offsets of runs of concealed work.
- .6 Identify each record drawing as "Project Record Copy". Maintain drawings in good condition and do not use them for construction purposes.
- .7 Maintain Project record drawings in a state current to Project. Record drawings are to be reviewed at each site meeting and will be considered a condition precedent for validation of applications for payment. The Consultant's visual inspection will constitute proof that record drawings are current. At completion of project, neatly transfer recorded notations to second set of white prints. Submit both sets of white prints to Consultant.

- .8 Prior to Substantial Performance, Contractor shall submit one clean, neat copy of As-built drawings to Consultant for review and approval.
- .9 The Contractor will be responsible for transferring As-built information on white prints to digital files in Autocad format for submission to the Owner on CD. The Consultants will provide tender copy of digital Autocad files for use by Contractor.

End of Section

PART 1 - GENERAL

1.1 General

- .1 This section specifies general requirements and procedures for Contractors submissions of shop drawings, product data and samples to Consultant for review. Additional specific requirements for submissions are specified in individual Sections of Divisions 2 to 16.
- .2 Do not proceed with work until relevant submissions are reviewed by Consultant.
- .3 Present shop drawings and product data in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 The General Contractor is to review submissions for completeness and conformance with the Contract Documents, before submitting them to the Consultant.
- .6 Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submissions.
- .7 Make any changes in submissions which Consultant may require consistent with Contract Documents and resubmit as directed by Consultant.
- .8 Notify Consultant, in writing, when resubmitting, of any revisions other than those requested by Consultant.

1.2 Submission Requirements

- .1 Coordinate each submission with requirements of work and Contract Documents. Individual submissions will not be reviewed until all related information is available.
- .2 Allow 14 days for Consultant's review of each submission.
- .3 Accompany submissions with transmittal letter.
- .4 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractors authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
- .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.

- .6 After Consultant's review, distribute copies. See Section 01 10 05.

1.3 Shop Drawings

- .1 Shop drawings: original drawings, or modified standard drawings provided by Contractor, to illustrate details of portions of Work, which are specific to project requirements. Consultant's drawings are not to be used for shop drawings.
- .2 Submit electronic pdf format shop drawings for which submission is requested in Sections of the Specifications. Where required Owner will review and submit comments directly to Consultant and Consultant will incorporate such comments into Consultant's review.
- .3 Cross-reference shop drawing information to applicable portions of Contract Documents.
- .4 Show on shop drawings:
 - .1 Clear and obvious notes of any proposed changes from drawings and specifications.
 - .2 Fabrication and erection dimensions.
 - .3 Provisions for allowable construction tolerances and deflections provided for live loading.
 - .4 Details to indicate construction arrangements of the parts and their connections, and interconnections with other work.
 - .5 Location and type of anchors, and exposed fastenings.
 - .6 Materials and finishes.
 - .7 Physical dimensions of materials including thickness and gauges.
 - .8 Descriptive names of equipment.
 - .9 Mechanical and electrical characteristics when applicable.
 - .10 Information to verify that superimposed loads will not affect function, appearance, and safety of the work detailed as well as of interconnected work.
 - .11 Assumed design loadings, and dimensions and material specifications for load-bearing members.
 - .12 Dimensions and dimensioned locations of proposed chases, sleeves, cuts, and holes in structural members.
 - .13 Time required for fabrication and installation, if applicable.
- .5 Following Consultant's review, 5 copies of shop drawings will be returned to Contractor marked "Reviewed", "Reviewed as Noted", or "Revise and Resubmit". Contractor shall revise and resubmit such drawings within 8 days.

1.4 Shop Drawings Review

- .1 The review of shop drawings by Consultant is for the sole purpose of ascertaining conformance with the general concept. This review shall not mean that Consultant approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents. Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of the work of all subtrades.

1.5 Product Data

- .1 Product data: manufacturers catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.
- .2 Submit 7 copies of product data for which submission is requested in Sections of the Specifications.

- .3 Delete information not applicable to project.
- .4 Supplement standard information to provide details applicable to project.
- .5 Cross-reference product data information to applicable portions of Contract Documents.

1.6 Samples

- .1 Samples: examples of materials, equipment, quality, finishes, workmanship.
- .2 Where colour, pattern or texture is criterion, submit full range of samples.
- .3 Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.

End of Section

PART 1 - GENERAL

1.1 Section Includes

- .1 Inspection and testing, administrative and enforcement requirements.
- .2 Tests and mix designs.
- .3 Mock-ups.
- .4 Mill tests.
- .5 Equipment and system adjust and balance.

1.2 Related Sections

- .1 Section 01 60 00 - Material and Equipment: Material and workmanship quality, reference standards.

1.3 Inspection

- .1 Refer to the General Instructions Section 01 10 05.
- .2 The Owner and the Consultant shall have access to the Work. If part of the Work is in preparation at locations other than the Place of the Work, access shall be given to such work whenever it is in progress.
- .3 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Specifications, Consultant instructions, or the law of the Place of the Work.
- .4 If the Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have the inspections or tests satisfactorily completed and make good such Work.
- .5 The Consultant may order any part of the Work to be examined if the Work is suspected to be not in accordance with the Contract Documents. If, upon examination such work is found not in accordance with the Contract Documents, correct such work and pay the cost of examination and correction. If such Work is found in accordance with the Contract Documents, the Owner shall pay the cost of examination and replacement.

1.4 Procedures

- .1 Notify the appropriate agency and Consultant in advance of the requirement for tests, in order that attendance arrangements can be made.

1.5 Rejected Work

- .1 Refer to the General Conditions.
- .2 Remove defective Work, whether the result of poor workmanship, use of defective products or damage and whether incorporated in the Work or not, which has been rejected by the Consultant as failing to conform to the Contract Documents. Replace or re-execute in accordance with the Contracts Documents at no additional cost to the Owner.
- .3 Make good other Contractor's work damaged by such removals or replacements promptly at no additional cost to the Owner.

- .4 If in the opinion of the Consultant it is not expedient to correct defective Work or Work not performed in accordance with the Contract Documents, the Owner may deduct from the Contract Price the difference in value between the Work performed and that called for by the Contract Documents, the amount of which shall be determined by the Consultant.
- .5 Defective work discovered before expiration of warranty period will be rejected, whether or not it has been previously inspected. If rejected, defective materials or work incorporating defective materials or workmanship shall be promptly removed and replaced or repaired to Consultant's approval, at no cost to Owner.

1.6 Tolerances for Installation of Work

- .1 Unless acceptable tolerances are otherwise specified in other Sections specific to the work or are otherwise required for proper functioning of equipment, site services, and Mechanical and Electrical systems, the following shall apply:
 - .1 "Plumb and level" shall mean 1mm in 1 metre.
 - .2 "Square" shall mean not in excess of 10 seconds lesser or greater than 90 degrees.
 - .3 "Straight" shall mean within 1mm under a 1 metre long straightedge.

End of Section

PART 1 - GENERAL

1.1 Construction Safety Measures

- .1 Observe construction safety measures of National Building Code, Ontario Building Code, Ontario Workers' Compensation Board, Occupational Health and Safety Act and all other federal, provincial and municipal safety codes and regulations provided that in any case of conflict or discrepancy more stringent requirements shall apply.
- .2 The Contractor shall provide competent personnel to implement their safety program and ensure that the standards of the Ontario Health and Safety Act are being complied with.
- .3 The Contractor shall report to the Consultant, Owner and jurisdictional authorities any accident occurring on the building site.

1.2 WHMIS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Canada Labour Code.
- .2 Maintain on site for duration of Contract, a hazardous materials log containing all required material safety data sheets.
- .3 Ensure that workers are instructed in the purpose and content of material safety data sheets.

1.3 MINISTRY OF LABOUR

- .1 Submit Notice of Project Form 0175 to Ministry of Labour prior to commencement of work. Copy of Notice of Project is to be posted at the site. Comply with relevant sections of Construction Regulation 213/91.
- .2 Submit Form 1000 for Registration of Constructors and Employers Engaged in Construction to nearest Ministry of Labour Office. Comply with relevant sections of Construction Regulation 213/91.

End of Section

PART 1 - GENERAL

1.1 General

- .1 Comply with requirements of standard for Building Construction Operations FCC No. 301-1982, latest issue, by Fire Commissioner of Canada, available from the office of the Ontario Fire Marshall.
- .2 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut-off.
 - .3 Left inactive at the end of a working day or shift.
- .3 Fire hydrants, standpipes and hose systems shall not be used for other than fire fighting purposes.

1.2 Fire Extinguishers

- .1 The Contractor shall supply fire extinguishers, necessary to protect, in an emergency, the work in progress and the contractors physical plant on site.
- .2 Extinguishers, generally, are to be 10 lb. capacity ABC type. Provide a minimum of Three (3) units.

1.3 Smoking Restrictions

- .1 Smoking is prohibited on project property.

1.4 Rubbish and Waste Materials

- .1 Rubbish and waste materials are to be kept to a minimum.
- .2 The burning of rubbish is prohibited.
- .3 All rubbish shall be removed from the work areas at the end of the work day or shift or as directed.
- .4 Extreme care is required where it is necessary to store oily waste in work areas to ensure maximum possible cleanliness and safety. Greasy or oily rags or materials subject to spontaneous combustion shall be deposited and kept in an approved receptacle and removed at the end of the work day.

1.5 Flammable Liquids

- .1 The handling, storage and use of flammable liquids are to be governed by the current National Fire Code of Canada.

End of Section

PART 1 - GENERAL

1.1 General

- .1 Use new material and equipment unless otherwise specified.
- .2 Products specified by manufacturer's name, brand name or catalogue reference shall be the basis of the bid and shall be supplied for the Work without exception in any detail, subject to allowable substitutions as approved.
- .3 Where several proprietary products are specified, any one of the several will be acceptable.
- .4 For products specified by reference standards, the onus shall be on the supplier to establish that such products meet reference standard requirements. The Consultant may require affidavits from the supplier or inspection and testing at the expense of the supplier, or both, to prove compliance. Products exceeding minimum requirements established by reference standards will be accepted for the Work if such products are compatible with, and harmless to, other products with which they are incorporated.
- .5 Within 7 days of written request by Consultant, submit following information for materials and equipment proposed for supply:
 - .1 Name and address of manufacturer,
 - .2 Trade name, model and catalogue number,
 - .3 Performance, descriptive and test data,
 - .4 Manufacturer's installation or application instructions,
 - .5 Evidence of arrangements to procure.
- .6 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.
- .7 Products delivered to the Project site for incorporation in the work shall be considered the property of the Owner. Maintain protection and security of products stored on the site.

1.2 Manufacturers Instructions

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- .2 Notify Consultant in writing of any conflict between these Specifications and manufacturers instructions. Consultant will designate which document is to be followed.

1.3 Fastenings - General

- .1 Supply fastenings, anchors and accessories required for fabrication and erection of work.
- .2 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work.
- .3 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage. Wood plugs not acceptable.
- .4 Conceal fasteners where indicated. Space evenly and lay out neatly.
- .5 Fastenings which cause spalling or cracking are not acceptable.

- .6 Comply with CSA Z166-1975 for use of explosive actuated fastening devices.

1.4 Fastenings - Equipment

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

1.5 Delivery and Storage

- .1 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
- .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
- .3 Store material and equipment in accordance with manufacturer's and supplier's instructions. Store products on site or in storage sheds with secure protection against all harmful environmental conditions.
- .4 Touch-up damaged factory finished surfaces to Consultant's satisfaction. Use primer or enamel to match original. Do not paint over name plates.

1.6 Scheduling Of Product Delivery

- .1 Verify that products supplied by all Sections are ordered from suppliers in sufficient time to ensure delivery for incorporation in the Work within the time limits established by approved construction schedule.
- .2 Obtain confirmed delivery dates from product suppliers.
- .3 Immediately inform the Consultant should supplier's confirmation of delivery dates indicate that Project completion may be delayed.
- .4 Submit copies of purchase orders and confirmations of delivery dates for products as may be requested.
- .5 Delivery dates for all major or critical items required during construction and items required in large quantities and over an extended period of time shall be noted in the Construction Schedule specified in Section 01005.

1.7 Defective Products and Work

- .1 Products and installations found defective; not in accordance with the Specifications; or defaced or damaged through negligence of the Contractor, his employees or Subcontractors, or by fire, weather or any other cause will be rejected for incorporation in the Work.
- .2 Remove rejected products and work from the premises immediately.

- .3 Replace rejected products and installations with no delay after rejection. Provide replacement products and execute replacement installations precisely as required by the Specifications for the defective products and installations replaced. Previous inspection and payment shall not relieve the Contractor from the obligation of providing sound and satisfactory products and installations in compliance with the Specifications.

1.8 Substitution

- .1 No substitutions will be permitted without prior written approval of Consultant.
- .2 Proposals for substitution may only be submitted after award of contract. Submit, with request for substitution, documentary evidence that substituted products are equal to, or superior to, specified or otherwise approved products, and a comparison of price and delivery factors for both specified or approved products, and proposed substitute.
- .3 Proposals will be considered by Consultant if:
 - .1 Materials selected by tenderer from those specified, are not available;
 - .2 Delivery date of materials selected from those materials specified would unduly delay completion of contract, or
 - .3 Alternative material to those specified, which are brought to the attention of and considered by Consultant as equivalent to the material specified and will result in a credit to the Contract amount, and
 - .4 Same warranty is provided for substitution as for product and method of installation specified.
- .4 Ensure that substituted products can be both functionally and dimensionally incorporated in the Work with no loss of intended function, performance, space or construction time, and that spare parts and service are readily available.
- .5 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.
- .6 Amounts of all credits arising from approval of substitutions will be determined by Consultant and Contract Price will be reduced accordingly.
- .7 The Contractor shall execute variations, alterations and substitutions which do not affect the contract amount as instructed by the Consultant.

1.9 Workers, Suppliers and Subcontractors

- .1 Assign work only to workers, suppliers, and Subcontractors who have complete knowledge, not only of the conditions of the Specifications, but of jurisdictional requirements, and reference standards and specifications.

1.10 Workmanship

- .1 Unless otherwise specified in a more detailed manner, workmanship shall be of the highest quality recognized by the trade executing the work in accordance with standard practices, by the best methods recommended by the manufacturer of the product, and as acceptable to the Consultant.

End of Section

PART 1 - GENERAL

1.1 Final Inspections and Declaration Procedures

- .1 Contractors Inspection: Contractor and Subcontractors shall conduct an Inspection of the Work, identify deficiencies and defects; repair as required to conform to the Contract Documents. Contractor to document deficiencies being corrected and forward to the Consultant. Notify Consultant in writing of satisfactory completion of Contractor's inspection and that corrections have been made.
- .2 Upon notification of completion of Contractor's inspection, arrange for, conduct, and document a final inspection with the Consultant.
- .3 Above Ceiling Inspection: Consultants, Owner and Contractor will perform an inspection of the Work above ceilings to identify defects or deficiencies. Contractor shall correct the work accordingly:
 - .1 No gypsum board or ceiling tile ceilings are to be installed prior to the following inspections with the exception of tiles with devices and perimeter tiles:
 - .1 Above Ceiling Inspection: performed by the Consultant team.
 - .2 Verification of Above Ceiling Inspection: verify above ceiling deficiencies are 100% complete.
 - .2 Acoustic tile ceilings can be installed with written Consultant verification to the Owner that deficiencies above ceiling are 100% complete.
 - .3 Substantial Performance Inspection shall not be scheduled until work above ceilings is complete and deficiencies have been deemed complete by the Consultant in writing.
- .4 Further procedures for Contract closeout and takeover at completion of work shall be in accordance with procedures described in OAA/OGCA TAKE-OVER PROCEDURES, OAA/OGCA Document No. 100, November, 1983.

1.2 Submittals

- .1 Provide submittals at Substantial Performance as listed in Section 01 33 00 and OAA/OGCA Document No. 100.

1.3 Equipment Startup

- .1 Arrange for a start-up of systems and operating equipment upon the 100% completion of their installation and before applying for Certificate of Substantial Performance. Attendance is required by Consultants, General Contractor, related Subcontractors and manufacturer's representatives.
- .2 Document time, date, people in attendance and results of start-up.
- .3 Provide copy of manufacturer's start-up reports.
- .4 Submit copies of letters from manufacturers of systems and/or equipment before making application for Certificate of Substantial Performance to verify that the equipment has been installed and connected correctly, and that it is operating in a satisfactory manner. The certification shall be based upon inspection and testing of the equipment by competent technical personnel. Include in letter of certification the names of personnel conducting the

testing and inspection, the methods of inspection utilized, and the location in the building of the equipment certified.

- .5 Following submission of letters of certification and their acceptance by the Owner, the Owner shall have the right to use the equipment on a trial basis and for instructing Owner's personnel in its use.

1.4 Demonstration of Systems and Equipment

- .1 Arrange for a demonstration of systems and operating equipment by Manufacturer. Attendance is required by Consultants, General Contractor, related Subcontractors, Custodial Staff, Health and Safety Representatives and Manufacturer.
- .2 Document time, date, people in attendance and any issues that may develop as a result of the demonstration.
- .3 The demonstrations shall be conducted by the Manufacturer and Subcontractor responsible for the installation of the systems and/or equipment, assisted by representatives of the manufacturer or supplier of the equipment. All personnel conducting the demonstration shall be completely knowledgeable of all conditions of the operating, functioning and maintenance of the systems and/or equipment.
- .4 The Consultant will acknowledge the successful completion of each demonstration.

1.5 Project Completion

- .1 Submit a written certificate that the following items 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 Equipment and systems have been tested, adjusted and balanced and are fully operational;
 - .4 Certificates required by the building inspector, fire inspector and utility companies have been submitted;
 - .5 Operation of systems have been demonstrated to Owner's personnel and;
 - .6 Work is complete and ready for final inspection.

1.6 Final Inspection

- .1 When items noted herein are completed, request a final inspection of the Work by the Owner, Consultant and Contractor. If Work is deemed incomplete by the Owner and the Consultants, complete the outstanding items and request a reinspection.
- .2 Outstanding deficiencies will be valued at 150% of normal costs with no value less than \$100. This cost will be used to determine money to be held and must be less than the contractual obligations under the Construction Lien Act for the project to be declared Substantially Performed.

1.7 Declaration of Substantial Performance

- .1 When the Owner and the Consultants consider deficiencies and defects have been corrected

and it appears that requirements of the Contract have been substantially performed, make application for Certificate of Substantial Performance with the following stipulations:

- .1 Contractor is to complete the project within sixty (30) days. Thereafter the Owner may elect to complete the Work and deduct the cost from final payment.
- .2 No payments will be processed between Substantial Performance and Total Performance.

1.8 Declaration of Total Performance

- .1 When the Consultants consider final deficiencies and defects have been corrected and it appears that requirements of the Contract have been totally performed, make application for Total Performance. If Work is deemed incomplete by Consultant, complete outstanding items and request re-inspection.

1.9 Final Payment

- .1 Following the completion of the lien period, submit claim for final payment in accordance with General Conditions.

1.10 Re-inspection

- .1 Should status of the Work require re-inspection by the Consultant due to failure of Work to comply with Contractor's claims for inspections, Owner will deduct amount of Consultant's compensation at current Ontario Association of Architects (OAA) per diem rates.

End of Section

PART 1 - GENERAL

1.1 General

- .1 Maintain project in accordance with the Health and Safety Standards of the Province of Ontario.
- .2 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .3 Store volatile waste in covered metal containers, and remove from premises at end of each working day. Do not dispose of volatile wastes in storm or sanitary drains.
- .4 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

1.2 Materials

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.3 Cleaning During Construction

- .1 Maintain project grounds, and public properties free from accumulations of waste materials and rubbish. Do not allow rubbish to accumulate in work under construction or on roofs.
- .2 Provide on-site containers for collection of waste materials, and rubbish and pay all costs of disposal.
- .3 At reasonable intervals during progress of work, clean site and public property and dispose of waste materials, debris and rubbish.
- .4 Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- .5 Vacuum clean interior building areas when ready to receive finish painting, and continue vacuum cleaning on an as-needed basis until building is ready for substantial completion or occupancy.
- .6 Schedule cleaning operations so that dust or other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.
- .7 Take precautions to prevent the disposing of mud or debris on roadways. Any and all such mud or debris shall be cleaned up immediately. Neglect of this requirement will cause the Owner to have the necessary clean-up work carried out and charge all costs to the Contractor.
- .8 Cleaning operations shall include those areas used for temporary site access or used on a temporary basis to facilitate the work.
- .9 Be responsible for removal of snow, for all trades, from all areas of site and site access roads as required to permit continuous, uninterrupted work on site.

1.4 Final Cleaning

- .1 Upon completion of the Work, prior to Substantial Performance or where Work is phased, upon completion of each phase, commence final cleaning of the area.
- .2 Clean the Place of the Work thoroughly, free of rubbish and surplus material. Dispose of rubbish and debris. Vacate the Place of the Work in a clean and tidy condition satisfactory to the Consultant. Note that final cleaning is intended to allow the Owner to occupy the Work without

- being required to do any further cleaning.
- .3 Dismantle and remove the work of the Temporary Facilities Section from the Place of the Work.
 - .4 Clean all new components within the Place of the Work including, without being limited to:
 - .1 Floors: sweep / vacuum, wash, wax, polish
 - .2 Walls: vacuum / dust / wet wash / dry wipe
 - .3 Ceilings: vacuum
 - .4 Window coverings: wet wash / wipe and vacuum
 - .5 Electrical switch gear: vacuum / wipe
 - .6 Windows, screens, mirrors, door glazing: dust, polish inside and outside, and replace all damaged glass
 - .7 Hardware: dust and polish clean
 - .8 Plumbing fixtures, mechanical and electrical fixtures and equipment: remove stains, dust dirt and paint spots
 - .9 Stainless steel, anodized aluminum, brass, bronze and other metals: dust and polish clean
 - .10 Use manufacturers' recommended cleaning products for each product provided in the Work.
 - .11 Remove stains, efflorescence, paint, plaster, labels, temporary coverings and protection, caulking compounds and dirt.
 - .12 Touch up damaged painted areas.
 - .13 Dust, clean and polish metal and glass surfaces.
 - .14 Clean millwork on all surfaces inside and out.
 - .15 Dirty and damaged ceiling tiles to be replaced with new.
 - .16 Clean inside of ducts, blowers and coils and behind grilles, louvers and screens.
 - .17 Replace construction filters for heating, ventilation and air conditioning equipment with new filters.
 - .18 Ceramic or porcelain tile is to be scrubbed so that all dirt, debris, stains and marks are removed. Grout is to be sealed.
 - .19 Power wash new and adjacent existing pavement roads and sidewalk surfaces.
 - .5 Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
 - .6 Clean wall mounted presentation boards, whiteboards, chalkboards and tackboard surfaces, including top and bottom rails.
 - .7 Replace dirty and damaged ceiling tiles with new tiles.
 - .8 Clean window coverings of dust, stains, and other construction dirt. Window coverings shall operate smoothly to supplier and/or manufacturer's approval.
 - .9 Vacuum clean all building interiors affected in construction operations including ceilings and walls. Wet wash and wipe down all surfaces to remove dust as required.
 - .10 Ceramic and porcelain floors are to be sealed in accordance with manufacturer's recommendations. Tile grout is to be sealed.

- .11 Broom clean and wash paved surfaces inside and outside the building.
- .12 Remove labels, temporary wrappings and coverings, and protective materials from all surfaces.
- .13 Replace ventilating and air conditioning filters.
- .14 Clean ducts, blowers and coils. Where HVAC equipment has been approved for pre-turnover use, all ducts shall be cleaned by approved commercial duct cleaner and filters replace prior to turnover.
- .15 Clean out floor and roof drains. Verify that they are clean and free-draining.
- .16 Leave premises ready for immediate occupation without further cleaning, to Consultant's and Owner's approval.

End of Section

PART 1 - GENERAL

1.1 Operations and Maintenance Manual

- .1 An organized compilation of operating and maintenance data including detailed technical information, documents and records describing operation and maintenance of individual products or systems as specified in individual Sections of Divisions 02 - 17.

1.2 General

- .1 Assemble, coordinate, bind and index required data into Operation and Maintenance Manual.
- .2 Submit complete operation and maintenance manual to Consultant prior to application for Certificate of Substantial Performance. For mechanical, electrical and other equipment that is specified to be demonstrated to Owner's staff and maintenance personnel, the submission time shall be a minimum of 14 working days before date of Substantial Performance. Where an Air Balancing Report is called for under Division 15, it shall be noted that failure to provide such report before the 14 day period specified above may be held as a reason by the Consultant, to delay Substantial Performance inspection.
- .3 Submit 1 hardcopy and 1 digital copy on USB drive.
- .4 Organize data into same numerical order as contract specifications.
- .5 Material: label each section with tabs protected with celluloid covers fastened to hard paper dividing sheets.
- .6 Type lists and notes.
- .7 Drawings, diagrams and manufacturers literature must be legible.

1.3 Binders

- .1 Binders: vinyl, hard covered, 2 "D" ring, loose leaf, sized for 8 1/2" x 11" paper.
- .2 Identify contents of each binder on spline and cover.

1.4 Contents

- .1 Cover sheet containing:
 - .1 Date submitted.
 - .2 Project title, location and project number.
 - .3 Names and addresses of Contractor, and all Sub-contractors.
- .2 Table of Contents.
- .3 Warranties, guarantees.
- .4 Copies of approvals, and certificates including Occupancy Certificate, Hydro Certificate, Fire Alarm Verification and sprinkler verification.
- .5 Provide data as specified in individual Sections of Divisions 02 to 17. Organize data into applicable Sections of work with each Section separated by hard paper dividers with plastic covered tabs marked by Section.
 - .1 List of equipment including service depot.
 - .2 Nameplate information including equipment number, make, size, capacity, model number and serial number.

- .3 Parts list.
 - .4 Installation details.
 - .5 Comprehensive operating instructions.
 - .6 Detailed maintenance instructions for equipment.
 - .7 Detailed maintenance instructions for finishes.
 - .8 Sources of supply for all proprietary products used in Work.
 - .9 Sources of supply for parts and maintenance of all equipment in Project.
- .6 Paint schedule including colour numbers, locations where applied, list of manufacturers and trade names of finishes and coatings applied.
 - .7 Shop drawings: bind separately one complete set of reviewed final shop drawings and product data. Record any changes made during fabrication and installation caused by unforeseen conditions.
 - .8 Reports, charts and diagrams specified in Divisions 15, 16 and 17, including Air Balancing Reports and control systems wiring diagrams.

1.5 Maintenance Materials

- .1 Specific requirements for maintenance materials are specified in individual Sections of Divisions 02 to 17.
- .2 Deliver specified items packaged to prevent damage. Store where directed by Consultant.
- .3 Identify, on carton or package, colour, room No., system or area as applicable where item is used.

1.6 Special Tools

- .1 Specific requirements for special tools are specified in individual Sections of Divisions 02 to 17.
- .2 Assemble special tools as specified. Deliver to site and store where directed by Consultant.
- .3 Include following:
 - .1 Identification tag reference.
 - .2 Identification of equipment or system for which tools are applicable.
 - .3 Instruction on intended use of tool.
- .4 Identify special tools to indicate equipment or system for which tools are intended.

1.7 Spare Parts

- .1 Specific requirements for spare parts are specified in individual Sections of Divisions 02 to 17.
- .2 Assemble spare parts as specified. Deliver to Site and store where directed by Consultant.
- .3 Include the following:
 - .1 Part number.
 - .2 Identification of equipment or system for which parts are applicable.
 - .3 Installation instructions as applicable.
 - .4 Name and address of nearest supplier.
- .4 Identify spare parts to indicate equipment or system for which parts are applicable.

End of Section

PART 1 - GENERAL

1.1 References

- .1 Canadian Standards Association (CSA).
- .2 CSA S350-M1980, Code of Practice for Safety in Demolition of Structures.

1.2 Existing Conditions

- .1 Structures to be demolished to be based on condition at time of examination prior to tendering.
- .2 Remove, protect and store salvaged items as directed by Consultant.

1.3 Protection

- .1 Prevent movement, settlement or damage of adjacent structures, services, paving and walks, parts of existing building to remain. Provide bracing, shoring and underpinning as required. Repair damage caused by demolition as directed by Consultant.
- .2 Support affected structures and, if safety of structure being demolished or adjacent structures or services appears to be endangered, cease operations and notify Consultant.
- .3 Prevent debris from blocking surface drainage system, mechanical and electrical systems which must remain in operation.

1.4 Requirements of Regulatory Agencies

- .1 Conform to the Ontario Building Code, to by-laws of municipality, and to all requirements of provincial authorities having jurisdiction.
- .2 Put in place all safety measures such as hoarding, fencing, signage, garbage bins, and perform all disconnect removal and capping-off work for existing hydro, water, gas, telephone, cable TV, computer feeds, etc. as required by Engineer, Municipal, Provincial, and Utility Authorities having jurisdiction. Maintain all required exists during demolition to approval of local authorities.

1.5 Quality Assurance

- .1 Disconnection, sealing off, demolition and alternations to existing mechanical/electrical services and equipment shall be performed by properly qualified and experienced Mechanical/Electrical Sub-Contractors. Co-ordinate with Mechanical/Electrical Sub-Contractors to schedule all necessary disconnects/capping-off of existing services to allow demolition work to proceed. Take special care to protect existing active services during demolition.
- .2 Demolition/removal/relocation work shall be executed with utmost care to prevent damage to adjacent materials and finishes that are to be maintained or to items being removed and relocated or turned over to School Representative. Make good, at no additional cost to Owner, any damage caused by failure to exercise care and protection

PART 2 – PRODUCTS

2.1 Scope of Work

- .1 Supply all labour, materials and equipment necessary to perform all demolition/removal/relocation work. Refer carefully to issued drawings for notes and symbols indicating general extent of this type of work.

PART 3 - EXECUTION

3.1 Preparation

- .1 Disconnect and re-route electrical and telephone service lines within buildings affected by demolition work. Post warning signs on electrical lines and equipment which must remain energized to serve other properties during period of demolition.
- .2 Disconnect and cap designated mechanical services.
- .3 Do not disrupt active or energized utilities traversing premises designated to remain undisturbed.

3.2 Safety Code

- .1 Do demolition work in accordance with Section 01545 – Safety Requirements.

3.3 Demolition

- .1 Demolish parts of building structure to permit construction of new work as indicated on drawings.
- .2 Notify Engineer Consultant in writing of any materials identified as not suitable for alternate disposal. Provide reasons prior to approval for disposal.
- .3 Remove existing equipment, services, and obstacles where required for refinishing or making good of existing surfaces, and replace as work progresses.
- .4 At end of each day's work, leave work in safe and stable condition. Protect interiors of parts not to be demolished from exterior elements at all times.
- .5 Demolish to minimize dusting. Keep materials wetted as required to minimize airborne dust.
- .6 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.

3.4 Dust Control

- .1 The Contractor shall assume full responsibility for protection of existing portions of building assemblies, materials, and finishes to be maintained so that they are not damaged by demolition / removal / relocation work.
- .2 Provide temporary dust proofing by means of partitions, filters, coverings, flexible screenings and tape to effectively isolate existing materials/finishes/equipment. Such measures shall be in place prior to commencement of any demolition work. Openings in existing floors, walls and ceilings shall be covered and taped to prevent dust migration. Existing return air grilles leading from areas being demolished shall be equipped with temporary filters and cleaned or replaced on regular basis. Include all costs for erection and removal of such protective devices. Remove such devices immediately upon completion of demolition work.

End of Section

Simcoe County District School Board

PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

**ANDREW HUNTER ELEMENTARY SCHOOL
59 LAMPMAN LANE, BARRIE, ONTARIO**

January 29, 2019

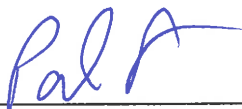
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PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY –
ANDREW HUNTER ELEMENTARY SCHOOL



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PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

Andrew Hunter Elementary School
59 Lampman Lane, Barrie, Ontario

Prepared for:

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701543-105

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January 29, 2019

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PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY –
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EXECUTIVE SUMMARY

Arcadis Canada Inc. (Arcadis) was retained by the Simcoe County District School Board to conduct a pre-renovation designated substances and hazardous materials survey in the Washroom area (Rooms 131, 131A, 133 and 135) of Andrew Hunter Elementary School located at 59 Lampman Lane in Barrie, Ontario.

Based on visual observations and results of laboratory analyses of samples collected by Arcadis, no asbestos-containing materials were found to be present in the designated study areas.

Lead was detected in Samples P-1 (purple paint on metal doors and frames), P-2 (white paint on concrete block walls) and P-3 (green paint on stall partitions) at levels below the *Surface Coating Materials Regulations* concentration of 90 mg/kg.

During the course of our site investigation, fluorescent lights were identified in the designated study areas. Mercury should be assumed to be present as a gas in all fluorescent light tubes and in all paint applications, albeit at low levels. No mercury-containing thermostats were observed.

Materials observed in the designated study areas which should be considered to contain silica included terrazzo, concrete, cement block walls, parging, and mortar.

Fluorescent lights were observed in the designated study areas during the course of our site investigation. Light ballasts, such as those associated with the type of fluorescent lights (T8s) observed in the designated study areas, are usually an electronic-type which do not contain PCBs, however, this would be confirmed by an electrician at the time of dismantling of the lights.

No equipment potentially containing Ozone-Depleting Substances (ODS) was identified in the designated study areas during the course of the site investigation.

No readily-evident mould was observed during the course of the site investigation.

No other designated substances (vinyl chloride, acrylonitrile, benzene, isocyanates, arsenic ethylene oxide and coke oven emissions) were observed to be present in the designated study areas in a form that would represent an exposure concern.

1 INTRODUCTION

Arcadis Canada Inc. (Arcadis) was retained by the Simcoe County District School Board to conduct a pre-renovation designated substances and hazardous materials survey in the Washroom area (Rooms 131, 131A, 133 and 135) of Andrew Hunter Elementary School located at 59 Lampman Lane in Barrie, Ontario. The building was reportedly built in 1984.

It is our understanding that renovations are planned for all rooms in the study area.

The information in this report is to be provided to all bidders on a project in accordance with the requirements of the *Occupational Health and Safety Act*.

A floor plan is provided in Appendix A.

The survey was undertaken to report on the presence or suspected presence of readily observable designated substances and hazardous materials.

1.1 Scope of Work

The scope of work for our investigation included:

- review of existing information;
- investigation of readily-accessible areas in the designated study areas for the presence of designated substances and hazardous materials used in building construction materials;
- obtaining representative bulk samples of materials suspected of containing asbestos and paint chip sample suspected of containing lead;
- laboratory analyses of bulk samples for asbestos content;
- laboratory analyses of paint chip samples for lead content; and
- preparation of a report outlining the findings of the investigation.

Mr. Joseph Jones of Arcadis visited the site on January 14, 2019 to conduct the designated substances and hazardous materials survey.

2 REGULATORY DISCUSSION AND METHODOLOGY

Ontario Occupational Health and Safety Act (OHSA)

The Ontario *Occupational Health and Safety Act* (OHSA) sets out, in very general terms, the duties of employers and others to protect workers from health and safety hazards on the job. These duties include, but are not limited to:

- taking all reasonable precautions to protect the health and safety of workers [clause 25(2)(h)];
- ensuring that equipment, materials and protective equipment are maintained in good condition [clause 25(1)(b)];
- providing information, instruction and supervision to protect worker health and safety [clause 25(2)(a)]; and
- acquainting a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical or physical agent [clause 25(2)(d)].

In addition, Section 30 of the OHSA deals with the presence of designated substances on construction projects. Compliance with the OHSA and its regulations requires action to be taken where there is a designated substance hazard on a construction project.

Section 30 of the OHSA requires the owner of a project to determine if designated substances are present on a project and, if so, to inform all potential contractors as part of the bidding process. Contractors who receive this information are to pass it onto other contractors and subcontractors who are bidding for work on the project.

Regulation for Construction Projects, O.Reg. 213/91

The *Regulation for Construction Projects*, O.Reg. 213/91, applies to all construction projects. The following sections of the regulation would apply to situations where there is the potential for workers to be exposed to designated substances:

- Section 14 (5) A competent person shall perform tests and observations necessary for the detection of hazardous conditions on a project.
- Section 21 (1) A worker shall wear such protective clothing and use such personal protective equipment or devices as are necessary to protect the worker against the hazards to which the worker may be exposed.
- (2) A worker's employer shall require the worker to comply with subsection (1).

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- (3) A worker required to wear personal protective clothing or use personal protective equipment or devices shall be adequately instructed and trained in the care and use of the clothing, equipment or device before wearing or using it.
- Section 30 Workers who handle or use substances likely to endanger their health shall be provided with washing facilities with clean water, soap and individual towels.
- Section 46 (1) A project shall be adequately ventilated by natural or mechanical means,
- (a) if a worker may be injured by inhaling a noxious...dust or fume;
- (2) If it is not practicable to provide natural or mechanical ventilation in the circumstances described in clause (1)(a), respiratory protective equipment suitable for the hazard shall be provided and be used by the workers.
- Section 59 If the dissemination of dust is a hazard to a worker, the dust shall be adequately controlled or each worker who may be exposed to the hazard shall be provided with adequate personal protective equipment.

Regulation for Designated Substances (O.Reg. 490/09)

The *Designated Substance Regulation* (O.Reg. 490/09) specifies occupational exposure limits (OELs) for designated substances and requires an assessment and a control program to ensure compliance with these OELs.

Although, O.Reg. 490/09 and the OELs do not apply to an employer on a construction project, or to their workers at the project, employers still have a responsibility to protect the health of their workers and to comply with the OHSA and other applicable regulations. Section 25(2)(h) of the OHSA requires that employers take "every precaution reasonable in the circumstances for the protection of a worker".

Other regulatory requirements (and guidelines) which apply to control of exposure to designated substances and hazardous materials are referenced in the sections below.

2.1 Asbestos

Asbestos has been widely used in buildings, both in friable applications (materials which can be crumbled, pulverized or powdered by hand pressure, when dry) such as pipe and tank insulation, sprayed-on fireproofing and acoustic texture material and in non-friable manufactured products such as floor tile, gaskets, cement board and so on. The use of asbestos in friable applications was curtailed around the mid-1970s and, as such, most buildings constructed prior to about 1975 contain some form of friable construction material with an asbestos content. The use of asbestos in certain non-friable materials continued beyond the mid-1970s.

Control of exposure to asbestos is governed in Ontario by Regulation 278/05 – *Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*. Disposal of asbestos waste

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(friable and non-friable materials) is governed by Ontario Regulation 278/05 and by Ontario Regulation 347, *Waste Management – General*. O.Reg. 278/05 classifies asbestos work operations into three types (Type 1, 2 and 3), as shown in Table C-1 in Appendix C, and specifies procedures to be followed in conducting asbestos abatement work.

2.2 Lead

Lead is a heavy metal that can be found in construction materials such as paints, coatings, mortar, concrete, pipes, solder, packings, sheet metal, caulking, glazed ceramic products and cable splices. Lead has been used historically in exterior and interior paints.

The *Surface Coating Materials Regulations* made under the *Hazardous Products Act* (SOR/2005-109) sets a maximum concentration of total lead of 90 mg/kg (0.009 percent or 90 parts per million) for surface coating materials, including paints, effective 21 October 2010. This criterion level applies to the sale and importation of new surface coating materials.

The *National Plumbing Code* allowed lead as an acceptable material for pipes until 1975 and in solder until 1986.

The Ministry of Labour *Guideline, Lead on Construction Projects*, dated April 2011, provides guidance in the measures and procedures that should be followed when handling lead containing materials during construction projects. In the guideline, lead-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of lead, as shown in Appendix C, Table C-2. Any operation that may expose a worker to lead that is not a Type 1, Type 2, or Type 3b operation, is classified as a Type 3a operation.

2.3 Mercury

Mercury has been used in electrical equipment such as alkaline batteries, fluorescent light bulbs (lamps), high intensity discharge (HID) lights (mercury vapour, high pressure sodium and metal halide), “silent switches” and in instruments such as thermometers, manometers and barometers, pressure gauges, float and level switches and flow meters. Mercury-containing lamps, the bulk of which are 1.22 m (four foot) fluorescent lamps contain between 7 and 40 mg of mercury each. Mercury compounds have also been used historically as additives in latex paint to protect the paint from mildew and bacteria during production and storage.

The intentional addition of mercury to Canadian-produced consumer paints for interior use was prohibited in 1991. Mercury may have remained in paints after 1991, however, as a result of impurities in the paint ingredients or cross-contamination due to other manufacturing processes. The *Surface Coating Materials Regulations* made under the *Hazardous Products Act* set a maximum total mercury concentration of 10 mg/kg (0.001 percent) for surface coating materials (including paint). This criterion level applies to the sale and importation of new surface coating materials.

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Mercury-containing thermostats and silent light switches are mercury tilt switches which are small tubes with electrical contacts at one end of the tube. A mercury tilt switch is usually present when no switch is visible. Mercury switches often have the word “TOP” stamped on the upper end of the switch, which is visible after removing the cover plate. If mercury switches are to be removed, the entire switch should be removed and placed into a suitable container for storage and disposal.

Waste light tubes generated during renovations or building demolition and waste mercury from equipment must either be recycled or disposed of in accordance with the requirements of Ont. Reg. 347 - *Waste Management, General*.

Waste mercury in amounts less than 5 kg (per month) are exempt from the generator registration requirements prescribed by O.Reg. 347 – *Waste Management – General*. Waste mercury from mercury switches or gauges should, however, be properly collected and shipped to a recycling facility or disposed of as a hazardous waste. Removal of mercury-containing equipment (e.g., switches, gauges, controls, etc.) should be carried out in a manner which prevents spillage and exposure to workers.

2.4 Silica

Silica exists in several forms of which crystalline silica is of most concern with respect to potential worker exposures. Quartz is the most abundant type of crystalline silica. Some commonly used construction materials containing silica include brick, refractory brick, concrete, concrete block, cement, mortar, rock and stone, sand, fill dirt, topsoil and asphalt containing rock or stone.

The Ministry of Labour *Guideline, Silica on Construction Projects*, dated April 2011, provides guidance in controlling exposure to silica dust during construction activities. In the guideline, silica-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of respirable crystalline silica in the form of cristobalite, tridymite, quartz and tripoli as shown in Appendix C, Table C-3.

2.5 Vinyl Chloride

Vinyl chloride vapours may be released from polyvinyl chloride (PVC) products in the event of heating or as a result of decomposition during fire. PVC is used in numerous materials that may be found in building construction, including, for example, piping, conduits, siding, window and door frames, plastics, garden hoses, flooring and wire and cable protection.

2.6 Acrylonitrile

Acrylonitrile is used to produce nitrile-butadiene rubber, acrylonitrile-butadiene-styrene (ABS) polymers and styrene-acrylonitrile (SAN) polymers. Products made with ABS resins which may be found in buildings include telephones, bottles, packaging, refrigerator door liners, plastic pipe, building panels and shower stalls. Acrylonitrile can be released into the air by combustion of products containing ABS.

2.7 Other Designated Substances

Isocyanates are a class of chemicals used in the manufacture of certain types of plastics, foams, coatings and other products. Isocyanate-based building construction materials may include rigid foam products such as foam-core panels and spray-on insulation and paints, coatings, sealants and adhesives. Isocyanates may be inhaled if they are present in the air in the form of a vapour, a mist or a dust.

Benzene is a clear, highly flammable liquid used mainly in the manufacture of other chemicals. The commercial use of benzene as a solvent has practically been eliminated, however it continues to be used as a solvent and reactant in laboratories.

Arsenic is a heavy metal used historically in pesticides and herbicides. The primary use in building construction materials was its use in the wood preservative chromated copper arsenate (CCA). CCA was used to pressure treat lumber since the 1940s. Pressure-treated wood containing CCA is no longer being produced for use in most residential settings.

Ethylene oxide is a colourless gas at room temperature. It has been used primarily for the manufacture of other chemicals, as a fumigant and fungicide and for sterilization of hospital equipment.

Coke oven emissions are airborne contaminants emitted from coke ovens and are not a potential hazard associated with building construction materials.

2.8 Polychlorinated Biphenyls (PCBs)

The management of equipment classified as waste and containing Polychlorinated Biphenyls (PCBs) at concentrations of 50 parts per million (mg/kg) or greater is regulated by Ontario Regulation 362, *Waste Management – PCBs*. Under this regulation, PCB waste is defined as any waste material containing PCBs in concentrations of 50 mg/kg or greater. Any equipment containing PCBs at or greater than this level, such as transformers, switchgear, light ballasts and capacitors, which is removed from service due to age, failure or as a result of decommissioning, is considered to constitute a PCB waste. Although current federal legislation (effective 1 July 1980) has prohibited the manufacture and sale of new equipment containing PCBs since that time, continued operation of equipment supplied prior to this date and containing PCBs is still permitted. Handling, storage and disposition of such equipment is, however, tightly regulated and must be managed in accordance with provincial and federal government requirements as soon as it is taken out of service or becomes unserviceable.

In most institutional, commercial facilities and in smaller industrial facilities, the primary source of equipment potentially containing PCBs is fluorescent and H.I.D. light ballasts. Small transformers may also be present. In larger industrial facilities, larger transformers and switch gear containing, or potentially containing, PCBs may also be present.

PCBs were also commonly added to industrial paints from the 1940s to the late 1970s. PCBs were added directly to the paint mixture to act as a fungicide, to increase durability and flexibility, to improve resistance to fires and to increase moisture resistance. The use of PCBs in new products was banned in Canada in

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the 1970s. PCB amended paints were used in specialty industrial/institutional applications prior to the 1970s including government buildings and equipment such as industrial plants, radar sites, ships as well as non-government rail cars, ships, grain bins, automobiles and appliances.

Removal of in-service equipment containing PCBs, such as fluorescent light ballasts, capacitors and transformers, is subject to the requirements of the federal *PCB Regulations* (discussed below).

The *PCB Regulations*, which came into force on 5 September 2008, were made under the *Canadian Environmental Protection Act, 1999* (CEPA 1999) with the objective of addressing the risks posed by the use, storage and release to the environment of PCBs, and to accelerate their destruction. The *PCB Regulations* set different end-of-use deadlines for equipment containing PCBs at various concentration levels.

The Regulations Amending the PCB Regulations and Repealing the Federal Mobile PCB Treatment and Destruction Regulations were published on 23 April 2014, in the *Canada Gazette, Part II*, and came into force on 1 January 2015. The most notable part of the amendments is the addition of an end-of-use deadline date of 31 December 2025 for specific electrical equipment located at electrical generation, transmission and distribution facilities.

When the PCB materials are classified as waste, jurisdiction falls under the Ontario Ministry of the Environment and Climate Change (MOECC) and O.Reg. 362. All remedial and PCB management work must be carried out under the terms of a Director's Instruction issued by an MOECC District Office (for quantities of PCB fluid greater than 50 litres). The PCB waste stream, regardless of quantity, must be registered with the MOECC, in accordance with O.Reg. 347, *General - Waste Management*. O.Reg. 362 applies to any equipment containing greater than 1 kg of PCBs.

2.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

Ontario Regulation 463/10 – *Ozone Depleting Substances and Other Halocarbons*, applies to the use, handling and disposal of Class 1 ozone-depleting substances, including various chlorofluorocarbons (CFCs), halons and other halocarbons, Class 2 ozone-depleting substances, including various hydrochlorofluorocarbons (HCFCs) and halocarbons, and other halocarbons, including fluorocarbons (FCs) and hydrofluorocarbons (CFCs). The most significant requirements for handling of ozone-depleting substances (ODS) and other Halocarbons, which include, for example, refrigerants used in refrigeration equipment and chillers, include the following:

- certification is required for all persons testing, repairing, filling or emptying equipment containing ODS and other halocarbons;
- the discharge of a Class 1 ODS or anything that contains a Class 1 ODS to the natural environment or within a building is prohibited;
- the making, use of, selling of or transferring of a Class 1 ODS is restricted to certain conditions;

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- the discharge of a solvent or sterilant that contains a Class 2 ODS is prohibited;
- the making, use of, selling of or transferring of a solvent or sterilant that contains a Class 2 ODS is restricted to certain conditions;
- fire extinguishing equipment that contains a halon may be discharged to fight fires, except fires for firefighting training purposes;
- portable fire extinguishing equipment that contains a halon may be used or stored if the extinguisher was sold for use for the first time before 1 January 1996;
- records of the servicing and repair of equipment containing ODS and other halocarbons must be prepared and maintained by the owner of the equipment; and
- equipment no longer containing ODS and other halocarbons must be posted with a notice completed by a certified person.

Ontario Regulation 347, *General – Waste Management*, has also been amended to provide for more strict control of CFCs. The requirements under the amended regulation apply primarily to the keeping of records for the receipt or recycling of CFC waste.

2.10 Mould

Moulds are forms of fungi that are found everywhere both indoors and outdoors all year round. Outdoors, moulds live in the soil, on plants and on dead and decaying matter. More than 1000 different kinds of indoor moulds have been found in buildings. Moulds spread and reproduce by making spores, which are all small and light-weight, able to travel through air, capable of resisting dry, adverse environmental conditions, and hence capable of surviving a long time. Moulds need moisture and nutrients to grow and their growth is stimulated by warm, damp and humid conditions.

Control of exposure to mould is required under Section 25(2)(h) of the Ontario *Occupational Health and Safety Act*, which states that employers shall take every precaution reasonable in the circumstances for the protection of workers. Recommended work practices are outlined in the following documents:

- *Mould Guidelines for the Canadian Construction Industry*. Standard Construction Document CCA 82 2004. Canadian Construction Association.
- *Mould Abatement Guidelines*. Environmental Abatement Council of Ontario. Edition 3. 2015.

3 RESULTS AND DISCUSSION

3.1 Asbestos

During the course of our site investigation, representative bulk samples of material were collected by Arcadis staff. The samples were forwarded to EMSL Canada Inc. for asbestos analyses. The results of bulk sample analysis for asbestos content are provided in Table 3.1. The laboratory report is provided in Appendix B.

Table 3.1
Summary of Results of Analyses of Bulk Samples for Asbestos Content
Andrew Hunter Elementary School
January 14, 2019

Sample No.	Sample Location	Sample Description	Asbestos Content
1A	Room 131	Parging on west concrete block wall	None detected
1B	Room 131	Parging on west concrete block wall	None detected
1C	Room 135	Parging on west concrete block wall	None detected
2A	Room 133	(12" x 12") vinyl floor tile - beige with brown streaks – mastic portion	None detected
2A	Room 133	(12" x 12") vinyl floor tile - beige with brown streaks – vinyl portion	None detected
2B	Room 133	(12" x 12") vinyl floor tile - beige with brown streaks – mastic portion	None detected
2B	Room 133	(12" x 12") vinyl floor tile - beige with brown streaks – vinyl portion	None detected
2C	Room 133	(12" x 12") vinyl floor tile - beige with brown streaks – mastic portion	None detected None detected (TEM)
2C	Room 133	(12" x 12") vinyl floor tile - beige with brown streaks – vinyl portion	None detected None detected (TEM)
3A	Room 131A	(12" x 12") vinyl floor tile - white with grey flecks – mastic portion	None detected
3A	Room 131A	(12" x 12") vinyl floor tile - white with grey flecks – vinyl portion	None detected
3B	Room 131A	(12" x 12") vinyl floor tile - white with grey flecks – mastic portion	None detected
3B	Room 131A	(12" x 12") vinyl floor tile - white with grey flecks – vinyl portion	None detected
3C	Room 131A	(12" x 12") vinyl floor tile - white with grey flecks – mastic portion	None detected None detected (TEM)

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Sample No.	Sample Location	Sample Description	Asbestos Content
3C	Room 131A	(12" x 12") vinyl floor tile - white with grey flecks – vinyl portion	None detected None detected (TEM)
4A	Room 131	(2' x 4') ceiling tile – pinholes	None detected
4B	Room 131	(2' x 4') ceiling tile – pinholes	None detected
4C	Room 131	(2' x 4') ceiling tile – pinholes	None detected
5	Room 135	(2' x 4') ceiling tile – fissure on 4' and pinholes	None detected
6	Room 131	Mortar – concrete block	None detected
7	Room 133	Mastic (brown) – on vinyl baseboard mastic	None detected
1B	Room 115	concrete block mortar	<1% chrysotile <0.25% chrysotile (400 PLM Pt. Ct.) ⁽¹⁾⁽²⁾
1C	Room 119	concrete block mortar	<1% chrysotile <0.25% chrysotile (400 PLM Pt. Ct.) ⁽¹⁾⁽²⁾
3B	Room 119	vinyl baseboard – brown mastic	None detected ⁽²⁾
3C	Room 115	vinyl baseboard – brown mastic	None detected None detected (TEM) ⁽²⁾
14	Exit at Room 101	(2' x 4') ceiling tile-1	None detected ⁽³⁾
15	Room 102	(2' x 4') ceiling tile-2	None detected ⁽³⁾
16	Room 118C	(2' x 4') ceiling tile-3	None detected ⁽³⁾
17	Corridor at Room 102	(2' x 4') ceiling tile-1	None detected ⁽³⁾
18	Room 107	(2' x 4') ceiling tile-2	None detected ⁽³⁾
19	Corridor at Room 130	(2' x 4') ceiling tile-3	None detected ⁽³⁾
20	Room 131	(2' x 4') ceiling tile-1	None detected ⁽³⁾
21	Room 131G	(2' x 4') ceiling tile-2	None detected ⁽³⁾
22	Room 136	(2' x 4') ceiling tile-3	None detected ⁽³⁾

NOTES:

Bulk samples were analyzed by Polarized Light Microscopy (PLM) analysis, except where "TEM" is noted, in which case Transmission Electron Microscopy analysis was also performed.

< - Less than.

- (1) "Asbestos-containing material" is defined as material that contains 0.5% or more asbestos by dry weight.
- (2) Sample result obtained from Arcadis report entitled "*Pre-Renovation Designated Substances and Hazardous Materials Survey – Andrew Hunter Elementary School*", dated February 2018.
- (3) Sample result obtained from DCS report entitled "*Survey of Asbestos-Containing Materials – Andrew Hunter Elementary School*", dated April 2007.

PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY –
ANDREW HUNTER ELEMENTARY SCHOOL

Based on visual observations and results of laboratory analyses of samples collected by Arcadis, no asbestos-containing materials were found to be present in the designated study areas. A floor plan showing the designated study areas is provided in Appendix A.

Asbestos may also be present in materials which were not sampled during the course of the asbestos survey carried out by Arcadis, including, but not limited to, gaskets in piping, components of electrical equipment (e.g. electric wiring insulation, non-metallic sheathed cable, electrical panel partitions, arc chutes, high-grade electrical paper, etc.), and/or in locations that are presently inaccessible (e.g., in pipe chases, behind walls). Confirmatory testing of any such materials could be undertaken as the need arises (i.e., at the time of renovations, modifications or demolition) or the materials can be assumed to contain asbestos based on findings in adjacent areas.

If any materials which may contain asbestos and which were not tested during the course of the designated substances and hazardous materials survey are discovered during any construction activities, the work shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.

3.2 Lead

During the course of our site investigation, three samples of paint were collected by Arcadis staff. The samples were forwarded to Maxxam for lead analyses. The results of the bulk sample analyses for lead content are provided in Table 3.2. The laboratory report is provided in Appendix B.

Table 3.2
Summary of Results of Analyses of Bulk Samples for Lead Content
Andrew Hunter Elementary School
January 14, 2018

Sample No.	Sample Location	Sample description	Lead Content
P-1	Room 135	Purple Paint – on metal doors and frames	9.7 mg/kg
P-2	Room 131	White Paint – on concrete block walls	<17 mg/kg
P-3	Room 135	Green Paint – on stall partitions	<20 mg/kg

NOTE:

< = less than.

mg/kg = milligrams lead per kilogram paint.

1 mg/kg = 1 part per million (ppm).

Lead was detected in Samples P-1 (purple paint on metal doors and frames), P-2 (white paint on concrete block walls) and P-3 (green paint on stall partitions) at levels below the *Surface Coating Materials Regulations* concentration of 90 mg/kg.

3.3 Mercury

During the course of our site investigation, fluorescent lights were identified in the designated study areas. Mercury should be assumed to be present as a gas in all fluorescent light tubes and in all paint applications, albeit at low levels. The fluorescent light tubes should be recycled for mercury, if the lights are removed. No mercury-containing thermostats were observed.

Proper procedures for removing and handling mercury-containing fluorescent light tubes typically involve:

- ensuring that electrical power to light fixtures has been disconnected and locked out;
- taking all necessary precautions to ensure that fluorescent lamp tubes are removed in a manner that prevents breakage; and
- transporting fluorescent lamp tubes to a licensed processing location for separation and recovery of mercury.

3.4 Silica

Materials observed in the designated study areas which should be considered to contain silica included terrazzo, concrete, cement block walls, parging, and mortar.

The Ministry of Labour *Guideline, Silica on Construction Projects*, April 2011, provides guidance in controlling exposure to silica dust during construction activities. In the guideline, silica-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of silica, as shown in Appendix C, Table C-3.

Additional precautionary measures should also be implemented for certain types of materials (e.g., concrete block, etc.). For minor disturbances such as drilling, a HEPA-filtered attachment should be used. For removal of more than a minor amount of material, enclosures should be constructed for dust control and separation of the work area from adjacent areas.

3.5 Vinyl Chloride

As mentioned in Section 2.5 above, vinyl chloride would only be a potential exposure concern in the event of combustion of PVC products.

3.6 Acrylonitrile

As mentioned in Section 2.6 above, acrylonitrile would only be a potential exposure concern in the event of combustion of ABS products.

3.7 Other Designated Substances

No other designated substances (benzene, isocyanates, arsenic, ethylene oxide and coke oven emissions) were observed to be present in the designated study areas, and none would be expected to be encountered in any building materials in a form that would represent an exposure concern. Arsenic may be present at low levels in paint applications. The measures and procedures outlined in the *MOL Guideline, Silica on Construction Projects* for control of potential exposure to silica in cement block walls, parging, and mortar during construction activities will also serve to control potential exposure to any arsenic (or mercury) in paint.

3.8 Polychlorinated Biphenyls (PCBs)

Fluorescent lights were observed in the designated study areas during the course of our site investigation. Light ballasts, such as those associated with the type of fluorescent lights (T8s) observed [in the designated study areas, are usually an electronic-type which do not contain PCBs, however, this would be confirmed by an electrician at the time of dismantling of the lights.

3.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

No equipment potentially containing Ozone-Depleting Substances (ODS) was identified in the designated study areas during the course of the site investigation.

3.10 Mould

No readily evident mould was observed during the course of the site investigation.

The inspection of mould was limited to visual observations of readily-accessible surfaces and did not include intrusive inspections of wall cavities. During renovations or interior demolition work, any mould-impacted materials uncovered/discovered should be remediated following the measures and procedures outlined in the *Canadian Construction Association Standard Construction Document CCA-82 2004 - Mould Guidelines for the Canadian Construction Industry*.

4 USE AND LIMITATIONS OF THIS PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY REPORT

This report, prepared for the Simcoe County District School Board, does not provide certification or warranty, expressed or implied, that the investigation conducted by Arcadis Canada Inc. identified all designated substances and hazardous materials (as defined in the Ontario Occupational Health and Safety Act) in the subject facility. The work undertaken by Arcadis Canada Inc. was directed to provide information on the presence of designated substances and hazardous building materials based on review of existing information, visual investigation of readily accessible areas in the designated study areas of the building and on the results of laboratory analysis of a limited number of bulk samples of material for asbestos content and laboratory analysis of three paint chip samples for lead content. The survey did not include for identification of asbestos in process materials and equipment (including electrical equipment and wiring).

The material in this report reflects Arcadis Canada Inc.'s best judgment in light of the information available at the time of the investigation, which was performed on January 14, 2019.

This report is not intended to be used as a scope of work or technical specification for remediation of designated substances or hazardous materials.

This report was prepared by Arcadis Canada Inc. for the Simcoe County District School Board. Any use which any other party makes of the report, or reliance on, or decisions to be based on it, is the responsibility of such parties.

APPENDIX A

Floor Plan





LEGEND:

- 25 FUNCTIONAL SPACE
- THROUGHOUT FUNCTIONAL SPACE
- FT ASBESTOS FLOORING
- STUDY AREA



SIMCOE COUNTY DISTRICT SCHOOL BOARD

**PRE-RENOVATION DESIGNATED
 SUBSTANCES AND HAZARDOUS
 MATERIALS SURVEY**

ANDREW HUNTER ELEMENTARY SCHOOL
 59 LAMPMAN LANE, BARRIE, ONTARIO
 GROUND FLOOR PLAN

Drawn By: I.S.Z.	Approved By: P.S.	Project No: 701543-092
Date: JANUARY 2019	Scale: N.T.S	Drawing No: 701543-092-1

APPENDIX B

Laboratory Reports





EMSL Canada Inc.

2756 Slough Street Mississauga, ON L4T 1G3
Phone/Fax: (289) 997-4602 / (289) 997-4607
<http://www.EMSL.com> / torontolab@emsl.com

EMSL Canada Order 551900458
Customer ID: 55DCSL97
Customer PO: 701543
Project ID:

Attn: Joseph Jones
ARCADIS Canada Inc.
121 Granton Drive
Unit 12
Richmond Hill, ON L4B 3N4
Proj: 701543-105 Andrew Hunter ES

Phone: (905) 882-5984
Fax: (905) 882-8962
Collected:
Received: 1/16/2019
Analyzed: 1/23/2019

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 1A **Lab Sample ID:** 551900458-0001

Sample Description: Room 131/Parging on west concrete block wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	Gray	0.0%	100%	None Detected	

Client Sample ID: 1B **Lab Sample ID:** 551900458-0002

Sample Description: Room 131/Parging on west concrete block wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	Gray	0.0%	100%	None Detected	

Client Sample ID: 1C **Lab Sample ID:** 551900458-0003

Sample Description: Room 135/Parging on west concrete block wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	Gray	0.0%	100%	None Detected	

Client Sample ID: 2A Mastic **Lab Sample ID:** 551900458-0004

Sample Description: Room 133/12x12 vinyl floor - beige with brown streaks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/21/2019	Black	0.0%	100.0%	None Detected	

Client Sample ID: 2A Tile **Lab Sample ID:** 551900458-0004A

Sample Description: Room 133/12x12 vinyl floor - beige with brown streaks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/21/2019	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 2B Mastic **Lab Sample ID:** 551900458-0005

Sample Description: Room 133/12x12 vinyl floor - beige with brown streaks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/22/2019	Black	0.0%	100.0%	None Detected	

Client Sample ID: 2B Tile **Lab Sample ID:** 551900458-0005A

Sample Description: Room 133/12x12 vinyl floor - beige with brown streaks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/22/2019	Beige	0.0%	100.0%	None Detected	



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<http://www.EMSL.com> / torontolab@emsl.com

EMSL Canada Order 551900458
Customer ID: 55DCSL97
Customer PO: 701543
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 2C Mastic **Lab Sample ID:** 551900458-0006

Sample Description: Room 133/12x12 vinyl floor - beige with brown streaks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	1/23/2019	Black	0.0%	100.0%	None Detected	

Client Sample ID: 2C Tile **Lab Sample ID:** 551900458-0006A

Sample Description: Room 133/12x12 vinyl floor - beige with brown streaks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	White	0.0%	100%	None Detected	
TEM Grav. Reduction	1/23/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3A Mastic **Lab Sample ID:** 551900458-0007

Sample Description: Room 131A/12x12 vinyl floor - white with grey flecks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/21/2019	Black	0.0%	100.0%	None Detected	

Client Sample ID: 3A Tile **Lab Sample ID:** 551900458-0007A

Sample Description: Room 131A/12x12 vinyl floor - white with grey flecks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/21/2019	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 3B Mastic **Lab Sample ID:** 551900458-0008

Sample Description: Room 131A/12x12 vinyl floor - white with grey flecks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/22/2019	Black	0.0%	100.0%	None Detected	

Client Sample ID: 3B Tile **Lab Sample ID:** 551900458-0008A

Sample Description: Room 131A/12x12 vinyl floor - white with grey flecks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/22/2019	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 3C Mastic **Lab Sample ID:** 551900458-0009

Sample Description: Room 131A/12x12 vinyl floor - white with grey flecks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	1/23/2019	Black	0.0%	100.0%	None Detected	



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<http://www.EMSL.com> / torontolab@emsl.com

EMSL Canada Order 551900458
Customer ID: 55DCSL97
Customer PO: 701543
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3C Tile **Lab Sample ID:** 551900458-0009A

Sample Description: Room 131A/12x12 vinyl floor - white with grey flecks (black mastic)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	White	0.0%	100%	None Detected	
TEM Grav. Reduction	1/23/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 4A **Lab Sample ID:** 551900458-0010

Sample Description: Room 131/2x4 ceiling tile - pinholes

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/21/2019	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 4B **Lab Sample ID:** 551900458-0011

Sample Description: Room 131/2x4 ceiling tile - pinholes

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/21/2019	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 4C **Lab Sample ID:** 551900458-0012

Sample Description: Room 131/2x4 ceiling tile - pinholes

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/22/2019	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 5 **Lab Sample ID:** 551900458-0013

Sample Description: Room 135/2x4 ceiling tile - fissure on 4' and pinholes

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/21/2019	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 6 **Lab Sample ID:** 551900458-0014

Sample Description: Room 131/Concrete block mortar

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/22/2019	Gray	0.0%	100%	None Detected	

Client Sample ID: 7 **Lab Sample ID:** 551900458-0015

Sample Description: Room 133/Vinyl baseboard mastic - brown

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction	1/23/2019	Tan	0.0%	100.0%	None Detected	

Your Project #: 701543-105-ANDREW HUNTER ES
Your C.O.C. #: na

Attention: Joseph Jones

ARCADIS Canada Inc
121 Granton Dr
Unit 12
Richmond Hill, ON
CANADA L4B 3N4

Report Date: 2019/01/23
Report #: R5567685
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B914072
Received: 2019/01/17, 08:48

Sample Matrix: Paint
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Metals in Paint	3	2019/01/21	2019/01/21	CAM SOP-00408	EPA 6010D m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marijane Cruz, Senior Project Manager
Email: MCruz@maxxam.ca
Phone# (905)817-5756

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

ELEMENTS BY ATOMIC SPECTROSCOPY (PAINT)

Maxxam ID		ITV657		ITV658		ITV659		
Sampling Date		2019/01/14		2019/01/14		2019/01/14		
COC Number		na		na		na		
	UNITS	P-1	RDL	P-2	RDL	P-3	RDL	QC Batch
Metals								
Lead (Pb)	mg/kg	9.7	5.0	<17	17	<20	20	5937717
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

GENERAL COMMENTS

Revised Report (2019/01/23): Project # changed as per client request.

Metals: Due to limited amount of sample available for analysis, a smaller than usual portion of the samples were used. Detection limits were adjusted accordingly.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5937717	Lead (Pb)	2019/01/21	NC	75 - 125	<1.0	mg/kg	3.5 (1)	35	95	75 - 125

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.



Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

(1) Duplicate Parent ID

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



EMSL Canada Inc.

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<http://www.EMSL.com> / torontolab@emsl.com

EMSL Canada Order 551900458
Customer ID: 55DCSL97
Customer PO: 701543
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Analyst(s):

Caroline Allen	PLM (5)
Khaledeh Tahmasbipoor	PLM (7)
Michelle Lung	PLM Grav. Reduction (8)
Natalie D'Amico	TEM Grav. Reduction (5)

Reviewed and approved by:

Matthew Davis or other approved signatory
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 01/23/2019 13:35:22

APPENDIX C

Summary of Asbestos, Lead and Silica Work Classifications



TABLE C-1
SUMMARY OF CLASSIFICATION OF
TYPE 1, 2 AND 3 OPERATIONS
(Ont. Reg. 278/05)

TYPE 1 OPERATIONS

- removing less than 7.5 m² asbestos-containing ceiling tiles;
- removing non-friable asbestos-containing material other than ceiling tiles, if the material is removed without being broken, cut, drilled, abraded, ground, sanded or vibrated;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the material is wetted and the work is done only using non-powered, hand-held tools; and
- removing less than 1 m² of drywall in which asbestos-containing joint compounds have been used.

TYPE 2 OPERATIONS

- removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling;
- removal of one square metre or less of friable asbestos-containing material;
- enclosing friable asbestos-containing material;
- applying tape or a sealant or other covering to asbestos-containing pipe or boiler insulation;
- removing 7.5 m² or more asbestos-containing ceiling tiles (if removed without being broken, cut, drilled, abraded, ground, sanded or vibrated);
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the material is not wetted and the work is done only using non-powered, hand-held tools;
- removal of one square metre or more of drywall in which asbestos-containing joint compounds have been used;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done using power tools that are attached to dust-collecting devices equipped with HEPA filters;
- cleaning or removing filters used in air-handling equipment in a building that has asbestos-containing sprayed fireproofing.

TABLE C-1 (Continued)
SUMMARY OF CLASSIFICATION OF
TYPE 1, 2 AND 3 OPERATIONS
(Ont. Reg. 278/05)

TYPE 3 OPERATIONS

- removal of more than one square metre of friable asbestos-containing material;
- spray application of a sealant to friable asbestos-containing material;
- cleaning or removing air-handling equipment, including rigid ducting but not including filters, in a building that has sprayed asbestos-containing fireproofing;
- repairing or demolishing a kiln, metallurgical furnace or similar structure that is made in part of asbestos-containing refractory materials;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing materials, if the work is done using power tools that are not attached to dust-collecting devices equipped with HEPA filters.

TABLE C-2
SUMMARY OF CLASSIFICATION OF
LEAD-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE – LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

Type 1 Operations	Type 2 Operations		Type 3 Operations	
	Type 2a	Type 2b	Type 3a	Type 3b
<0.05 mg/m ³	>0.05 to 0.50 mg/m ³	>0.50 to 1.25 mg/m ³	>1.25 to 2.50 mg/m ³	>2.50 mg/m ³

Note: The classification of Type 1, 2 and 3 operations is based on presumed airborne concentrations of lead, as shown above.

TYPE 1 OPERATIONS

- application of lead-containing coatings with a brush or roller;
- removal of lead-containing coatings with a chemical gel or paste and fibrous laminated cloth wrap;
- removal of lead-containing coatings or materials using a power tool that has an effective dust collection system equipped with a HEPA filter;
- installation or removal of lead-containing sheet metal;
- installation or removal of lead-containing packing, babbitt or similar material;
- removal of lead-containing coatings or materials using non-powered hand tools, other than manual scraping or sanding;
- soldering.

TYPE 2 OPERATIONS

Type 2a Operations

- welding or high temperature cutting of lead-containing coatings or materials outdoors. This operation is considered a Type 2a operation only if it is short-term, not repeated, and if the material has been stripped prior to welding or high temperature cutting. Otherwise it will be considered a Type 3a operation;
- removal of lead-containing coatings or materials by scraping or sanding using non-powered hand tools;
- manual demolition of lead-painted plaster walls or building components by striking a wall with a sledgehammer or similar tool.

Type 2b Operations

- spray application of lead-containing coatings.

TABLE C-2 (Continued)
SUMMARY OF CLASSIFICATION OF
LEAD-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE – LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

TYPE 3 OPERATIONS

Type 3a Operations

- welding or high temperature cutting of lead-containing coatings or materials indoors or in a confined space;
- burning of a surface containing lead;
- dry removal of lead-containing mortar using an electric or pneumatic cutting device;
- removal of lead-containing coatings or materials using power tools without an effective dust collection system equipped with a HEPA filter;
- removal or repair of a ventilation system used for controlling lead exposure;
- demolition or cleanup of a facility where lead-containing products were manufactured;
- an operation that may expose a worker to lead dust, fume or mist that is not a Type 1, Type 2, or Type 3b operation

Type 3b Operations

- abrasive blasting of lead-containing coatings or materials;
- removal of lead-containing dust using an air mist extraction system.

TABLE C-3
SUMMARY OF CLASSIFICATION OF SILICA-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE, SILICA ON CONSTRUCTION PROJECTS, APRIL 2011

	Type 1 Operations	Type 2 Operations	Type 3 Operations
Cristobalite and Tridymite	>0.05 to 0.50 mg/m ³	>0.50 to 2.50 mg/m ³	>2.5 mg/m ³
Quartz and Tripoli	>0.10 to 1.0 mg/m ³	>1.0 to 5.0 mg/m ³	>5.0 mg/m ³

Note: The classification of silica-containing construction tasks is based on presumed concentrations of respirable crystalline silica, as shown above.

TYPE 1 OPERATIONS

- The drilling of holes in concrete or rock that is not part of a tunnelling operation or road construction.
- Milling of asphalt from concrete highway pavement.
- Charging mixers and hoppers with silica sand (sand consisting of at least 95 per cent silica) or silica flour (finely ground sand consisting of at least 95 per cent silica).
- Any other operation at a project that requires the handling of silica-containing material in a way that may result in a worker being exposed to airborne silica.
- Entry into a dry mortar removal or abrasive blasting area while airborne dust is visible for less than 15 minutes for inspection and/or sampling.
- Working within 25 metres of an area where compressed air is being used to remove silica-containing dust outdoors.

TYPE 2 OPERATIONS

- Removal of silica containing refractory materials with a jackhammer.
- The drilling of holes in concrete or rock that is part of a tunnelling or road construction.
- The use of a power tool to cut, grind, or polish concrete, masonry, terrazzo or refractory materials.
- The use of a power tool to remove silica containing materials.
- Tunnelling (operation of the tunnel boring machine, tunnel drilling, tunnel mesh installation).
- Tuckpoint and surface grinding.
- Dry mortar removal with an electric or pneumatic cutting device.
- Dry method dust cleanup from abrasive blasting operations.
- The use of compressed air outdoors for removing silica dust.
- Entry into area where abrasive blasting is being carried out for more than 15 minutes.

TABLE C-3 (Continued)
SUMMARY OF CLASSIFICATION OF SILICA-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE, SILICA ON CONSTRUCTION PROJECTS, APRIL 2011

TYPE 3 OPERATIONS

- Abrasive blasting with an abrasive that contains ≥ 1 per cent silica.
- Abrasive blasting of a material that contains ≥ 1 per cent silica.

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PART 1 - GENERAL

1.1 Related Sections

- .1 Section 10 99 00 Miscellaneous Specialties

1.2 General Requirements

- .1 The General Conditions of the Contract, Supplementary Conditions, and the General Requirements of Division 1, form part of this section, and must be read in conjunction with the requirements of this section. The work of this section shall comply with all requirements of Division 1 – General Requirements.
- .2 The Contractor shall, together with any and all Subcontractors involved in the work of this section, examine all surfaces or conditions relating to the Work, in order to determine the acceptability of such surfaces or conditions for the work of this section to commence.
- .3 Subcontractors shall report in writing, any observed defects or deficiencies in any surfaces or conditions that would adversely affect the work of this section, to the Contractor for correction prior to commencing the work of this section.
- .4 Commencement of the work of this section shall imply acceptance of all surfaces and conditions.

1.3 Product Delivery, Storage and Handling

- .1 Protect materials against dampness during and after delivery.
- .2 Store materials in ventilated areas, protected from extreme changes of temperature or humidity.

PART 2 - PRODUCTS

2.1 Fasteners

- .1 Nails and staples: to CSA B111-1974.
- .2 Wood screws: to CSA B35.4-72.
- .3 Toggle bolts, expansion shields and lag bolts, screws and lead shields, recommended for purpose by manufacturer. Use toggle bolts for fastening to hollow masonry and panel material. Use bolts or screws in lead expansion shields for fastening to solid masonry and concrete.
- .4 Galvanizing: to CSA G164-M92. Use galvanized fasteners for exterior work, interior humid areas and for treated lumber; plain finish elsewhere.

PART 3 - EXECUTION

3.1 Workmanship

- .1 Take site measurements of construction to which finish carpentry installations must conform, and through which access must be made, before fabricated units are delivered to site, to ensure that adaptation is not required which would result in construction delay.

- .2 Do not regard drawings as exact or complete for nailers, blocking or other fastening provisions.
- .3 Lay out all items to be installed by this Section carefully to suit requirements of all other Sections.
- .4 Install items under Section 10 99 00 plumb, level and straight, and fasten it securely to backing to support itself and anticipated superimposed loads.

3.2 Fastening

- .1 Position items accurately, level, plumb, true and fasten or anchor securely.
- .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.
- .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round cleanly cut hole and plug with wood plug to match material being secured.

3.5 Washroom Accessories

- .1 Install washroom accessories supplied by Section 10 99 00 and SCDSB as indicated on drawings and in accordance with manufacturer's instructions.

3.6 Finish Hardware

- .1 Install finish hardware supplied by Section 10 99 00 as specified and in accordance with manufacturer's instructions.
- .2 Finish hardware installer to have a minimum 5 years experience directly related to hardware specified. Submit resume of related experience to hardware supplier for approval. Hardware supplier will inspect workmanship on hardware installer periodically to confirm necessary skills.

End of Section

PART 1 - GENERAL

1.1 Related Sections

- .1 Division 01 – General Requirements

1.2 Reference Standards

- .1 CSA A23.1, Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
- .2 CAN/CSA A3000, Cementitious Materials Compendium .
- .3 TTMAC, Terrazzo, Tile and Marble Association of Canada

1.3 Section Includes

- .1 Labour, Products, equipment and services necessary for terrazzo restoration work in accordance with the Contract Documents.

1.4 Submittals

- .1 Product data:
 - .1 Submit duplicate copies of manufacturer's Product data in accordance with the Conditions of the Contract indicating:
 - .1 Performance criteria, compliance with appropriate reference standard(s), characteristics, limitations, and trouble-shooting protocol.
 - .2 Product transportation, storage, handling and installation requirements.
 - .2 Certificates: Submit manufacturer's certificates stating that materials supplied are in accordance with this specification.
 - .3 Closeout submittals: Submit recommended maintenance instructions and listing of recommended maintenance Products for incorporation into Operations and Maintenance Manuals in accordance with the Conditions of the Contract.

1.5 Quality Assurance

- .1 Installers qualifications: Perform work of this Section by a company that has a minimum of five years proven experience in terrazzo restoration work of a similar size and nature and that is approved by manufacturer. Submit to Consultant, applicator's current certificate of approval by the material manufacturer as proof of compliance.
- .2 Mock-up:
 - .1 Construct one 2 m2 mock-ups of terrazzo restoration work in area selected by Consultant, to demonstrate heavy grind procedures, colour, and final finish .
 - .2 Obtain Consultant's acceptance in writing before proceeding with the Work of this Section.
 - .3 Mock-ups may remain as part of the Work if acceptable to Consultant and will serve as a standard for similar code systems.

1.6 Site Conditions

- .1 Do not install Work of this Section outside of the following environmental ranges without the Consultant's and Product manufacturer's written acceptance:

- .1 Ambient air and surface temperature: 15°C to 45°C .
 - .2 Precipitation: None.
- .2 Install temporary protection and facilities to maintain the Product manufacturer's, and specified, environmental requirements for 7 Days before, during, and 7 Days after installation.

PART 2 - PRODUCTS

2.1 Materials

- .1 General: Grinding equipment and materials used for work of this Section shall be according to best trade practice and TTMAC requirements.
- .2 Cleaner: To meet specified requirements of #1000 Series of Terrazzo, Tile and Marble Association of Canada.
- .3 Sealer: To meet specified requirements of #2000 Series of Terrazzo, Tile and Marble Association of Canada.
- .4 Floor finish: To meet specified requirements of Type #3001 of Terrazzo, Tile and Marble Association of Canada.

PART 3 - EXECUTION

3.1 Examination

- .1 Verify condition and dimensions of previously installed Work upon which this Section depends. Report defects to Consultant. Commencement of Work means acceptance of existing conditions.
- .2 Ensure that environmental conditions and backing surfaces have been provided according to specified requirements. Do not proceed with work until satisfied that installation will meet specified standard.

3.2 Preparation

- .1 Take extreme care that surfaces adjacent to terrazzo work are protected from staining by terrazzo materials, and that slurry is not tracked into other building areas any time during installation.
- .2 Sweep backing surfaces clean of all loose materials, and remove the debris. Clean off contaminants which would cause a defective installation.
- .3 Locate and prepare for equipment or accessories recessed in finished terrazzo work .

3.3 Terrazzo Restoration Work

- .1 Restore existing terrazzo flooring as required by this Project by heavy grinding and refinishing in accordance with TTMAC requirements and as specified herein.
- .2 Grinding and Finishing:
 - .1 Heavy grind existing terrazzo surfaces with a grinding machine and coarse grit to remove a thin layer of terrazzo and surface sealers and dirt. Sufficiently hand grind places inaccessible to grinding machines.
 - .2 Constantly flood surfaces with water during wet grinding procedures.

- .3 For initial grinding, use 24 grit grinding stones.
 - .4 Follow initial grind with No. 80 grit stone or finer to a maximum of 120 grit finish to obtain a like-new appearance.
 - .5 After grinding procedures, wash surfaces clean, remove all residue from holes and voids, and thoroughly rinse with only water.
 - .6 Apply grout by machine or hand trowel of same mix and colour to match existing terrazzo flooring as required to fill pinholes and voids that occur in the existing terrazzo flooring. Remove excess grout.
 - .7 Cure grout for a minimum of 48 hours as specified above for curing and before final grinding procedures.
 - .8 Final grind with 120 grit stones until all grout has been removed from the existing terrazzo surface and leave surface free from scratches.
3. Cleaning and sealing:
- .1 Remove dust with heavy-duty vacuum cleaner.
 - .2 Wash and scrub all surfaces clean with a neutral cleaner and abundance of water. Use machine scrubbers where possible for floors.
 - .3 Rinse with clean water and allow to dry.
 - .4 If further cleaning is required, use Terrazzo, Tile and Marble Association of Canada #1001 cleaner in accordance with their specifications.
 - .5 Sealing:
 - .1 As soon as possible after final cleaning, apply a coat of sealer. Wipe off excess before it dries.
 - .2 Just before completion of Project, clean terrazzo, as specified above, and apply a second coat of sealer as before.
 - .3 Apply a total of two coats to the newly restored terrazzo floor finish.
4. Cleaning:
- .1 Clean finished surfaces in accordance with TTMAC guidelines.
 - .2 Leave site clean and free of dust and debris.
5. Protection:
- .1 Prevent all traffic and work on newly laid floors by barricading areas for at least 24 hours following restoration.

End of Section

PART 1 - GENERAL

1.1 Related Sections

- .1 Division 01 – General Requirements

1.2 Reference Standards

- .1 Do tile work in accordance with Installation Manual 200, produced by Terrazzo Tile and Marble Association of Canada (TTMAC), except where specified otherwise.
- .2 American National Standards Institute (ANSI)
 - .1 ANSI A118.1-1992, Specifications for Dry-Set Portland Cement Mortar.
 - .2 ANSI A118.3-1992, Specifications for Chemical Resistant Water Cleanable Tile-Setting and Grouting Epoxy and Water Cleanable Tile-Setting Epoxy Adhesive.
 - .3 ANSI A118.5-1992, Specifications for Chemical Resistant Furan Resin Mortars and Grouts for Tile Installation.
 - .4 ANSI A118.6-1992, Specifications for Ceramic Tile Grouts.
- .3 American Society for Testing and Materials (ASTM)
 - .1 ASTM C 136- 96a , Method for Sieve Analysis of Fine and Coarse Aggregates.
- .4 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-25.20- 95 , Surface Sealer for Floors.
 - .2 CGSB 71-GP-22M- 86 , Adhesive, Organic, for Installation of Ceramic Wall Tile.
 - .3 CGSB 71-GP-29M- 79 , Adhesive, Elastomeric, for Installation of Quarry Tiles.
 - .4 CGSB 71-GP-30M- 79 , Adhesive, Epoxy and Modified Mortar Systems, for Installation of Quarry Tiles.
 - .5 CAN/CGSB-75.1- M88 , Tile, Ceramic.
- .5 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A5/A8/A362- 93 , Portland Cement/Masonry Cement/Blended Hydraulic Cement.

1.3 General Requirements

- .1 The General Conditions of the Contract, Supplementary Conditions, and the General Requirements of Division 1, form part of this section, and must be read in conjunction with the requirements of this section. The work of this section shall comply with all requirements of Division 1 – General Requirements.
- .2 The Contractor shall, together with any and all Subcontractors involved in the work of this section, examine all surfaces or conditions relating to the Work, in order to determine the acceptability of such surfaces or conditions for the work of this section to commence.
- .3 Subcontractors shall report in writing, any observed defects or deficiencies in any surfaces or conditions that would adversely affect the work of this section, to the Contractor for correction prior to commencing the work of this section.
- .4 Commencement of the work of this section shall imply acceptance of all surfaces and conditions.

1.5 Quality Assurance

- .1 Perform tile installation specified in this Section only by a Subcontractor who has adequate plant, equipment and skilled tradesmen to perform it expeditiously and is proven to have been responsible for satisfactory installations similar to that specified during a period of at least the

immediate past five years.

- .2 All products for use in this Section shall be from the same product run to ensure consistent colour match.

1.6 Samples

- .1 Submit samples in accordance with Section 01 34 00.
- .2 Submit one 600 mm x 600 mm sample panel of each colour, texture, size, and pattern of tile.
- .3 Submit 38mm long sample bars of cured grout, submit manufacturers full colour range.
- .4 Adhere tile samples to 11 mm thick plywood and grout joints to represent project installation.

1.7 Environmental Conditions

- .1 Maintain air temperature and structural base temperature at quarry tile installation area above 12°C for 48 h before, during, and 7 days after installation.

1.8 Maintenance Materials

- .1 Supply 2% of quantity of each type and colour of tile installed for maintenance purposes. Deliver sealed labelled packages to the Site as directed by Consultant. Maintenance materials to be from same product run as tile used for the project.

PART 2 - PRODUCTS _

2.1 Porcelain Floor Tile

- .1 **CT-1:** Washroom porcelain floor tile base only to be Olympia Tile Regal Series. Floor base to be REL top edge finished (100mm high), colour to match floor tile as supplied by Olympia Tile. Colour to be Cream Matte. Include for 100mm base tile at all walls within work area.

2.2 Mortar and Adhesive Materials

- .1 Thin Set Floor Mortar: latex-modified Portland cement thin-set mortar, to ANSI 118.4.
Acceptable products are:
 - .1 Kerabond/Keralastic by Mapei Inc.
 - .2 Laticrete 4237/211, by Laticrete International Inc.
 - .3 Full Flex, by Tec Specialty Products Inc.
 - .4 Premium-Blend/Acrylic Mortar Admix, by Custom Building Products.

2.3 Grout

- .1 Epoxy floor grout: two-component, 100% solids epoxy grout, to ANSI 118.6.
Colour to match Mapei Walnut 106. Acceptable products are:
 - .1 Kerapoxy®, by Mapei Inc.
 - .2 SpectraLOCK PRO, by Laticrete International Inc.
 - .3 AccuColor EFX, by Tec Specialty Products Inc.
 - .4 CEG 2000, by Custom Building Products

PART 3 - EXECUTION

3.1 Examination

- .1 Ensure that environmental conditions and backing surfaces have been provided to specified requirements.

- .2 Concrete surfaces shall be at least 28 days old, completely cured and free of excessive moisture.
- .3 Defective tile work resulting from application to unsatisfactory surfaces will be considered the responsibility of this Section.

3.2 Protection

- .1 Prohibit traffic in work areas during installation and for 72 hours after installation of tile.

3.3 Workmanship

- .1 Apply tile to clean and sound surfaces.
- .2 Fit tile around corners, fitments, fixtures, drains and other built-in objects. Drill tile for hardware and pipes, fit tile closely so that escutcheons cover cuts. Maintain uniform joint appearance. Cut edges smooth and even. Tile to cover entire wall or floor before installation of items of other trades, such as sinks, mirrors, urinals, hand dryers, etc.
- .3 Make joints between tile uniform and approximately 4 mm wide, plumb, straight, true, even and flush with adjacent tile. Align patterns.
- .4 Sound tiles after setting and replace hollow-sounding units to obtain full bond.
- .5 Make internal corners square. Use rounded edge tile at external corners.
- .6 Allow minimum 24 hours after installation of tiles before grouting.
- .7 Grout tile joints in accordance with grout manufacturer's directions.
- .8 Fill joints solid and flush with face of square edge tile, and to the depth of cushion on cushion-edge tile.
- .9 Ensure that finish grout is uniform in colour, smooth and without voids, pinholes or low spots.
- .10 Before project completion remove and replace defective, damaged, loose and unbonded tile. Point defective joints.
- .11 Clean installed tile surfaces after installation and grout has cured, in accordance with tile manufacturer's directions.
- .12 Wash unglazed tile surfaces with #1000 Series cleaner. Use 5% solution of murectic acid only when preceded and followed by a complete drenching of clean water, and only when other cleaning methods are insufficient.

3.4 Floor Tile Base Application

- .1 Install floor tile in locations as indicated on Room Finish Schedule and Drawings.
- .2 Install 100mm high tile base in locations as indicated on Room Finish Schedule, Drawings and to suit site conditions.
- .3 Install floor tile base in compliance with appropriate T.T.M.A.C. recommended details for thin-set methods on applicable substrates, based on specified materials and construction, and in accordance with tile and adhesive manufacturer's recommendations.

- .4 Ensure concrete surfaces are straight and level within tolerance of 1/8" +/- in 12'-0".
- .5 Spread thin-set mortar using an approved notched trowel, in accordance with manufacturer's directions. Do not spread more material that can be covered before skinning or initial set takes place.
- .6 Imbed tiles firmly in place. Make grout joints in tile uniform.
- .7 Level and bed tiles by tapping with a rubber mallet or similar tool.
- .8 Do not wet tiles or backing surface before installation.
- .9 Allow minimum 24 hours after installation of floor tiles, before grouting.
- .10 Grout joints flush with surface of tiles using a pointing tool or small trowel. Force grout into joints to eliminate voids and to obtain maximum compaction.

3.5 Grouting

- .1 Mix grout materials and latex additive in accordance with manufacturer's written instructions.
- .2 Apply grout in accordance with manufacturer's written instructions with a straight edge steel trowel, force material to completely fill joints.
- .3 Immediately remove excess material with purpose made stiff rubber trowel.
- .4 Completely clean surface of tile with damp sponge to remove all traces of grout on face of tile. Leave grout joint with a smooth consistent texture.

3.6 Cleaning

- .1 Clean installed tile surfaces with cleaner after installation and grouting cured, in strict accordance with manufacturer's recommendations.
- .2 Clean to Owner's satisfaction.

3.7 Protection Of Finished Work

- .1 Do not permit traffic over finished floor surface until tile mortar is fully set.

3.8 Sealers and Protective Coatings

- .1 Upon completion of installation, after tiles surfaces are clean and dry, apply sealer and protective coatings as required, in accordance with manufacturer's instructions and T.T.M.A.C. recommendations.
- .2 Keep surfaces free from traffic and staining materials for 72 hours after application of sealer and coatings.
- .3 Sealers and Protective Coatings:
 - .1 Tile and grout to be sealed with Aqua Mix Sealer's Choice 15 Gold.
 - .2 Polished finished tiles shall have Aqua Mix Sealer's Choice 15 Gold applied before grouting.

End of Section

PART 1 - GENERAL

1.1 Related Sections

- .1 Division 15
- .2 Division 16

1.2 References

- .1 ASTM C 635-95 Specifications for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
- .2 ASTM C 636-92 Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.

1.3 Design Criteria

- .1 Maximum deflection: 1/360th of span to ASTM C 635-95 deflection test.

1.4 Samples

- .1 Submit samples in accordance with Section 01340.
- .2 Submit samples of ceiling suspension system and acoustical panels.

1.5 Environmental Conditions

- .1 Permit wet work to dry before commencement of installation.
- .2 Maintain uniform minimum temperature of 15°C and humidity of 20 - 40% before and during installation.
- .3 Store materials in work area 48 hours prior to installation.

1.6 Maintenance Materials

- .1 Provide maintenance materials in accordance with Section 01730.
- .2 Provide acoustical units amounting to 2% of gross ceiling area for each pattern and type required for project. Pattern and type of material to be in proportion to amounts supplied.
- .3 Store where directed, in suitable boxes, properly identified.
- .4 Materials to be same production run as installed materials.

PART 2 - PRODUCTS

2.1 Materials

- .1 Lay-in Suspended Exposed Tee System: Donn Series DX Fast-Loc, or Bailey Standard B.E. Safe-T-Lock, to following specifications:

- .1 Basic Steel Material and Finish: commercial quality cold rolled steel 26 ga. thick, galvanized to zinc coating designation Z275. Exposed surfaces of metal products shall be factory finished with satin white enamel.
 - .2 Hangers: minimum 12 gauge overall thickness galvanized steel wire to zinc coating designation Z275.
 - .3 Main Tees: 3658 mm long, double web design, rectangular bulb at top of web, 38 mm web height, 24 mm face width.
 - .4 Main Tee Splices: designed to lock lengths of main tees together so that joined lengths of tee function structurally as a single unit with tee faces at joint perfectly aligned and presenting a tight seam.
 - .5 Cross Tees: 1220 mm long, 25 mm web height structural cross-section, design same as main tees, designed to connect at main tees forming positive lock without play, loss or gain in grid dimensions with offset over-ride of face flange over main tee flange to provide flush joint.
 - .6 Edge Moulding: materials and finish to match tees.
 - .7 Corner caps: square for square corners, round for bullnose corners.
 - .8 Hold-Down Clips: as required by fire resistance rating test.
- .2 Mineral Fibre Panels:
- .1 Acoustic Tile Design:
 - .1 Material: CGC Radar 2315 white square edge
 - .2 Surface finish: factory applied vinyl latex paint.
 - .3 Surface pattern: non-directional fissured.
 - .4 Colour: White 050
 - .5 Size: 610 mm x 1220 mm x 16 mm thick
 - .6 Edge style: square edge
 - .7 Flame spread rating: 25 or under.
 - .8 Smoke developed: 50 or under.
 - .9 Fuel Contributed: 25 or under.
 - .10 Noise reduction co-efficient 0.50 - 0.60 or better.
 - .11 Light reflectance: over 75.

PART 3 - EXECUTION

3.1 Installation

- .1 Install acoustic ceilings in accordance with ASTM C 636-92, in accordance with manufacturer's instructions and as specified herein.
- .2 Co-ordinate location of grid with mechanical and electrical contractors and in accordance with architectural reflected ceiling plans. Report all conflicts to Architect before starting installation.
- .3 Neatly and symmetrically install suspended ceiling to true lines, evenly balanced to layout shown on drawings or as directed.
- .4 Centre ceiling system on room axis unless otherwise directed leaving equal border panels not less than 1/2 a full width.
- .5 Recessed items shall replace or be centred on acoustical panels, except where shown otherwise. Consult with Mechanical and Electrical Divisions to co-ordinate work. Provide additional supports where required.
- .6 Space hangers for suspended ceilings to support grillage independent of walls, columns, pipes and ducts at maximum 1220 mm centres along support grillage and not more than 150 mm from ends. Provide additional hangers at light fixtures and diffusers at maximum 600 mm around perimeter of fixture and within 150 mm of each corner.

- .7 Suspension from steel structure: Secure hangers firmly to the lower chord of the metal bar joist or to cold rolled support channels attached to the lower chord and spanning the bar joists. Attachment to metal deck will not be permitted.
- .8 Suspension from concrete slab or composite concrete slab and steel deck: use self-drilling expandable steel anchors and threaded inserts designed to accept hangers.
- .9 Provide written confirmations to Divisions 15 and 16, when requested by Consultant, that suspended ceiling is capable of supporting additional weight of mechanical and electrical fixtures specified in Divisions 15 and 16.
- .10 Run main tees at right angles to length of light fixtures.
- .11 Space main tees 1220 mm o.c. in one direction and securely tie to hangers. Ensure that the main tee is supported at the end maximum 600mm from the adjacent wall or bulkhead.
- .12 Space cross tees 610 mm o.c. at right angles to main tees and properly lock at intersections.
- .13 Finished ceiling systems to be square with adjoining walls and level within 1:1000.
- .14 Make joints square, tight, flush and reinforced with concealed splines. Assemble framework to form a rigid and interlocking system.
- .15 Design suspension system to accommodate movement caused by thermal expansion or contraction.
- .16 Design and space hangers and carrying members to support entire ceiling system, including lighting fixtures, diffusers and equipment openings in locations shown on drawings.
- .17 Use edge moulding where ceiling abutts vertical surface.
- .18 Use round corner caps at bullnose concrete block corners.
- .19 Use corner moulding along external edges at ceiling steps.
- .20 Join abutting sections of main tees by means of suitable connections such as splices, interlocking ends, tab locks, pin locks.
- .21 Intersecting tees shall form a right angle and be flush on exposed surface.
- .22 Butt ends of cross tees flush to exposed edge of intersecting member.
- .23 Provide hold-down clips on all lay-in panels in areas where differential air pressure occurs and within 6 m of an exterior door.

End of Section

PART 1 - GENERAL

1.1 Related Sections

- .1 Division 01 – General Requirements

1.2 General Requirements

- .1 The General Conditions of the Contract, Supplementary Conditions, and the General Requirements of Division 1, form part of this section, and must be read in conjunction with the requirements of this section. The work of this section shall comply with all requirements of Division 1 – General Requirements.
- .2 The Contractor shall, together with any and all Subcontractors involved in the work of this section, examine all surfaces or conditions relating to the Work, in order to determine the acceptability of such surfaces or conditions for the work of this section to commence.
- .3 Subcontractors shall report in writing, any observed defects or deficiencies in any surfaces or conditions that would adversely affect the work of this section, to the Contractor for correction prior to commencing the work of this section.
- .4 Commencement of the work of this section shall imply acceptance of all surfaces and conditions.

1.3 Samples

- .1 Submit one set of manufacturer's full range colour samples for colour selections by Consultant.

1.4 Environmental Requirements

- .1 Do not apply paint finish in areas where dust is being generated.
- .2 Paint and finish only in clean, properly ventilated areas with temperatures not lower than 10 degrees C for paint and for varnish.
- .3 Do work only when surfaces and conditions are satisfactory for production of first class job.

1.5 Delivery, Storage, Handling

- .1 Deliver materials in original containers with labels intact and store in locked ventilated area where directed. Keep stored materials covered at all times and take necessary precautions against fire. Minimum temperature of storage room, 10 degrees C.
- .2 Provide CO² fire extinguisher of minimum 9 kg capacity in storage area while materials are stored within.
- .3 Leave storage areas clean and free from evidence of occupancy on completion.

1.6 Maintenance Materials

- .1 Deliver to site on completion of painting as directed by Consultant, sealed containers of each finish painting material applied and in each colour. Label each container as for original, including mixing formula. Provide 1 L when less than 50 L are used, 4 L when 50-200 L are used and 8 L when over 200 L are used.

PART 2 - PRODUCTS

2.1 Materials

- .1 Qualified products: only paint materials listed on the CGSB Qualified Products List are acceptable for use on this project.
- .2 Paint materials for each coating formulae to be products of a single manufacturer.
- .3 Painting and finishing materials shall be products of one of the following manufacturers and shall be manufacturer's best quality products.
 - .1 Benjamin Moore Co. Ltd.
 - .2 ICI Paints.
 - .3 Pittsburgh Paints
- .4 Provide the following paint systems for the various substrates, as indicated. Provide only the listed prime and finish coat materials unless otherwise recommended in writing by the paint manufacturer for each specific substrate.
- .5 Where specific finish paint material is not indicated, refer to notes and finish schedules for finish paint material and gloss levels for each surface to be painted.

2.3 Interior Painting Schedule

- .1 Existing Concrete Block; two (2) finish coats over block-filler:

Primer Coat: Stix® SXA-110 Waterborne Bonding Primer, acrylic-urethane primer-sealer or approved equal for existing epoxy and/or gloss previously painted masonry walls.

Finish Coat:
PPG: Pure Performance Interior Latex Semi-gloss
Benjamin Moore: Eco Spec Interior Latex Semi-gloss
ICI: Devoe Devflex 4206 Interior Latex Semi-gloss

PART 3 – EXECUTION

3.1 Preparation

- .1 Prepare masonry, and concrete surfaces to CGSB 85-GP-31M.
- .2 Wash down existing walls with trisodium phosphate (TSP) and provide light sanding to remove glossy surfaces prior to application of bonding primer.
- .3 Provide drop cloths or adequate plastic sheets to protect floors in areas assigned for storage and mixing of paints.
- .4 Use sufficient drop cloths and protective coverings for full protection of floors, furnishings and work not being painted. Protect mechanical, electrical and special equipment, hardware, all other components of building which do not require painting, from paint spotting and other soiling. Clean any components so paint spotted or soiled. Remove switch and outlet covers to protect them from paint splatter.
- .5 Accessories: Remove finish hardware, receptacle and switch plates and other accessories, mask items not removable. Replace when paint is dry and clean them. Do not clean hardware with solvent that will remove permanent lacquer finish.

3.2 Application

- .1 Sand and dust between each coat to remove defects visible from distance up to 1.5 m.
- .2 Finish as specified elsewhere and as follows; when finish is required, finish tops, bottoms, sides or any other surface which is exposed. This includes areas visible by looking in, up or behind
- .3 Provide scaffolding, staging, platforms and ladders, as required for execution of the Work. Place to avoid interference with work of other trades. Comply with Occupational Health and Safety Act.
- .4 Finishes and number of coats specified hereinafter are intended as guide only. Some materials and colours require additional coats to ensure adequate and uniform coverage. Apply further coats until complete satisfactory coverage is achieved. Consult with Consultant before proceeding with application of finishes to surfaces for which no formula is given in finish schedule.
- .5 Areas exhibiting incomplete or unsatisfactory coverage shall have entire plane repainted. Patching not acceptable. Paint entire plane of areas which have been cut and patched.
- .6 Apply materials in accordance with manufacturer's directions and specifications. Do not use adulterants.

3.3 Disposal of Paint Waste

- .1 Be responsible for disposal of material and waste of this Section.
- .2 All empty containers shall be wiped or drained clean. Allow remaining film to dry before disposal. Recycle metal containers and dispose of container which are not recyclable. Ensure non-recyclable containers are acceptable to landfill authority.
- .3 Remove leftover paint and recycle for other uses. Paint that cannot be recycled and is hazardous shall be cared for and disposed of as Hazardous Waste. Generators of Hazardous Waste shall be registered and disposal shall be in accordance with regulations. Note that when handling coating materials, approved vapour/particulate respirator should be worn as protection from solvent vapours. Dust respirators do not provide protection from vapours.
- .4 Cleanup solvents shall be removed and recycled if possible. Consider non-recyclable thinners and paint sludge hazardous. Treat them as Hazardous Waste.
- .5 Painting work will not be considered complete until spatters, drips, smears and overspray have been removed to satisfaction of Consultant.

3.4 Field Quality Control

- .1 The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied.
- .2 The Owner will engage the services of an independent testing laboratory to sample the paint material being used. Samples of material delivered to the project will be taken, identified, sealed, and certified in the presence of the Contractor.

End of Section

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 10 99 00 Miscellaneous Specialties

1.2 References

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM A 167-[90] Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- .2 Canadian Standards Association (CSA)
 - .1 CAN3-A172-[M79] High Pressure Paper Base, Decorative Laminates.
 - .2 CAN/CSA-B651-[M90] Barrier-Free Design.
 - .3 CSA O112 Series-[M1977] CSA Standards for Wood Adhesives.
 - .4 CSA O121-[M1978] Douglas Fir Plywood.
 - .5 CSA O151-[M1978] Canadian Softwood Plywood.
 - .6 CAN3-O188.1-[M78] Interior Mat-Formed wood Particleboard.
 - .7 CAN/CGSB-71.20-[M88] Adhesive, Contact, Brushable.
- .3 Ontario Building Code
 - .1 Section 3
 - .2 Appendices

1.3 General Requirements

- .1 The General Conditions of the Contract, Supplementary Conditions, and the General Requirements of Division 1, form part of this section, and must be read in conjunction with the requirements of this section. The work of this section shall comply with all requirements of Division 1 – General Requirements.
- .2 The Contractor shall, together with any and all Subcontractors involved in the work of this section, examine all surfaces or conditions relating to the Work, in order to determine the acceptability of such surfaces or conditions for the work of this section to commence.
- .3 Subcontractors shall report in writing, any observed defects or deficiencies in any surfaces or conditions that would adversely affect the work of this section, to the Contractor for correction prior to commencing the work of this section.
- .4 Commencement of the work of this section shall imply acceptance of all surfaces and conditions.

1.5 Quality Assurance

- .1 Model numbers listed herein are for overhead braced compartments manufactured by Bobrick Washroom Equipment, Inc. and are listed to establish a standard of quality for design, function, materials, workmanship, and appearance. Other manufacturers not listed below may be submitted for evaluation by the Consultant as an approved equal. Unless approval is obtained ten days prior to the bid closing, all bids shall be based on the standard of quality. The Consultant shall be the sole judge as to the acceptability of all products submitted for substitution.
- .2 Compartments shall be the product(s) of a single manufacturer.

1.6 Samples

- .1 Submit samples in accordance with Section 01 33 00 - Submittals.

- .2 Submit triplicate 300 x 300 mm samples of panel showing finish on both sides, two finished edges and core construction.
- .3 Submit duplicate representative samples of each hardware item, including brackets, fastenings and trim.

1.7 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittals.
- .2 Indicate fabrication details, plans, elevations, hardware, and installation details.

1.8 Closeout Submittals

- .1 Provide maintenance data for solid phenolic panels for incorporation into manual specified in Section 01 70 00 – Contract Closeout.

1.9 Storage and Protection

- .1 Deliver, store, handle and protect materials in accordance with Section 01 60 00 – Material and Equipment.
- .2 Protect finished surfaces during shipment and installation. Do not remove until immediately prior to final inspection.

PART 2 - PRODUCTS

2.1 Materials

- .1 Solid Phenolic Toilet Partitions and Modesty Screens
 - .1 Acceptable Systems
 - .1 Ampco Solid Phenolic Core Washroom Compartments, floor mounted, overhead braced, distributed by W.G. Wood Sales.
 - .2 Watrous, Global 'Black Core' Solid Phenolic Core Washroom Compartments, floor mounted, overhead braced.
 - .3 Bobrick Washroom Equipment Inc., Model 1082.67 Solid Phenolic Core Washroom Compartments, floor mounted, overhead braced.
 - .2 Construction:
 - .1 Doors, panels and pilasters shall be certified CLASS B polyethylene or 100% post-consumer recycled polyethylene solid plastic. The material shall contain no foaming agents, which can cause the formation of air pockets. The self-lubricating surface is resistant to marking and can be maintained effectively with ordinary household cleaners. Material is ideal for toilet partition installations, especially in high abuse and high moisture environments.
 - .2 Doors: Shall be 19mm thick by 1475mm high straight cut with fine radius edges, top set at 1880 above finished floor.
 - .3 Panels: Shall be 13mm thick by 1475mm high straight cut with fine radius edges, top set at 1880 above finished floor.

- .4 Pilasters: Shall be 19mm thick and straight cut with fine radius edges, minimum width 75mm, height to be 2070mm.
- .5 Headrails: Shall be 32mm (1.25") by 44mm (1.75") extruded anodized aluminum with anti-grip design. Wall thickness to be 1.5mm (0.060") and shall be securely attached to wall and pilasters with manufacturer's fittings in such a way as to make a rigid installation. All joints in headrails shall be made at a pilaster.
- .6 Hardware
 1. All hardware to be 18-8, type-304 stainless steel with satin-finish.
 2. All hardware shall be concealed inside compartments with the exception of outswing doors.
 3. Hardware of chrome-plated "Zamak" is unacceptable.
- .7 Latch
 1. Sliding door latch shall be 16-gauge (1.6mm).
 2. Sliding door latch shall require less than 5-lb force to operate. Twisting latch operation will not be acceptable.
 3. Latch track shall be attached to door by flathead machine screws into factory installed threaded brass inserts.
 4. Latch handle shall have rubber bumper to act as door stop.
 5. Latch shall allow door to be lifted over 16-gauge (1.6mm) keeper for emergency access.
 6. Metal-to-metal connection shall withstand a direct pull of over 1,500 lb. per screw.
- .8 Hinges
 1. Cam shall be adjustable in the field to permit door to be fully closed or partially open when compartment is unoccupied.
 2. Hinges shall be attached to door and stile by theft-resistant, one-way stainless steel machine screws into factory-installed metal inserts. Fasteners secured directly into the core are not acceptable.
 3. Metal-to-metal connection shall withstand a direct pull of over 1,500 lb. per screw.
- .9 Clothes Hook
 1. SCDSB will supply break-away type coat hooks for Contractor to install under this Section. Ten (10) required.
- .10 Mounting Brackets
 1. Mounting Brackets shall be constructed of stainless steel and shall be mounted inside compartment. Mounting brackets exposed on the exterior of the compartment will not be acceptable. Wall mounted urinal screen brackets shall be 11-gauge (3mm) double thickness.
- .11 Leveling Device
 1. Leveling Device shall be 3/16" (5mm) hot rolled steel bar; chromate-treated and zinc-plated; through-bolted to base of solid phenolic stile.
 - 2.

.12 Stile Shoe

1. Stile Shoe shall be one-piece, 4" (102mm) high, type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Top shall have 90° return to stile. Patented one-piece shoe capable of adapting to 3/4" or 1" stile thickness and capable of being fastened (by clip) to stiles starting at wall line.

.13 Headrail (Overhead-Braced)

1. Headrail shall be satin finish, extruded anodized aluminum (.125" / .065mm thick) with anti-grip profile.

PART 3 - EXECUTION

3.1 Preparations

- .1 Store partitions where they will not be damaged by construction operations and protect them with complete wrappings. Replace damaged partitions and lost components at no cost to Owner.
- .2 Take onsite measurements after erection of work upon which the work of this Section depends. Inspect for levels and ensure allowances for floor falls, and final thicknesses of tile and other finish installations. Note that wall tile may not extend full height of toilet partitions or through headrail height. Maximum gap between partition edge and adjacent wall shall be 16 mm.
- .3 Do not commence installation until all other finishes are in place and have been accepted by the Owner and Consultant. Co-ordinate installation with finish work and accessories installations described in Division 10.

3.2 Inspection

- .1 Check areas scheduled to receive compartments for correct dimensions, plumbness of walls, and soundness of surfaces that would affect installation of mounting brackets.
- .2 Verify spacing of plumbing fixtures to assure compatibility with installation of compartments.
- .3 Do not begin installation of compartments until conditions are satisfactory.

3.3 Erection

- .1 Partition erection: Do work in accordance with CAN/CSA-B651.
 - .1 Install partitions secure, plumb and square, and in accordance with manufacturer's installation instructions.
 - .2 Leave 12 mm space between wall and panel or end pilaster. Maintain uniform clearance between all components.
 - .3 Anchor mounting brackets to masonry or concrete surfaces using screws and shields: to hollow walls using bolts and toggle type anchors, to steel supports with bolts in threaded holes.
 - .4 Attach panel and pilaster to brackets with through type sleeve bolt and nut.

- .5 Provide for adjustment of floor variations with screw jack through steel saddles made integral with pilaster. Conceal ceiling fixings with stainless steel shoes.
- .6 Provide templates for locating threaded studs through finished ceilings.
- .7 Equip each door with hinges, latch set, and each stall with coat hook mounted on door or on side wall,. Adjust and align hardware for proper function. Set door open position at full open. Install door bumper wall and door mounted type.
- .8 Equip outswinging doors with door pulls on inside and outside of door in accordance with CAN/CSA-B651.
- .9 Install hardware for toilet tissue dispenser(s), sanitary napkin dispenser(s) and grab bar(s).

3.4 Adjustment and Cleaning

- .1 Adjust hardware for proper operation after installation.
- .2 Set hinge cam on inswinging doors to hold doors open when unlatched.
- .3 Set hinge cam on outswinging doors to hold unlatched doors in closed position.
- .4 Clean exposed surfaces of compartments, hardware, and fittings.

End of Section

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 06 20 00 Finish Carpentry

1.2 Samples

- .1 Submit samples of items in accordance with Section 01340, when requested by Consultant.
- .2 Submit manufacturer's full range colour samples of materials for colour selections by Consultant.

1.3 Shop Drawings

- .1 Submit shop drawings for coat hook systems and aluminum letters in accordance with Section 01340.
- .2 Indicate materials, construction, mounting details, plan and section installation details.

1.4 Co-ordination

- .1 Co-ordinate supply and installation of all specified items. Where manufacturer installs, clarify with Contractor before submitting tender.
- .2 Supply anchors, templates, bolts, sleeves and other items required to other trades for building-in of items in this Section.

PART 2 - PRODUCTS

2.1 Washroom Accessories

- .1 The following accessories are to be supplied and/or installed in each washroom under this Contract.
 - A. Wall Mounted Soap Dispenser: supplied by SCDSB, installed by Contractor. 4 required
 - B. Toilet Paper Dispenser: supplied by SCDSB, installed by Contractor. 6 required
 - C. Sanitary Napkin Disposals: supplied by SCDSB, installed by Contractor. 4 required
 - D. Sanitary Napkin Dispenser (SNV). This unit is existing and shall be removed and reinstalled at new location indicated in drawing A2.1.
 - E. Mirrors: Fixed flat mirrors for each Washroom per Frost 941 2436. Supplied and installed by Contractor. 4 required
 - F. Grab Bars: satin finish stainless steel, peened grip, concealed mount.
 - .1 **Type GB-1:** 600mm long x 38mm diameter. (on wall behind toilet & beside urinal)
- 4 required
 - .2 **Type GB-2:** 760 x 760 x 38mm diameter, L-shaped. (on wall beside toilet) -2 required

2.2 Specialty Hardware

- .1 Electro-Magnetic door hold open devices, as manufactured by LCN SEM Series, SEM 7830 AL 24V to be installed on each entry door to washroom, two required. Magnetic door holders are to be tied into fire alarm so that doors will close and latch upon activation of the alarm.

End of Section