

Waterloo Region District School Board

REQUEST FOR TENDER

25-7692-RFT

Grand River Collegiate Institute Asbestos Removal for Family Studies Renovation

ISSUE DATE: March 7, 2025

ELECTRONIC SUBMISSIONS will be received by the Bidding System no later than **2:00 p.m. local time, on March 24, 2025.**

DIVISION 00 – BIDDING AND CONTRACT DOCUMENTS

00 01 00 Consultant/Professional Seals	5
DIVISION 00 – BIDDING AND CONTRACT DOCUMENTS	6
00 21 13 Instructions to Bidders	6
00 21 14 – General Contractors and Subcontractors	
00 21 15 – Scope of Work	20
00 31 34 – Subsurface Investigation Report – Not Applicable	21
Appendix 00 31 34A – Soil Report – Not Applicable	22
00 41 13A – Asset and Warranty Card	23
00 41 73 – Supplementary Bid Information	
00 56 13 – Definitions Stipulated Price	24
00 72 13 – Standard Terms and Conditions	26
00 73 00 "The Supplementary Conditions"	60
DIVISION 01 - GENERAL REQUIREMENTS	118
01 14 00 - Work Restrictions	
01 19 00 - Specifications and Documents	120
01 21 00 – Allowances	
01 31 00 – Project Managing And Coordination	
01 32 00 – Construction Progress Documentation	
01 33 00 – Submittal Procedures	
01 35 17 – Fire Safety Procedures	
Appendix 013517-A Contractor Hot Work Permit	146
01 35 23 – Health And Safety	147
01 35 43 – Hazardous Materials	
Appendix 01 35 43A Asbestos Audit Report	
Appendix 01 35 34B– Lead Report	
01 42 00 – References	158
01 45 00 – Quality Control	
01 51 00 – Temporary Utilities	170
01 53 00 – Temporary Construction Facilities	
01 54 00 – Materials and Equipment	
01 61 00 – Product Requirements	
01 70 00 - Examination and Preparation	189
01 73 30- Execution and Cutting and Patching	196
01 74 00 – Cleaning and Waste Management	
01 78 10 - Closeout Submittals and Requirements	
01 78 40 – Maintenance Requirements	
01 79 00 – Demonstration and Training	
01 82 19 – Fire Rating and Assemblies	

DIVISION 02 – EXISTING CONDITIONS

02 40 00 Demolition

DIVISION 03 – CONCRETE Unused.

DIVISION 04 – MASONRY Unused.

DIVISION 05 – METALS

Unused.

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

Unused.

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 81 00	Cementitious Fireproofing
0,0100	

- 07 84 00 Firestopping and Smoke Seals
- 07 92 00 Sealants

DIVISION 08 – DOORS AND OPENINGS

Unused.

DIVISION 09 – FINISHES

09 22 00	Non-Structural Metal Framing
09 29 00	Gypsum Board
09 51 00	Acoustic Ceilings

DIVISION 10 – SPECIALTIES

Not used.

DIVISION 11 – EQUIPMENT Not used.

DIVISION 12 – FURNISHINGS Not used.

DIVISION 13 – SPECIAL CONSTRUCTION Not used.

DIVISION 14 – CONVEYING EQUIPMENT Not used.

DIVISION 21 – MECHANICAL Refer to Mechanical Drawings for Mechanical Specifications.

DIVISION 26 – ELECTRICAL Refer to Electrical Drawings for Electrical Specifications.

DIVISION 27 – COMMUNICATIONS Not used. **DIVISION 28 – ELECTRICAL SAFETY AND SECURITY** Not used.

DIVISION 31 – EARTHWORK Not used.

DIVISION 32 – EXTERIOR IMPROVEMENTS Not used.

DIVISION 33 – UTILITIES Not used.

00 01 00 Consultant/Professional Seals

- 1.1 The following professional seals and signatures are provided as required by Paragraph 1.21.1 (4) Division C of the Ontario Building Code and apply to the areas of expertise for which each consultant was commissioned.
 - 1.1.1 Architect



DIVISION 00 – BIDDING AND CONTRACT DOCUMENTS

00 21 13 Instructions to Bidders

1. Designated Contact

To contact the Board or ask questions in relation to this Procurement, bidders must initiate the communication electronically through the Bidding System. The Board will not accept any respondent's communications by any other means, except as specifically stated in the Procurement. Bidder's must not communicate in any manner with anyone other than the Designated Contact.

For the purposes of this procurement process, the Designated Contact will be:

Procurement Lead: Ardith Inapan Title: Buyer Waterloo Region District School Board Email: ardith_inapan@wrdsb.ca

2. Consultant

The Board has hired the following architect/consultant to assist in the preparation of this Tender: ward99 architects inc.

The architect/consultant and any sub consultants are not to be contacted by any interested parties from the bid issue date to the bid award notification. The architect/consultant or any sub consultants will not respond to any direct communication.

The Board will be responsible for the contract administration of the project after the purchase order has been issued or the contract has been signed by the Board

3. Blackout Period

A black out period shall exist between the deadline for questions and the date of award. During this period, there shall be no communication between the Bidders, the Board, or any Board consultants or employees, unless initiated by the Board's Designated Representative, noted above.

4. Communication and Question Protocol

Bidders and their representatives are NOT permitted to contact WRDSB Project Managers/Leads, or agents of the Board; any member of the Board's governing body (such as Board of Trustees, or advisors); any employee, consultant, or agent of the Board's Clients, other than the Designated Contact listed above. Any attempt by a Bidder to bypass or influence the procurement process may result in disqualification of the Bidder and the rejection of the Bidder's submission.

The Board will not be responsible for any verbal statement, instruction, or representations. In case of difference between any verbal information and written document, the written document shall govern. Information obtained from any source, other than the Designated Representative, noted above in writing, shall not be relied upon.

The Board shall not be bound by any verbal instruction or information provided by any Board employee or consultant of the Board. Only responses provided in an Addendum shall form part of this Procurement Document.

All requests for information, instructions, or clarifications shall be through the Bidding System by clicking on the "Submit a Question" button found within the bid detail of the specified Procurement. Addenda will be issued accordingly.

It is the responsibility of the Bidder to seek clarification of any matter that they consider unclear before submitting their application. The Board is not responsible for any misunderstanding of the Procurement documents on the part of the Bidder.

All requests for information, instructions, or clarifications shall be through the Bidding System by clicking on the "Submit a Question" button found within the bid detail of the specified Procurement. Addenda will be issued accordingly.

5. Doing Business with the Waterloo Region District School Board

The Waterloo Region District School Board is a provincially funded institution reporting to the Ministry of Education of Ontario and is one of the larger school boards in Ontario, operating 121 school locations and serving approximately 64,000 students in the Region of Waterloo.

The Waterloo Region District School Board's Vendor Registration program is transitioning to a fully integrated online eProcurement tool for bid opportunities through the electronic bidding system: <u>bids&tenders</u>.

Bid opportunities may be posted as Public or by Invitation and are based on dollar thresholds outlined in Administration Procedure 4570 PROCUREMENT. Click <u>here</u> to access the Board's Administrative Procedures, Section 4000 – Business Services.

The Board utilizes prequalified Roster Lists for specific categories/commodities awarded through a competitive process.

Competitive opportunities including Requests of Prequalification (RFPQ) are posted on the Electronic Bidding System, <u>bids&tenders/wrdsb</u>.

6. Anticipated Project Schedule

The following table represents the anticipated project timelines. This timeline is an estimate only and may be subject to change by the Board at any time.

DESCRIPTION	DATE
Issue Date of Tender	March 7, 2025
Non-Mandatory Pre-Bid Site	Date: Friday, March 14, 2025
Examination	Time: 2:00 pm.Click or tap to enter a date.
	Address: 175 Indian Road, Kitchener,
	ON N2B 2S7
	Meeting Area: Main Office.
Deadline for Questions	March 18, 2025
Closing Date and Time	March 24, 2025, 2:00 pm local time
Anticipated Contract Start / Work begins	July 2, 2025
Substantial Completion Date	August 22, 2025
Ready for Takeover	August 29, 2025
Deemed Complete Date	September 12, 2025

7. Pre-Bid Site Examination

Bidders are strongly encouraged to attend the non-mandatory pre-bid site examination and sign the attendance sheet. Date, time and location are provided above in the Anticipated Project Schedule. The Board may not provide another opportunity to visit the site. However, absence from this site meeting will not disqualify any Bidder.

Bidders shall attend the site meeting at their own risk and hold the Board harmless for any issues or damages arising out of their attendance of the site meeting.

The Owner will not consider any claims for additional payments during the execution of the Work for extra work or difficulties encountered resulting from conditions which were either visible or could be reasonably inferred from an examination of the Place of the Work and the available project information prior to the submission of Bids

Bidders are encouraged to bring their own measuring tape, camera, or other portable tools as required to the site meeting. Bidders are solely responsible for making their own assessment of the site.

8. Secondary Site Examinations

Bidder may request a secondary site examination visit through the Bidding System by clicking on the "Submit a Question" button found within the bid details page of that Procurement. Include the contact's name and email of the person who will visit the site.

Bidders shall attend the secondary site examination visit at their own risk and hold the Board harmless for any issues or damages arising out of their attendance of the site meeting.

Bidders not in attendance of a Mandatory Pre-Bid Site Examination meeting will not be provided an opportunity to a secondary stie examination visit.

Bidders must adhere to all communication protocols, as describe in Section 1.0, Sub Section 4. Communication Protocol.

The Owner will not consider any claims for additional payments during the execution of the Work for extra work or difficulties encountered resulting from conditions which were either visible or could be reasonably inferred from an examination of the Place of the Work and the available project information prior to the submission of Bids.

Bidders are encouraged to bring their own measuring tape, camera, or other portable tools as required to the site meeting. Bidders are solely responsible for making their own assessment of the site.

9. Examination of Bid Documents and Work and Submitting Questions

- i. Bidders are required to fully acquaint themselves with the Procurement documents; fully inform themselves of all conditions, limitations and requirements involved in the Procurement; and obtain all information that may be necessary to complete those requirements before submitting a Bid.
- ii. Submission of a Bid shall be considered conclusive evidence that the Bidder has satisfied itself as to the requirements of this Procurement.
- iii. In the event a Bidder discovers any errors, discrepancies, inconsistencies, or omissions or requires clarification within this Procurement, they are to submit their observations and/or questions through bids&tenders by clicking on the "Submit a Question" button found within the bid detail of the specified Procurement by the Deadline for Questions specified in this paragraph.
- iv. Bidders are strongly encouraged to ask clear and concise question(s) or statements citing the relevant section of the Bid Solicitation Document. The Board cannot guarantee a response to questions received by the Board after the Deadline for Questions.
- v. The Board has endeavored to provide complete, correct information and estimates to enable Bidders to properly assess and determine the scope and complexity of the Work prior to submitting a Bid.

- vi. Bidders are solely responsible for determining if they require additional information or if anything appears incorrect or incomplete. The onus is on the Bidder to contact the Designated Representative prior to the Deadline for Responses indicated in this document, if they have any questions or queries whatsoever or find omissions from or discrepancies in this Bid Solicitation document, unnecessary restrictions in the terms of reference, or should they be in doubt as to the meaning of any part of this document.
- vii. Written responses or clarifications to issues of substance will be shared with all Bidders in the form of an Addendum.

10. Electronic Bid Submission Only / Electronic Bidding System

Competitive opportunities including Requests of Prequalification (RFPQ) are posted on the Electronic Bidding System, <u>bids&tenders/wrdsb</u>.

The Bidder must submit their bid through the Bidding System only. Any other form of submittal will not be considered. It is the Bidder's responsibility to read the Procurement documents thoroughly including all attachments and addenda, if any, as these contain information that is highly pertinent to this Procurement and to clarify any details with the Designated Representative prior to their submission. To be considered, Bidders must respond to this Procurement.

- i. In order to submit a bid, bidders must be registered with <u>bids&tenders</u>. The sole onus is on the bidder to have the most current correct information set-up in Bids and Tenders including but not limited to plan taker contact information, categories, and agency.
- ii. All Bids shall be submitted through <u>bids&tenders</u> only. The onus is on the Bidder to ensure all requirements of the Bid Solicitations are submitted.
- iii. If the bidder encounters technical issues, the onus is on the bidder to have this resolved prior to the closing date and time by contacting <u>support@bidsandtenders.ca</u>
- iv. Bidder shall have a "Vendor account" in the Bidding System and shall ensure the account is created with the Bidders full legal company name and be registered as a "plan taker" for this bid solicitation. Only the plan takers will have access to download bid documents, receive addenda email notifications, download addenda and to submit their bid electronically through the Bidding System.
- v. The onus is on the Bidder to ensure that the Bid is received in the Bidding System on or before the Closing Time. The Closing Time shall be determined by the Bidding System's web clock. The timing of the Bid submission shall be based on when the Bid is received by the Bidding System, not when a Bid is submitted by a Bidder.
- vi. Bidders shall allow sufficient time to upload their Bid submission including all requirements as stated in this Procurement and to resolve any issues that may

arise as Bid transmission can be delayed in an "internet traffic jam" due to file transfer size, transmission speed, and other electronic considerations

- vii. All prices including provisional/supplementary pricing, if requested, shall be submitted in the Schedule of Prices forms available through the Bidding System.
- viii. The Owner reserves the right to accept or reject any or all provisional bid prices submitted, and such prices shall remain in effect for the duration of the Contract. Failure to submit provisional prices where required may result in the Bid being declared non-compliant.
- ix. Bids submitted by fax or paper copy, or any other format will not be accepted.
- x. The Bidding System will not accept Bids after the Closing Time as determined by the Bidding System's web clock.
- xi. The Board hereby consent to the use of an Electronic Signature for the signing of all documents requested hereunder. Acceptable forms of signatures include, but are not limited to, the typing of the Bidder's authorized signing officer's name or the inclusion of an image of the Bidder's authorized signing officer's signature, so long as the electronic signature is sufficient to identify the Bidder's authorized signing officer. The Bidder's authorized signing officer agrees that whatever form of electronic signature is provided constitutes a signature for the purpose of executing all documents requested hereunder.
- xii. Upon submitting a Bid, the Bidding System will send a confirmation email to the Bidder advising that the Bid was submitted successfully. If a Bidder does not receive a confirmation email despite submitting a Bid, the Bidder should contact technical support of the service provider hosting the Bidding System via email: support@bidsandtenders.ca
- xiii. There will be no public opening for this Bid.
- xiv. If a Bid is a joint submission of two (2) or more firms, a single Bid is to be coordinated and submitted by the lead Bidder with the required information. If two or more parties submitted a joint response to this Bid Solicitation, they shall decide between them who is to be the Bidder, without any involvement of the Board.
- xv. Your online Bid submission shall be taken as your statement that you understand the requirements and agree to comply with the requirements as well as terms and conditions stated in this Bid Solicitation document, including Board's Standard Terms and Conditions. Your Bid submission through the Bidding System confirms that you have checked and confirmed your pricing and by submitting the Bid online, you agree that you have not omitted any items from your Bid.
- xvi. For construction projects with Bids above \$200,000 the Successful Bidder will be required to execute a "Canadian Standard Form of Construction Contract to a Stipulated Sum" (CCDC 2 - 2020 including amendments thereto as set out in this Procurement.

11. Bid Prices

- i. The amounts stipulated on the Schedule of Prices are intended to cover the cost of the complete Work as described in this Bid Solicitation Document.
- ii. All prices shall be in Canadian Funds, Free On Board (FOB) Destination, Freight Prepaid (Board locations).
- iii. HST is extra and shall not be included in Bid prices.
- iv. The person submitting the Bid on behalf of the Bidder must have authority to bind the Bidder.
- v. Quantities may be estimated, and therefore the Board, at its discretion, may purchase more or less of the commodity based on the unit price bid.
- vi. All information required on the forms shall be completed in full including references and subcontractors that it proposes to use for Work described. Changes made to the list of nominated subcontractors after the closing of the Bid, must have prior written approval of the Board Contact.
- vii. All price(s) submitted shall be a reasonable price for each particular item as determined by the Board and under no condition will an unbalanced Bid be considered. Submissions containing prices which appear to be so unbalanced as to likely affect the interests of the Board adversely will be clarified and may be rejected.
- viii. Unit prices and/or provisional/supplementary pricing, if any will set the foundation for any approved increases or decreases in Work. The unit prices must remain fixed and firm for the term of the Contract, unless otherwise specified in this Bid Solicitation document.
- ix. Provisional or Supplementary Pricing may or may not be required for completion of the Work called for under the Contract. The Board will decide necessity of these items and quantities thereon based on the unit prices(s) included in their Bid. If Provisional or Supplementary items are not purchased, or quantities are less than estimated, no adjustment or compensation will be awarded to the Bidder by the Board. Provisional or Supplementary pricing is not used for comparison of Bids for award purpose.

12. References (Not Applicable)

Bidders must provide a minimum of three (3) references for work of comparable size and scope that has been successfully completed within the last five (5) years. One (1) reference must be from the WRDSB, if you've done previous work, otherwise one (1) reference must be of a government entity of similar size, scope, and complexity.

References must contain information about your clients including a complete organization name, contact person's names, title, telephone number and/or email address, details of the work provided, start and end dates of the work, and total cost of the work. Bidders cannot use references that pertain to another Vendor/Contractors' work.

The Board reserves the right to contact the clients noted to verify information provided

and assess overall client experience. Bidders should ensure that their references are prepared to provide a response if contacted by the Board. If the Board is unable to obtain a satisfactory reference, or if the reference does not respond to the reference call (after Board's best efforts), or if the reference chooses not to comment, the reference will be deemed unsatisfactory, and the Board may ask the Bidder for additional references. Unsatisfactory references may result in the Bidder's submission being rejected.

13. Addenda

All Addenda issued through the Bidding System shall form part of the Bid Solicitation Document.

The Board shall not be bound by any verbal instruction or information provided by any Board employee or consultant of the Board. Only responses provided in an Addendum shall form part of this Bid Solicitation Document.

Prior to bid closing any discrepancies, omissions, questions, or clarifications regarding the procurement documents must be sent immediately through the Bidding System by clicking on the "Submit a Question" button found within the bid details page of that opportunity.no later than the deadline noted in the Anticipated Project Schedule. Those that are deemed pertinent to the Bid Solicitation Document will be addressed in the form of an Addendum.

It is understood and acknowledged that while the Bid Solicitation document includes specific requirements, a complete review and recommendation is required. Minor items or details not herein specified, but obviously required for the Work shall be provided as if specified in conformance with modern practices. Any omissions or errors or misrepresentation of these requirements and specifications within the Bid Solicitation document shall not relieve the Bidder of the responsibility of providing the services or products as aforesaid

Bidders shall acknowledge the receipt of all Addenda in the Bidding System prior to the submission of a Bid. Where Addenda has been issued, the system will not allow the Bidder to submit a Bid prior to acknowledging said Addenda.

Where an Addendum is issued after a Bid has been submitted, the Bidding System will automatically withdraw the submitted Bid. The Bid status will change to incomplete and will not be accepted by the Board as a submitted Bid. It is the responsibility of the Bidder to make any required adjustments to their submission, acknowledge all Addenda and ensure the Bid has been received by the Bidding System. Bidders should check the Bidding System for Addenda up until the Bid Closing Date and Time.

Addenda cannot be acknowledged after the Closing Date and Time.

14. Edit and Withdrawal of Bid Submission

i. A Bidder who has submitted a bid may edit or withdraw its bid at any point up to the Closing Date and Time.

- ii. Any edits to a bid submission will cause the submission to automatically be withdrawn. The bid submission must be re-submitted to be accepted.
- iii. The Bidder is solely responsible for ensuring that its re-submission is received prior to Closing Date and Time. The closing time shall be determined by the web clock within the Bidding System. After such time, requests to withdraw Bid will not be considered.

15. Irrevocable Period

Bids will be irrevocable by the Bidder, and open for acceptance by the Board, for **60 (sixty) days** following the Closing Date.

16. Tie Bids

Where two (2) or more Bids have been received reflecting the same, lowest Bid price, the time stamp for date and time submission in the Bidding System will dictate the award (earliest submission shall prevail).

17. Bid Irregularities

Bids with one or more of the following may be declared informal and/or disqualified and/or non-compliant:

- i. Bids that do not comply strictly with all terms and conditions of the Bid Solicitation Document.
- ii. Bids that are incomplete, conditional, qualified, or obscure.
- iii. Bids that are based upon an unreasonable period of time for completion of the Work.
- iv. Bids received from Bidders involved in Claims with either of the Board or banned or on probation with the Board.
- v. Bids received from any Bidder deemed to be unskilled or experienced in the work contemplated, or those who have defaulted on, or failed to satisfactorily complete other similar work in the past.
- vi. Bids submitted by Bidders that are not prequalified, where applicable.

18. Bid Review

- i. All Bids received on or before the Closing Time will be reviewed for compliance based on this Bid Solicitation document. Non-compliant Bids will be rejected. Bids not meeting any of the mandatory requirements included in this Bid Solicitation document will be disqualified. Bidders may be contacted to clarify their submissions.
- ii. Should there be any error in extensions, additions or computations, the Board shall be entitled to correct such errors based upon the unit prices supplied, and the corrected total shall be considered as representing the intention of the Bidder and shall be used as the basis for comparison of Bids.

- iii. It is the Bidder's responsibility to satisfy the Board that they can comply with the requirements contained within this Bid Solicitation document and that they possess the necessary inventory, equipment, facilities, resources, and staff to perform the work specified in this Bid Solicitation document. Bidders may be required to submit evidence of above in a form acceptable to the Board. Substitution of materials, equipment, or methods different from that outlined in the terms of reference will not be accepted unless provided for within this Bid Solicitation document or with the written approval of the Board.
- iv. The Board also reserves the right to examine Bidder's facilities, equipment and visit the subcontractors or sub-consultants proposed and/or Bidder's existing and past clients. The award decision may be revised based on the above.
- v. The Board will not be responsible for travel costs if travel is required. No additional charges will be accepted by the Board for any cost incurred by the Bidder or any other party in participating in the Bid evaluations.
- vi. The Board may, in its sole discretion, check references, conduct credit checks, review the litigation history and history of professional liability or other insurance claims, and obtain any other type of information that might aid the Board in its selection. The Board reserves the right to consider all, or any information received from all available sources, whether internally or externally obtained. The Board may disqualify any Bid from further consideration based on results of reference or credit checks or review of litigation or claim history. The foregoing may include the Board's own experiences with the respective Bidder(s) or any of the subcontractors and sub-consultants proposed in their Bid.

19. Post-Award Meeting

A post-award meeting may be held consisting of the successful Vendor/Contractor, and their key personnel assigned to the contract, the Board's Project Manager/Lead and if applicable the Architect/Consultant, to discuss the program and exchange information before the contract commences. This meeting will be at the sole expense of the Bidder and shall be considered part of the contract. If applicable, the meeting date will be scheduled after the Award.

20. Intent to Award

Bidders are advised not to make any business decisions, assignments, or any sub-contract for the execution of the Work, before receiving a Purchase Order from the Board.

- i. Subject to the reserved rights of the Board and availability of funds, the lowest compliant Bid will be recommended for award.
- ii. There shall be no obligation on the Board as a result of seeking Bids or conducting the procurement process and the Board reserves the right to pursue other Bidders, cancel the Bid Solicitation, issue a revised request, or to pursue any other course of action which would aid in meeting their needs.
- iii. If Applicable, within twenty-four (24) hours, excluding hours occurring during a Saturday, Sunday, or a legal holiday, of receiving a request or intent to award from the Board, the Bidder (the "Recommended Bidder") shall provide a list of all Subcontractors/Subconsultants that it proposes to use for all Work described in this Procurement including the Company Name, Sub Trade Category and if applicable, related Divisions.
- iv. Within **seven (7) calendar days** of receiving a request or intent to award from the Board, the Bidder (the "Recommended Bidder") shall provide the following mandatory requirements:
 - a. Insurance certificate with coverage specified in the Bid Solicitation Document.
 - b. WSIB clearance certificate valid on the date of award or an exemption letter (if applicable and requested).
 - c. Non-Disclosure Agreement (NDA) duly signed by the authorized signatory (to be renewed annually). The Board will provide this form.
 - d. Bonding Requirements, if applicable, as specified in the Bid Solicitation Document.
 - e. An executed Board issued Form of Agreement, if applicable, and duly signed by the authorized signatory.
 - f. Any other submittal specified in the Bid Solicitation Document or in the intent to award, as a requirement of award.

- g. For construction projects above \$200,000 the Successful Bidder will be required to execute a "Canadian Standard Form of Construction Contract to a Stipulated Sum" (CCDC 2 – 2020) including amendments thereto as set out in this Procurement.
- v. The documents listed below will be incorporated as deemed necessary by the Board, into the Contract with the Bidder. If there is a discrepancy between the wording of one document and the wording of any other document that appears on the list, the wording of the document that first appears on the list shall take precedence:
 - a. Board approved change order(s) or Contract / Agreement / CCDC 2 -2020 amendment(s)
 - b. Purchase Order(s), Contract(s) Agreement(s) / CCDC 2 -2020 executed with the Bidder including exhibits
 - c. Bid Solicitation document issued by the Board, including addenda, if applicable
 - d. Bid submitted by the Bidder

21. Post Award

Ministry of Labour Notice of Project confirmation notice to be uploaded in Bids and Tender prior to mobilization and/or prior to first project draw

In addition to all of the Board's other remedies, if a recommended Bidder fails to satisfy the requirements and/or execute the Form of Agreement or any other applicable conditions within seven (7) calendar days of notice of selection, the Board may, in their sole and absolute discretion and without incurring any liability, rescind the selection of that Bidder.

The Bidder may protest within the five (5) day Notice of Intent to Award, after that, the protest will not be reviewed or accepted.

22. Award Notification

For procurements valued at \$121,200 or more, and in accordance with the Broader Public Sector Procurement Directive, once the Board is satisfied that all requirements are met, the project award notification will be posted in the same manner as the procurement documents were posted. The notification will be posted after the purchase order and/or agreement between the successful bidder and the Board has been issued/executed. The award notification will list the name of the successful bidder, agreement start and end dates, and any extension options.

00 21 14 – General Contractors and Subcontractors

1.0 General Contractors

- 1.1 Only invited prequalified General Contractors, as a result of the award of a competitive prequalification process, #23-7430-RFPQ, may submit a bid for this opportunity. Invitations are based on awarded Project Size Categories. Roster approved GCs can only bid on the project size categories based on the award.
- 1.2 A Site Supervisor and Project Manager, assigned to manage and supervise the Work, must be named in the Bidder's Contact Information Specification section through the electronic Bidding System only and include resumes. Personnel will be subject to approval by the Board and cannot be changed without prior written approval from the Board.

2.0 Subcontractors/Subconsultants

- 2.1. Refer to specification sections for products, suppliers and installers that will be required.
- 2.2. The Subcontractor/Subconsultant list is not required at time of bid submission.
- 2.3. The Subcontractor/Subconsultant list is mandatory after the bid closing date from the Recommended Bidder within twenty-four (24) hours, excluding hours occurring during a Saturday, Sunday, or a legal holiday, of receiving a request or intent to award from the Board.
- 2.4. The Bidder (the "Recommended Bidder") shall provide a listing in a Board approved formatted list of Subcontractor/Subconsultant that it proposes to use for all Work described in this Procurement including the specification sections, as per the following:
 - 2.5.1 Bidders shall select experienced and qualified Subcontractor/Subconsultant or Suppliers in their field to perform or supply an item of Work indicated in this Procurement.
 - 2.5.2 The Bidder shall be fully aware of the capability of each Subcontractor/Subconsultant and/or Supplier included in its bid, including but not limited to technical ability, financial stability and ability to maintain the proposed construction schedule.
 - 2.5.3 The Owner reserves the right to reject any nominated Subcontractor/Subconsultant or supplier, based on the following but not limited to unsatisfactory past performance, suspended/removed from doing business with the Board and/or outstanding/unresolved corrective action notice issued by the Owner to the Subcontractor/Subconsultant within the last three (3) years.
 - 2.5.4 The Owner reserves the right to obtain information from the Bidder and from third parties respecting the qualifications and experience of the Bidder's nominated list of Subcontractor/Subconsultant for such item of the Work.

- 2.5.5 The Board reserves the right to examine Bidder's facilities, equipment and visit the Subcontractor/Subconsultant's proposed.
- 2.5.6 The substitution of any Subcontractor/Subconsultant and/or Suppliers after the list is submitted will not be accepted unless a valid reason is given in writing to and approved by the Owner, whose approval may be arbitrarily withheld.
- 2.5.7 Where a bidder lists "own forces" in place of a Subcontractor/Subconsultant, the bidder shall carry out such item of the Work with its own forces.
- 2.5.8 Where "own forces" have been listed by a bidder, 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.

00 21 15 – Scope of Work

Interior renovation to two classrooms, Classroom 1-117 and Classroom 1-119 and one Work Room 1-117A and partial interior renovation to Corridor 1, for the extent shown on the drawings. The interior renovation includes but is not limited to the following:

1- Abatement of asbestos containing cementitious spray fireproofing at existing steel beams, including overspray, and replacement with new cementitious spray fireproofing.

2- Additional concealed abatement in the Corridor. Refer to mechanical drawings.

3- The demolition of existing suspended acoustic ceiling assemblies and associated existing concealed gypsum board ceilings with adhered acoustic ceiling tiles and replacement with new suspended acoustic ceiling assemblies with concealed fire-rated gypsum board finished ceiling assemblies.

4- Replacement of existing light fixtures with new light fixtures and provision for new and relocated devices.

00 31 34 – Subsurface Investigation Report – Not Applicable

1.0 General

1.1. Related Sections

.1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. SUBSURFACE INVESTIGATION REPORT

- .1 An investigation report with respect to the applicable building site and important immediate affected surroundings, is titled as follows:
 - .1 Title:
 - .2 Dated:
 - .3 Prepared By:
- .2 A copy of this detailed investigation report is included as an appendix to this section.
- .3 The subsurface investigation report records properties of the soils, subgrade conditions, and offers recommendations for the design of foundations.
- .4 The report as prepared primarily for the use of the Consultants.
- .5 The recommendations given shall not be construed as a requirement of this Contract unless also contained in the Contract Documents.
- .6 The report, by its nature, cannot reveal all conditions that exist or can or might occur on the subject site. Should subsurface conditions be found or be a concern thereto, or to vary substantially from the investigation report, changes in the design and construction of foundations will be made, with resulting credits or expenditures to the Contract Price accruing to the Owner.

Appendix 00 31 34A – Soil Report – Not Applicable

00 41 13A - Asset and Warranty Card



WRDSB PROJECT ASSET & WARRANTY CARD

Instructions:

a. The WRDSB Project Asset & Warranty Card shall be filled out and completed for any project or work that calls for the replacement or new installation of any asset that has a warranty and requires ongoing preventative maintenance, as well any asset that is being removed.

b. The information for the WRDSB Project Asset & Warranty Card shall be collected and coordinated by the General Contractor responsible for the overall project. The WRDSB Project Asset & Warranty Card shall be filled out and submitted to the Board electronically to FAC_maintenance@wrdshca and carbon copy the project coordinator at the point in time where the project is deemed "Substantially Complete" or at the start of the Warranty Period for said asset. For any project without a General Contractor, the Contractor or Trade responsible for the installation and/or removal of the asset shall complete the WRDSB Project Asset & Warranty Card and submit it to the Board in the same manner as mentioned above.

- c. All items shall include the asset Identifier, asset description, location, manufacturer, model, serial number, and warranty end date (refer to example at bottom of page).
- d. NO Warranty Period shall start without the written permission of the Board prior to the point of Substantial Completion of the project.
- e. The Contractor that is responsible for the coordination and completion of the WRDSB Project Asset & Warranty Card shall ensure that the contractor or trade responsible for the installation of the item understands that the contractor or trade is responsible for the preventative and general maintenance of that item for the minimum 2 year warranty period as noted on the WRDSB Project Asset & Warranty Card.
- f. <u>All</u> items installed under this contract that require ongoing preventative maintenance (PM) shall be included on the WRDSB Project Asset & Warranty Card. The following list contains examples to be included but not limited to;

Air Compressor	Chiller	Grease Trap
Air Handler- ERV, Heat Pump, RTU	Cooling Tower	Gym Equipment
AC Split -Indoor/Outdoor Unit	Elevator/Lift	Hoods- Kitchen/Fume
Automatic Doors	Eyewash Station-location only	Operable Partitions
Backflow Preventer	Fire Panel	Sprinkler System -area covered
Boiler		Tech Equipment

g. All maintenance during the warranty period shall be the responsibility of the contractor. This shall include, but not be limited to: air handling unit filter changes (3x min.per year), or as per manufacturers recommendations; servicing testable backflow preventors, including fees; and any and all required maintenance.

Sample:

To be filled out by Consultant			To be filled out by Contractor					
IDENTIFIER	ASSET	LOCATION (incl. Rm. No.)	REMOVED (R), OR NEW (N)	CONTRACTOR	MANUFACTURER	MODEL	SERIAL NUMBER	WARRANTY END DATE
Boiler 2	Condensing Boiler	Boiler Rm. B005	R	Bob's Mechanical	Viessman	Vitocrossal 300 CA3B	1234x5678y90	Jan. 1, 2025
HVAC 7	New RTU	Roof D	N	Bob's Mechanical	Daiken	DPS020A	ABCD1EFGH2IJ	Jan. 1, 2025
n/a	Gym Partition	Gyms 122/123	R	Extreme Partitions	Hufcor	933EC	n/a	Jun. 30, 2028



Project Name: ____

Date: _

School / Location:

To be filled out by Consultant			To be filled out by Contractor					
IDENTIFIER	ASSET	LOCATION (include Room No.)	ASSET REMOVED (R) OR NEW (N)	CONTRACTOR	MANUFACTURER	MODEL	SERIAL NUMBER	WARRANTY END DATE

00 56 13 – Definitions Stipulated Price

1.1. Definitions Declaration

- .1 CCDC 2-2020 Edition, Stipulated Price Contract as may be amended, forms the basis of Definitions between the Owner and Contractor.
- .2 These Definitions are bound to the CCDC 2 Definitions and CCDC 2 General Conditions.

1.2. Supplementary Words and Terms to CCDC 2-2020

- .1 The following words and terms are additional to the CCDC 2 Definitions.
- .2 Addendum: A document that amends the Bid Documents during the Bidding Period and becomes part of the Contract Documents when a Contract is executed. (Plural: Addenda).
- .3 Agreement: The signed and sealed legal instrument binding parties in a Contract, describing in strict terms their mutual arrangement, roles and responsibilities, commencement, and completion responsibilities.
- .4 Alternative Price: The amount stipulated by a Bidder for an Alternative and stated as an addition, a deduction, or no change to the Bid Price.
- .5 Authorities: Those having jurisdiction under law over Work or Parts thereof.
- .6 Bid: To offer as a Bid stating for what price a Contractor will assume a Contract.
- .7 Bid Documents: A set of documents consisting of the Instructions to Bidders, Bid Form, Contract Documents, and other information issued for the benefit of Bidders to prepare and submit a Bid.
- .8 Bid Form: The specific and detailed form used to collect information about a Bid.
- .9 Bidding: The process of preparing and submitting a Bid.
- .10 Construction Documents: The Drawings and Project Manual. When combined with a Contract and Contract conditions, these documents form the Contract Documents.
- .11 Contingency Allowance: An additional monetary amount added to a Project cost estimate and designated to cover unpredictable or unforeseen items of Work. The amount is usually based on some percentage of the estimated cost and expended and adjusted by Change Order. It is not intended to cover additions to the scope of Work.
- .12 General Conditions: That part of the Contract Documents which sets forth many of the rights, responsibilities and relationships of the parties involved in a Contract.
- .13 Exposed: Visible at completion of Work, in usable areas as well as interior of closets, cabinets, drawers, storage and service rooms, stairwells and exterior surfaces.

- .14 Instructions To Bidders: Instructions contained in the Bid Documents to convey an Owner's expectations and criteria associated with submitting a Bid.
- .15 Ready for Takeover: *Ready-for-Takeover* shall have been attained when the conditions set out in GC12.1, SC 55.1, 12.1.1
- .16 Section: A portion of a Project Specification covering one or more segments of the total Work or requirements. Sections are included in a Project manual as required to meet Project requirements.
- .17 Standard: A document describing a grade or a level of quality, which has been established by a recognized agency or organization, utilizing an internal voting process.
- .18 Separate Price: A separate price for work to be added to the base price if selected by the Owner. This price type is not a part of the base bid price.
- .19 Stipulated Price: An amount set forth in a Stipulated Price Contract as the total payment for the performance of the Work. Sometimes referred to as a stipulated sum or a lump sum stipulated price.
- .20 Tender: Refer to definition of Bid.
- .21 Unit Price: The amount payable for a single unit of Work as stated in a Schedule of Prices.
- .22 Install: To remove from site storage, move or transport to intended location, install in position, connect to utilities, repair site caused damage, and make ready for use.
- .23 Supply: To acquire or purchase, ship or transport to the site, unload, remove packaging to permit inspection for damage, re-package, replace damaged items, and safely store on-site.
- .24 Provide: To Supply and Install
- .25 Wherever words 'approved', 'selected', 'satisfactory', 'directed', 'permitted', 'inspected', 'instructed', 'required', 'submit', 'ordered', 'reviewed', 'reported to', or similar words or phrases are used in Contract Documents, it shall be understood, unless context provides otherwise, that words 'by Consultant' or 'to Consultants' follow.
- .26 Words 'by others' when used in Specifications or on Drawings shall not mean by someone other than Contractor. Only means by which something shown or specified shall be indicated as not being in Contract is by initials 'NIC' or words 'not in Contract', 'by Owner', or 'by Other Contractor'.

00 72 13 – Standard Terms and Conditions

1. Applicable Terms and Conditions

None of the standard or other terms, conditions, or policies of the Bidder, whether published or otherwise shall be of any effect unless accepted by the Board in writing. This includes, without limitations, terms in publications, web-site, sales invoice, delivery document as well as those commonly applied by the Bidder. Board's acceptance of goods, equipment or service, acknowledgement thereon or paying invoices shall not imply acceptance of such terms, conditions, or provisions.

2. Bankruptcy

If, during the term of the Contract, the Vendor/Contractor makes an assignment for the benefit of creditors, or becomes bankrupt or insolvent, or makes a proposal to its creditors, the Contract with the Vendor/Contractor shall immediately be terminated, and the Board shall be entitled to enter into an agreement with another party without the consent of the Vendor/Contractor.

3. Basis of Award (Price factor)

Bidders shall be deemed to have included all costs related to the Work in the Total Price as provided in their Bid, except for items clearly identified as provisional in the Bid Solicitation document. In no case shall the invoicing for the entire Work performed exceed the Total Price, unless additional Work is ordered by the Board in writing. The unit prices as well as provisional pricing shall be used to invoice the additional or provisional work, as required by the Board. For the purpose of award, the Total Price will be considered as representing the intention of the Bidders and will be used as the basis for comparison of Bids for the price factor.

4. Bonding Requirements

Bonding is required if the project is equal to or greater than \$200,000.00.

Note: The Bidding System has flagged these fields as mandatory. If your bid is less than \$200,000.00, you may upload a pdf document stating: Not Applicable.

i. Bid Amount

Bonding requirements are based on the total base bid amount INCLUSIVE of ALL applicable taxes.

ii. Bid Deposit Bond & Agreement to Bond

Bid submissions must be accompanied by a bid deposit in the form of a digital Bid Bond in an electronically verifiable and enforceable (e-Bond) format in the amount of 10% of the total base bid (inclusive of HST) made payable to the Waterloo Region District School Board (the 'Board") as surety that, if the Bid is accepted, a Contract will be entered into for the proper performance of the work. For more information, contact your surety company or visit the Surety Association of Canada website. Bid Submissions must be accompanied by an Agreement to Bond in the form of a digital Bond in an electronically verifiable and enforceable (e-Bond), completed and executed by the Bidder's Surety, assuring the successful Vendor/Contractor shall provide for a Performance Bond for 50% of the total Contract Price, and a Labour and Material Payment Bond for 50% of the total Contract Price.

Bidders shall upload their digital Bid Deposit Bond and Agreement to Bond separately to the Bidding System, in the bid submission files labeled "Bid Deposit Bond" & "Agreement to Bond". If both Bonds are within one (1) document, upload it in both files. All instructions and details for accessing authentication shall be included with the digital Bonds uploaded in the Bidding System. Do not include and/or upload Performance Bond and Labour and Materials Bond in this section.

Bids that do not contain the bid deposit(s) in the required amount will be declared non-compliant and will be rejected. A scanned PDF copy of bonds or original certified cheque, bank draft, money order, etc. are not acceptable as Bid deposit and will result in your Bid being rejected.

The bid deposit of the Bidder whose submission is accepted shall be forfeited by the Bidder should the Bidder fail to execute a Contract or provide the necessary documents as required within this Bid Solicitation document (including but not necessarily limited to: signed agreement, satisfactory security, insurance certificate, appropriate Workplace Safety and Insurance Board letter of clearance certificate) within the time stipulated as a written notice from the Board.

For bid amounts where Bonding is not requested, the Awarded Bidder agrees to pay to the Board the difference in costs between the bid submitted and the final contract should the Awarded Bidder fail to either execute or deliver the contract documents in accordance with the Bid Solicitation within seven (7) calendar days of written notification of the award of the contract.

iii. Performance and Labour & Materials Bonds

For bid amounts where bonding is required, inclusive of all taxes, the successful Bidder shall provide a digital Bid Performance and Labour and Materials Bond in an electronically verifiable and enforceable (e-Bond) format in the amount(s) of not less than 50% Performance Bond and a 50% Labour and Materials Bond of the total Contract Price made payable to the Waterloo Region District School Board (the 'Board") as surety that, if the Bid is accepted, a Contract will be entered into for the proper performance of the work and extends protection to Subcontractors, Suppliers, and any other persons supplying labour or materials to the Project. For more information, contact your surety company or visit the Surety Association of Canada website. If the successful Bidder fails to provide a performance bond and/or labour and materials bond when requested, the Board may declare the bid deposit forfeited and the Bidder will be held responsible for any increased costs or damages incurred by the Board. Any Bidder who fails to provide all required documents within the timelines provided, or otherwise fails to enter into an agreement with the Board upon notice of being the successful Bidder may be subject to future bidding constraints by the Board.

Performance bond shall guarantee all conditions as set out in the contract, including proper execution of the work and for all matters for which the successful Bidder is responsible for throughout the two (2) year period of maintenance and warranty.

Any costs associated with performance bond are the responsibility and cost of the Bidder.

Bonds must be submitted through the Bidding System within seven (7) calendar days of receiving the Intent to Award.

5. Business Code of Conduct for Board Employees

The Board will not knowingly purchase goods and/or services from Vendor/Contractors who operate in contravention of local and international laws. If a product and/or service supplied to the Board is discovered to be in contravention, the Board reserves the right to rectify the issue with the Vendor/Contractor, including the cancellation of the contract.

The Board expects that all employees and Vendor/Contractors act within the parameters of the in Administration Procedure 4360 PRINCIPLES OF BUSINESS CONDUCT FOR BOARD EMPLOYEES. Click <u>here</u> to access the Board's Administrative Procedures, Section 4000 – Business Services.

6. Code of Conduct for Vendors/Contractors

These Guidelines cover any vendor, contractor, supplier, business, firm, company or individual doing work, providing a service or delivering goods on any Waterloo Region District School Board property, as well as the contractor's employees, sub-contractors, agents, consultants, and others on site in connection with the contractor's work or at the vendor/contractor's express or implied invitation.

- i. **Courtesy and Respect**: all vendor/contractors and their employees must conduct themselves in a manner that is lawful, courteous, businesslike, and respectful of all students, staff, faculty, guests, or visitors.
- ii. Language and Behavior: vendors/contractors and their employees cannot engage in behavior that is rude, threatening, or offensive. Use of profane or insulting language is prohibited. Harassment of any type, including sexual harassment is strictly prohibited. Abusive, derogatory, obscene or improper

language, gestures, remarks, whistling, cat calls or other disrespectful behavior cannot be tolerated. Rough housing, fighting, fisticuffs, physical threats, destruction of property, vandalism, littering, or physical abuse of anyone on WRDSB property are not permitted under any circumstance.

- iii. No Weapons, Alcohol, or Drugs: The use, possession, distribution, or sale of any weapon, alcohol, illegal drug, or controlled dangerous substance by any contractor or contractor's employee is prohibited. Offenders will be removed from WRDSB property and/or reported to the local Police Department.
- iv. **Smoking**: Contractors and their employees are not permitted to smoke on WRDSB property, in or near any buildings.
- v. **Fraternization**: Vendor/Contractors and their employees may not fraternize or socialize with WRDSB students or employees.
- vi. **Appearance**: Vendor/Contractors and their employees are required to wear appropriate work wear, hard hats and safety footwear, as the case may be, while on WRDSB property. Articles of clothing must be neat and tidy in appearance, and cannot display offensive or inappropriate language, symbols or graphics. WRDSB has the right to decide if such clothing is inappropriate.
- vii. **Reporting**: The Vendor/Contractor is required to report any matter involving a violation of these rules of conduct, any matter involving health or safety, including any altercations, to WRDSB Facilities staff.

The Vendor/Contractor is responsible for its employees, agents, consultants and guests. If prohibited conduct does occur, the vendor/contractor will take all necessary steps to stop and prevent any future occurrence. Any breach of these conditions will result in the removal of the person responsible from the school premises and prohibited actions could result in the termination of any contract or agreement with WRDSB.

7. Compliance with Laws, Acts and Regulations

Vendor/Contractors shall abide by all applicable provincial and federal laws, as well as Board Policies. Some of the applicable laws are highlighted below for information purposes only. In case of any discrepancy between this Bid Solicitation Document and the provision of applicable laws, the latter shall prevail. This list is not intended to be a comprehensive summary of relevant laws or be a complete list of applicable regulations or interpretation of the provisions of any laws

- i. Broader Public Sector Accountability Act, 2010
- ii. Building Ontario Businesses Initiative Act, 2022
- iii. Construction Act
- iv. Architect Act
- v. Canada Revenue Agency (CRA) regulations
- vi. Accessibility for Ontarians with Disabilities Act (AODA)

- vii. Workplace Safety and Insurance Act (WSIB)
- viii. Occupational Health and Safety Act
- ix. Trade Agreements (CETA/CFTA)
- x. Education Act
- xi. Fighting Against Forced Labour and Child Labour in Supply Chains Act
- xii. WRDBS Procurement Services Policies website
- xiii. WRDSB Policies and Procedures

Non-compliance to provincial and/or federal laws, or Board Policies may result in rejection of the Bidder's Bid submission and/or termination of Contract.

Bidders shall make themselves aware of provisions in all applicable provincial and federal laws as well as Board policies and ensure full compliance. Non-compliance may result in rejection of Bid and/or termination of Contract.

The successful Bidder(s) will be required to comply with all applicable federal, provincial laws as well as Board policies in performing its obligations under the Contract including, without limitation, the Occupational Health and Safety Act, as amended, and the Workplace Safety and Insurance Act, 1997, as amended, and Accessibility for Ontarians With Disabilities Act, 2005, S.O. 2005, c.11, Accessibility Standards for Customer Services O. Reg. 429/07 requirements, under the Accessibility for Ontarians With Disabilities Act, or any successor legislation applicable, and to provide to the Board, upon request, periodic reports and evidences confirming such compliance.

By supplying the goods or equipment and/or providing services, the Vendor warrants that the goods or equipment supplied, and services provided to the Board conforms in all respects to the standards and codes set forth by federal and provincial agencies. Failure to comply with this condition will be considered a breach of this Contract.

The obligations of the parties and resolutions of any disputes shall be governed by and construed in accordance with the laws of the Province of Ontario and the federal laws of Canada, including the Construction Act, as to interpretation and performance, and shall be treated, in all respects, as an Ontario contract. The parties shall attorn to the exclusive jurisdiction of the courts of the Province of Ontario.

8. Confidential Information and Municipal Freedom of Information and Protection of Privacy Act

All information and documentation provided by the Board or to the Board in connection with this Procurement, before or after the issuance of this Procurement is the sole property of the Board and shall be treated as confidential, subject to the provisions of the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA).

Bidders shall identify any confidential information in their Bid Submission. The Board will make reasonable efforts to safeguard confidential information, subject to its disclosure requirements under MFIPPA or any other disclosure requirements imposed by law or by

order of a court or competent tribunal. Bidders are advised that their Bid submissions may be disclosed, on a confidential basis, to advisers retained by the Board to advise or assist with the Bid process, including the evaluation of Bid submissions.

Bidders should be advised that when submitting a Bid, the name, title, and contact information will be made public upon request. Under MFIPPA, and as a record of the Board, the Bid prices submitted and agreed to under contract with the Board can also be made available through a Freedom of Information request. Bidders will be notified regarding requests for any other information submitted in a Bid; information may be disclosed to a requester in whole or part unless otherwise considered exempt from disclosure under MFIPPA.

9. Confirmation to Proceed

No work shall commence until the Board has issued a purchase order and/or contract, if applicable to the successful Bidder. Goods/Service or Work as described shall not commence until all the required documents have been submitted to Procurement Services and the Form of Agreement and/or the CCDC 2 - 2020 if applicable, are executed by the Successful Bidder and the Board. For payment purposes, a Purchase Order shall be generated and issued to the Successful Bidder. The Purchase Order number must appear on all invoices in order to ensure prompt payment.

10. Conflict of Interest

By submitting a Bid, the Bidder confirms that they have no conflict of interest with respect to other work and/or other clients. The Bidder shall ensure that all subcontractors, subconsultants and suppliers also have no conflict with respect to other work and/or other clients.

The Vendor/Contractor, Subcontractors and Suppliers and any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall not engage in any activity or provide any services where such activity or the provision of such services creates a conflict of interest (actually or potentially, in the sole opinion of the Owner) with the provision of the Work pursuant to the Contract. The Vendor/Contractor acknowledges and agrees that a conflict of interest, as described in this section includes, but is not limited to, the use of Confidential Information where the Owner has not specifically authorized such use.

The Vendor/Contractor shall disclose to the Owner, in writing, without delay, any actual or potential situation that may be reasonably interpreted as either a conflict of interest or a potential conflict of interest, including the retention of any Subcontractor or Supplier that is directly or indirectly affiliated with or related to the Vendor/Contractor.

The Vendor/Contractor covenants and agrees that it will not hire or retain the services of any employee or previous employee of the Owner where to do so constitutes a breach by

such employee or previous employee of the Owner's conflict of interest policy, as it may be amended from time to time, until after completion of the Work/Services under the Contract.

It is of the essence of the Contract that the Owner shall not have direct or indirect liability to any Subcontractor or Supplier, and that the Owner relies on the maintenance of an arm's-length relationship between the Vendor/Contractor and its Subcontractors and Suppliers. Consistent with this fundamental term of the Contract, the Vendor/Contractor will not enter into any agreement or understanding with any Subcontractor or Supplier, whether as part of any contract or any written or oral collateral agreement, pursuant to which the parties thereto agree to cooperate in the presentation of a claim for payment against the Owner, directly or through the Vendor/Contractor, where such claim is, in whole or in part, in respect of a disputed claim by the Subcontractor or Supplier against the Vendor/Contractor, where the payment to the Subcontractor or Supplier by the Vendor/Contractor is agreed to be conditional or contingent on the ability to recover those amounts or a portion thereof from the Owner, failing which the Vendor/Contractor shall be saved harmless from all or a portion of those claims. The Vendor/Contractor acknowledges that any such agreement would undermine the required arm's-length relationship and constitute a conflict of interest. For greater certainty, the Vendor/Contractor shall only be entitled to advance claims against the Owner for amounts pertaining to Subcontractor or Supplier claims where the Vendor/Contractor has actually paid or unconditionally acknowledged liability for those claims or where those claims are the subject of litigation or binding arbitration between the Subcontractor or Supplier and the Vendor/Contractor has been found liable for those claims.

A breach by the Vendor/Contractor, any of the Subcontractors, Suppliers or any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall entitle the Owner to terminate the Contract, in addition to any other rights and remedies that the Owner has in the Contract, in law, or in equity."

11. Construction Act Guidelines

For Work that is governed by the provisions of the Construction Act, the Construction Act shall apply where applicable including in respect to release of 10% holdback, 2% deficiency holdback, adjudication, and the provision of security.

12. Criminal Background Checks and Collection of Personal Information

The Board must comply with Ontario Regulation 521/01 (Collection of Personal Information) of the Education Act with respect to criminal background checks and offence declarations.

If required by the Board, the Vendor/Contractor will provide to the Board, or designate, a Criminal Background check for pertinent individuals covering offences under the Criminal Code, the Controlled Drugs and Substances Act, and any other offences which would be revealed by a search of the automated Criminal Records Retrieval System.

An Offence Declaration on a Board-approved form for every employee of the Vendor/Contractor who may come in direct contact with Board staff and/or students on a regular basis at any Board site prior to the occurrence and on or before September 1 each year thereafter may be required. Updated Offence Declarations may be required annually. The Board will determine in its sole discretion whether this is a requirement.

Termination of contracts may be the result of non-compliance to this requirement.

13. Damage Responsibility of Contractor/Vendor

The Vendor/Contractor, their agents and all workers and persons employed by them or under their control, shall use due care that no person or property is injured and that no rights are infringed in the prosecution of the work, and the Vendor/Contractor shall be solely responsible for all damages by whomsoever claimable in respect of any injury to persons or to lands, buildings, structures, utilities, survey markers, fences, livestock, trees, crops, roads, ways, ditches, drains and in watercourses, whether natural or artificial, or property or whatever description and in respect of any infringement of any right, privilege or easement whatever occasioned in the carrying on of the work or any part thereof, or by any neglect, misfeasance or nonfeasance on the Vendor/Contractor's part or on the part of any of his agents, workers and persons employed by them or under their control shall bear the full cost thereof and shall at his own expense make such temporary provisions as may be necessary to ensure the avoidance of any such damage, injury or infringement.

The Vendor/Contractor shall indemnify and save harmless the Board from and against all claims, demands, loss, costs, damages, actions suits or other proceedings by whomsoever made, brought, or prosecuted in any manner based upon, occasioned by, or attributed to any such damage, injury, or infringement.

Notwithstanding the indemnity provisions contained in this section, where in the opinion of the Board Representative the Vendor/Contractor has failed to rectify any damage, injury or infringement or has failed to adequately compensate any person for any damage, injury or infringement for which the Vendor/Contractor is responsible under the Contract, the Board, following notice in writing to the Vendor/Contractor of his intention so to do, may withhold payment of any monies due to the Vendor/Contractor under this or any other Contract until the Vendor/Contractor has rectified such damage, injury or infringement or has paid adequate compensation for such damage, injury or infringement.

14. Damage Reporting

If a utility structure or device, utility cable/conduit, or utility related infrastructure is damaged, the Vendor/Contractor shall notify the Board representative the same working day of any service disruption or damage and the Vendor/Contractor will immediately

notify the utility company to initiate repair. The Vendor/Contractor will additionally make every reasonable effort to advise impacted resident(s) of a service disruption.

It is understood that all damage caused by workers engaged in the work under these specifications will be repaired by the Vendor/Contractor and at the Vendor/Contractor's sole expense. Damaged turf areas will be levelled and seeded, all horticultural planting damaged beyond repair will be replaced and any damage to structures, utilities, signs, light fixtures, landscape furniture, irrigation systems etc. will be repaired or replaced. Repair work will be carried out by skilled workers acceptable to the Board representative. All repairs and replacements will be approved by a Board representative prior to final payment.

15. Debriefing Requests

For procurements valued at \$100,000 or more, and in accordance with the Broader Public Sector Procurement Directive, unsuccessful Bidders are entitled to a debriefing to receive feedback with respect to their Bid submission. To obtain a debriefing, Bidders shall contact the Board Contact listed in this Bid Solicitation Document in writing with their request within sixty (60) calendar days of the award notification.

16. Default

If the Vendor/Contractor fails to properly, promptly, and fully carry out the Work required by these documents, the Board reserves the right to notify the Vendor/Contractor to discontinue all Work under this Contract, to advertise for new Bids or carry out the Work in any way as the Board may, in their sole discretion, deem best.

The Vendor/Contractor further agrees to indemnify and save harmless the Indemnified Parties from all loss, damage, liability, cost, charge, or expense whatsoever which it, they or any of them may suffer, incur or be put to by reason of such default or failure.

17. Delay Claims

The Vendor/Contractor shall be responsible for all deliverables including lead times. The bidder shall include in their bid price any costs associated with an extended schedule beyond the stated substantial completion date due to delayed deliveries of items. Costing is to be inclusive of any afterhours work required due to the school being occupied by staff and students during the school year until completion.

The board will not accept or consider any "delay claim" requests for delayed deliverables outlined in the tender documents.

18. Designated Substances

The Occupational Health and Safety Act of Ontario (OHSA) allows for certain toxic substances to be especially designated. The OHSA defines a designated substance as "a biological, chemical, or physical agent or combination thereof prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited, or controlled". Ontario Regulation 490/09 - Designated Substances (O.Reg. 490/09), made

under the Occupational Health and Safety Act outlines required steps to control exposure of workers to designated substances. Under O. Reg. 490/09 there are eleven (11) designated substances: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride. This regulation applies to every employer and worker at a workplace where the designated substances are present, produced, processed, used, handled or stored and at which a worker is likely to be exposed to the designated substance.

I. Asbestos

Asbestos-containing material (ACMs) were identified during the completion of the Asbestos Audit Update Report (AAU), prepared by MTE Consultants Inc. Each facility was surveyed, and if applicable, an AAU Report is available, refer to attached, Appendix 01 35 34A. If these materials, including those deemed or suspected, will be disturbed, or will likely be disturbed, during building maintenance, renovations, construction, or demolition activities, they must be handled and disposed of in accordance with the procedures prescribed by O. Reg. 278/05.

Should the Vendor/Contractor encounter asbestos, not noted in the above AAU Report, which would be disturbed during the course of the Work they should stop the work in that immediate area and report the same to the Board Contact.

All asbestos work must be conducted by Vendor/Contractors approved by the Board, who are trained in the type of asbestos operations required and should be overseen by a qualified third-party Health, Safety and Environmental professional. To conduct Type 3 asbestos operations, Vendor/Contractors must be certified as Asbestos Abatement Workers AAW (Trade code 253W) and Asbestos Abatement Supervisors AAS (Trade code 253S) by The Ministry of Training, Colleges and Universities as prescribed by Section 20 of O. Reg. 278/05.

Unless otherwise specifically covered by Cash Allowance or Contingency Allowance for known asbestos materials, include in this contract for the removal under abatement, in compliance with O. Reg. 278/05, of all known asbestos containing materials, as identified in the audit, within 0.6 meter (2'-0") of all new services, materials, and equipment, and/or as required to complete the work. No claims for extra cost will be accepted for areas known to contain asbestos containing materials.

II. Lead

Lead was historically used in mortar pigments, ceramic glazing; plumbing solder, electrical equipment and electronics solder, in pipe gaskets as packing in cast iron bell and spigot joints of sanitary drains, flexible plumbing connections, flashing panels, acoustical dampeners, phone cable casing and some architectural applications. The assessment of lead for this assignment was limited to paint on interior and exterior surfaces which may be disturbed during the Work.

Preliminary paint, coatings or materials were collected within the work area to determine if lead-containing paints, including lead-based paints, are present. The analytical results, if applicable, including the location marked on the floor plans are available, refer to attached, Appendix 01 35 34B.

Should the Vendor/Contractor encounter paint and coatings, not sampled, that would be disturbed during the course of the Work, they should stop the work in that immediate area and report the same to the Board Contact.

Unless otherwise specifically covered by Cash Allowance or Contingency Allowance for known lead-containing paint and coatings, include in this contract for the removal or disturbance of lead-containing materials, must be completed in compliance with "Lead on Construction Projects" guideline (April 2011). No claims for extra cost will be accepted for lead-containing paint or coatings in identified areas.

The classification of typical lead-containing construction tasks is based on presumed airborne concentrations obtained from the U.S. Occupational Safety and Health Administration (OSHA), the Ontario Ministry of Labour, and published research studies. The classification of Type 1, Type 2, or Type 3 operations are grouped based on the following concentrations of airborne lead

Vendor/Contractor shall inform all workers of the presence of paint finishes that are lead containing. Disturbance of lead-containing materials, paints or surface coatings shall be conducted in accordance with the procedures outlined in the Environmental Abatement Council of Canada (EACC) "Lead Guideline" (October 2014) and/or the Ministry of Labour (MOL) "Lead on Construction Projects" guideline (April 2011). The extent of procedures required depends on the type of work to be conducted. Waste to be handled and disposed of in accordance with O.Reg. 347.

III. Mercury

Mercury is typically used in building service applications such as thermometers, barometers, thermostats, gauges, electrical switches, and lighting products including fluorescent light bulbs and a variety of High Intensity Discharge (HID) lamps as mercury vapour, metal halide and high pressure sodium lamps. Lamps and other devices that require demolition are to be handled with care and kept intact to avoid potential exposure. Any mercury-containing lamps or other equipment that are demolished are to be recycled. Waste to be handled and disposed of in accordance with O.Reg. 347.

IV. Silica

Silica is present in rock, stone, soil, and sand. Masonry products such as concrete block, brick, and mortar, as well as concrete and associated products contain silica.

Due to its ubiquitous nature, silica was historically used in a wide variety of building materials and is still used today in new construction.

All work involving the demolition silica-containing materials shall follow the procedures outlined in the MOL "Silica on Construction Projects" guideline. Type 1 operations may be necessary based on the type of work conducted and the Vendor/Contractor shall implement dust suppression methods and protect workers.

V. Other Designated Substance

In addition to asbestos and/or lead, silica, and mercury are present in all WRDSB facilities. New construction, renovation or alterations require compliance by the Vendor/Contractor with the applicable legislation. Other designated substances (i.e., acrylonitrile, arsenic, benzene, coke oven emissions, isocyanates, ethyl oxide, and vinyl chloride) are not encountered in WRDSB facilities as significant constituents or in a form that would represent an exposure concern. responsible for obtaining its own independent financial, legal, accounting, and technical advice with respect to any information included in the Bid Solicitation Document or in any data, materials, or documents provided or required by the Board.

19. Dispute Resolution

All disputes arising out of or in connection with this Contract, or in respect of any legal relationship associated with or derived from this Contract, other than with respect to the Board's right to terminate this Contract, shall first be mediated pursuant to the <u>National Mediation Rules of the ADR Institute of Canada, Inc</u>. Despite this agreement to mediate, the Vendor/Contractor or the Board may apply to a court of competent jurisdiction or other competent authority for interim measures of protection at any time. All disputes remaining unsettled after mediation shall be arbitrated and finally resolved before a single arbitrator pursuant to the National Arbitration Rules of the ADR Institute of Canada, Inc. The place of mediation and arbitration shall be Toronto, Ontario, Canada. The language of the mediation shall be English.

20. Electrical Safety Requirements

All electrical equipment and components must bear a C.S.A. or Electrical Safety Association (E.S.A.) label.

21. Emergency and Maintenance

The care of the Works until completed, delivered to and accepted by the Board rests solely with the Vendor/Contractor who shall assume all risk of damage to the work.

For the purpose of emergency and maintenance measures, the name, address, and telephone number of a responsible official of the contracting firm shall be given to the Board's contact person in charge of the project, if requested. This official shall always be available and have the necessary authority to mobilize workers and machinery and to take any action as directed by the Board in the event emergency or maintenance measures are required, regardless of the fact that the emergency or requirement of maintenance may

have been caused by the Vendor/Contractor's negligence, Act of God, or any cause whatsoever.

Should the Vendor/Contractor be unable to carry out the required immediate remedial measures, the Board may carry out the necessary repairs and the costs for this work shall be deducted from payments due to the Vendor/Contractor.

22. Equivalent or Brand Name

Any reference to a brand name or a particular manufacturer shall be understood to have been made solely for the purpose of establishing and describing required performance and quality levels of the product to be supplied, unless specified otherwise.

No reference to the brand name of a particular manufacturer shall be construed to restrict Bidders to that manufacturer. Bidders are invited to Bid equivalent and comparable equipment or items of any manufacturer, pending approval from the Board in the form of an Addendum. It is the Bidder's responsibility to demonstrate that the item meets the specifications.

Bidders shall request through the Bidding System by clicking on the "Submit a Question" button found within the bid details page of that Procurement that a proposed product be considered an approved equivalent prior to the Deadline for Questions in the Anticipated Project Schedule.

The request must include enough detail to determine equivalency by comparing the Board's specifications to the alternate product. It will not be the Board's responsibility to perform this comparison.

The Board/ Consultant may, depending on the nature of the product request site visits within a reasonable distance (preferable within 100 km of the Board) showing product and installation based on a certain age, minimum 18 months in use, room use, room size, etc. based on same or similar purpose as described in this Procurement.

The Board/Consultant will endeavor to complete a review and make a decision prior to the Closing Date, and, if required, the Board reserves the right to extend the Closing Date to complete its review. However, in the event additional time is required beyond a suitable extension to the Closing Date, the request will be pending until the product is thoroughly vetted, therefore, it may not be approved for this particular Procurement.

If the Board is willing to consider the product with its differences, it will be communicated in the form of an Addendum prior to the Closing Date.

The cost of any testing requirements to establish acceptable equivalent or comparable products will be borne by the Bidder, unless otherwise stated by the Board.

23. Evidence of Quality

It is the Bidder's responsibility to prove their product/service quality meets the Board's requirements and Bidders may be required to submit evidence in a form acceptable to the Board. Substitution of materials equipment or methods different from that outlined

in the specifications / terms of reference will not be accepted unless provided for within the Bid Solicitation document or without the written approval of the Board.

24. Force Majeure

If either party is delayed in the performance of their obligations under this Contract by Force Majeure, then the Contract Time shall be extended for such reasonable time as the Owner and the Vendor/Contractor shall agree. The extension of time shall not be less than the time lost as a result of the event causing the delay, unless the parties agree to a shorter extension. Neither party shall be entitled to payment for costs incurred by such delays. Upon reaching agreement on the extension of the Contract Time attributable to the Force Majeure event, the Owner and the Vendor/Contractor shall execute a Change Order indicating the length of the extension to the Contract Time and confirming that there are no costs payable by the either party for the extension of Contract Time. However, if at the time an event of Force Majeure arises a party is in default of its obligations under the Contract and has received a notice of default shall not excuse a party from its obligation to cure the default(s). For greater certainty, the defaulting party, to the extent possible, must continue to address and cure the default notwithstanding an event of Force Majeure."

Any cause, unknown at the effective date of the Contract and beyond either party's control, other than financial difficulties, bankruptcy or insolvency, which prevents the performance by a party, or both, of any of their respective obligations under the Contract and the event of Force Majeure did not arise from a party's default and could not be avoided or mitigated by the exercise of reasonable effort or foresight. Force Majeure includes Labour Disputes; fire; unusual delay by common carriers or unavoidable casualties; delays in obtaining third-party licenses, permits, agreements, or approvals (excluding approvals of any Subcontractors or Suppliers of any tier); civil disturbance; emergency acts, orders, legislation, regulations or directives or revoking of funding from any government or other public authority; acts of a public enemy; war; riot; sabotage; blockage; embargo; lightning; earthquake; adverse weather conditions but only if substantially beyond the weather norms of the Place of the Work; acts of God; or declared epidemic or pandemic outbreak or other public health emergency (e.g. SARS, COVID-19)

If in the reasonable opinion of either party to this Contract that performance of the Contract is made impossible by force majeure, then either party shall notify the other in writing and the Board shall either terminate the Contract forthwith without any future payments being made or authorize the Bidder to continue performance of the Contract with such adjustments as may be required by the existence of the force majeure and agreed upon by both parties.

25. Hot Work Procedure

Take all precautions to Work safely and to provide the necessary protection to persons and property from Hot Work. This includes, but is not limited to Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding. With all such activity these steps are to be followed:

- i. Whenever possible, complete Hot Work in a welding shop or out of doors at the school.
- Flammable liquids, dust lint and oily deposits to be removed from within 50-ft (15m) of Work. Remove other combustibles where possible.
 Otherwise protect with fire-resistive tarpaulins or metal shields.
- iii. Explosive atmosphere in area eliminated. Floors swept clean. Combustible floors wet down, covered with damp sand or fire-resistive tarpaulins.
- iv. All wall and floor openings covered. Fire-resistive tarpaulins suspended beneath Work.
- v. For on-site Work (indoor and out of doors), advise the Head Custodian, Principal, Consultant (if assigned) and Project Coordinator/Lead prior to Work being performed, and of related dangers.
- vi. Where the Fire Alarm system is required to be set to stand-by to discourage false alarms from smoke detectors provide a firewatch throughout the building or structure being worked on. NEVER put the fire alarm system in stand-by mode when the building is occupied by staff or students.
- vii. In the event of a fire as a result of the Hot Work, notify the fire department immediately. Report incident to the head custodian, the Consultant, if assigned, and Project Coordinator immediately, whether extinguished or not. Provide a fire incident report to the Board.
- viii. Barriers must be set up to protect staff and students (i.e. pylons, shields, and caution tape) from exposure to arc flash and smoke migration.
- ix. Have all necessary doors, windows and/or drapes closed. Confer with the Head Custodian to shut down all fan systems in the area to reduce or eliminate smoke distribution.
- x. Provide and keep fire extinguishers handy and in good Working condition. Temporarily cover all smoke detectors in the area during time of Work.
- xi. Provide a fire watch/spot check for several hours after Work is completed. Uncover smoke detectors.
- xii. On new construction, the requirements of the Hot Wok permit may be waived, until such time as either Substantial Completion or Occupancy is granted, whichever comes first.
- xiii. On additions to existing buildings, the requirements for Hot Work permits shall remain in place.

25.1 Hot Work Permit

- i. Each permit is valid for seven (7) days only and must be renewed prior to its expiration date
- ii. The contractor must obtain Hot Work Permits from the School Board's representative prior to the start of work.
- iii. The contractor must complete the form as required and must keep the form on site.
- iv. Return each completed form to the School Board's representative on the date of expiration.
- v. The most current version of the Permit and its requirements shall be used for the purposes of the Work.

26. Incurred Costs

The Board will not be liable, nor reimburse any Bidder for costs incurred in the preparation of the Bid, or any other services that may be requested as part of the procurement process.

27. Indemnification

The Bidder will indemnify and save harmless and defend the Board, and their respective elected officials, officers, employees, a

gents and their respective successors and assigns, from and against all actions claims and demands whatsoever which may be brought against or made upon any of the Indemnified Parties and against all losses, liability, judgments, claims, costs, demands or expenses which the Indemnified Parties may sustain, suffer, or be put to resulting from or arising out of the Bidder's failure to exercise reasonable care, skill or diligence in the performance or rendering of any Work or service required hereunder to be performed or rendered by the Bidder, its agents, servants, employees or subcontractors, or any of them as well as for the infringement of or use of any intellectual property rights including any copyright or patent arising out of the reproduction or use in any manner of any plans, designs, drawings, specifications, information, negatives, data, material, sketches, notes, documents, memoranda, or computer software furnished by the Bidder in the performance of this Contract.

28. Insurance Provisions

If selected, it is the responsibility of the Vendor/Contractor and its Insurance Broker to review all potential operations and exposures to determine if the coverage and limits noted below are sufficient to address all insurance related exposures presented by the specification of the Project, Work, or Supply. The Vendor/Contractor shall insure its undertaking, business, and equipment under the following coverage to protect and indemnify and save harmless the Board:

- General Liability Insurance: The Vendor/Contractor shall maintain liability insurance i. acceptable to the Board throughout the term of this Agreement from the date of commencement of work until one (1) year from the date of substantial performance of work. Liability coverage shall be provided for completed operations hazards from the date of substantial performance of the work, as set out in the certificate of substantial performance of work, on an ongoing basis for a period of 6 years following substantial performance of work. Coverage shall consist of a comprehensive policy of public liability and property damage insurance, with all applicable coverage extensions/ endorsements, in an amount of not less than \$5,000,000 per occurrence. Such insurance shall name the Waterloo Region District School Board and any other person or party identified in the contract documents, as an additional insured with a cross liability endorsement and severability of interests' provision. The policy SIR/deductible shall not exceed \$100,000 per claim and if the policy has an aggregate limit, the amount of the aggregate shall be double the required per occurrence limit. A combination of primary coverage plus umbrella or excess liability insurance may be used.
- ii. **Owned and Non-Owned Automobile Liability Insurance:** The Vendor/Contractor shall maintain liability insurance on all Owned, Non-Owned and Leased Automobiles used in the performance of this work to a limit of \$2,000,000 per occurrence throughout the term of this Agreement from the date of commencement of work and until one (1) year after the date of substantial performance of work.
- iii. **If applicable, Broad Form Contractor's Equipment Insurance**: The General Contractor shall provide and maintain during the term of the Agreement, coverage for construction machinery and equipment used by the Contractor for the performance of the work. Such insurance shall be in a form acceptable to the Board and shall not allow subrogation claims by the Insurer against the Board.
- iv. If applicable, the General Contractor shall provide and maintain during the term of the Agreement an All Risk Installation Floater Insurance policy covering the installation of any machinery and equipment associated with the construction project. Coverage shall be in an amount equal to the value of the machinery and/or equipment and shall include coverage while it is in transit to, while stored at a temporary location, and awaiting installation at the work site.
- v. If applicable, the General Contractor shall ensure its professional consultants, architects, landscape architects, planners, and engineers providing a professional service in connection with the contract, maintain until three (3) years after the Agreement, Professional Liability Insurance to a limit not less than \$1,000,000 per claim providing coverage for acts, errors and omissions arising from their professional services performed under this Agreement. The policy SIR/deductible shall not exceed \$100,000 per claim and if the policy has an aggregate limit, the amount of the aggregate shall be double the required per claim limit. Certificates evidencing such

coverage shall be supplied to the Board prior to the completion of the project and in accordance with the provisions stated above.

- vi. If applicable, (i.e., for projects with environmental liability concerns) the General Contractor shall take out and keep in force Contractor's Pollution Liability (CPL) coverage to ensure that its work does not exacerbate any pre-existing environmental condition during construction. Coverage shall be in an amount of not less than \$5,000,000 per claim or per occurrence, or such greater amount as the Board may from time to time require, naming the Board as an additional insured, whose coverage shall be maintained in force for 1 year following the termination of the Contract. The policy SIR/deductible shall not exceed \$100,000 per claim and if the policy has an aggregate limit, the amount of the aggregate shall be double the required per occurrence limit.
- vii. **Provisions:** Prior to the commencement of work, the General Contractor shall forward a Certificate of Insurance evidencing this insurance with the executed Agreement. The Certificate shall state that coverage will not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days (ten (10) days if cancellation is due to non-payment of premium) prior written notice by certified mail to the Board.

It is also understood and agreed that in the event of a claim any deductible or selfinsured retention under these policies of insurance shall be the sole responsibility of the General Contractor and that this coverage shall preclude subrogation claims against the Board and any other person insured under the policy and be primary insurance in response to claims. Any insurance or self-insurance maintained by the Board and any other person insured under the policy shall be considered excess of the Contractor's insurance and shall not contribute with it. The minimum amount of insurance required herein shall not modify, waive or otherwise alter the Contractor's obligation to fully indemnify the Board under this Agreement.

The Board reserves the right to modify the insurance requirements as deemed suitable.

viii. Third Party Claims Process:

- a. The Board's claims process for Third Party claims is to refer the claimant directly to the Vendor/Contractor and to leave the resolution of the claim with the Vendor/Contractor. This applies regardless of whether or not it is an insured loss.
- b. As the Board has a responsibility to the taxpayers, we must ensure that claimants are dealt with in a fair and efficient manner. Claims reported to the Vendor/Contractor, either directly by a third party or through the Board shall be promptly investigated by the Vendor/Contractor. The Vendor/Contractor shall contact the third party claimant within 48 hours of

receipt of notice of a claim. The Vendor/Contractor shall initiate an investigation of the claim immediately upon notice, and advise the third party claimant in writing, with a copy to the Board, of its position regarding the claim within 21 calendar days of the notice. The Vendor/Contractor shall include in its response the reasons for its position.

- c. Should this position not resolve the claim and be accepted by the third party claimant, the Vendor/Contractor shall immediately report the claim to its Insurer for further review. (Insurer for this purpose is defined as either the Claims Department of the Vendor/Contractor's Insurance Company or the Claims Administrator at the Vendor/Contractor's Insurance Broker.) The Vendor/Contractor's Insurer upon receipt of this claim shall advise the third party claimant by letter, with a copy to the Board, that it is now investigating the claim. When a final position on the claim has been determined, the Vendor/Contractor's Insurer shall advise the third party claimant by letter, with a copy to the Board. Failure to follow this procedure shall permit the Board to investigate and resolve any such claims.
- d. Nothing herein shall limit the right of the Board to investigate and resolve any such claims notwithstanding the response of the Vendor/Contractor and/or its Insurer and to seek indemnification from the Vendor/Contractor or to exercise any other rights under the Contract.
- e. The Board may, without breaching this contract, retain from the funds owing to the Vendor/Contractor an amount that, as between the Board and the Vendor/Contractor, is equal to the balance in the Board's favour of all outstanding debts, claims or damages, whether or not related to this contract.

29. Invoice Requirements, Proper Invoice and Payment Terms

Except for Credit Card payments, all invoices shall be sent to <u>finance-ap@wrdsb.ca</u> for payment at the completion of the Work or after receipt of goods, unless otherwise stated.

- **29.1** In advance of invoicing, upon request, contracted Vendors will provide:
 - i. necessary company information to set up a WRDSB account and
 - ii. banking information if they wish to receive payment by Electronic Funds Transfer (EFT).
- **29.2** Requests to change company information, such as a name change due to a merger or acquisition, must be submitted in writing accompanied with a legal document/letter signed by a lawyer on the law firm's letterhead.
- **29.3** Invoices, not subject to the Construction Act, must contain the following information, where applicable, in order to be deemed complete:
 - i. Purchase Order Number
 - ii. Work Order Number
 - iii. Invoice Date

- iv. Unique Invoice Number
- v. Vendor name and address
- vi. Contract reference (RFT #, RFQ# etc.)
- vii. A description, including quantity where appropriate, month of service for ongoing contracts, and location of work
- viii. The amount payable for the services or materials that were supplied, including unit price (where applicable)
- ix. HST amount shown as a separate line item
- x. Payment Terms
- xi. Board Project Lead/ Contact and
- xii. Confirmation of completion of order and all Work as described in this Bid Solicitation Document.

29.4 Construction Act – Proper Invoice

The Board will pay such invoice within twenty-eight (28) calendar days of the Board's receipt of such proper invoice if the work has been performed to the satisfaction of the Board For Work that is governed by the provisions of the Construction Act and the Regulations thereto, the successful Bidder shall submit its invoices in the form of a Proper Invoice. For the purposes of this section, a "Proper Invoice" shall include the following:

- i. the Vendor/Contractor's name, address, telephone number and mailing address.
- ii. the date of the Proper Invoice and the period during which the services or materials for which payment is being applied for were supplied.
- iii. information identifying the authority, whether in the contract or otherwise, under which the services or materials were supplied.
- iv. a description, including quantity where appropriate, of the services or materials that were supplied during the payment period.
- v. the amount payable for the services or materials that were supplied during the payment period, with a clear identification of the portions of the amount that are holdbacks, and HST.
- vi. the name, title, telephone number and mailing address of the person to whom payment is to be sent.
- vii. the payment terms as specified by the Board in the Contract.
- viii. the invoice number and if applicable, the revision number.
- ix. the Vendor/Contractor's HST number.
- x. invoices and time sheets from all subtrades whose work is included in the Proper Invoice, if required in the Contract.
- xi. backup documentation to support any cash allowances and extra work claimed in the Proper Invoice.
- xii. a schedule of values indicating:
 - a. for lump sum contracts, the percentage of work completed per division

with each division further subdivided to show the percentage of work completed for each subtrade,

- b. for unit price contracts, the tender quantity, unit of measure, previous quantity, current quantity, to-date quantity,
- c. an updated list of change orders, showing the percentage of work completed under each change order, and
- d. an updated cash allowance list, showing the percentage of work completed in respect of each cash allowance, if required by the Contract.
- xiii. a Statutory Declaration where required by the Contract attesting to the truth of the statements made therein.

29.5 Payment Terms

The payment terms shall be net twenty-eight days (28) days after receipt of proper invoice where the Construction Act is applicable, unless otherwise agreed by the Board in writing. All other payment terms will reflect Net 30. An early payment discount, if offered, may be considered on a mutual agreement basis. Payment may be delayed if the invoice is incorrect or the goods, equipment and/or services are not acceptable to the Board. The Board will not pay any interest, penalty, or late fee for delayed payments. The Board preferred payment method is Credit Card or EFT, however alternate payment methods may be approved. Vendors are required to invoice promptly, without delay.

30. Licenses and Permits

The successful bidder will be responsible for applications and fees associated with any and all licenses and permits required by any and all governing bodies. The successful bidder will attach a copy of all permits, and any other required documentation to the applicable assigned work order for Board records.

31. Locates, if applicable

All required utility locates must be obtained before any on-site work commences, be available for Vendor/Contractor operator/employee review, and are the sole responsibility of the successful bidder. Any damage to any utility installation arising from work performed by the Vendor/Contractor or their employees shall be the Vendor/Contractor's responsibility.

The successful Bidder will obtain all utility locates in advance of work and all cost(s) associated with obtaining the utility locates will be the Vendor/Contractor's responsibility.

The successful Bidder shall possess the ability to supply and or share with the Board Representative utility locates for the sole purpose of Quality Control inspections. This is to be done at no additional cost to the Board.

32. Materials - Specifications

Only new materials in perfect condition will be accepted. Demonstrators, seconds or defective materials are unacceptable. Any materials found not to be in a new condition or as specified will be returned to the successful Bidder at the successful Bidder's expense.

33. Material Safety Data Sheets (M.S.D.S.)

Where applicable, a materials safety data sheet (M.S.D.S.), musts accompany all purchased goods, that fall under the requirements of the Occupational Health and Safety Act. The Board will not accept any additional charges or surcharges related to the supplying of M.S.D.S.

34. Mathematical Errors (Unit Prices Prevail)

Should there be any error in extensions, additions or computations, the Board shall be entitled to correct such errors based upon the unit prices supplied, and the corrected total shall be considered as representing the intention of the Bidder and shall be used as the basis for comparison of bid submissions.

35. No Branding

The Vendor/Contractor shall not place any sign at the site, public meetings, any public or private property or along curbside prior, during or after the Work without prior written permission of the Board.

36. No Collusion

Bidders including any of their agents are prohibited from engaging in any comparison of figures or arrangement with any other individual, corporation or person submitting a Bid for the same Work and shall be fair in all respects and shall be without collusion or fraud.

37. No Lobbying

Any attempt by the Bidder or its agents to contact any of the following persons, directly or indirectly, with respect to this procurement may lead to disqualification:

- i. any elected or appointed officer.
- ii. any staff of the Board except the Board Contact as identified in the Bid Solicitation Document; or
- iii. any other person connected in any way with the procurement.

38. No Smoking and Scent-Free Environment

The Province of Ontario has legislated under the Smoke Free Ontario Act that smoking is not permitted on any Board owned properties. Furthermore, most Board properties are "scent free". Smoking will not be permitted on-site. Offenders will be asked to leave the site, and infractions could result in corrective action and or fine.

39. Non-Assignment

No assignment by the Vendor/Contractor shall relieve the Vendor/Contractor of any responsibility for the full performance of all its' obligations under this contract.

The Vendor/Contractor shall not change its corporate name without the prior written approval of the Board.

40. Non-Disclosure Agreement (NDA)

The Board requires all service providers to sign off on a non-disclosure agreement and for the service provider to complete the Software Privacy and Security Standards Document (if necessary) in accordance with Board procedure AP4790. Prior to any sharing of Board personal, sensitive, or confidential information, the Vendor will be subject to further privacy and security reviews as required. This agreement will be renewed on an annual basis.

41. Ownership of Work

For the purposes of this paragraph:

" **Deliverables**" means all material prepared by the Bidder forming the Work under this Contract including, without limitation, all electronic media, reports, documents and instruments of service.

" Intellectual Property Rights " means any and all rights provided under: (a) patent law; (b) copyright law; (c) trade-mark law; (d) industrial design law; (e) any other statutory provision or common law principle applicable to this Contract, including trade secret law; and (f) any and all registrations and licenses in relation to the foregoing; and

"Personnel" means employees, representatives, agents and subcontractors.

The Bidder and the Board acknowledge and agree that the development of the Deliverables and the provision of the Work may result in the creation or development of new intellectual property and may contain or utilize the existing intellectual property of the Bidder or of third parties. Accordingly, the Bidder and the Board agree as follows.

- i. Except as set out in paragraph (b) below, the Bidder hereby assigns and agrees to assign to the Board all right, title and interest, including all Intellectual Property Rights, in and to each Deliverable from the moment of creation, and will cause its Personnel to assign the same. The Bidder will cause its Personnel to waive all moral rights they may have in each Deliverable.
- ii. To the extent that a Deliverable contains or utilizes the intellectual property of the Bidder or a third party ("Retained Materials"), and the Bidder expressly identifies such Retained Materials, the Bidder and the applicable third party will, subject to the following sentence, retain all their respective right, title and interest, including all Intellectual Property Rights, which each may have in such Retained Materials. To the extent that a Deliverable contains or utilizes Retained Materials, the Bidder hereby grants to each of the Board a royalty-free, irrevocable, perpetual, worldwide, non-exclusive license to make, use, sell, modify, prepare derivative works, disclose, publish, sublicense, copy and communicate by electronic means such Retained Materials.
- iii. The Vendor/Contractor agrees to always cooperate fully, and will cause its

Personnel to cooperate fully at all times, with respect to signing such documents and doing such acts and other things reasonably requested by the Board to confirm the transfer of ownership rights in the Deliverables.

42. Patent, Copyright and Other Proprietary Rights

The Bidder (by responding) agrees that the Bid on acceptance by the Designated Representative, become the property of the Board. The copyright for respective purchased concepts and/or materials will become the property of the Board unless otherwise mutually agreed upon by the Bidder and the Board.

All Bids, other documents as well as correspondence are subject to the provisions of the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA).

43. Performance

- i. Where the Vendor/Contractor is in default in carrying out any of its obligations under the contract, the Board may issue a verbal warning outlining the deficiency in supply or other aspects of performance and requiring the Vendor/Contractor to correct those deficiencies within such period of time as stated.
- ii. If the deficiency is not corrected within the time specified, or there is a further instance of deficient performance, the Board may issue a written notice to the Vendor/Contractor, identifying the deficiency in performance and setting a final date or time period for its correction.
- iii. If corrective steps are not taken by the final date or within that time, the Board may terminate the Contract and take corrective action.
- iv. Termination of any Contract can be immediate depending on the severity of the default.
- v. The Vendor/Contractor shall have no right to perform the services contemplated under this agreement beyond the time when such services become unsatisfactory to the Board; and in the event that Vendor/Contractor shall be discharged before all the services contemplated hereunder have been completed, or the services are for any reason terminated, stopped or discontinued because of the inability of the Vendor/Contractor to serve under this agreement they shall be paid only for that portion of the Work which shall have been satisfactorily completed at the time of termination.
- vi. Where deemed appropriate, a performance evaluation shall be completed by the Board. The evaluation report shall be reviewed with Procurement Services, and a copy of the completed evaluation forwarded to the Vendor for their records. Dependent on the evaluation scoring, the Board may request a corrective action plan

and/or project size/value may be affected on future bid opportunities for your company.

44. Permits and Licenses

Unless stated otherwise, the Vendor/Contractor shall apply for all required permits and licenses, supply all necessary notices required for the Work and pay all required fees. These costs shall be included in the Total Price. A copy of all permits, and any other required documentation shall be provided the Board upon request.

45. Proceedings Against the Board

The Bidder represents and warrants that the Bidder is not a party to any legal suits, actions, litigation proceedings, arbitrations, alternative dispute resolutions, investigations, or claims (Hereinafter collectively referred to as "Claims") by or against or otherwise involving the Board and the Bidder. The Board may reject any Bid in the event of potential, current, pending, or threatened litigation, arbitration, alternative dispute resolution or disputes involving the Board and the Bidder.

46. Protection of Board Assets

The successful Bidder (the contractor / subcontractor) shall be informed of and protect all Board assets including existing structures and vehicles, to the satisfaction of the Board. Any damage shall be reported to the Board and subsequently repaired and/or replaced by the Vendor/Contractor, at their expense, to the satisfaction of the Board. The Vendor/Contractor shall not cause any inconvenience to Board operations, staff, public or users of the Board facilities, within reason. Communication between the successful Vendor/Contractor and the school (or Board representative if school contact is not available) must be timely and effective to ensure all stakeholders are considered / aware of work to be completed.

47. Public Health Safety Protocol

Best practices include but not limited to wearing a medical grade mask and maintaining physical distancing (2m/6.5ft).

Recommended practices are subject to change at any time For information and updates, refer to the following resources and website: <u>Waterloo Region District School Board</u> and <u>Regional of Waterloo Public Health Services</u>

48. Records, Inspection, Audits

The Board will have the right, upon reasonable notice, to full access to the accounts and records of the Vendor/Contractor in respect of the goods, services and equipment provided by it under the Contract, for the purposes of inspection and/or audit. The Vendor/Contractor shall make and retain such records during the term of the Contract and for a minimum of seven (7) years following its termination, cancellation, or expiry.

49. Reserved Rights of the Board

The Board reserve the right, in their respective sole and unfettered discretion, to:

- i. Reject any Bid received from a Bidder which is party to any potential, current, past or existing suits, actions, and litigation proceedings, arbitrations, alternative dispute resolutions, investigations, Bidder performance evaluations that are below expectations, or claims by or against or otherwise involving either of the Board and the Bidder.
- ii. waive formalities and accept Bids which substantially comply with the requirements of this tender.
- iii. accept any Bid in whole or in part.
- iv. accept, reject, or cancel any or all Supplementary pricing.
- v. discuss with any Bidders different or additional terms to those contemplated in this Bid Solicitation Document or in any Bid submission.
- vi. make public the names of any or all Bidders.
- vii. accept or reject equivalent or alternative brand names.
- viii. check references other than those provided by any Bidder.
- ix. reject any, or any part of, any or all Bids, or cancel the bidding process at any stage and/or issue a new Bid call for the same or similar deliverables.
- x. disqualify any Bidder:
 - a. whose Bid contains misrepresentations or any other, inaccurate, or misleading information, or any qualifications within its Bid,
 - b. who has engaged in conduct prohibited by the Bid Solicitation Document,
 - c. with inadequate credentials or due to unsatisfactory past performance,
- xi. reject Bid(s) from Bidder who has engaged in lobbying or has contravened any of the terms of the Bid Solicitation Document.
- xii. reject a Bid based on:
 - a. information provided by references or credit check or other due diligence efforts,
 - b. the information provided by a Bidder pursuant to the Board exercising its clarification rights under the procurement process, or
 - c. other relevant information that arises during the procurement process.
- xiii. choose to reject a Bid if only a single Bid is received and cancel the bidding process or enter into direct negotiations with the sole Bidder.
- xiv. accept a Bid other than the lowest or highest scoring and/or to not accept any Bid for any reason whatsoever.
- xv. award the contract as split-order, lump sum or individual-item basis, or such combination as shall best serve the interests of the Board
- xvi. negotiate in circumstances permitted for in the Bid document or by relevant policies, or directives, and include additional terms and conditions during the process of negotiations.
- xvii. no longer consider a Bidder if a satisfactory outcome is not reached as part of negotiation, as determined by the Board in their sole discretion and move to the next highest ranked Bid in such event.
- xviii. select a Bidder other than the Bidder whose Bid reflects the lowest cost to the

Board and/or award the Contract to any Bidder.

- xix. award any business/Work described in this Bid Solicitation to more than one (1) Bidder.
- xx. not award the Contract if the costs of completing the Work exceed budget funding; or
- xxi. do not respond to all requirements or do not represent fair market value or where necessary internal approvals are not obtained.

These reserved rights are in addition to any other expressed rights or any other rights which may be implied in the circumstances. The Board shall not be liable for any expenses, costs or losses suffered by any Bidder or any third party resulting from the Board exercising any of its express or implied rights under this bidding process.

50. Responsibilities of the Vendor

Acceptance of a purchase order issued by the Board and/or a signed agreement shall constitute a contract (the "Contract") between the Board and the Vendor, which shall bind the Vendor on their part to furnish and deliver the goods, equipment and services at the prices given and in accordance with the conditions of the Bid solicitation document.

The Vendor shall:

- i. perform the Contract in accordance with the specifications, terms and conditions under which it is awarded.
- ii. act in a professional manner at all times when dealing with Board staff, with the public, and while working on site.
- iii. not, except with the consent of the Board in writing, release information relating to any subsequent order for advertising, promotional or technical purposes or otherwise give it publicly in any fashion, nor shall the name of either of the Board be used for, or in connection with, any advertising or promotional purpose of the Vendor.
- iv. treat information gained while working with the Board confidentially and not use it for any other project and return it to the Board if requested.
- v. submit to Finance Accounts Payable, an invoice for payment at the completion of the Work, unless otherwise stated. All applicable taxes including HST are to be itemized separately on invoices. Include the purchase order number on each invoice; and
- vi. provide necessary information if they wish to receive payment by Electronic Funds Transfer (EFT).

51. Site and Work Examination

i. Bidders will accept the site conditions, and the requirements of the Work, as is. No

modifications to the Bid will be accepted after the Closing Time.

- ii. No claim for extras will be allowed for Work or difficulties encountered due to conditions of the site which were visible, knowable, or reasonably inferable, prior to the time of submission of Bid. Bidders shall accept sole responsibility for any error or neglect on their part in this regard.
- iii. Before submitting a Bid, each Bidder shall:
 - a. carefully examine this entire Bid Solicitation Document to determine the extent of the Work, and various provisions including the maps, drawings, reports and specifications.
 - b. immediately report all discrepancies between the various documents and site conditions.
 - c. provide subcontractors, sub-consultants, and suppliers to whom the Bidder intends to sublet a portion or portions of the Work with complete information as to the requirements of the Work. This is to include maps, drawings, reports, specifications, and all requirements of the Bid Solicitation Document including any addenda.
- iv. In the event of discrepancies between the maps, drawings, reports, and the specifications with regard to quantity or quantities of materials or items, and in the absence of Addenda in clarification of said discrepancies, the Bidder is to include for the larger quantity or quantities.
- v. No additional payments will be made for any costs incurred through failure of the Bidder to abide by provisions stipulated in all of the articles and sub-articles of this item.
- vi. Any soils investigation, environmental, geotechnical or other reports prepared or obtained with respect to the Place of the Work (collectively the "Reports") are available from the Consultant. Where the Work involves existing buildings, structures, facilities, plant or equipment, any reports, data or as-built drawings concerning such buildings, structures, facilities, plant or equipment (collectively the "Data") are available from the Consultant. The Reports should not be considered a representation of the site conditions of the entire Place of the Work, and the Reports and Data are provided for general information and guidance purposes only. Neither the Owner nor the Consultant guarantees the accuracy or completeness of the Reports or the Data, nor does either assume any responsibility for any interpretations or conclusions that bidders may make or draw from the Reports or the Data.
- vii. Each Bidder is solely responsible, at its own cost and expense, to carry out its own independent research and due diligence, or to perform any other investigations considered necessary by the Bidder to satisfy itself as to all existing conditions. The Bidders' obligations set out in this paragraph apply irrespective of any Reports, Data or any information contained in the Bid Documents.
- viii. No allowances will be made for additional costs and no claims will be entertained

in connection with conditions which could reasonably have been ascertained by investigation or other due diligence undertaken prior to the Submission Deadline, and/or in connection with Work which is required and which is reasonably inferable from the Bid Documents, the Reports and/or Data as being necessary.

52. Site Existing Services, if applicable

The position of utility pole lines, underground conduits and services, watermains, sewers and other underground and over ground utilities and structures are not necessarily known, and the accuracy of the position of such utilities and structures on any reference documents is not guaranteed. The Board will not be responsible for damages or extra work caused or occasioned by the Vendor/Contractor relying on this or any other information or records.

Before starting work, the Vendor/Contractor shall familiarize themselves of the exact location of all such utilities and structures and shall assume all liability for damage to them. Where extra measures are required to support utility poles during construction either by the utility involved or the Vendor/Contractor themself, the costs involved shall be borne by the Vendor/Contractor. The Vendor/Contractor will be responsible for any fees that may be associated with these services.

53. Site Inspection and Control

A representative of the Board (appointed by the Board) reserves the right to enter the site at any time for the review & inspection. The presence of a said representative does not indicate satisfaction or compliance unless these comments are made by the representative and submitted to the Vendor/Contractor in written form

54. Site Investigation

Bidders shall not rely solely upon information furnished by the Board but shall do their own investigation of the locations, and quantity of the work to be completed under this contract.

The Bidder assumes all risk of conditions, existing or arising, in the course of the work, which might or could make the work or any items therefore more expensive in character, or more onerous to fulfill, than was contemplated or known when the Bid was made, or the Contract signed.

55. Site Safety and Clean Up

For safety of students, staff, and community members alike, it is expected that cleanup operations will progress with the job.

Repair work will be carried out by skilled workers acceptable to the Board Representative, under the liability of the Vendor/Contractor.

The Board Authorized Representative must approve all repairs and replacements prior to final payment.

56. Site Traffic/Pedestrian Safety

Vehicles, including Couriers and movable Equipment/Machinery must take all precautions to avoid entering or driving on Board premises during nutritional breaks, before and after school hours, or anytime there are students or staff outside of the building.

57. Site Use and Traffic Control

Vendor/Contractor's activities shall be limited to areas for work and storage as directed by the Board. Except where expressly permitted by the Board, materials and/or equipment must not be stored within four metres of the travelled portion of any roadway. Notwithstanding the foregoing, the Vendor/Contractor shall, at their own expense, remove any equipment or material, which, in the Board's opinion, constitutes a traffic hazard.

The Vendor/Contractor shall plan and schedule the routes of vehicles transporting all materials to, from or within the job, so that vehicular movements are accomplished with minimum interference and interruption to traffic. This will necessitate vehicles to "slip off" or "slip on" in the direction of traffic lanes.

The Vendor/Contractor shall maintain the adjacent side streets in a condition free from debris resulting from their operations, such as materials spilling from trucks. It is expected that the Vendor/Contractor shall regularly inspect the surface condition of these streets and promptly dispose of all the debris.

Should the Vendor/Contractor be unable to carry out the required remedial measures, the Board may carry out the necessary maintenance and the costs for the work shall be deducted from payments due to the Vendor/Contractor.

The Vendor/Contractor shall, at his own expense and to the satisfaction of the Board, provide all vehicular traffic control equipment, material, and labor required to perform the work in a safe manner in accordance with the "Occupational Health and Safety Act" and the "Ontario Traffic Manual" (Book 7). The Vendor/Contractor shall assure that all required forms are completed and on-site for inspection. In the event a traffic control company is contracted for the purpose of signage, information regarding the Vendor/Contractor must be included in the quotation and included with the bid price.

The Vendor/Contractor shall be responsible for the supply of traffic flag person(s) where required under the "Ontario Traffic Manual" (Book 7), with all costs included in the base unit price.

58. Suspension of Bidders

At the sole discretion of the Manager of Procurement Services, any Bidder may be suspended from consideration for default of delivery, unsatisfactory performance, safety concerns, lobbying or contravention of the Bid Solicitation Document.

59. Sustainable Purchasing

The procurement needs of the Board represent a significant level of responsibility to demonstrate leadership and support for greener business practices. Integrating environmental performance and impact into supply chain decisions is a commitment to improvement of the environment and the quality of life.

Green procurement shall be viewed in the context of achieving value for money for the total life-cycle costs. It requires the inclusion of environmental impact considerations into the procurement process, including planning, acquisition, use and disposal. Value for money shall include the consideration of many environmental tangible and intangible factors when determining the total life-cycle costs and environmental impact.

60. Termination

If the Vendor/Contractor fails to comply with any provision of this agreement or otherwise fails to perform its obligations hereunder in a competent manner satisfactory to the Board, the Board may give the Vendor/Contractor notice in writing of such failure. If the Vendor/Contractor has not remedied its failure within ten (10) working days of the said notice, the Board shall be entitled to exercise any one or more of the following remedies:

- i. The Board may terminate the contract without further notice, and exercise its rights to the Contract security provided by the Vendor/Contractor.
- ii. The Board may withhold any payment due to the Vendor/Contractor hereunder until the Vendor/Contractor has remedied its failure.
- iii. The Board may engage the services of another Bidder to remedy the Vendor/Contractor's failure, and obtain reimbursement therefore from the Vendor/Contractor. The said reimbursement may be obtained either through deduction from any amounts owing to the Vendor/Contractor hereunder, or through any other legal means available to the Board; or
- iv. The Board may assert any other remedy available to it in law or equity.

Unless the Board expressly agrees to the contrary, any failure of the Board to exercise any of the foregoing remedies, or the granting of any extension or indulgences, shall not be prejudicial to any right of the Board to subsequently obtain such remedies.

61. Termination for Convenience

The Board may terminate the Contract, in whole or in part, whenever the Board determine that such termination is in the best interests of the Board without showing cause, upon providing written notice to the Vendor/Contractor. The Board shall pay all reasonable costs incurred by the Vendor/Contract up to the date of termination considering the Work performed and/or services were provided in accordance with the Contract and to the complete satisfaction of the Board. Payment shall be in accordance with prices as per Contract. However, in no event shall the Vendor/Contractor be paid an amount, which exceeds the Total Bid Price. The Vendor/Contractor will not be reimbursed

for any profits which may have been anticipated but which have not been earned up to the date of termination.

62. Termination for Lack of Funding

Should the Board fail to appropriate funds to enable payments including multi-year agreements, the Board may cancel the contract without termination charges, provided the Vendor/Contractor receives thirty (30) days written notice of such termination from the Board.

63. Tools and Equipment

All equipment and methods used to carry out this Contract shall be in accordance with best practices, guidelines, regulations, and standards with respect to safety and quality.

No equipment, tools or materials are to be stored or left overnight within Board property.

At the time of bid, if requested, the bidders will indicate the type of equipment that will be used to fulfill the terms and conditions of this contract. Prior to the Board entering into an agreement with the Vendor/Contractor, or at any time during the Contract, the Board may, at their discretion, request an inspection of the equipment proposed for use.

It is the responsibility of the Vendor/Contractor, in the event of a major mechanical equipment breakdown, to have available substitute equipment of similar capability. It shall be supplied and put into service to fulfill the timeline terms of this tender. Failure to provide alternative equipment within timeline expectations specified within this tender, may result in termination of the contract. It is the responsibility of the Vendor/Contractor to ensure work continues and deadlines are met, despite any unforeseen interruption as a result of equipment failure.

It is the Vendor/Contractor's responsibility to ensure that the equipment and the operator, are licensed in accordance with the Ministry of Transportation. The Board may, at their discretion, require the Vendor/Contractor to provide proof that the equipment has passed a recent (within the last 12 months) government safety inspection and that the operators are suitably licensed prior to commencement of the contract. All vehicles, tools, equipment, and voltage rated gloves requiring dielectric testing shall have current certification and all applicable documentation.

The equipment must be in good working order and the Vendor/Contractor is responsible for all general and preventative maintenance, fuel, and repair and those costs shall be included in the bid. All preventative maintenance and repairs are to be conducted off peak hours. No other charges to the Board shall apply.

64. Usage Reports

The Board, at no additional cost, may request usage reports to be provided annually or upon request.

65. Variation of Bid Prices

No variation in the Total Price, unit prices and/or provisional pricing will be permitted after Closing Time, except in the instance of variation solely due to an increase or decrease in the rate of eligible taxes, beyond the control of the Bidder, occurring after the time of submission of their Bid. An increase or a decrease in the rate of eligible taxes, under these circumstances, shall alter the price of the Bid, but only to the extent of the tax increase or decrease.

66. Volume and Exclusivity

The Board makes no guarantee of value or volume of work to be assigned to the Successful Bidder. Any agreement executed with the Successful Bidder may not be an exclusive contract for the provision of the described goods/services.

67. Waiver

No term or provision of the Bid Solicitation Document shall be deemed waived, and no breach consented to, unless such waiver or consent is in writing and signed by an authorized representative of the party claimed to have waived or consented to the breach. No consent by a party to, or waiver of, a breach under the procurement process shall constitute consent to, waiver of, or excuse for any other, different, or subsequent breach.

The Board does not accept responsibility for any information or any errors or omissions which may be contained in the Bid Solicitation Document, or the data, materials or documents disclosed or as provided to the Bidders pursuant to the procurement. The Board make no representation or warranty, either expressed or implied, in fact or in law with respect to the accuracy or completeness of the Bid Solicitation Document or such data, materials or documents and the Board shall not be responsible for any actions, costs, losses or liability whatsoever arising from any Bidder's reliance or use of the Bid Solicitation Document or any other technical or historical data, materials or documents provided by the Board. The Bidder is responsible for obtaining its own independent financial, legal, accounting, and technical advice with respect to any information included in the Bid Solicitation Document or in any data, materials, or documents provided or required by the Board.

68. Warranty and Maintenance

The Vendor/Contractor, at the time of substantial completion, shall furnish a written warranty covering material, maintenance, and work performed under the contract for a minimum period of two (2) years from the date of completion unless otherwise stated. Individual sections may extend warranties beyond the two (2) year time frame. The Vendor/Contractor is responsible for all required maintenance complete with materials and labour during the warranty period.

69. Work Continuity

The Vendor/Contractor shall take adequate care to protect the Work, the Board's property, adjacent properties and shall be fully responsible for any damage or injury due

to their act or neglect or is attributable to the acts or omissions of the Vendor/Contractor, its subcontractors, suppliers, agents, employees, officers, directors, and all other persons and other entities for whose acts the Vendor/Contractor may be liable or for whom it is responsible in law and their respective officers, directors, agents and employees.

The Vendor/Contractor shall ensure minimal to no disturbance to the user(s) of the surrounding facilities. Replacement and repairs due to any damage caused to any existing structure, Board equipment, public assets or private property during the Work shall be the responsibility of the Vendor/Contractor.

70. Work Requirements

The Vendor/Contractor shall perform entire work with minimal to no disturbance to the routine operations of the respective facility. Further, the Vendor/Contractor shall ensure safety of WRDSB assets, students, staff as well as public at all times.

71. Workplace Safety Insurance Board (WSIB) Certificate

The Board requires all Vendor/Contractors and service providers be in full compliance with all requirements imposed upon them by the Workplace Safety Insurance Board. All certificates of training and Safety Policies and Manuals must be available for presentation upon request.

Prior to a formal award and commencing the services covered by this Bid Solicitation, the recommended Bidder(s) make available to the Board a copy of certificates of good standing with the Workplace Safety and Insurance Board ("WSIB Certificates") stating that the vendor/contractor/consultant and all of its sub-contractors/consultants have complied with the requirements of the Workplace Safety and Insurance Act and in particular, that all requisite premiums under such Act have been paid. Where the Bidder is exempt from registration with the WSIB, the Bidder must provide evidence of such by way of written confirmation from WSIB.

WSIB Certificate evidencing renewal or replacement of Certificates shall be uploaded through the Bidding System within 72 hours of the expiration or replacement of the current certificate, without demand by the Board.

END OF SECTION

00 73 00 "The Supplementary Conditions"

SUPPLEMENTARY CONDITIONS & AMENDMENTS TO STANDARD CONSTRUCTION DOCUMENT CCDC2 -2020 STIPULATED PRICE SUBCONTRACT

(the "Supplementary Conditions")

AGREEMENT, DEFINITIONS, AND

GENERAL CONDITIONS

The Standard Construction Document CCDC 2 2020 for a Stipulated Price Contract, English version, consisting of the Agreement Between *Owner* and Contractor, Definitions and General Conditions of the Stipulated Price Contract, Parts 1 to 13 inclusive, governing same, together with the changes with the new *Construction Act* is hereby made part of these *Contract Documents*, with the following amendments, additions and modifications:

AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE A-1 – THE WORK

SC17.1	A-1.3	Amend Article A-1.3 by <u>deleting</u> all of the words after <i>"Contract Documents"</i> and <u>replace</u> them with the following" <i>"attain</i> .1 <i>Substantial Performance of the Work</i> by the 22 nd day of August in the year 2025. .2 (if applicable) <i>Occupancy</i> by the 22 nd day of August in the year 2025, and .3 <i>Ready-for-Takeover</i> by the 29 th day of August in the year 2025."
SC1.1		

ARTICLE A-3 – CONTRACT DOCUMENTS

SC2.1	A-3.1	Add the following documents to the list of <i>Contract Documents</i> in Article A-3.1:	
		• Waterloo Region District School Board's Supplementary Conditions & Amendments to Standard Construction Document CCDC 2-2020 Stipulated Price Subcontract, May 2022 Version, including any Special Supplementary Conditions listed in Appendix 2 thereto	
		• Drawings	
		• Specifications	
		• Performance Bond (Form 32 -Performance Bond under Section 85.1 of the Act) if applicable	
		 Labour and Material Payment Bond (Form 31 – Labour and Material Payment Bond under Section 85.1 of the Act), if applicable 	

ARTICLE A-4 – CONTRACT PRICE

SC3.1	A-4.4	Delete Article A-4.4 and replace it with the following:	
		"4.4 The <i>Contract Price</i> shall remain fixed for the duration of the <i>Contract Time</i> , subject only to adjustments as provided for in the <i>Contract Documents</i> . For certainty, and without limiting the general application of the preceding sentence, the <i>Contractor</i> assumes all risks in connection with cost increases for overhead, <i>Products, Labour</i> , and <i>Construction Equipment</i> prescribed by the <i>Contract Documents</i> for the performance of the <i>Work</i> , and the <i>Contractor</i> assumes all responsibility for liabilities and additional costs that may arise as a result of the <i>Contractor's</i> inclusion of any <i>Product, Construction Equipment, Supplier</i> , or <i>Subcontractor</i> in its calculation of the <i>Contract Price</i> ."	

ARTICLE A-5 – PAYMENT

SC4.1	A-5.1	Delete Article A- 5.1 in its entirety including all subparagraphs and replace it with the following:	
		"5.1 Subject to the provisions of the <i>Contract Documents</i> and the <i>Construction Act</i> , the <i>Owner</i> shall:	

		T
		.1 make progress payments to the <i>Contractor</i> on account of the <i>Contract Price</i> when due together with such <i>Value Added Taxes</i> as may be applicable to such payments,
		.2 upon Substantial Performance of the Work as certified by the Consultant, and on the 61 st day after the publication of the certificate of Substantial Performance of the Work, in accordance with the Construction Act, there being no claims for lien registered against the title to the Place of the Work and no written notices of lien delivered to the Owner, pay the Contractor the unpaid balance of the 10% holdback, together with such Value Added Taxes as may be applicable to such payment, less any amount stated in the Owner's Notice of Non-Payment.
		 .3 after <i>Ready-for-Takeover</i> has been achieved in accordance with the <i>Contract Documents</i> and the <i>Work</i> is complete, there being no claims for lien registered against the title to the <i>Place of the Work</i> and no written notices of lien delivered to the <i>Owner</i>, pay the <i>Contractor</i> any unpaid balance of the <i>Contract Price</i> in accordance with GC 5.5 – FINAL PAYMENT, excluding <i>Deficiency Holdback</i>, together with such <i>Value Added Taxes</i> as may be applicable to such payment."
SC 4.2	A-5.2.1	Delete subparagraph 5.2.1 in its entirety and replace it with the following:
		".1 Should either party fail to make payments as they become due under the terms of the <i>Contract</i> or in an award by arbitration or court, interest shall also become due and payable on such unpaid amounts at the prejudgment interest rate prescribed by the <i>Courts of Justice Act</i> (Ontario), as it may change from time to time."

NEW ARTICLE A-9 – CONFLICT OF INTEREST

r	-	
SC3.1	A-9	Add new ARTICLE A-9 CONFLICT OF INTEREST as follows:
		"ARTICLE A-9 CONFLICT OF INTEREST
		9.1 The <i>Contractor, Subcontractors</i> and <i>Suppliers</i> and any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall not engage in any activity or provide any services where such activity or the provision of such services creates a conflict of interest (actually or potentially, in the sole opinion of the <i>Owner</i>) with the provision of the <i>Work</i> pursuant to the <i>Contract</i> . The <i>Contractor</i> acknowledges and agrees that a conflict of interest, as described in this Article A-9, includes, but is not limited to, the use of <i>Confidential Information</i> where the <i>Owner</i> has not specifically authorized such use.
		9.2 The <i>Contractor</i> shall disclose to the <i>Owner</i> , in writing, without delay, any actual or potential situation that may be reasonably interpreted as either a conflict of interest or a potential conflict of interest, including the retention of any <i>Subcontractor</i> or <i>Supplier</i> that is directly or indirectly affiliated with or related to the <i>Contractor</i> .
		9.3 The <i>Contractor</i> covenants and agrees that it will not hire or retain the services of any employee or previous employee of the <i>Owner</i> where to do so constitutes a breach by such employee or previous employee of the <i>Owner's</i> conflict of interest policy, as it may be amended from time to time, until after completion of the <i>Work</i> under the <i>Contract</i> .
		9.4 It is of the essence of the <i>Contract</i> that the <i>Owner</i> shall not have direct or indirect liability to any <i>Subcontractor or Supplier</i> , and that the <i>Owner</i> relies on the maintenance of an arm's-length relationship between the <i>Contractor</i> and its <i>Subcontractors and Suppliers</i> . Consistent with this fundamental term of the <i>Contract</i> , the <i>Contractor</i> will not enter into any agreement or understanding with any <i>Subcontractor or Supplier</i> , whether as part of any contract or any written or oral collateral agreement, pursuant to which the parties thereto agree to

	cooperate in the presentation of a claim for payment against the <i>Owner</i> , directly or through the <i>Contractor</i> , where such claim is, in whole or in part, in respect of a disputed claim by the <i>Subcontractor or Supplier</i> against the <i>Contractor</i> , where the payment to the <i>Subcontractor</i> or <i>Supplier</i> by the <i>Contractor</i> is agreed to be conditional or contingent on the ability to recover those amounts or a portion thereof from the <i>Owner</i> , failing which the <i>Contractor</i> shall be saved harmless from all or a portion of those claims. The <i>Contractor</i> acknowledges that any such agreement would undermine the required arm's-length relationship and constitute a conflict of interest. For greater certainty, the <i>Contractor</i> shall only be entitled to advance claims against the <i>Owner</i> for amounts pertaining to <i>Subcontractor or Supplier</i> claims where the <i>Contractor</i> has actually paid or unconditionally acknowledged liability for those claims or where those claims are the subject of litigation or binding arbitration between the <i>Subcontractor or Supplier</i> and the <i>Contractor</i> has been found liable for those claims.
9.5	Notwithstanding 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, a breach of this Article A-9 by the <i>Contractor</i> , any of the <i>Subcontractors</i> , or any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall entitle the <i>Owner</i> to terminate the <i>Contract</i> , in addition to any other rights and remedies that the <i>Owner</i> has in the <i>Contract</i> , in law, or in equity."

NEW ARTICLE A-10 TIME OF THE ESSENCE

SC6.1	Article A-10	Add the following new Article A-10 as follows:	
		"ARTICLE A-10 TIME OF THE ESSENCE	
		10.1 It is agreed that one of the reasons the <i>Contractor</i> was selected by the <i>Owner</i> for this <i>Contract</i> is the <i>Contractor's</i> representation and covenant that it will attain <i>Substantial Performance, Occupancy</i> (if applicable), and <i>Ready-for-Takeover</i> within the <i>Contract Time</i> stated in Article A-1 of this <i>Contract</i> .	
		10.2 The <i>Contractor</i> acknowledges and agrees that it is responsible to marshal its resources and those of its <i>Subcontractors and Suppliers</i> in a manner which will permit timely attainment of <i>Substantial Performance, Occupancy</i> (if applicable), and <i>Ready-for-Takeover</i> . The <i>Contractor</i> agrees that time is of the essence of this <i>Contract.</i> "	
		10.3 The Contractor shall pay to the Owner compensation for all additional costs and damages borne by the Board to cover costs incurred due to delay beyond contract timelines, until Ready-for-Takeover is achieved and certified pursuant to the terms of the Contract. Liquidated damages will be assessed as incurred and amounts will be payable directly to the Board. Additional costs may include, but are not limited to: temporary classrooms, temporary washrooms, additional staff, etc.	
SC6.2			

DEFINITIONS

Revision	s to Existing Definitions	
SC5.1	Consultant	<u>Amend</u> the definition of "Consultant" by <u>adding</u> the following to the end of the definition:
		"For the purposes of the <i>Contract</i> , the terms " <i>Consultant</i> ", "Architect" and "Engineer" shall be considered synonymous."
SC5.2	Payment Legislation/Construction Act	<u>Delete</u> the Definition of <i>Payment Legislation</i> and replace it with "Construction Act" as follows:
		"Construction Act
		<i>Construction Act</i> means the <i>Construction Act</i> , R.S.O. 1990, c. C.30, as amended, including all regulations passed under it that are enforceable as of the date of execution of this <i>Contract</i> . For certainty, the first procurement process for the <i>Project</i> (<i>i.e.</i> , the "improvement" as that term is defined in the <i>Construction Act</i>) commenced on or after October 1, 2019."
SC5.3	Ready-for-Takeover	<u>Amend</u> the Definition of <i>Ready-for-Takeover</i> by deleting all the words after "as verified" and replacing them with "and approved by the <i>Owner</i> ."
New Def	initions	
	Adjudication	Add the following definition:
		"Adjudication
		Adjudication means construction dispute interim adjudication as defined under the Construction Act."
	Close-Out Documentation	Add the following new definition:
		"Close-Out Documentation Close-Out Documentation has the meaning given to it under GC 5.4.2."
	Confidential Information	Add the following definition:
		"Confidential Information
		<i>Confidential Information</i> means all the information or material of the <i>Owner</i> that is of a proprietary or confidential nature, whether it is identified as proprietary or confidential or not, including but not limited to information and material of every kind and description (such as drawings and move-lists) which is communicated to or comes into the possession or control of the <i>Contractor</i> at any time, but <i>Confidential Information</i> shall not include information that:
		.1 is or becomes generally available to the public without fault or breach on the part of the <i>Contractor</i> , including without limitation breach of any duty of confidentiality owed by the <i>Contractor</i> to the <i>Owner</i> or to any third party, but only after that information becomes generally available to the public;
		.2 the <i>Contractor</i> can demonstrate to have been rightfully obtained by the <i>Contractor</i> from a third party who had the right to transfer or disclose it to the <i>Contractor</i> free of any obligation of confidence;

	 .3 the <i>Contractor</i> can demonstrate to have been rightfully known to or in the possession of the <i>Contractor</i> at the time of disclosure, free of any obligation of confidence; or .4 is independently developed by the <i>Contractor</i> without use of any <i>Confidential Information.</i>"
Construction Schedule	Add the following definition: "Construction Schedule <i>Construction Schedule</i> means the schedule for the performance of the <i>Work</i> provided by the <i>Contractor</i> , and approved by the <i>Owner</i> , pursuant to GC 3.4.1, including any amendments to the <i>Construction Schedule</i> made pursuant to the <i>Contract</i> <i>Documents.</i> "
Construction Schedule Update	Add the following definition: "Construction Schedule Update
	Construction Schedule Update means an update to the Construction Schedule by the Contractor using Microsoft Project (or other approved scheduling software) that accurately depicts the progress of the Work relative to the critical path established in the Construction Schedule approved in GC 3.5.1 (or any approved successor Construction Schedule), aligns with the currently approved date for Substantial Performance of the Work, shows up-to-date projected major activity sequences and durations, and shows any changes or delays in anticipated completion dates of major activities in the Work relative to the last Construction Schedule Update, and includes the following minimum deliverables:
	(a) a record version of the updated <i>Construction Schedule</i> in .pdf format;
	(b) an editable copy of the updated original digital file of the <i>Construction Schedule</i> (<i>e.g.</i> , .mpp format files for Microsoft Project)."
Deficiency Holdback	Add the following definition:
	Deficiency Holdback - a value applied to the total contract value to cover the cost of completing deficiencies in, or correcting defects in The Work.
 Direct Costs	Add the following definition:
	"Direct Costs
	<i>Direct Costs</i> are the reasonable costs of performing the contract or subcontract including costs related to the additional supply of services or materials (including equipment rentals), insurance and surety bond premiums, and costs resulting from seasonal conditions, that would not have been incurred, but do not include indirect damages suffered, such as loss of profit, productivity or opportunity, or any head office overhead costs."
EFT	Add the following definition:
	"EFT
	EFT has the definition given to it under GC 5.3.2."

	Excess Soil	Add the following definition:
		"Excess Soil Excess Soil means "excess soil" as that term is defined under section 3 of the Excess Soil Regulation."
	Excess Soil Regulation	Add the following Definition:
		"Excess Soil Regulation <i>Excess Soil Regulation</i> means O. Reg. 406/19: On-Site and Excess Soil Management to the <i>Environmental Protection Act</i> , R.S.O. 1990, c. E.19."
	Final Pre-Invoice	Add the following ne definition:
	Submission Meeting	"Final Pre-Invoice Submission Meeting
		Final Pre-Invoice Submission Meeting has the meaning given to it in GC 5.5.1."
	Force Majeure	Add the following definition:
		"Force Majeure
		<i>Force Majeure</i> means any cause, unknown at the effective date of the <i>Contract</i> and beyond either party's control, other than financial difficulties, bankruptcy or insolvency, which prevents the performance by a party, or both, of any of their respective obligations under the <i>Contract</i> and the event of <i>Force Majeure</i> did not arise from a party's default and could not be avoided or mitigated by the exercise of reasonable effort or foresight. <i>Force Majeure</i> includes <i>Labour Disputes</i> ; fire; unusual delay by common carriers or unavoidable casualties; delays in obtaining third-party licences, permits, agreements, or approvals (excluding approvals of any <i>Subcontractors</i> or <i>Suppliers</i> of any tier); civil disturbance; emergency acts, orders, legislation, regulations or directives or revoking of funding from any government or other public authority; acts of a public enemy; war; riot; sabotage; blockage; embargo; lightning; earthquake; adverse weather conditions but only if substantially beyond the weather norms of the <i>Place of the</i> Work; acts of God; or declared epidemic or pandemic outbreak or other public health emergency (<i>e.g.</i> SARS, COVID-19)."
	Install	Add the following definition:
		"Install
		<i>Install</i> means install and connect. <i>Install</i> has this meaning whether or not the first letter is capitalized."
	Labour Dispute	Add the following definition:
		"Labour Dispute
		<i>Labour Dispute</i> means any lawful or unlawful labour problems, work stoppage, labour disruption, strike, job action, slow down, lock-outs, 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 <i>Work</i> ."
	Notice of Non-Payment	Add the following definition:
L		

	"Notice of Non-Payment
	<i>Notice of Non-Payment</i> means a notice of non-payment of holdback (Form 6) or a notice of non-payment (Form 1.1) under the <i>Act</i> , as applicable to the circumstances."
OHSA	Add the following definition:
	"OHSA
	<i>OHSA</i> means the <i>Occupational Health and Safety Act</i> , R.S.O. 1990, c. O.1, as amended, including all regulations thereto."
Overhead	Add the following definition:
	"Overhead
	<i>Overhead</i> means all site and head office operations and facilities, all site and head office administration and supervision; all duties and taxes for permits and licenses required by the authorities having jurisdiction at the <i>Place of the Work</i> ; all requirements of Division 1, including but not limited to submittals, warranty, quality control, calculations, testing and inspections; meals and accommodations; and, tools, expendables and clean-up costs."
Payment Period	Add the following definition:
	"Payment Period
	Payment Period has the definition given to it under GC 5.2.1."
Pre-Invoice Submission	Add the following definition:
Meeting	"Pre-Invoice Submission Meeting
	Pre-Invoice Submission Meeting has the definition given to it under GC 5.2.1."
Proper Invoice	Add the following definition:
	"Proper Invoice
	<i>Proper Invoice</i> means a "proper invoice" as that term is defined in Section 6.1 of the <i>Act,</i> including the minimum requirements set out in Appendix "1" of the Supplementary Conditions."
Proper Invoice	Add the following definition:
Submission Date	"Proper Invoice Submission Date
	Proper Invoice Submission Date has the definition given to it under GC 5.2.2.1."
Request for Information	Add the following definition:
(RFI)	"Request for Information (RFI)
	<i>Request for Information</i> or <i>RFI</i> means written documentation sent by the <i>Contractor</i> to the <i>Owner</i> or to the <i>Owner's</i> representative or the <i>Consultant</i> requesting written clarification(s) and/or interpretation(s) of the <i>Drawings</i> and/or <i>Specifications, Contract</i> requirements and/or other pertinent information required to complete the <i>Work</i> of the <i>Contract</i> without applying for a change or changes to the <i>Work.</i> "

	Restricted Period	Add the following definition:
		"Restricted Period
		<i>Restricted Period</i> means the (inclusive) period of time between December 1 to January 8 and August 15 to September 15 of any given year throughout the duration of the <i>Contract.</i> "

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

Where a General Condition or paragraph of the General Conditions of the *Contract* is deleted by these amendments, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, unless stated otherwise herein, and the numbering of the deleted item will be retained, unused.

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

SC5.1	1.1.3	Delete GC 1.1.3 in its entirety and <u>replace</u> it with the following:
		"1.1.3 The Contractor shall review the Contract Documents and shall report promptly to the Consultant any error, inconsistency, or omission the Contractor may discover. Such review by the Contractor shall be undertaken with the standard of care described in GC 3.13.1. Except for its obligation to make such a review and report the result, the Contractor does not assume any responsibility to the Owner or to the Consultant for the accuracy of the Contract Documents. Provided it has exercised the degree of care and skill described in this GC 1.1.3, the Contractor shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the Contract Documents, which the Contractor could not reasonably have discovered through the exercise of the required standard of care."
SC5.2	1.1.4	Delete GC 1.1.4 in its entirety and <u>replace</u> it with the following:
		"1.1.4 Except for the obligation to complete the review prescribed in GC 1.1.3, and report the results as set out in this GC 1.1.4, the <i>Contractor</i> is not responsible for errors, omissions or inconsistencies in the <i>Contract Documents</i> . If there are errors, omissions or inconsistencies discovered by or made known to the <i>Contractor</i> as part of its review under GC 1.1.3 or at any time during the performance of the <i>Work</i> , the <i>Contractor</i> shall immediately notify the <i>Consultant</i> , and request instructions, a <i>Supplemental Instruction, Change Order</i> , or <i>Change Directive</i> , as the case may require, and shall not proceed with the <i>Work</i> affected until the <i>Contractor</i> shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the <i>Contract Documents</i> , which the <i>Contractor</i> could not reasonably have discovered through the exercise of care and skill described in GC 3.13."
	1.1.5.1	<u>Delete</u> GC 1.1.5.1 and <u>replace</u> with the following:
		".1 the order of priority of documents, from highest to lowest, shall be:
		.1 Supplementary Conditions;
		.2 the Agreement between the Owner and the Contractor;
		.3 the Definitions;
		.4 the General Conditions;
		.5 Division 01 of the <i>Specifications</i>

	.6 technical Specifications;
	.7 material and finishing schedules; and
	.8 the Drawings.
1.1.5.5	Delete GC 1.1.5.5 and replace with the following:
	".5 Noted materials and annotations on the <i>Drawings</i> shall govern over the graphic representation of the <i>Drawings</i> ."
1.1.5.6	Add the following new GC 1.1.5.6 to 1.1.5.8 as follows:
to 1.1.5.8	".6 Finishes in the room finish schedules shall govern over those shown on the <i>Drawings</i> .
	.7 Architectural drawings shall have precedence over structural, plumbing, mechanical, electrical and landscape drawings insofar as outlining, determining and interpreting conflicts over the required design intent of all architectural layouts and architectural elements of construction, it being understood that the integrity and installation of the systems designed by the <i>Consultant</i> or its sub- <i>Consultants</i> are to remain with each of the applicable drawing disciplines.
	.8 Should reference standards contained in the <i>Specifications</i> conflict with the <i>Specifications</i> , the <i>Specifications</i> shall govern. Should reference standards and <i>Specifications</i> conflict with each other or if certain requirements of the <i>Specifications</i> conflict with other requirements of the <i>Specifications</i> , the more stringent requirements shall govern."
1.1.9	Add the following to the end of GC 1.1.9:
	"The Specifications are divided into divisions and sections for convenience but shall be read as a whole and neither such division nor anything else contained in the Contract Documents will be construed to place responsibility on the Owner or the Consultant to settle disputes among the Subcontractors and Suppliers with respect to such divisions. The Drawings are, in part, diagrammatic and are intended to convey the scope of the Work and indicate general and appropriate locations, arrangements and sizes of fixtures, equipment, outlets and other elements. The Contractor shall obtain more accurate information about the locations, arrangements and sizes from study and coordination of the Drawings, including Shop Drawings and shall become familiar with conditions and spaces affecting those matters before proceeding with the Work. Where site conditions require reasonable minor changes where the change requires only the additional labour two hours or less, 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. The schedules are those portions of the Contract Documents, wherever located and whenever issued, which compile information of similar content and may consist of drawings, tables and/or lists."
1.1.13	Add new paragraphs 1.1.13 as follows:
	1.1.13 The Contractor shall keep one copy of the current Contract Documents, Supplemental Instructions, contemplated Change Orders, Change Orders, Change Directives, cash allowance disbursement authorizations, reviewed Shop Drawings, submittals, reports and records of meeting at the Place of the Work, in good order and available to the Owner and Consultant."

GC 1.3 RIGHTS AND REMEDIES

SC6.1	1.3.2	In paragraph 1.3.2 <u>delete</u> the word "No" from the beginning of the paragraph and <u>replace</u> it with the words:
		"Except with respect to the requirements set out in paragraphs 6.4.1, 6.5.4, 6.6.1 and 8.3.2, no"

NEW GC 1.5 EXAMINATION OF DOCUMENTS AND SITE

SC8.1	1.5	Add new GC 1.5 – EXAMINATION OF DOCUMENTS AND SITE as follows:
		"GC 1.5 EXAMINATION OF DOCUMENTS AND SITE
		1.5.1 The <i>Contractor</i> declares and represents that in tendering for the <i>Work</i> , and in entering into a Contract with the <i>Owner</i> for the performance of the <i>Work</i> , it has investigated for itself the character of the <i>Work</i> to be done, based on information generally available from a visit to the <i>Place of the Work</i> and to the standard set out under GC 3.14.1 and further represents and warrants and acknowledges that it considered and took into account in the <i>Contract Price</i> all reasonably known impacts and restrictions arising from the COVID-19 pandemic, including without limitation corresponding legislative changes that may impact performance of the <i>Project</i> , various weather conditions that may affect the <i>Work</i> , the availability of supplies and labour or other conditions or risks that the <i>Contract</i> . The <i>Contractor</i> has assumed and does hereby assume all risk of known conditions now existing or arising in the course of the <i>Work</i> which might or could make the Work, or any items thereof more expensive in character, more onerous to fulfill than was contemplated or known when the tender was made or the <i>Contract</i> signed.
		1.5.2 The <i>Contractor</i> also declares that prior to commencement of the <i>Work</i> , where in tendering for the <i>Work</i> and in entering into this <i>Contract</i> , the <i>Contractor</i> relied upon information furnished by the <i>Owner</i> or any of its agents or servants respecting the nature or confirmation of the ground at the site of the Work, the Contractor shall review to the standard specified in GC 3.14.1, the accuracy of the information furnished by the <i>Owner</i> . If a condition is materially different than what is stated in the information furnished by the <i>Owner</i> . If a condition (s), deliver to the <i>Owner</i> and to the <i>Consultant</i> a <i>Notice in Writing</i> specifying the materially different condition and the <i>Contractor</i> shall not proceed with the affected part of the Work until receiving written direction from the <i>Owner</i> or the <i>Consultant</i> . Where the <i>Contractor</i> fails to provide prompt <i>Notice in Writing</i> in accordance with this GC 1.5.2, the <i>Contractor</i> expressly waives and releases the <i>Owner</i> from all claims with respect to the said information with respect to the <i>Work</i> .

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.2 ROLE OF THE CONSULTANT

SC11.1	2.2.5	Delete paragraph 2.2.4 and replace it with the following:
		"2.2.4 Upon receipt of an application for payment that satisfies the requirement of a <i>Proper Invoice</i> , based on the <i>Consultant's</i> observations and evaluation of the <i>Contractor's</i> application for payment, the <i>Consultant</i> will determine the amounts owing to the <i>Contractor</i> under the <i>Contract</i> and will issue certificates for payment as provided in Article A-5 - PAYMENT, GC 5.3 - PAYMENT, GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK, and GC 5.5 - FINAL PAYMENT. If the <i>Consultant</i> determines that the amount payable to the <i>Contractor</i> differs from the amount stated in a <i>Proper</i>

	<i>Invoice</i> , the <i>Consultant</i> shall notify the <i>Owner</i> as provided in GC 5.3.1.2 and prepare a draft of the applicable <i>Notice of Non-Payment</i> for the amount in dispute."
2.2.6	In the first sentence of paragraph 2.2.6, <u>delete</u> the words "Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER".
2.2.12	At paragraph 2.2.12, <u>insert</u> the following at end of that paragraph: "If, in the opinion of the <i>Contractor</i> , the <i>Supplemental Instruction</i> involves an adjustment in the <i>Contract Price</i> or in the <i>Contract Time</i> , it shall, within ten (10) <i>Working Days</i> of receipt of a <i>Supplemental Instruction</i> , provide the <i>Consultant</i> with a notice in writing to that effect. Failure to provide written notification within the time stipulated in this paragraph 2.2.12 shall be deemed an acceptance of the <i>Supplemental Instruction</i> by the <i>Contractor</i> , without any adjustment in the <i>Contract</i> <i>Price</i> or <i>Contract Time</i> ."

GC 2.3 REVIEW AND INSPECTION OF THE WORK

SC10.1	2.3.2	Amend paragraph 2.3.2 by adding the words "and Owner" after the words "Consultant" in the second and third lines.
	2.3.3	Delete paragraph 2.3.3 in its entirety and replace it with the following: "2.3.3 The Contractor shall furnish promptly two copies to the Consultant and one copy to the Owner of all certificates and inspection reports relating to the Work."
	2.3.4	In paragraph 2.3.4 <u>add</u> the word "review" after the word "inspections" in the first and second lines of paragraph 2.3.4.
	2.3.5	In paragraph 2.3.5 in the first line after the word "Consultant", add "or the Owner".
	2.3.8	 <u>Add</u> a new paragraph 2.3.8 as follows: "2.3.8 The <i>Consultant</i> will conduct periodic reviews of the <i>Work</i> in progress, to determine general conformance with the requirements of the <i>Contract Documents</i>. Such reviews, or lack thereof, shall not give rise to any claims by the <i>Contractor</i> in connection with construction means, methods, techniques, sequences and procedures, nor in connection with construction safety at the <i>Place of Work</i>, responsibility for which belongs exclusively to the <i>Contractor</i>."

GC 2.4 DEFECTIVE WORK

SC11.1	2.4.1	Amend GC 2.4.1 by inserting ", the Owner and/or its agent" in the first sentence following "rejected by the Consultant".
	2.4.1.1 to	Add new paragraphs 2.4.1.1 and 2.4.1.2 as follows:
	2.4.1.2	"2.4.1.1 The <i>Contractor</i> shall rectify, in a manner acceptable to the <i>Consultant</i> and to the <i>Owner through the Consultant</i> all defective work and deficiencies throughout the <i>Work</i> , whether or not they are specifically identified by the <i>Consultant</i> .
		2.4.1.2 The <i>Contractor</i> shall prioritize the correction of any defective work, which, in the sole discretion of the <i>Owner through the Consultant</i> , adversely affects the day to day operations of the <i>Owner</i> or which, in the sole discretion of the <i>Consultant</i> , adversely affects the progress of the <i>Work</i> ."

2.4.2	Delete paragraph 2.4.2 in its entirety and replace it with the following:
	"2.4.2 The <i>Contractor</i> shall promptly pay the <i>Owner</i> for costs incurred by the <i>Owner</i> , the <i>Owner's</i> own forces or the <i>Owner's</i> other contractors, for work destroyed or damaged or any alterations necessitated by the <i>Contractor's</i> removal, replacement or re-execution of defective work."
2.4.4	Add new paragraph 2.4.4 as follows:
	"2.4.4 Neither acceptance of the <i>Work</i> by the <i>Consultant</i> or the <i>Owner</i> , nor any failure by the <i>Consultant</i> or the <i>Owner</i> to identify, observe or warn of defective <i>Work</i> or any deficiency in the <i>Work</i> shall relieve the <i>Contractor</i> from the sole responsibility for rectifying such defect or deficiency at the <i>Contractor's</i> sole cost, even where such failure to identify, observe or warn is negligent."

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

SC12.1	3.1.2	Amend paragraph 3.1.2 by <u>inserting</u> the words "Construction Schedule" after the word "sequences".
SC12.2	3.1.3 & 3.1.4	Add new paragraphs 3.1.3 and 3.1.4 as follows: "3.1.3 Prior to commencing individual procurement, fabrication and construction activities, the
		<i>Contractor</i> shall verify at the <i>Place of the Work</i> , all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the <i>Work</i> and shall further carefully compare such field measurements and conditions with the requirements of the <i>Contract Documents</i> . Where dimensions are not included or exact locations are not apparent, the <i>Contractor</i> shall immediately notify the <i>Consultant</i> in writing and obtain written instructions from the <i>Consultant</i> before proceedings with any part of the affected <i>Work</i> .
		3.1.4 Notwithstanding the provisions of paragraphs 3.1.1 and 3.1.2, the <i>Owner</i> shall have access to the site at all times to monitor all aspects of construction. Such access shall in no circumstances affect the obligations of the <i>Contractor</i> to fulfill its contractual obligations."

GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

	1	
SC13.1	3.2.2.1	Delete subparagraph 3.2.2.1 and replace it with "[Intentionally left blank]".
	3.2.3.2	Delete subparagraph 3.2.3.2 and replace it with the following:
		".2 co-ordinate and schedule the activities and work of other contractors and the <i>Owner's</i> own forces, including where other contractors or the Owner's own forces are used after the <i>Owner</i> and the <i>Contractor</i> cannot reach agreement on the value of a change, with the <i>Work</i> of the <i>Contractor</i> and connect as specified or shown in the <i>Contract Documents.</i> "
	3.2.3.4	Delete the period at the end of subparagraph 3.2.3.4 and replace it with a semicolon.
	3.2.3.5	Add new subparagraph 3.2.3.5 as follows:
		".5 Subject to GC 9.4 CONSTRUCTION SAFETY, for the <i>Owner's</i> own forces and for other contractors, assume overall responsibility for compliance with all aspects of the applicable health and safety legislation in force at the <i>Place of the Work</i> , including all of the responsibilities of the "constructor", pursuant to the <i>OHSA</i> ."

GC 3.3 TEMPORARY WORK

SC14.1	3.3.2	In paragraph 3.3.2, in the second line after the words "where required by law", insert "or by the <i>Consultant</i> ".

GC 3.4 CONSTRUCTION SCHEDULE

SC17.1	3.4.1	Delete GC 3.4.1 in its entirety and <u>replace</u> it with the following:
		"3.4.1 The <i>Contractor</i> shall:
		1 within five (5) calendar days of receiving written confirmation of the award of the <i>Contract</i> , prepare and submit to the <i>Owner</i> and the <i>Consultant</i> for their review and approval, a construction schedule in the format indicated below that indicates the timing of the activities of the <i>Work</i> and provides sufficient detail of the critical events and their interrelationship to demonstrate the <i>Work</i> will be performed in conformity with the <i>Contract Time</i> and in accordance with the <i>Contract Documents</i> . Such schedule is to include a delivery schedule for <i>Products</i> whose delivery is critical to the schedule for the <i>Work</i> or are required by the <i>Contract</i> to be included in a <i>Products</i> delivery schedule. The <i>Contractor</i> shall employ construction scheduling software, being the latest version of "Microsoft Project", that permits the progress of the <i>Work</i> to be monitored in relation to the critical path established in the schedule. The <i>Contractor</i> shall provide such schedule and any successor or revised schedules in both original digital file format (<i>e.g.,</i> .mpp format for Microsoft Project), portable data file (PDF) format, and hard copy. Once accepted by the <i>Owner</i> and the <i>Consultant</i> , the construction schedule submitted by the <i>Contractor</i> shall become the baseline "Construction Schedule";
		.2 provide the expertise and resources, such resources including manpower equipment and tools, as are necessary on a best efforts basis to maintain progress under the accepted baseline <i>Construction Schedule</i> or revised construction schedule accepted by the <i>Owner</i> pursuant to GC 3.4 CONSTRUCTION SCHEDULE, which includes without limitation, the <i>Contractor's</i> use of all possible and, if necessary, extraordinary measures, to bring the progress of the <i>Work</i> into compliance with the <i>Construction Schedule</i> , such as (i) increasing the presence of its own forces at the <i>Place of the Work</i> ; (ii) directing any <i>Subcontractors</i> or <i>Suppliers</i> to increase their labour forces and equipment; (iii) working overtime and extra shifts; and (iv) providing any additional supervision and coordination of the <i>Project</i> , all at the <i>Contractor's</i> own cost and expense save and except where GC 6.5.1, 6.5.2, or 6.5.3 apply; and,
		.3 monitor the progress of the <i>Work</i> on a weekly basis relative to the baseline <i>Construction</i> <i>Schedule</i> , or any revised <i>Construction Schedule</i> accepted by the <i>Owner</i> pursuant to GC 3.4 CONSTRUCTION SCHEDULE, deliver a <i>Construction Schedule Update</i> to the <i>Consultant</i> and <i>Owner</i> with each application for payment, at a minimum, or as may be reasonably required by the <i>Consultant</i> and advise the <i>Consultant</i> and the <i>Owner</i> weekly in writing of any variation from the baseline or slippage in the schedule; and,
		.4 if after applying the expertise and resources required under paragraph 3.4.1.2, the <i>Contractor</i> forms the opinion that the slippage in schedule reported in paragraph 3.4.1.3

	 cannot be recovered by the <i>Contractor</i>, it shall, in the same notice provided under paragraph 3.4.1.3, indicate to the <i>Consultant</i> if the <i>Contractor</i> intends to apply for an extension of <i>Contract Time</i> as provided in PART 6 — CHANGES IN THE WORK; and, ensure that the <i>Contract Price</i> shall include all costs required to phase or stage the <i>Work</i>."
3.4.2	 <u>Add</u> new GC 3.4.2 and GC 3.4.3 as follows: "3.4.2 If, at any time, it should appear to the <i>Owner</i> or the <i>Consultant</i> that the actual progress of the <i>Work</i> is behind schedule or is likely to become behind schedule, or if the <i>Contractor</i> has given notice of such to the <i>Owner</i> or the <i>Consultant</i> pursuant to GC 3.4.1.3, the <i>Contractor</i> shall, either at the request of the <i>Owner</i> or the <i>Consultant</i>, or following giving notice pursuant to GC 3.4.1.3, take appropriate steps to cause the actual progress of the <i>Work</i> to conform to the schedule or minimize the resulting delay. Within 5 calendar days of the request by the <i>Owner</i> or the <i>Consultant</i> or the notice being given pursuant to GC 3.4.1.3, the <i>Contractor</i> shall produce and present to the <i>Owner</i> and the <i>Consultant</i> a plan demonstrating how the <i>Contractor</i> will recover the performance of the <i>Work</i> to align with the currently approved <i>Construction Schedule</i>. 3.4.3 The <i>Contractor</i> shall not amend the <i>Construction Schedule</i> without the prior written consent of the <i>Owner</i>. Any revisions to the <i>Construct Time</i>. All requests by the <i>Owner</i> shall not be deemed to be an extension of the <i>Contract Time</i>. All requests by the Contractor for a revision to the
	Construction Schedule that include an extension to the <i>Contract Time</i> must be approved by the <i>Owner</i> through an executed <i>Change Order</i> ."

GC 3.5 SUPERVISION

SC17.1	3.5.1	Delete GC 3.5.1 and replace it with the following:
		"3.5.1 The <i>Contractor</i> shall employ a competent full-time superintendent, acceptable to the <i>Owner</i> and <i>Consultant</i> , who shall be in full time attendance at the <i>Place of the Work</i> while the <i>Work</i> is being performed. The superintendent shall not be changed by the <i>Contractor</i> without valid reason which shall be provided in writing and shall not be changed without prior consultation with and agreement by the Owner and the <i>Consultant</i> . The <i>Contractor</i> shall replace the superintendent within 7 <i>Working Days</i> of the <i>Owner's</i> written notification, if the superintendent's performance is not acceptable to the <i>Owner</i> . The <i>Contractor</i> shall provide the <i>Owner</i> and the <i>Consultant</i> with the names, addresses and telephone numbers of the superintendent referred to in this GC 3.5.1 and other responsible persons who may be contacted for emergency and other reasons during non-working hours"
	3.5.2	Delete GC 3.5.2 and replace it with the following:
		"3.5.2 The superintendent, and any project manager appointed by the <i>Contractor</i> , shall represent the <i>Contractor</i> at the <i>Place of the Work</i> and shall have full authority to act on written instructions given by the <i>Consultant</i> and/or the <i>Owner</i> . Instructions given to the

	a	uperintendent or the project manager shall be deemed to have been given to the <i>Contractor</i> nd both the superintendent and any project manager shall have full authority to act on ehalf of the <i>Contractor</i> and bind the <i>Contractor</i> in matters related to the <i>Contract.</i> "
3.5.3 to	<u>Add</u> new G	C 3.5.3, 3.5.4, 3.5.5 and 3.5.6 as follows:
3.5.6	а	the <i>Owner</i> may, at any time during the course of the <i>Work</i> , request the replacement of the ppointed representative(s). Immediately upon receipt of the request, the <i>Contractor</i> shall nake arrangements to appoint an acceptable replacement, which is approved by the <i>Owner</i> .
	e ir	The supervisory staff assigned to the <i>Project</i> shall also be fully competent to implement officiently all requirements for scheduling, coordination, field engineering, reviews, anspections and submittals defined in the <i>Specifications</i> , and have a minimum 5 years locumented "Superintendent/Project Management" experience.
		The <i>Consultant and Owner</i> shall reserve the right to review the record of experience and redentials of supervisory staff assigned to the <i>Project</i> prior to commencement of the <i>Work</i> .
	С	superintendent assigned to the <i>Work</i> shall be "Gold Seal Certified" as per the Canadian onstruction Association; or a superintendent that can demonstrate the requisite experience nd success related to the <i>Project</i> to the sole satisfaction of the <i>Owner</i> ."

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

SC18.1	3.6.1.1	In paragraph 3.6.1.1 <u>add</u> to the end of the second line the words "including any warranties and service agreements which extend beyond the term of the <i>Contract</i> ."		
	3.6.1.2	In subparagraph 3.6.1.2 after the words "the <i>Contract Documents</i> " <u>add</u> the words "including any required surety bonding".		
	3.6.2	 <u>Delete</u> paragraph 3.6.2. in its entirety and <u>replace</u> it with the following: "3.6.2 The substitution of any <i>Subcontractor</i> and/or <i>Suppliers</i> after submission of the <i>Contractor's</i> bid will not be accepted unless a valid reason is given in writing to and approved by the <i>Owner</i>, whose approval may be arbitrarily withheld. The reason for substitution must be provided to the <i>Owner</i> and to the original <i>Subcontractor</i> and/or <i>Supplier</i> and the <i>Subcontractor</i> and/or <i>Supplier</i> shall be given the opportunity to reply to the <i>Contractor</i> and <i>Owner</i>. The <i>Contractor</i> shall be fully aware of the capability of each <i>Subcontractor</i> and/or <i>Supplier</i> included in its bid, including but not limited to technical ability, financial stability and ability to maintain the proposed construction schedule." 		
	3.6.7, 3.6.8, 3.6.9 & 3.6.10	 <u>Add</u> new paragraphs 3.6.7, 3.6.8, 3.6.9, and 3.6.10 as follows: "3.6.7 The <i>Contractor</i> represents and warrants that it has confirmed the availability of its <i>Subcontractors</i> for the <i>Project</i> and, in particular, for the performance of their respective portions of the <i>Work</i> to ensure completion of the <i>Project</i> within the <i>Contract Price</i> and the <i>Contract Time</i>. 		

3.6.8	The <i>Consultant</i> or the <i>Owner</i> , acting reasonably, may from time to time require the <i>Contractor</i> to remove from the <i>Project</i> any personnel of the <i>Contractor</i> , including project managers, superintendents or <i>Subcontractors</i> . Such persons shall be replaced by the <i>Contractor</i> in a timely fashion to the satisfaction of the <i>Consultant</i> or the <i>Owner</i> , as the case may be, at no cost to the <i>Owner</i> .
3.6.9	Where provided in the <i>Contract</i> , the <i>Owner</i> may assign to the <i>Contractor</i> , and the <i>Contractor</i> agrees to accept, any contract procured by the <i>Owner</i> for <i>Work</i> or services required on the <i>Project</i> that has been pre-tendered or pre-negotiated by the <i>Owner</i> , and upon such assignment, the <i>Owner</i> shall have no further liability to any party for such contract.
3.6.10	The <i>Contractor</i> covenants that each subcontract or supply contract which the <i>Contractor</i> enters into for the purpose of performing the <i>Work</i> shall expressly provide for the assignment thereof to the <i>Owner</i> (at the option of the <i>Owner</i>) and the assumption by the <i>Owner</i> of the obligations of the <i>Contractor</i> thereunder, upon the termination of the <i>Contract</i> and upon written notice by the <i>Owner</i> to the other parties to such subcontracts or supply contracts, without the imposition of further terms or conditions; provided, however, that until the <i>Owner</i> has given such notice, nothing herein contained shall be deemed to create any contracts or supply contracts and the <i>Contractor</i> shall be fully responsible for all of its obligations and liabilities (if any) under such subcontracts and supply contracts."

GC 3.7 LABOUR AND PRODUCTS

SC19.1	3.7.1	<u>Amend</u> paragraph 3.7.1 by <u>adding</u> the words, ", agents, <i>Subcontractors</i> and <i>Suppliers</i> " after the word "employees" in the first line.
SC19.2	3.7.2	Delete paragraph 3.7.2 and substitute with the following:
		"3.7.2 <i>Products</i> 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, provincial and municipal building codes, fire safety standards, and all governmental authorities and regulatory agencies having jurisdiction at the <i>Place of the Work</i> , unless otherwise specified. <i>Products</i> which are not specified shall be of a quality consistent with those specified and their use acceptable to the <i>Consultant</i> . <i>Products</i> brought on to the <i>Place of the Work</i> by the <i>Contractor</i> shall be deemed to be the property of the <i>Owner</i> , but the <i>Owner</i> shall be under no liability for loss thereof or damage thereto arising from any cause whatsoever. The said <i>Products</i> shall be at the sole risk of the <i>Contractor</i> . Workmanship shall be, in every respect, first class and the <i>Work</i> shall be performed in accordance with the best modern industry practice."
	3.7.4 to 3.7.8	Add new paragraphs 3.7.4, 3.7.5, 3.7.6, 3.7.7, and 3.7.8 as follows:
	5.7.0	"3.7.4 Upon receipt of a <i>Notice in Writing</i> from the <i>Owner</i> , the <i>Contractor</i> shall immediately remove from the <i>Place of the Work</i> , tradesmen and labourers or anyone whose conduct jeopardizes the safety of the <i>Owner's</i> operations or who are considered by the <i>Owner</i> or the <i>Consultant</i> to be unskilled or otherwise objectionable. Immediately upon receipt of the request, the <i>Contractor</i> shall make arrangements to appoint an acceptable replacement.

3.7.5	The <i>Contractor</i> shall cooperate with the <i>Owner</i> and its representatives and shall take all reasonable and necessary actions to maintain stable and harmonious labour relations with respect to the <i>Work</i> at the <i>Place of the Work</i> , including cooperation to attempt to avoid <i>Work</i> stoppages, trade union jurisdictional disputes and other <i>Labour Disputes</i> . Any costs arising from labour disputes shall be at the sole expense of the <i>Contractor</i> .
3.7.6	The cost for overtime required beyond the normal <i>Working Day</i> to complete individual construction operations of a continuous nature, such as pouring or finishing of concrete or similar work, or <i>Work</i> that the <i>Contractor</i> elects to perform at overtime rates without the <i>Owner</i> requesting it, shall not be chargeable to the <i>Owner</i> .
3.7.7	All manufactured <i>Products</i> which are identified by their proprietary names or by part or catalogue number in the <i>Specifications</i> shall be used by the <i>Contractor</i> . No substitutes for such specified <i>Products</i> shall be used without the written approval of the <i>Owner</i> and the <i>Consultant</i> . Substitutes will only be considered by the <i>Consultant</i> when submitted in sufficient time to permit proper review and investigation. When requesting approval for the use of substitutes, the <i>Contractor</i> shall use all proprietary <i>Products</i> in strict accordance with the manufacturer's directions. Where there is a choice of proprietary <i>Products</i> specified for one use, the <i>Contractor</i> may select any one of the <i>Products</i> so specified for this use.
3.7.8	Materials, appliances, equipment and other <i>Products</i> are sometimes specified by reference to brand names, proprietary names, trademarks or symbols. In such cases, the name of a manufacturer, distributor, <i>Supplier</i> or dealer is sometimes given to assist the <i>Contractor</i> to find a source <i>Supplier</i> . This shall not relieve the <i>Contractor</i> from its responsibility from finding its own source of supply even if the source names no longer supplies the <i>Product</i> specified. If the <i>Contractor</i> is unable to obtain the specified <i>Product</i> , the <i>Contractor</i> shall supply a substitute product equal to or better than the specified <i>Product</i> , as approved by the <i>Consultant</i> with no extra compensation. Should the <i>Contractor</i> be unable to obtain a substitute <i>Product</i> equal to or superior to the specified <i>Product</i> and the <i>Owner</i> accepts a different Product, the <i>Contract Price</i> shall be adjusted accordingly, as approved by the <i>Consultant</i> ."

GC 3.8 SHOP DRAWINGS

SC21.1	3.8.1	Delete paragraph 3.8.1 in its entirety and <u>replace</u> with the following:
		"3.8.1 The <i>Contractor</i> shall provide shop drawings as described in the <i>Contract Documents</i> and as the <i>Consultant</i> may reasonably request."
	3.8.3	Delete paragraph 3.8.3 and replace it with the following:
		"3.8.3 The Contractor shall prepare a Shop Drawings schedule acceptable to the Owner and the Consultant prior to the first application for payment. A draft of the proposed Shop Drawings schedule shall be submitted by the Contractor to the Consultant and the Owner for approval. The draft Shop Drawings schedule shall clearly indicate the phasing of Shop

	<i>Drawings</i> submissions. The <i>Contractor</i> shall periodically re-submit the <i>Shop Drawings</i> schedule to correspond to changes in the <i>Construction Schedule</i> ."
3.8.5	Delete paragraph 3.8.5 in its entirety and substitute the following:
	"3.8.5 At the time of providing <i>Shop Drawings</i> , the <i>Contractor</i> shall advise the <i>Consultant</i> in writing of any deviations in <i>Shop Drawings</i> from the requirements of the <i>Contract Documents</i> . The <i>Consultant</i> shall indicate the acceptance of such deviation expressly in writing. Where manufacturers' literature is submitted in lieu of scaled drawings, it shall be clearly marked in ink, to indicate the specific items for which review is requested."
3.8.8 to	Add new paragraphs 3.8.8, 3.8.9, 3.8.10, 3.8.11, and 3.8.12 as follows:
3.8.12	"3.8.8 Reviewed Shop Drawings shall not authorize a change in the Contract Price and/or the Contract Time.
	3.8.9 Except where the parties have agreed to a different <i>Shop Drawings</i> schedule pursuant to paragraph 3.10.3, the <i>Contractor</i> shall comply with the requirements for <i>Shop Drawings</i> submissions stated in the <i>Specifications</i> .
	3.8.10 The <i>Contractor</i> shall not use the term "by others" on <i>Shop Drawings</i> or other submittals. The related trade, <i>Subcontractor</i> or <i>Supplier</i> shall be stated.
	3.8.11 Certain <i>Specifications</i> sections require the <i>Shop Drawings</i> to bear the seal and signature of a professional engineer. Such professional engineer must be registered in the jurisdiction of the <i>Place of the Work</i> and shall have expertise in the area of practice reflected in the <i>Shop Drawings</i> .
	3.8.12 The <i>Consultant</i> will review and return <i>Shop Drawings</i> and submittals in accordance with the schedule agreed upon in paragraph 3.10.3, The <i>Contractor</i> shall allow the <i>Consultant</i> a minimum of 10 <i>Working Days</i> to review <i>Shop Drawings</i> from the date of receipt. If resubmission of <i>Shop Drawings</i> is required, a further 10 <i>Working Day</i> period is required for the <i>Consultant's</i> review."

NEW GC 3.9 USE OF THE WORK

SC22.1	GC 3.9	Add new GC 3.9 – USE OF THE WORK as follows: "GC 3.9 USE OF THE WORK
		3.9.1 The <i>Contractor</i> shall confine <i>Construction Equipment, Temporary Work,</i> storage of <i>Products,</i> waste products and debris, and operations of employees and <i>Subcontractors</i> to limits indicated by laws, ordinances, permits, by the direction of the <i>Owner</i> or the <i>Consultant,</i> or the <i>Contract Documents</i> and shall not unreasonably encumber the <i>Place of the Work.</i>
		3.9.2 The <i>Contractor</i> shall not load or permit to be loaded any part of the <i>Work</i> with a weight or force that will endanger the safety of the <i>Work</i> .

3.9.3	The Owner shall have the right to enter or occupy the Place of the Work in whole or in part for the purpose of placing fittings and equipment, or for other use before Substantial Performance of the Work, if, in the opinion of the Consultant, such entry and occupation does not prevent or substantially interfere with the Contractor in the performance of the Contract within the Contract Time. Such entry or occupation shall neither be considered as acceptance of the Work or in any way relieves the Contractor from its responsibility to complete the Contract."
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NEW GC 3.10 CUTTING AND REMEDIAL WORK

SC23.1	GC 3.10	<u>Add</u> new	/ GC 3.10 – CUTTING AND REMEDIAL WORK as follows:
		"GC 3.10) CUTTING AND REMEDIAL WORK
		3.10.1	The <i>Contractor</i> shall perform the cutting and remedial work required to make the affected parts of the <i>Work</i> come together properly. Such cutting and remedial work shall be performed by specialists familiar with the <i>Products</i> affected and shall be performed in a manner to neither damage nor endanger the <i>Work</i> .
		3.10.2	The <i>Contractor</i> shall coordinate the <i>Work</i> to ensure all cutting and remedial work required is kept to a minimum.
		3.10.3	Unless specifically stated otherwise in the <i>Specifications</i> , the <i>Contractor</i> shall do all cutting and making good necessary for the proper installation and performance of the <i>Work</i> .
		3.10.4	To avoid unnecessary cutting, the <i>Contractor</i> shall lay out its work and advise the <i>Subcontractors</i> , when necessary, where to leave holes for installation of pipes and other work."

NEW GC 3.11 CLEAN UP

SC24.1	3.11.1,	Add new paragraphs 3.11.1, 3.11.2, 3.11.3, 3.11.4, 3.11.5, and 3.11.6 as follows:
	3.11.2, 3.11.3, 3.11.4, 3.11.5 & 3.11.6	"3.11.1 The <i>Contractor</i> shall maintain the <i>Work</i> in a safe and tidy condition and free from the accumulation of waste products and debris, other than that caused by the <i>Owner</i> , other contractors or their employees. The <i>Contractor</i> shall remove accumulated waste and debris at least once a week as a minimum or as required by the nature of the <i>Work</i> .
		3.11.2 Before applying for <i>Substantial Performance of the Work</i> , the <i>Contractor</i> shall remove waste products and debris, other than that resulting from the work of the <i>Owner</i> , other contractors or their employees, and shall leave the <i>Place of the Work</i> clean and suitable for use or occupancy by the <i>Owner</i> . The <i>Contractor</i> shall remove products, tools, materials, <i>Construction Equipment</i> , and <i>Temporary Work</i> not required for the performance of the remaining work.

3.11.3	As a condition precedent to submitting its application for final payment, the <i>Contractor</i> shall remove any remaining products, tools, materials, <i>Construction Equipment, Temporary Work</i> , and waste products and debris, other than those resulting from the work of the <i>Owner</i> , other contractors or their employees.
3.11.4	The <i>Contractor</i> shall clean up garbage during and after construction and maintain the <i>Place</i> of the Work in a neat and orderly condition on a daily basis. Prior to leaving the <i>Place of</i> the Work and following completion of the Work, the <i>Contractor</i> shall make good all damage to the building and its components caused by the performance of the Work or by any <i>Subcontractor</i> or <i>Supplier</i> . The <i>Contractor</i> shall leave the <i>Place of the</i> Work in a clean and finished state; remove all <i>Construction Equipment</i> and materials; remove all paint, stains, labels, dirt, etc. from the <i>Place of the</i> Work; and touch up all damaged painted areas (if applicable). The <i>Contractor</i> shall be responsible for restoring those areas of the <i>Place of the</i> Work, impacted by the <i>Work</i> , to their original condition."
3.11.5	Without limitation to or waiver of the <i>Owner's</i> other rights and remedies, the <i>Owner</i> shall have the right to back charge to the <i>Contractor</i> the cost of damage to the site caused by transportation in and out of the <i>Place of the Work</i> by the <i>Contractor, Subcontractors</i> or <i>Suppliers,</i> if not repaired before final payment.
3.11.6	The <i>Contractor</i> shall dispose of debris at a location and in a manner acceptable to the <i>Owner</i> (and to the authorities having jurisdiction at the <i>Place of the Work</i> and at the disposal area) and the <i>Contractor</i> shall cover containers with tarpaulins."

NEW GC 3.12 EXCESS SOIL MANAGEMENT

SC25.1	GC 3.12	Add new GC 3.12 – EXCESS SOIL MANAGEMENT as follows:
		"GC 3.12 EXCESS SOIL MANAGEMENT
		3.12.1 The <i>Contractor</i> shall be solely responsible for the proper management of all <i>Excess Soil</i> at the <i>Place of the Work</i> and for performance of the <i>Work</i> in compliance with the rules, regulations and practices required by the <i>Excess Soil Regulation</i> until such time as <i>Ready-for-Takeover</i> is achieved. Without restricting the generality of the previous sentence, the <i>Contractor</i> 's responsibility under this GC 3.12 includes the designation, transportation, tracking, temporary and/or final placement, record keeping, and reporting of all <i>Excess Soil</i> in connection with the Work all in compliance with the <i>Excess Soil Regulation</i> .
		3.12.3 The <i>Contractor</i> shall indemnify and save harmless the <i>Owner</i> , their agents, officers, directors, administrators, employees, consultants, successors and assigns from and against the consequences of any and all health and safety infractions committed directly by the <i>Contractor</i> , or those for whom it is responsible at law, under the <i>Excess Soil Regulation</i> , or any environmental protection legislation, including the payment of legal fees and disbursements on a substantial indemnity basis. Such indemnity shall apply to the extent to which the <i>Owner</i> is not covered by insurance."

NEW GC 3.13 CONTRACTOR STANDARD OF CARE

SC25.1	3.13	<u>Add</u> a n	ew GC 3.13 – CONTRACTOR STANDARD OF CARE as follows:
		"GC 3.1	3 CONTRACTOR STANDARD OF CARE
		"3.13.1	In performing its services and obligations under the <i>Contract</i> , the <i>Contractor</i> shall exercise the standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The <i>Contractor</i> acknowledges and agrees that throughout the <i>Contract</i> , the performance of the <i>Contractor's</i> obligations, duties and responsibilities shall be interpreted in accordance with this standard. The <i>Contractor</i> shall exercise the same standard of care, skill and diligence in respect of any <i>Products</i> , personnel or procedures which it may recommend to the <i>Owner</i> or employ on the <i>Project</i> .
		3.13.2	The Contractor further represents, covenants and warrants to the Owner that:
			.1 the personnel it assigns to the <i>Project</i> are appropriately experienced;
			.2 it has a sufficient staff of qualified and competent personnel to replace any of its appointed representatives, subject to the <i>Owner's</i> approval, in the event of death, incapacity, removal or resignation; and
			.3 there are no pending, threatened or anticipated claims, liabilities or contingent liabilities that would have a material effect on the financial ability of the <i>Contractor</i> to perform its work under the <i>Contract.</i> "

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

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SC27.1	4.1.3	In GC 4.1.3 <u>delete</u> the words "through the <i>Consultant</i> " and <u>replace</u> them with "in writing."		
	4.1.4	Delete GC 4.1.4 in its entirety and replace it with the following:		
		"4.1.4 Where the actual cost of the <i>Work</i> under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, by the <i>Consultant</i> at the <i>Owner</i> 's direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the <i>Contract Price</i> for overhead and profit. Only where the actual cost of the <i>Work</i> under all cash allowances exceeds the total amount of all cash allowances shall the <i>Contractor</i> be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the <i>Contract Documents.</i> "		
	4.1.7	Delete GC 4.1.7 in its entirety and replace it with the following:		

	"4.1.7	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 <i>Contract Price</i> by <i>Change Order</i> without any adjustment for the <i>Contractor's</i> overhead and profit on such amount."
4.1.8 and	Add new	GC 4.1.8 and 4.1.9 as follows:
4.1.9	"4.1.8	The <i>Owner</i> reserves the right to call, or to have the <i>Contractor</i> call, for competitive bids for portions of the <i>Work</i> to be paid for from cash allowances.
	4.1.9	Cash allowances cover the net cost to the <i>Contractor</i> of services, <i>Products, Construction Equipment</i> , freight, unloading, handling, storage, installation, provincial sales tax, and other authorized expenses incurred in performing any <i>Work</i> stipulated under the cash allowances but does not include any <i>Value Added Taxes</i> payable by the <i>Owner</i> and the <i>Contractor.</i> "

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

SC28.1	5.1	<u>Delete</u> GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER and all paragraphs thereunder, including any reference to GC 5.1 throughout the <i>Contract</i> .
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GC 5.2 APPLICATIONS FOR PAYMENT

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SC29.1	5.2.1	Delete GC 5.2.1 and replace it with the following:
		 "5.2.1 Upon execution of the <i>Contract</i>, and in any event prior to the <i>Contractor</i> submitting its first application for payment, the <i>Owner</i> shall issue a purchase order to the <i>Contractor</i> for the performance of the <i>Contract</i>. The number indicated on such purchase order must be clearly identifiable on all applications for payment. Applications for payment shall be dated the last day of each month or an alternative day of each month agreed to in writing by the parties, with each month representing one payment period under the <i>Contract</i> (each a "Payment Period"). Within 3 calendar days of the end of each <i>Payment Period</i>, the <i>Contractor</i> will submit a draft application for payment to the <i>Owner</i> and the <i>Consultant</i>. Upon receipt of the draft application for payment, and within 7 calendar days, a representative of each of the <i>Contractor</i>, <i>Owner</i>, and the <i>Consultant</i> shall attend a meeting to discuss and review the work completed during the <i>Payment Period</i>, including quantities, if applicable (the "Pre-Invoice Submission Meeting"). In the event that the scheduled date for the <i>Pre-Invoice Submission Meeting</i> to the <i>Contractor</i> shall bring with it to the <i>Pre-Invoice Submission Meeting</i> as stipulated in for payment; a copy of the draft application for payment; any documents the <i>Contractor</i> is required to bring to the <i>Pre-Invoice Submission Meeting</i> as stipulated in the <i>Contract Documents</i> or as reasonably requested by the <i>Owner</i>; and

		.3 any other documents reasonably requested, in advance, by the Owner or the
		Consultant."
SC29.2	5.2.2	Delete GC 5.2.2 in its entirety and replace it with the following:
		"5.2.2 Applications for payment shall be given in accordance with the following requirements:
		.1 Within 5 calendar days following the <i>Pre-Invoice Submission Meeting</i> , the <i>Contractor</i> shall deliver its application for payment to the <i>Owner</i> and to the <i>Consultant</i> for <i>Work</i> performed during the <i>Payment Period</i> (" Proper Invoice Submission Date ") subject to the following:
		.1 If the fifth calendar day following the <i>Pre-Invoice Submission Meeting</i> , to which an invoice relates falls on a day that is not a <i>Working Day</i> , the <i>Proper Invoice Submission Date</i> shall be deemed to fall on the next <i>Working Day</i> .
		.2 The application for payment must be delivered to the Owner and to the Consultant in the same manner as a Notice in Writing during the hours of 9:00 am to 4:00pm (EST) on the Proper Invoice Submission Date. Delivery to the Owner shall be to the following email address:
		facilities_cap@wrdsb.ca
		.3 If an application for payment is received after 4:00 p.m. (EST) on the applicable <i>Proper Invoice Submission Date</i> , the application for payment will not be considered or reviewed by the <i>Owner</i> and <i>Consultant</i> until the next <i>Proper Invoice Submission Date</i> . Notwithstanding the foregoing, the <i>Owner</i> in its sole and absolute discretion may elect to accept an application for payment submitted after 4:00 p.m. on the applicable <i>Proper Invoice Submission Date</i> ; however, such acceptance shall not be construed as a waiver of any of its rights or waive or release the <i>Contractor</i> 's obligations to strictly comply with the requirements prescribed in this subparagraph 5.2.2.3.
		.4 No applications for payment shall be accepted by the <i>Owner</i> prior to the <i>Proper</i> <i>Invoice Submission Date</i> .
		.5 All applications for payment shall include all of the requirements for a <i>Proper Invoice</i> prescribed by the <i>Construction Act</i> and this <i>Contract</i> and be dated the last day of the applicable <i>Payment Period</i> ;"
SC29.3	5.2.3	Delete GC 5.2.3 and replace it with the following:
		"5.2.3 The amount claimed shall be for the value, proportionate to the amount of the <i>Contract</i> , of <i>Work</i> performed and <i>Products</i> delivered and incorporated into the <i>Work</i> as of the last date of the applicable <i>Payment Period</i> . Materials may also be deemed to be supplied to an improvement, for payment purposes, when, in the <i>Owner's</i> opinion, they are placed and properly secured on the land on which the improvement is made, or placed upon land designated by the <i>Owner</i> or agent of the <i>Owner</i> , but placing the materials on the land so
		designated does not, of itself, make that land subject to a lien. No amount claimed shall include products delivered and incorporated into the work, unless the products are free

		and clear of all security interests, liens and other claims of third parties. No amount claimed shall include <i>Products</i> delivered to the <i>Place of the Work</i> unless the <i>Products</i> are free and clear of all security interests, liens, and other claims of third parties."
SC29.4	5.2.4	After the word "Consultant" in GC 5.2.4 add the words "and the Owner"
SC29.5	5.2.5	After the word "Consultant" in GC 5.2.5 add the words "or the Owner".
SC29.6	5.2.9	Add new 5.2.9 as follows:
		"5.2.9 The <i>Contractor</i> shall prepare and maintain current as-built drawings which shall consist of the <i>Drawings</i> and <i>Specifications</i> revised by the <i>Contractor</i> during the <i>Work</i> , showing changes to the <i>Drawings</i> and <i>Specifications</i> , which current as-built drawings shall be maintained by the <i>Contractor</i> and made available to the <i>Consultant</i> for review with each application for progress payment. The <i>Consultant</i> shall recommend to the <i>Owner</i> that the <i>Owner</i> retain a reasonable amount for the value of the as-built drawings not presented for review."

GC 5.3

PAYMENT

SC30.1	5.3.1	<u>Delete</u> GC 5.3.1 in its entirety, including all subparagraphs thereunder, and <u>replace</u> it with the following:
		"5.3.1 After receipt by the <i>Owner</i> and the <i>Consultant</i> of an application for payment submitted by the <i>Contractor</i> in accordance with GC 5.2 - APPLICATIONS FOR PAYMENT:
		.1 the <i>Consultant</i> will either:
		(a) issue to the <i>Owner</i> with a copy to the <i>Contractor</i> , a progress payment certificate in the amount applied for by the <i>Contractor</i> in the <i>Proper Invoice</i> , or
		(b) issue to the Owner, with a copy to the Contractor, a certificate for payment for an amount determined by the Consultant to be properly due to the Contractor after applying any credits, withheld amounts, or other set-offs which the Consultant has determined that the Owner is entitled to notwithstanding any notice of dispute or disagreement that the Contractor may have served, along with the Consultant's reasons why an amount other than what is claimed in the Proper Invoice is properly due to the Contractor, which finding the Owner may accept or amend prior to the Owner issuing a Notice of Non-Payment, if any, in accordance with GC 5.3.2;
		.2 the <i>Owner</i> shall make payment to the <i>Contractor</i> on account as provided in Article A-5 PAYMENT,
		(a) in the amount stated in the certificate for payment, or
		(b) in the amount stated in the certificate for payment less such amount stated in the <i>Owner's Notice of Non-Payment</i> issued pursuant to GC 5.3.3,

		on the 28th calendar day after receipt of a <i>Proper Invoice</i> , unless such 28th calendar day lands on a day that is other than a <i>Working Day</i> , in which case payment shall be made on the next <i>Working Day</i> after such 28th day."
		<u>dd</u> new paragraphs 5.3.2, 5.3.3, 5.3.4, 5.3.4, 5.3.5, 5.3.6, and 5.3.7 as follows:
5.3.		All payments to the <i>Contractor</i> shall be processed using electronic funds transfer (" EFT ") and deposited directly to the <i>Contractor's</i> bank account unless agreed to otherwise by the <i>Contractor</i> and the <i>Owner</i> in writing. Prior to the <i>Contractor</i> submitting its first application for payment, the <i>Owner</i> and the <i>Contractor</i> shall exchange such information as is necessary to facilitate <i>EFT</i> payments.
	5	.3.3 In the event that the application for payment delivered by the <i>Contractor</i> pursuant to GC 5.2 - APPLICATIONS FOR PAYMENT does not include the requirements for a <i>Proper Invoice</i> or where the <i>Owner</i> disputes the amount claimed as payable in the <i>Proper Invoice</i> , then the <i>Owner</i> shall within 14 calendar days of receipt of the application for payment, issue a <i>Notice</i> of <i>Non-Payment</i> (Form 1.1).
	5	.3.4 Where the <i>Owner</i> has delivered a <i>Notice of Non-Payment</i> , the <i>Owner</i> and the <i>Contractor</i> shall first engage in good faith negotiations to resolve the dispute. If within 5 calendar days following the issuance of a <i>Notice of Non-Payment</i> , despite good faith efforts by both parties and the assistance of the <i>Consultant</i> , the <i>Owner</i> and the <i>Contractor</i> cannot resolve the dispute, either party may commence an <i>Adjudication</i> in accordance with the procedures set out in the <i>Construction Act</i> . Any portion of the <i>Proper Invoice</i> which is not the subject of the <i>Notice of Non-Payment</i> shall be payable within the time period set out in GC 5.3.1.2.
	5	.3.5 Provided that the <i>Owner</i> complies with its obligations under the <i>Construction Act</i> , and subject to any interim determination of an adjudicator in accordance with any <i>Adjudication</i> , and where applicable, a final determination made in accordance with the dispute resolution processes prescribed by this <i>Contract</i> , the <i>Owner</i> shall be entitled to claim in a <i>Notice of Non-Payment</i> a right to deduct from or, set off against, any payment of the <i>Contract Price</i> :
		.1 any amount expended by the <i>Owner</i> in exercising the <i>Owner's</i> rights under this <i>Contract</i> to perform any of the <i>Contractor's</i> obligations that the <i>Contractor</i> has failed to perform;
		.2 any damages, costs or expenses (including, without limitation, reasonable legal fees and expenses) incurred by the <i>Owner</i> as a result of the failure of the <i>Contractor</i> to perform any of its obligations under the <i>Contract;</i>
		.3 any other amount owing from the <i>Contractor</i> to the <i>Owner</i> under this <i>Contract</i> .
	5	.3.6 The amounts disputed and described under the <i>Notice of Non-Payment</i> shall be held by the <i>Owner</i> until all disputed amounts of the <i>Proper Invoice</i> have been resolved pursuant to PART 8 – DISPUTE RESOLUTION.

5.:	3.7 The <i>Contractor</i> represents, warrants, and covenants to the <i>Owner</i> that it is familiar with its prompt payment and trust obligations under the <i>Construction Act</i> and will take all required steps and measures to ensure that it complies with the applicable prompt payment and trust provisions under the <i>Construction Act</i> including, without limitation, section 8.1 of the <i>Construction Act</i> . Evidence of the <i>Contractor's</i> compliance under this GC 5.3.7, including evidence demonstrating that all <i>EFTs</i> by the <i>Owner</i> to the <i>Contractor</i> are kept in a bank account in the <i>Contractor's</i> name will be made available to the <i>Owner</i> within 5 <i>Working Days</i> following receipt by the <i>Contractor</i> of a <i>Notice in Writing</i> making such request."
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GC 5.4

SUBSTANTIAL PERFORMANCE OF THE WORK- AND PAYMENT OF HOLDBACK

SC32.1	GC 5.4			SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK in its
		entirety a	and <u>rep</u>	lace it with the following:
		"GC 5.4 S	UBSTA	NTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK
			achiev compr incomp <i>Owner</i>	the <i>Contractor</i> considers that <i>Substantial Performance of the Work</i> has been ed, the <i>Contractor</i> shall prepare and submit to the <i>Consultant</i> and the <i>Owner</i> a ehensive deficiency list of items to be completed or corrected, including any plete <i>Close-Out Documentation</i> , and apply for a review by the <i>Consultant</i> and the to establish <i>Substantial Performance of the Work</i> . Failure to include an item on the es not alter the responsibility of the <i>Contractor</i> to complete the <i>Contract</i> .
			<i>Contra</i> docum warrar literatu	o, or as part of its written application for <i>Substantial Performance of the Work</i> the <i>ictor</i> shall submit to the <i>Consultant</i> submit to the <i>Consultant</i> all closeout inentation required by the <i>Contract Documents</i> , including but not limited to, aties, manuals, guarantees, as-built drawings, warranty cards and all other relevant are from suppliers and manufacturers including, but not limited to, where applicable Close-Out Documentation "):
			.1	equipment, maintenance, and operations manuals;
			.2	equipment specifications, data sheets and brochures, parts lists and assembly
				drawings, performance curves and other related data;
			.3	line drawings, value charts and control sheets sequences with description of the
				sequence of operations;
			.4	warranty documents;
			.5	guarantees;
			.6	certificates;
			.7	service and maintenance reports;
			.8	Specifications;
			.9	Shop Drawings;
			.10	coordination drawings;
			.11	testing and balancing results and reports;
			.12	Commissioning and quality assurance documentation;
			.13	distribution system diagrams;

	.14 spare parts;
	.15 samples;.16 existing reports and correspondence from authorities having jurisdiction in the
	Place of the Work;
	.17 inspection certificates;
	.18 red-lined record drawings from the construction trailer in two copies and
	.19 other materials or documentation required to be submitted under the <i>Contract</i> .
5.4.3	The Consultant will review the Work to verify the validity of the application and shall
	promptly, and in any event, no later than 30 calendar days after receipt of the Contractor's
	complete deficiency list and application:
	.1 prepare a final deficiency list incorporating all items to be completed or corrected, including any incomplete or unsubmitted <i>Close-Out Documentation</i> . Each item shall have an indicated value for correction or completion and the determination of the total value of such items shall be determined pursuant to GC 5.8 – DEFICIENCY HOLDBACK. The final deficiency list complete with values is to be included with the <i>Consultant's</i> draft verification and shall be reviewed with the <i>Owner</i> prior to the <i>Consultant</i> rendering a determination in accordance with GC 5.4.3.2
	.2 having completed the requirements set out in GC 5.4.3.1,
	(a) the <i>Consultant</i> shall advise the <i>Contractor</i> in writing that the <i>Work</i> or the designated portion of the <i>Work</i> is not substantially performed and give reasons why, or
	(b) the <i>Consultant</i> shall state the date of <i>Substantial Performance of the Work</i> in a certificate and issue a copy of that certificate to each the <i>Owner</i> and the <i>Contractor</i> .
5.4.4	Following the issuance of the certificate of <i>Substantial Performance of the Work</i> referenced in subparagraph 5.4.3.2(b):
	.1 The Contractor shall publish, in a construction trade newspaper in the area of the location of the Work, a copy of the certificate of <i>Substantial Performance of the Work</i> referred to in GC 5.4.2.2(b) within seven (7) calendar days of receiving a copy of the certificate signed by the <i>Consultant</i> , and the <i>Contractor</i> shall provide suitable evidence of the publication to the <i>Consultant</i> and the <i>Owner</i> . If the Contractor fails to publish such notice, the Owner shall be at liberty to publish said certificate and back-charge the Contractor its reasonable costs for doing so;
	.2 The <i>Contractor</i> shall complete the <i>Work</i> within forty (40) calendar days of the date certified as the date of <i>Substantial Performance of the Work</i> ;
	.3 Notwithstanding any other provisions of the <i>Contract,</i> no payments will be processed between <i>Substantial Performance of the Work</i> and <i>Ready-for-Takeover;</i>
	.4 The <i>Owner</i> reserves the right to contract out any or all unfinished <i>Work</i> if it has not been completed within forty (40) days of <i>Substantial Performance of the Work</i> using, without limitation, the funds retained in accordance with GC 5.8 - DEFICIENCY HOLDBACK, without prejudice to any other right or remedy and without affecting

		the warranty period. The cost to the <i>Owner</i> of completing the <i>Work</i> including <i>Owner</i> and <i>Consultant</i> wages and materials shall be deducted from the <i>Contract Price</i> .
	5.4.5	After publication of the certificate of the <i>Substantial Performance of the Work</i> , and provided that the <i>Contractor</i> has completed performance of the <i>Work</i> within the 40 calendar days following certification of <i>Substantial Performance of the Work</i> , the <i>Contractor</i> may submit an application for payment of the outstanding <i>Construction Act</i> holdback amount, which application for payment shall:
		.1 include all of the requirements listed in EXHIBIT "1" - PROJECT SPECIFIC REQUIREMENTS FOR A PROPER INVOICE, as applicable to the application for payment of the holdback amount; and
		.2 include a statement that the <i>Contractor</i> has not received any written notices of lien or any claims for liens from any <i>Subcontractor</i> or <i>Supplier</i> .
	5.4.6	The <i>Construction Act</i> holdback amount shall become due and payable the day immediately following the expiration of the holdback period prescribed by the <i>Construction Act</i> (in most cases being the 61st calendar day following the publication of the certificate of <i>Substantial Performance of the Work</i> referred to in GC 5.4.4.1), subject to the occurrence of any of the following:
		.1 the preservation of a lien in respect of the <i>Project</i> that has not been satisfied, discharged or otherwise provided for in accordance with the <i>Construction Act</i> ;
		.2 receipt by the <i>Owner</i> of a written notice of lien that has not been satisfied, discharged or otherwise provided for in accordance with the <i>Construction Act</i> ; or
		.3 prior to the expiry of 40 calendar days following the publication of the certificate of <i>Substantial Performance of the Work</i> , the <i>Owner</i> publishes a <i>Notice of Non-Payment</i> of holdback in accordance with the <i>Construction Act</i> (Form 6), setting out the amount of holdback that will not be paid, which may include non-payment to secure the correction of deficiencies and/or the completion of the <i>Work</i> .
	5.4.7	Notwithstanding the <i>Owner's</i> obligation to make payment of the holdback amount in accordance with GC 5.4.6, the processing of such payment remains subject to the <i>Owner's</i> internal <i>EFT</i> timing limitations. The <i>Owner</i> covenants, and the <i>Contractor</i> agrees, that payment of the holdback shall be made by <i>EFT</i> at the first opportunity during the <i>Owner's</i> normal processing of <i>EFTs</i> upon the holdback becoming due in accordance with GC 5.4.6.
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GC 5.5 FINAL PAYMENT

SC35.1	GC 5.5	Delete GC 5.5 in its entirety, including all subparagraphs thereunder and <u>replace</u> it with the following:	
		"5.5.1	When <i>Ready-for-Takeover</i> has been achieved in accordance with GC 12.1 – READY-FOR- TAKEOVER and the <i>Contractor</i> considers the <i>Work</i> is complete, and after the <i>Contractor</i> , the <i>Owner</i> , and the <i>Consultant</i> have attended a <i>Pre-Invoice Submission Meeting</i> analogous

	to the requirement in CC F 2.1 (the "Final Dre Invaice Submission Meeting") the
	to the requirement in GC 5.2.1 (the " <i>Final Pre-Invoice Submission Meeting</i> "), the <i>Contractor</i> may submit an application for final payment to the <i>Owner</i> and to the
	<i>Consultant</i> , which application for payment shall:
	 .1 include all of the requirements set out in GC 5.2.2, including without limitation those requirements listed in APPENDIX "1" - PROJECT SPECIFIC REQUIREMENTS FOR A PROPER INVOICE that are specific to an application for final payment; and
	.2 if applicable, (a) a certificate from the <i>Consultant</i> or written confirmation from the <i>Owner</i> that the deficiencies or incomplete <i>Work</i> waived by the <i>Owner</i> pursuant to GC 12.1.2 have been fully rectified as of the date of the <i>Contractor's</i> application for final payment, and/or (b) written confirmation, signed by the <i>Owner</i> and the <i>Contractor</i> , that the <i>Contract Price</i> has been reduced by a specified amount in exchange for the <i>Owner</i> releasing the <i>Contractor</i> of its obligation to rectify the certain outstanding deficiencies and/or incomplete <i>Work</i> waived by the <i>Owner</i> pursuant to GC 12.1.2, as detailed in such written confirmation.
5.5.2	No later than 5 calendar days prior to the <i>Final Pre-Invoice Submission Meeting</i> , the <i>Contractor</i> will, if not already provided, submit to the <i>Consultant</i> all <i>Close-Out Documentation</i> .
5.5.3	Delivery of all <i>Close-Out Documentation</i> is a requirement for the <i>Proper Invoice</i> for final payment.
5.5.4	After receipt by the <i>Owner</i> and the <i>Consultant</i> of an application for payment submitted by the <i>Contractor</i> that is a <i>Proper Invoice</i> and by no later than 10 calendar days after the receipt of the <i>Proper Invoice</i> :
	.1 the <i>Consultant</i> will either:
	(a) issue to the <i>Owner</i> with a copy to the <i>Contractor</i> , a progress payment certificate in the amount applied for by the <i>Contractor</i> in the <i>Proper Invoice</i> , or
	(b) deliver a finding to the <i>Owner</i> with reasons why an amount other than what is claimed in the <i>Proper Invoice</i> is properly due to the <i>Contractor</i> , which finding the <i>Owner</i> may accept or amend prior to issuing a <i>Notice of Non-Payment</i> (Form 1.1), if any, in accordance with GC 5.5.2;
	.2 the Owner shall make payment to the Contractor on account as provided in Article A-5 PAYMENT,
	(a) in the amount stated in the certificate for payment, or
	(b) in the amount stated in the certificate for payment less such amount stated in the <i>Owner's Notice of Non-Payment</i> issued pursuant to GC 5.5.5,
	on the 28th calendar day after receipt of a <i>Proper Invoice</i> , unless such 28th calendar day lands on a day that is other than a <i>Working Day</i> , in which case payment shall be made on the next <i>Working Day</i> after such 28th day.

	5.5.5	In the event that the application for final payment delivered by the <i>Contractor</i> does not
		include the requirements of GC 5.5.1 (including the requirements for a <i>Proper Invoice</i>) and
		GC 5.5.2 or where the Owner disputes the amount claimed as payable in the Proper Invoice,
		then the Owner shall within 14 calendar days of receipt of the application for payment, issue
		a Notice of Non-Payment. Where the Owner has delivered a Notice of Non-Payment, as
		specified under this GC 5.5.5, the Owner and the Contractor shall first engage in good faith
		negotiations to resolve the dispute. If within 5 calendar days following the issuance of a
		Notice of Non-Payment, despite good faith efforts by both parties with the assistance of the
		Consultant, the Owner and the Contractor cannot resolve the dispute, either party may
		commence an Adjudication in accordance with the procedures set out in the Construction
		Act. Any portion of the Proper Invoice which is not the subject of the Notice of Non-Payment
		shall be payable within the time period set out in GC 5.5.4.2.
		shan be payable within the time period set out in de 5.5.4.2.
	5.5.6	Subject to the provisions of the Construction Act and any other rights conferred on the
		Owner at law or under this Contract to withhold payment or back charge or set-off against
		payment, the Owner shall pay the amount payable under a Proper Invoice for final payment
		in accordance with the Construction Act.
	5.5.7	When the Consultant issues a certificate of completion in accordance with GC 5.5.4.1, the
		Consultant shall also issue a certificate for release of any holdback for finishing work
		amount. In accordance with the <i>Construction Act</i> , the <i>Owner</i> may retain any amounts which
		are required by law to satisfy any liens against the <i>Work</i> , in respect of any third party claims
		made to the <i>Owner</i> in respect of the <i>Contract</i> or the <i>Work</i> , and in respect of any claims the
		Owner may have against the Contractor. Subject to the foregoing, the Owner shall release
		the holdback in accordance with the <i>Construction Act.</i> "
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GC 5.6 DEFERRED WORK

SC33.1	5.6.1	Delete paragraph 5.6.1 and replace with the following:	
		"5.6.1 If because of conditions reasonably beyond the control of the <i>Contractor</i> , there are items of work that cannot be performed, payment in full for that portion of the <i>Work</i> which has been performed as certified by the <i>Consultant</i> shall not be withheld or delayed by the <i>Owner</i> on account thereof, but the <i>Owner</i> may withhold, subject to its requirement to issue a <i>Notice of Non-Payment</i> under the <i>Construction Act</i> , until the remaining portion of the <i>Work</i> is finished, only such an amount that the <i>Consultant</i> determines is sufficient and reasonable to cover the cost of performing such remaining work. The remaining work shall be valued as deficient work as defined in GC 5.8.1."	

NEW GC 5.8 DEFICIENCY HOLDBACK

SC34.1	5.8.1	Add new GC 5.8 – DEFICIENCY HOLDBACK as follows:	
		"GC 5.8 DEFICIENCY HOLDBACK	
		5.8.1 Notwithstanding any provisions contained in the <i>Contract Documents</i> concerning certification and release of monies to the <i>Contractor</i> , the <i>Owner</i> reserves the right to retain a <i>Deficiency Holdback</i> , In addition to the Construction Act holdback. The <i>Deficiency</i>	

	<i>Holdback</i> in the value of 2% shall be applied against the total Contract value and shall be applied to each progress payment. The <i>Deficiency Holdback</i> shall be payable to the Contractor upon the confirmation of completion of all deficiencies and defects in work by the Consultant and the Owner.
5.8.2	In performing the calculation under GC 5.8.1,
	.1 no individual deficiency will be valued at less than five hundred dollars (\$500.00); and
	.2 for any <i>Close-Out Documentation</i> not submitted in advance of or as part of the <i>Contractor's</i> application for <i>Substantial Performance of the Work</i> , an amount shall be retained by the <i>Owner</i> as part of the deficiency holdback that is equal to the estimated time and material costs to retain a third-party to re-create the applicable <i>Close-Out Documentation</i> , as determined by the <i>Consultant</i> , until such time as the applicable <i>Close-Out Documentation</i> is submitted and approved.
5.8.3	The deficiency holdback shall be due and payable to the <i>Contractor</i> on the 61 st day following completion of all of the deficiencies listed by the <i>Consultant</i> and confirmed to be corrected, there being no claims for lien registered against the title to the <i>Place of the Work</i> issued in accordance with the <i>Construction Act</i> , and less any amounts disputed under an <i>Owner</i> 's <i>Notice of Non-Payment</i> (Form 1.1)."

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

SC37.1	6.1.2	Add the following to the end of GC 6.1.2:	
		"This requirement is of the essence and it is the express intention of the parties that any claims by the <i>Contractor</i> for a change in the <i>Contract Price</i> and/or <i>Contract Time</i> shall be barred unless there has been strict compliance with PART 6 - CHANGES IN THE WORK. No verbal dealings between the parties and no implied acceptance of alterations or additions to the <i>Work</i> and no claims that the <i>Owner</i> has been unjustly enriched by any alteration or addition to the <i>Work</i> , whether in fact there is any such unjust enrichment or not, shall be the basis of a claim for additional payment under this <i>Contract</i> , an increase to the <i>Contract Price</i> , or a claim for any extension of the <i>Contract Time</i> ."	
	6.1.3 to 6.1.8	 <u>Add</u> new paragraphs 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7 and 6.1.8 as follows: "6.1.3 The <i>Contractor</i> agrees that changes resulting from construction coordination, including but not limited to, scheduling, site surface conditions, site coordination, and <i>Subcontractor</i> and <i>Supplier</i> coordination are included in the <i>Contract Price</i> and the <i>Contractor</i> shall be precluded from making any claim for a change in the <i>Contract Price</i> as a result of such changes. 	
		6.1.4 Labour costs shall be actual, prevailing rates at the <i>Place of the Work</i> paid to workers, plus statutory charges on labour including WSIB, unemployment insurance, Canada pension,	

6.1.9	When a change in the <i>Work</i> is proposed or required, the <i>Contractor</i> shall within 10 calendar days submit to the <i>Consultant</i> for review a claim for a change in <i>Contract Price</i> and/or <i>Contract Time</i> . Should 10 calendar days be insufficient to prepare the submission, the <i>Contractor</i> shall within 5 calendar days, advise the <i>Consultant</i> in writing of the proposed date of submission of the claim. Claims submitted after the dates prescribed herein will not be considered."
6.1.8	No extension to the <i>Contract Time</i> shall be granted for changes in the <i>Work</i> unless the <i>Contractor</i> can clearly demonstrate that such changes significantly alter the overall construction schedule submitted at the commencement of the <i>Work</i> . Extensions of <i>Contract Time</i> and all associated costs, if approved, shall be included in the relevant <i>Change Order</i> .
6.1.7	Changes to the contract shall be quoted to permit the work to be executed within the <i>Contract Time</i> unless approved by the <i>Consultant</i> and the <i>Owner</i> .
6.1.6	When both additions and deletions covering related <i>Work</i> or substitutions are involved in a change to the <i>Work</i> , payment, including <i>Overhead</i> and profit, shall be calculated on the basis of the net difference, if any, with respect to that change in the <i>Work</i> .
6.1.5	Quotations for changes to the <i>Work</i> shall only include <i>Direct Costs</i> and be accompanied by itemized breakdowns together with detailed, substantiating quotations or cost vouchers from <i>Subcontractors</i> and <i>Suppliers</i> , submitted in a format acceptable to the <i>Consultant</i> and shall include any <i>Direct Costs</i> associated with extensions in <i>Contract Time</i> .
	vacation pay, hospitalization and medical insurance. The <i>Contractor</i> shall provide these rates, when requested by the <i>Consultant</i> , for review and/or agreement.

GC 6.2 CHANGE ORDER

SC38.1	6.2.1	In paragraph 6.2.1 after the last sentence in the paragraph <u>add</u> the following:		
		"The adjustment in the <i>Contract Time</i> and the <i>Contract Price</i> shall include an adjustment, if any, for delay or for the impact that the change in the <i>Work</i> has on the <i>Work</i> of the <i>Contractor</i> , and once such adjustment is made, the <i>Contractor</i> shall be precluded from making any further claims for delay or impact with respect to the change in the <i>Work</i> ."		
	6.2.3 to	Add new paragraphs 6.2.3, 6.2.4, and 6.2.5 as follows:		
	6.2.5	"6.2.3 The value of a change shall be determined in one or more of the following methods as directed by the <i>Consultant</i> :		
		.1 by estimate and acceptance of a lump sum;		
		.2 by negotiated unit prices which include the <i>Contractor's</i> overhead and profit, or;		

.3	 by the actual <i>Direct Cost</i> to the <i>Owner</i>, such costs to be the actual cost after all credits included in the change have been deducted, plus the following ranges of mark-up on such costs: .1 Contractor on work of their own forces, 5% overhead, 5% profit. .2 Subcontractor on work of their own forces, 5% overhead, 5% profit .3 Contractor on work of Subcontractor, 5% overhead only.
6.2.4 All quo	ptations shall include <i>Direct Costs</i> and be submitted in a complete manner listing:
.1 .2 .3 .4 .5 .6	quantity of each material, unit cost of each material, man hours involved, cost per hour, <i>Subcontractor</i> quotations submitted listing items 1 to 4 above and item 6 below. mark-up.
	wner and the Consultant will not be responsible for delays to the Work resulting late, incomplete or inadequately broken-down valuations submitted by the actor."

GC 6.3 CHANGE DIRECTIVE

SC39.1	6.3.6.1	Amend paragraph 6.3.6.1 by deleting the final period and adding the following:
		".1 Contractors work by their own forces - 5% overhead and 5% profit, Subcontractor work by their own forces – 5% overhead and 5% profit, Contractors on Subcontractors work – 5% overhead only.
	6.3.6.2	Delete paragraph 6.3.6.2 and replace it with the following:
		".2 If a change in the <i>Work</i> results in a net decrease in the <i>Contract Price</i> , the amount of the credit shall be the net cost, without deduction for <i>Overhead</i> or profit."
	6.3.7.1(4)	<u>Delete</u> GC 6.3.7.1(4).
	6.3.7.7	Amend GC 6.3.7.7 by <u>deleting</u> the words "described in paragraph 6.3.7.1" and <u>replacing</u> them with "approved by the <i>Owner</i> in writing and in advance of any such expenses being incurred;"
	6.3.7.9	Amend GC 6.3.7.9 by <u>adding</u> the following to the end of the paragraph: "when specifically requested by the <i>Owner</i> or as directed by the <i>Consultant</i> ;".

6.3.7.10	Amend GC 6.3.7.10 by <u>adding</u> the following to the end of the paragraph:		
	", provided that such amounts are not caused by negligent acts, omissions, or default of the		
	Contractor or Subcontractor;".		
6.3.7.13	<u>Delete</u> GC 6.3.7.13.		
6.3.7.15	<u>Delete</u> GC 6.3.7.15.		
6.3.7.17	Delete GC 6.3.7.17 in its entirety including all subparagraphs.		
6.3.11	Delete GC 6.3.11 and replace it with the following:		
	"6.3.11 The value of the <i>Work</i> performed as a result of a <i>Change Directive</i> shall not be eligible to be included in progress payments until the amount, including the method for		
	determining the amount, of such Change Directive has been determined."		

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

SC40.1	6.4.1	Delete paragraph 6.4.1 in its entirety and <u>replace</u> with the following:
		"6.4.1.1 Prior to the submission of the bid on which the Contract was awarded, the Contractor confirms that it carefully investigated the Place of the Work insofar as the Place of Work was available for investigation and, in doing so, applied to that investigation the degree of care and skill required by paragraph 3.14.1
		6.4.1.2 No claim by the <i>Contractor</i> will be considered by the <i>Owner</i> or the <i>Consultant</i> in connection with conditions which could reasonably have been ascertained by such investigation or other due diligence undertaken prior to the execution of the <i>Contract</i> .
	6.4.2	Amend paragraph 6.4.2 by adding a new first sentence as follows:
		"Having regard to paragraph 6.4.1, if the <i>Contractor</i> believes that the conditions of the <i>Place of the Work</i> differ materially from those reasonably anticipated, differ materially from those indicated in the <i>Contract Documents</i> and were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1, it shall provide the <i>Owner</i> and the <i>Consultant</i> with <i>Notice in Writing</i> no later than five (5) <i>Working Days</i> after the first observation of such conditions." -and-
		<u>amend</u> the existing second sentence of paragraph 6.4.2 in the second line, following the word "materially" by <u>adding</u> the words "or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1,".
	6.4.3	Delete paragraph 6.4.3 in its entirety and <u>substitute</u> 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 the Contract Time is justified, the Consultant shall report in writing the reasons for this finding to the Owner and the Contractor."
6.4.5	 <u>Add</u> new paragraph 6.4.5 as follows: "6.4.5 No claims for additional compensation or for an extension of <i>Contract Time</i> shall be allowed if the <i>Contractor</i> fails to give <i>Notice in Writing</i> to the <i>Owner</i> or <i>Consultant,</i> as required by paragraph 6.4.2."

GC 6.5 DELAYS

SC41.1	6.5.1	In paragraph 6.5.1 <u>delete</u> the words after the word "for" in the fourth line and <u>replace</u> them with the words "reasonable <i>Direct Costs</i> directly flowing from the delay, but excluding any consequential indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity)."		
	6.5.2	DeleteGC 6.5.2 in its entirety and replace it with the following:"6.5.2If the Contractor is delayed in the performance of the Work by a stop work order issued by a court or other public authority and providing that such order was issued on account of a direct breach, violation, contravention, or a failure to abide by any laws, ordinances, rules, regulations, or codes by the Owner, Other Contractor(s), or the Consultant, and relating to the Work or the Place of the Work, then the Contract Time shall be extended for such reasonable time as the Consultant may determine. The Contractor shall be reimbursed by the Owner for reasonable Direct Costs directly flowing from the delay, but excluding any consequential, indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity)."		
	6.5.3	DeleteDeleteparagraph 6.5.3 in its entirety and replacewith the following:"6.5.3"6.5.3If either party is delayed in the performance of their obligations under this Contract by ForceMajeure, then the Contract Time shall be extended for such reasonable time as the Ownerand the Contractor shall agree. The extension of time shall not be less than the time lost asa result of the event causing the delay, unless the parties agree to a shorter extension.Neither party shall be entitled to payment for costs incurred by such delays. Upon reachingagreement on the extension of the Contract Time attributable to the Force Majeure event,the Owner and the Contract Time and confirming that there are no costs payable by the eitherparty for the extension of Contract Time. However, if at the time an event of Force Majeurearises a party is in default of its obligations under the Contract and has received a notice ofdefault pursuant to PART 7 – DEFAULT NOTICE, this paragraph 6.5.3 shall not excuse a partyfrom its obligation to cure the default(s). For greater certainty, the defaulting party, to theextent possible, must continue to address and cure the default notwithstanding an eventof Force Majeure."		

6.5.4	Delete paragraph 6.5.4 in its entirety and replace it with the following:		
	"6.5.4 No extension or compensation shall be made for delay or impact on the Work unless in writing of a claim is given to the Consultant not later than ten (10) Working Days the commencement of the delays or impact on the Work, provided however, that, case of a continuing cause of delay or impact on the Work, only one notice of claim sh necessary."		
6.5.6 to	Add new paragraphs 6.5.6, 6.5.7 and 6.5.8 as follows:		
6.5.8	"6.5.6 If the <i>Contractor</i> is delayed in the performance of the <i>Work</i> by an act or omission <i>Contractor</i> or anyone directly or indirectly employed or engaged by the <i>Contractor</i> , any cause within the <i>Contractor's</i> control, then (i) firstly, at its expense, and to the opossible, the <i>Contractor</i> shall accelerate the work and/or provide overtime work to retime lost by a delay arising under this paragraph 6.5.6, and (ii) secondly, where it possible for the <i>Contractor</i> to recover the time lost by implementing acceleration meand/or overtime work, the <i>Contract Time</i> may be extended for such reasonable time <i>Owner</i> may decide in consultation with the <i>Consultant</i> and the <i>Contractor</i> . The <i>Owner</i> be reimbursed by the <i>Contractor</i> for all reasonable costs incurred by the <i>Owner</i> as the of such delay, including, but not limited to, Owner's staff costs, the cost of all addi services required by the <i>Owner</i> from the <i>Consultant</i> or any sub-consultants, pranagers, or others employed or engaged by the <i>Owner</i> , and in particular, the costs <i>Consultant's</i> services during the period between the date of <i>Substantial Performance Work</i> stated in Article A-1 herein, as the same may be extended through the provise these General Conditions, and any later or actual date of <i>Substantial Performance Work</i> achieved by the <i>Contractor</i> .		
	 6.5.7 Without limiting the obligations of the <i>Contractor</i> described in GC 3.2 – CONSTRUCTION OWNER OR OTHER CONTRACTORS or GC 9.4 – CONSTRUCTION SAFETY, the <i>Own Consultant</i> may, by <i>Notice in Writing</i>, direct the <i>Contractor</i> to stop the <i>Work</i> whe <i>Owner</i> or <i>Consultant</i> determines that there is an imminent risk to the safety of persor property at the <i>Place of the Work</i>. In the event that the <i>Contractor</i> receives such nor shall immediately stop the <i>Work</i> and secure the site. The <i>Contractor</i> shall not be er to an extension of the <i>Contract Time</i> or to an increase in the <i>Contract Price</i> unler resulting delay, if any, would entitle the <i>Contractor</i> to an extension of the <i>Contractor's</i> costs as provided in paragraphs 6.5.1, 6.5.2 or 6.5.8 No claim for delay shall be made by the <i>Contractor</i> and the <i>Contract Time</i> shall rextended due to climatic conditions or arising from the <i>Contractor's</i> efforts to maintain the contractor of the contract of the contractor of the contract of the contractor of the contract of the contractor of the contract of the con		

PART 7 DEFAULT NOTICE

GC 7.1

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

SC43.1	7.1.2	In GC 7.1.2, <u>delete</u> the words "and if the <i>Consultant</i> has given a written statement to the <i>Owner</i> and
		<i>Contractor</i> which provides the detail of such neglect to perform the <i>Work</i> properly or such failure to comply with the requirements of the <i>Contract</i> to a substantial degree".
SC43.2	7.1.3.4	Add a new subparagraph 7.1.3.4 as follows:
		".4 an "acceptable schedule" as referred to in subparagraph 7.1.3.2. means a schedule approved by the <i>Consultant</i> and the <i>Owner</i> wherein the default can be corrected within the balance of the <i>Contract Time</i> and shall not cause delay to any other aspect of the <i>Work</i> or the work of other contractors, and in no event shall it be deemed to give a right to extend the <i>Contract Time</i> ."
	7.1.4.1	Delete subparagraph 7.1.4.1 and replace it with the following:
		".1 correct such default and deduct the cost, including <i>Owner's</i> expenses, thereof from any payment then or thereafter due the <i>Contractor</i> ."
	7.1.4.2	<u>Delete</u> subparagraph 7.1.4.2 and <u>replace</u> it with the following:
		".2 by providing <i>Notice in Writing</i> to the <i>Contractor</i> , terminate the <i>Contractor's</i> right to continue with the <i>Work</i> in whole or in part or terminate the <i>Contract</i> , and publish a notice of termination (Form 8) in accordance with the <i>Act.</i> "
	7.1.5.3	In subparagraph 7.1.5.3 <u>delete</u> the words: "however, if such cost of finishing the <i>Work</i> is less than the unpaid balance of the <i>Contract Price</i> , the <i>Owner</i> shall pay the <i>Contractor</i> the difference"
	7.1.6 to 7.1.10	DeleteGC 7.1.6 and replace it with new paragraphs 7.1.6, 7.1.7, 7.1.8, 7.1.9 and 7.1.10 as follows:"7.1.6In addition to its right to terminate the <i>Contract</i> set out herein, the <i>Owner</i> may terminate this <i>Contract</i> at any time for any other reason and without cause upon giving the <i>Contractor</i> fifteen (15) <i>Working Days Notice in Writing</i> to that effect. In such event, the <i>Contractor</i> shall be entitled to be paid for all <i>Work</i> performed including reasonable profit, for loss
		7.1.7 The <i>Owner</i> may suspend <i>Work</i> under this <i>Contract</i> at any time for any reason and without cause upon giving the <i>Contractor Notice in Writing</i> to that effect. In such event, the <i>Contractor</i> shall be entitled to be paid for all <i>Work</i> performed to the date of suspension and be compensated for all actual costs incurred arising from the suspension, including reasonable profit, for loss sustained upon <i>Products</i> and <i>Construction Equipment</i> , and such other damages as the <i>Contractor</i> may have sustained as a result of the suspension of the <i>Work</i> , but in no event shall the <i>Contractor</i> be entitled to be compensated for any indirect, special, or consequential damages incurred. In the event that the suspension continues for more than thirty (30) calendar days, the <i>Contract</i> shall be deemed to be terminated and the provisions of paragraph 7.1.6 shall apply.
		7.1.8 In the case of either a termination of the <i>Contract</i> or a suspension of the <i>Work</i> under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the <i>Contractor</i> shall use its best commercial efforts to mitigate the financial consequences to the <i>Owner</i> arising out of the termination or suspension, as the case may be.

7.1.9	Upon the resumption of the <i>Work</i> following a suspension under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the <i>Contractor</i> will endeavour to minimize the delay and financial consequences arising out of the suspension.
7.1.10	The <i>Contractor's</i> obligations under the <i>Contract</i> as to quality, correction, and warranty of the <i>Work</i> performed by the <i>Contractor</i> up to the time of termination or suspension shall continue after such termination of the <i>Contract</i> or suspension of the <i>Work</i> ."

GC 7.2		CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT		
SC44.1	7.2.2	Delete paragraph 7.2.2 and replace it with the following:		
		"7.2.2 If the Work is suspended or otherwise delayed for a period of 40 consecutive Working Days or more under a stop work order issued by a court or other public authority on account of a breach, violation, contravention, or a failure to abide by any laws, ordinances, rules, regulations, or codes directly by the Owner, the Owner's other contractor(s), or the Consultant, and relating to the Work or the Place of the Work, the Contractor may, without prejudice to any other right or remedy the Contractor may have, terminate the Contract by giving the Owner Notice in Writing to that effect."		
SC44.2	7.2.3.1	Delete subparagraph 7.2.3.1 in its entirety.		
	7.2.3.2	Delete subparagraph 7.2.3.2 in its entirety.		
	7.2.3.4	In subparagraph 7.2.3.4, <u>delete</u> the words "except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER".		
	7.2.5	Delete paragraph 7.2.5 and replace it with the following:		
		"7.2.5 If the default cannot be corrected within the 5 <i>Working Days</i> specified in paragraph 7.2.4, the <i>Owner</i> shall be deemed to have cured the default if it:		
		.1 commences correction of the default within the specified time;		
		.2 provides the <i>Contractor</i> with an acceptable schedule for such correction; and,		
		.3 completes the correction in accordance with such schedule."		
	7.2.6 to	Add new paragraphs 7.2.6, 7.2.7, 7.2.8 and 7.2.9 as follows:		
	7.2.9	"7.2.6 If the Contractor terminates the Contract under the conditions described in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the Contractor shall be entitled to be paid for all Work performed to the date of termination, as determined by the Consultant. The Contractor shall also be entitled to recover the direct costs associated with termination, including the costs of demobilization and losses sustained		

on <i>Products</i> and <i>Construction Equipment</i> . The <i>Contractor</i> shall not be entitled to any recovery for any special, indirect or consequential losses, including loss of profit.
The Contractor shall not be entitled to give notice of the Owner's default or terminate the
<i>Contract</i> in the event the <i>Owner</i> withholds certificates or payment or both in accordance with the <i>Contract</i> because of:
.1 the <i>Contractor's</i> failure to pay all legitimate claims promptly, or
.2 the failure of the <i>Contractor</i> to discharge construction liens which are registered against the title to the <i>Place of the Work</i> .
The <i>Contractor's</i> obligations under the <i>Contract</i> as to quality, correction and warranty of the <i>Work</i> performed by the <i>Contractor</i> up to the effective date of termination shall continue in force and shall survive termination of this <i>Contract</i> by the <i>Contractor</i> .
If the <i>Contractor</i> suspends the <i>Work</i> or terminates the <i>Contract</i> as provided for in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the <i>Contractor</i> shall ensure the site and the <i>Work</i> are left in a safe, secure condition as required by authorities having jurisdiction at the <i>Place of the Work</i> and the <i>Contract Documents.</i> "

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

SC45.1	8.1.3	Delete paragraph 8.1.3 in its entirety and substitute as follows:		
		"8.1.3 If a dispute is not resolved promptly, the <i>Consultant</i> will give such instruction as in the <i>Consultant's</i> opinion are necessary for the proper performance of the <i>Work</i> and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by doing so neither party will jeopardize any claim the party may have."		

GC 8.2 ADJUDICATION

SC45.2	8.2.2 to	Add new GC 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.6, and 8.2.7 as follows:
	8.2.7	'8.2.2 Save and except where the <i>Contractor</i> has given an undertaking, in accordance with the Act, to refer a dispute to Adjudication, prior to delivering a notice of Adjudication in a form prescribed by the Act, the parties agree to first address all disputes with at least one inperson meeting with the Owner's representative, the <i>Consultant's</i> representative, and the Contractor's representative. The parties agree that such steps will be taken to resolve any
		 disputes in a timely and cost-effective manner. 8.2.3 Notwithstanding any other provisions in PART 8 DISPUTE RESOLUTION, the parties shall engage in <i>Adjudication</i> proceedings as required by, and in accordance with, the <i>Construction Act</i>.
		3.2.4 The following procedures shall apply to any <i>Adjudication</i> the parties engage in under the <i>Construction Act</i> :

	.1 any hearings shall be held at a venue within the jurisdiction of the <i>Place of the Work</i> or such other venue as the parties may agree and which is acceptable to the adjudicator;
	.2 the <i>Adjudication</i> shall be conducted in English;
	.3 each party may be represented by counsel throughout an <i>Adjudication</i> ;
	.4 there shall not be any oral communications with respect to issues in dispute that are
	the subject of an Adjudication between a party and the adjudicator unless it is made
	in the presence of both parties or their legal representatives; and
	.5 a copy of all written communications between the adjudicator and a party shall be
0.05	given to the other party at the same time.
8.2.5	Any documents or information disclosed by the parties during an Adjudication are
	confidential and the parties shall not use such documents or information for any purpose
	other than the Adjudication in which they are disclosed and shall not disclose such
	documents and information to any third party, unless otherwise required by law, save and except the for the adjudicator.
8.2.6	If the <i>Contractor</i> fails to comply with any of the notice requirements set out in the <i>Contract</i> ,
0.2.0	including the time limits set out in any of the following:
	.1 GC 6.4 – CONCEALED OR UNKNOWN CONDITIONS;
	.2 GC 6.5 – DELAYS;
	.3 GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE;
	.4 PART 8 DISPUTE RESOLUTION
	.5 GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES
	.6 GC 9.3 – ARTIFACTS AND FOSSILS; or
	.7 GC 9.5 - MOULD
	in respect of any claim or dispute, the Contractor shall have no entitlement whatsoever
	(including to an increase in the Contract Price, or an extension of Contract Time) in the
	context of an Adjudication under the Construction Act and waives the right to make any
	such claims or disputes in an Adjudication. This GC 8.2.6 shall operate conclusively as an
	estoppel and bar in the event such claims or disputes are brought in an Adjudication and
	the <i>Owner</i> may rely on this GC 8.2.6 as a complete defence to any such claims or disputes.
8.2.7	The parties hereby acknowledge and agree,
	.1 that counterclaims, claims of set-off or the exercise or use of other contractual
	rights that permit the Owner to withhold, deduct or retain from monies otherwise
	owed to the Contractor under the Contract may be referred to, and included as
	part of, Adjudications under the Construction Act;
	.2 that disputes related to the termination or abandonment of the <i>Contract</i> , as well
	as any disputes that arise or are advanced following the termination or
	abandonment of the Contract, shall not be referred to Adjudication under the
	Construction Act;
	.3 that notice(s) of <i>Adjudication</i> , with respect to any dispute or claim relating to the
	Project, shall not be given, and no Adjudication shall be commenced following
	Contract completion, Contract abandonment, or termination of the Contract;
	.4 that any Adjudication between the Contractor and a Subcontractor or a supplier
	that relates to an Adjudication between the Owner and the Contractor shall be

	joined together to be adjudicated by a single adjudicator, provided that the adjudicator agrees to do so, and the <i>Contractor</i> shall include a provision in each
	of its contracts that contain an equivalent obligation to this GC 8.2.7.4; and
	.5 that, other than where the <i>Contractor</i> is obliged to commence an <i>Adjudication</i>
	pursuant to an undertaking under the Construction Act, neither the Owner nor
	the Contractor shall commence an Adjudication during the Restricted Period.
8.2.8	The parties acknowledge and agree that no Adjudication, arbitration, action, suit or other
	proceeding may be brought by the Contractor against the Owner in respect of a claim for
	an increase to the Contract Price as set out in GC 6.6, before the Consultant has issued its
	findings in respect of same, pursuant to GC 6.6.5. For greater clarity and without limiting
	the foregoing, the amount applied for in each Proper Invoice shall not include any amounts
	pertaining to the Contractor's claim for an increase in Contract Price unless and until the
	Consultant has issued a written notice to the Contractor regarding the validity of such claim,
	as provided for in GC 6.6.5. However, nothing in this GC 8.2.8 shall prevent a Contractor
	from commencing an Adjudication where, pursuant to the Construction Act, the Contractor
	is required to give an undertaking to a Subcontractor to commence an Adjudication
	following delivery of a Notice of Non-Payment."

GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

SC46.1	8.3.1	Amend paragraph 8.3.1 by changing part of the second line from "shall appoint a Project Mediator"	
3040.1	0.5.1		
		to "may appoint a <i>Project Mediator</i> , except that such an appointment shall only be made if be	
		Owner and the Contractor agree."	
	8.3.4	Amend paragraph 8.3.4 by changing part of the second line from "the parties shall request the Project	
		Mediator" to "and subject to paragraph 8.3.1 the parties may request the Project Mediator".	
	8.3.6 to	Delete paragraphs 8.3.6, 8.3.7 and 8.3.8 in their entirety and replace them with the following new	
	8.3.9	GCs 8.3.6, 8.3.7, 8.3.8, and 8.3.9:	
		"8.3.6 The dispute may be finally resolved by arbitration under the Rules for Arbitration of	
		Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, provided	
		that both the Contractor and the Owner agree. If the Contractor and the Owner agree to	
		resolve the dispute by arbitration, the arbitration shall be conducted in the jurisdiction of	
		the Place of the Work.	
		8.3.7 Prior to delivering a notice of <i>Adjudication</i> in a form prescribed by the <i>Act</i> , the parties agree	
		to first address all disputes by attending at least one meeting with the <i>Owner's</i>	
		representative, the <i>Consultant</i> 's representative, and the <i>Contractor</i> 's representative, prior	
		to commencing an <i>Adjudication</i> . The parties agree that such steps will be taken to resolve	
		any disputes in a timely and cost effective manner. If a resolution to the dispute(s) is not	
		made at such a meeting, any party who plans to commence an <i>Adjudication</i> shall provide	
		the other party with 5 Working Days' Notice in Writing of its intention to issue a notice of	
		Adjudication.	
		8.3.8 Other than where the <i>Contractor</i> is obliged to commence an <i>Adjudication</i> pursuant to an	
		undertaking under the Construction Act, neither the Owner nor the Contractor shall	
		commence an Adjudication during the Restricted Period.	
		8.3.9 Where either party has delivered a notice of <i>Adjudication</i> in a form prescribed by the <i>Act</i> ,	
		the procedures and rules set out under the Construction Act and the regulations thereto	
		shall govern the Adjudication."	

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

SC47.1	9.1.1.1	Delete subparagraph 9.1.1.1 in its entirety and substitute the following:		
		".1 errors in the <i>Contract Documents</i> which the <i>Contractor</i> could not have discovered applying the		
		standard of care described in paragraph 3.14.1;"		
	9.1.2	Delete paragraph 9.1.2 in its entirety and substitute as follows:		
		"9.1.2 Before commencing any <i>Work</i> , the <i>Contractor</i> shall determine the locations of all underground or hidden utilities and structures indicated in or inferable from the <i>Contract Documents</i> , or that are inferable from an inspection of the <i>Place of the Work</i> exercising the degree of care and skill described in paragraph 3.14.1."		
	9.1.5	Add new paragraph 9.1.5 as follows:		
		"9.1.5 With respect to any damage to which paragraphs 9.1.3 or 9.1.4 apply, the <i>Contractor</i> shall neither undertake to repair or replace any damage whatsoever to the work of other contractors, or to adjoining property, nor acknowledge that the same was caused or occasioned by the <i>Contractor</i> , without first consulting the <i>Owner</i> and receiving written instructions as to the course of action to be followed from either the <i>Owner</i> or the <i>Consultant</i> . Where, however, there is danger to life, the environment, or public safety, the <i>Contractor</i> shall take such emergency action as it deems necessary to remove the danger."		

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

SC48.1	9.2.1	Amend GC 9.2.1 by inserting the following to the end of the paragraph:	
		"For the purposes of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES, <i>Excess Soil</i> shall not be considered a 'toxic and hazardous substance'."	
SC48.2	9.2.5.5	 Add a new subparagraph 9.2.5.5 as follows: ".5 in addition to the steps described in subparagraph 9.2.5.3, take any further steps it deems necessary to mitigate or stabilize any conditions resulting from encountering toxic or hazardous substances or materials." 	
	9.2.6	<u>Amend</u> GC 9.2.6 by <u>adding</u> the following words after the word "responsible" in the second line: "or whether any toxic or hazardous substances or materials already at the <i>Place of the Work</i> (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the <i>Contractor</i> or anyone for whom the <i>Contractor</i> is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the <i>Owner</i> or others,".	

9.2.8	<u>Amend</u> GC 9.2.8 by <u>adding</u> the following words after the word "responsible" in the second line: "or whether any toxic or hazardous substances or materials already at the <i>Place of the Work</i> (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the <i>Contractor</i> or anyone for whom the <i>Contractor</i> is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the <i>Owner</i> or others,".	
9.2.10	 <u>Add</u> new paragraph 9.2.10 as follows: "9.2.10 The <i>Contractor, Subcontractors</i> and <i>Suppliers</i> shall not bring on to the <i>Place of the Work</i> any toxic or hazardous substances and materials except as required in order to perform the <i>Work</i>. If such toxic or hazardous substances or materials are required, storage in quantities sufficient to allow work to proceed to the end of any current work week only shall be permitted. All such toxic and hazardous materials and substances shall be handled and disposed of only in accordance with all laws and regulations that are applicable at the <i>Place of the Work.</i>" 	

GC 9.4 CONSTRUCTION SAFETY

SC49.1	9.4.1	<u>Delete</u> GC 9.4.1 in its entirety and <u>replace</u> it with the following:	
		"9.4.1 The <i>Contractor</i> shall be solely responsible for construction safety at the <i>Place of the Work</i> and for compliance with the rules, regulations, and practices required by the <i>OHSA</i> , including, but not limited to those of the "constructor", and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the <i>Work</i> . The <i>Contractor's</i> health and safety program documentation shall be made available for review by the <i>Owner</i> or <i>Consultant</i> immediately upon request. Without limiting the foregoing, the <i>Contractor</i> shall be solely responsible for construction safety in respect of the <i>Consultant</i> , <i>Subcontractors</i> and <i>Suppliers</i> , the <i>Owner's</i> own forces, <i>Other Contractors</i> , and all persons attending the <i>Place of the Work</i> during the course of the <i>Project.</i> "	
	9.4.2	Amend GC 9.4.2 by <u>adding</u> the following words after "and the <i>Contractor</i> ":	
		", Subcontractors and Suppliers".	
	9.4.3	Amend GC 9.4.3 by <u>adding</u> the following words after "and the <i>Contractor</i> ":	
		", Subcontractors and Suppliers".	
	9.4.4	Delete GC 9.4.4 and replace it with the following:	

		"9.4.4	The Owner undertakes to include in its contracts with other contractors and in its
		-	instructions to its own forces the requirement that the other contractor or its own forces,
			as the case may be, comply with the policies and procedures of and the directions and
			instructions from the Contractor with respect to occupational health and safety and
			related matters."
	9.4.5	Delete G	iC 9.4.5 in its entirety and <u>replace</u> it with the following:
		<u>201010</u> 0	
		"9.4.5	Prior to the commencement of the Work, the Contractor shall submit to the Owner:
			.1 a current WSIB clearance certificate;
			.2 copies of the <i>Contractor</i> 's insurance policies having application
			to the Project or certificates of insurance, at the option of the
			Owner;
			 .3 documentation setting out the <i>Contractor</i>'s in-house safety programs;
			.4 a copy of the Notice of Project filed with the Ministry of Labour
			naming itself as "constructor" under the OHSA; and
			. 5 copies of any documentation or notices to be filed or delivered
			to the authorities having jurisdiction for the regulation of
			occupational health and safety at the <i>Place of the Work;</i> "
_	9.4.6 to 9.4.12	<u>Add</u> new	GC 9.4.6, 9.4.7, 9.4.8, 9.4.9, 9.4.10, 9.4.11, and 9.4.12 as follows:
		"9.4.6	The Contractor shall indemnify and save harmless the Owner, its agents, trustees, officers,
			directors, employees, consultants, successors, appointees, and assigns from and against
			the consequences of any and all safety infractions committed by the Contractor under
			OHSA and any other occupational health and safety legislation in force at the Place of the
			Work including the payment of legal fees and disbursements on a solicitor and client basis.
			Such indemnity shall apply to the extent to which the <i>Owner</i> is not covered by insurance.
		9.4.7	If the Owner is of the reasonable opinion that the Contractor has not taken such precautions
			as are necessary to ensure compliance with the requirements of paragraph 9.4.1, the <i>Owner</i> may take any remedial measures which it deems necessary, including stopping the
			performance of all or any portion of the Work, and the Owner may use its employees, the
			Contractor, any Subcontractor or any other contractors to perform such remedial measures.
		9.4.8	The Contractor shall file any notices or any similar document required pursuant to the
			<i>Contract</i> or the safety regulations in force at the <i>Place of the Work</i> . This duty of the <i>Contractor</i> will be considered to be included in the <i>Work</i> and no separate payment therefore will be made to the <i>Contractor</i> .
		9.4.9	Unless otherwise provided in the <i>Contract Documents</i> , the <i>Contractor</i> shall develop, maintain and supervise for the duration of the <i>Work</i> a comprehensive safety program that will effectively incorporate and implement all required safety precautions. The program
			shall, at a minimum, respond fully to the applicable safety regulations and general construction practices for the safety of persons or property, including, without limitation, any general safety rules and regulations of the <i>Owner</i> and any workers' compensation or occupational health and safety statutes or regulations in force at the <i>Place of the Work</i> .

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	9.4.10	The <i>Contractor</i> shall provide a copy of the safety program described in GC 9.4.9 hereof to the <i>Consultant</i> for delivery to the <i>Owner</i> prior to the commencement of the <i>Work</i> , and shall, ensure, as far as it is reasonably practical to do so, that every employer and worker performing work in respect of the <i>Project</i> complies with such program.
	9.4.11	The <i>Contractor</i> shall arrange regular safety meetings, and shall supply and maintain, at its own expense, at its office or other well-known place at the job site, safety equipment necessary to protect the workers and general public against accident or injury as prescribed by the authorities having jurisdiction at the <i>Place of the Work</i> , including, without limitation, articles necessary for administering first-aid to any person and an emergency procedure for the immediate removal of any injured person to a hospital or a doctor's care.
	9.4.12	The <i>Contractor</i> shall promptly report in writing to the <i>Owner</i> and the <i>Consultant</i> all accidents of any sort arising out of or in connection with the performance of the <i>Work</i> , whether on or adjacent to the job site, giving full details and statement of witnesses. If death or serious injuries or damages are caused, the accident shall be promptly reported by the <i>Contractor</i> to the <i>Owner</i> and the <i>Consultant</i> by telephone or messenger in addition to any reporting required under the applicable safety regulations."."

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

SC50.1	10.1.2	Amend paragraph 10.1.2 by adding the following sentence to the end of the paragraph:	
		"For greater certainty, the <i>Contractor</i> shall not be entitled to any mark-up for overhead or profit on	
		any increase in such taxes and duties and the Owner shall not be entitled to any credit relating to	
		mark-up for overhead or profit on any decrease in such taxes. The Contractor shall provide a detailed	
		breakdown of Additional taxes if requested by the Owner in a form satisfactory to the Owner."	
	10.1.3	Add new paragraph 10.1.3 as follows:	
		"10.1.3 Where the <i>Owner</i> 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, assist with the application for any exemption, recovery or refund of	
		all 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."	

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

SC51.1	10.2.5	Amend paragraph 10.2.5 by adding the words "Subject to paragraph 3.4" at the beginning of the paragraph.
		-and-
		Add the following to the end of the second sentence:

	"and no further Work on the affected components of the Contract shall proceed until these	
	directives have been obtained by the Contractor from the Consultant."	
10.2.6	Amend paragraph 10.2.6 by adding the following sentence to the end of the paragraph:	
	"In the event the <i>Owner</i> suffers loss or damage as a result of the <i>Contractor's</i> failure to comply with paragraph 10.2.5 and notwithstanding any limitations described in paragraph 12.1.1, the <i>Contractor</i>	
	agrees to indemnify and to hold harmless the <i>Owner</i> and the <i>Consultant</i> from and against any claims, demands, losses, costs, damages, actions suits or proceedings resulting from such failure by the <i>Contractor</i> ."	
10.2.7	<u>Amend</u> paragraph 10.2.7 by inserting the words "which changes were not, or could not have reasonably been known to the <i>Owner</i> or to the <i>Contractor</i> , as applicable, at the time of bid closing and which changes did not arise as a result of a public emergency or other <i>Force Majeure</i> event" to the second line, after the words "authorities having jurisdiction".	
10.2.8	AddAdd"10.2.8The Contractor shall furnish all certificates that are required or given by the appropriate governmental authorities as evidence that the Work as installed conforms with the laws and regulations of authorities having jurisdiction, including certificates of compliance for the Owner's occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the Work, in the event that such governmental authorities furnish such certificates."	

GC 10.4 WORKERS' COMPENSATION

SC52.1	10.4.1	Delete paragraph 10.4.1 and replace with the following:	
		"10.4.1 Prior to commencing the <i>Work</i> , and with each and every application for payment thereafter, including the <i>Contractor's</i> application for payment of the holdback amount following <i>Substantial Performance of the Work</i> and again with the <i>Contractor's</i> application for final payment, the <i>Contractor</i> shall provide evidence of compliance with workers' compensation legislation in force at the <i>Place of the Work</i> , including payments due thereunder."	

GC 11.1 INSURANCE

SC53.1	11.1	Delete entirety of GC 11.1 and replace with the following:
		"GC 11.1 INSURANCE
		11.1.1 Without restricting the generality of GC 12 – INDEMNIFICATION, the <i>Contractor</i> shall
		provide, maintain, and pay for the insurance coverages specified in GC 11.1 –
		INSURANCE. Unless otherwise stipulated, the duration of each insurance policy shall be
		from the date of commencement of the Work until the expiration of the warranty periods
		set out in the Contract Documents. Prior to commencement of the Work and upon the
		placement, renewal, amendment, or extension of all or any part of the insurance, the
		Contractor shall promptly provide the Owner with confirmation of coverage and, if
		required, a certified true copy of the policies certified by an authorized representative of
		the insurer together with copies of any <u>amending</u> endorsements.
		.1 General Liability Insurance

General liability insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as <u>Add</u>itional insureds, with limits of not less than \$5,000,000.00 inclusive per occurrence for bodily injury, death, and damage to property, including loss of use thereof, for itself and each of its employees, *Subcontractors* and/or agents. The insurance coverage shall not be less than the insurance required by IBC Form 2100, or its equivalent <u>replacement</u>, provided that IBC Form 2100 shall contain the latest edition of the relevant CCDC endorsement form. To achieve the desired limit, umbrella, or excess liability insurance may be used. All liability coverage shall be maintained for completed operations hazards from the date of *Ready-for-Takeover*, as set out in the certificate of *Ready-for-Takeover*. Where the *Contractor* maintains a single, blanket policy, the <u>Add</u>ition of the *Owner* and the *Consultant* is limited to liability arising out of the *Project* and all operations necessary or incidental thereto. The policy shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation and of change or <u>amend</u>ment restricting coverage.

.2 Automobile Liability Insurance

Automobile liability insurance in respect of licensed vehicles shall limits of not less than \$2,000,000.00 inclusive per occurrence for bodily injury, death and damage to property, covering all licensed vehicles *owned* or leased by the *Contractor*, and endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation, change or <u>amend</u>ment restricting coverage. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor*.

.3 Aircraft and Watercraft Liability Insurance

Intentional Deleted. Not Applicable

.4 Property and Boiler and Machinery Insurance

(1) Builder's Risk property insurance shall be in the name of the Contractor with the Owner and the Consultant named as Additional insureds. The policy shall insure against all risks of direct physical loss or damage to the property insured which shall include all property included in the Work, whether owned by the Contractor or the owner or owned by others, so long as the property forms part of the Work. The property insured also includes all materials and supplies necessary to complete the work, whether installed in the work temporarily or permanently, in storage on the project site, or in transit to the project site, as well as temporary buildings, scaffolding, falsework forms, hoardings, excavation, site preparation and similar work. The insurance shall be for not less than the sum of the amount of the contract price and the full value of products that are specified to be provided by the owner for incorporation into the work, if applicable, with the deductible of \$10,000.00 payable by the contractor. The insurance shall include the foregoing and, otherwise, shall not be less than the insurance required by IBC Form 4042 or its equivalent replacement provided that the IBC Form 4042 shall include the latest Addition of the relevant CCDC endorsement form. The coverage shall be based on a completed value form and shall be maintained continuously until ten (10) days after the date of the final certificate of payment.

(2) Boiler and machinery insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as <u>Add</u>itional insureds, for not less than the <u>replace</u>ment value of the boilers, pressure vessels and other insurable objects forming part of the *Work*. The insurance provided shall not be less than the insurance provided by the "Comprehensive Boiler and Machinery Form" and shall be maintained continuously from commencement of use or operation of the property insured and until 10 days after the date of the final certificate for payment.

(3) The policies shall allow for partial or total use or occupancy of the *Work*.

(4) The policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. The *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of the *Contract Time*, relative to the extent of the loss or damage, as determined by the *Owner*, in its sole discretion.

(5) The *Contractor* shall be entitled to receive from the *Owner*, in <u>Add</u>ition to the amount due under the *Contract*, the amount at which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds and as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3 – PROGRESS PAYMENT. In <u>Add</u>ition, the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*.

(6) In the case of loss or damage to the *Work* arising from the work of other contractors, or the *Owner's* own forces, the *Owner*, in accordance with the *Owner's* obligations under paragraph 3.2.2.4 of GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS, shall pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3 – PROGRESS PAYMENT.

.5 Contractors' Equipment Insurance

"All risks" contractors' equipment insurance covering construction machinery and equipment used by the *Contractor* for the performance of the *Work*, excluding boiler insurance, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. The policies shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of cancellation, change or <u>amend</u>ment restricting coverage. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance of his equipment, the *Owner* agrees to waive the equipment insurance requirement.

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

11.1.3 Where the full insurable value of the <i>Work</i> is substantially less than the <i>Contract Price</i> , the <i>Owner</i> may reduce the amount of insurance required to waive the course of construction insurance requirement.
11.1.4 If the <i>Contractor</i> fails to provide or maintain insurance as required by the <i>Contract Documents</i> , then the <i>Owner</i> shall have the right to provide and maintain such insurance and provide evidence of same to the <i>Contractor</i> . The <i>Contractor</i> shall pay the costs thereof to the <i>Owner</i> on demand, or the <i>Owner</i> may deduct the amount that is due or may become due to the <i>Contractor</i> .
11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the <i>Place of the Work.</i> "

NEW GC 11.2 CONTRACT SECURITY

SC52.1	GC 11.2	Add new GC 11.2 – CONTRACT SECURITY as follows:
		"GC 11.2 CONTRACT SECURITY
		11.2.1 The <i>Contractor</i> shall, prior to the execution of the <i>Contract</i> , furnish a performance bond and labour and material payment bond which meets the requirements under paragraph 11.2.2.
		 11.2.2 The performance bond and labour and material payment bond shall: be issued by a duly licensed surety company, which has been approved by the Owner and is permitted under the Construction Act, be issued by an insurer licensed under the Insurance Act (Ontario) and authorized to transact a business of suretyship in the Province of Ontario; shall be in the form prescribed by the Construction Act; have a coverage limit of at least 50 per cent of the Contract Price, or such other percentage of the Contract Price as stated in the Contract Documents; extends protection to Subcontractors, Suppliers, and any other persons supplying labour or materials to the Project; and shall be maintained in good standing until the fulfillment of the Contract, including
		 all warranty and maintenance periods set out in the <i>Contract Documents</i> 11.2.3 It is the intention of the parties that the performance bond shall be applicable to all of the <i>Contractor's</i> obligations in the <i>Contract Document</i> and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply. The <i>Contractor</i> represents and warrants to the <i>Owner</i> that it has provided its surety with a copy of the <i>Contract Documents</i> prior to the issuance of such bonds.
		 Without limiting the foregoing in any way, the bonds shall indemnify and hold harmless the <i>Owner</i> for and against costs and expenses (including legal and <i>Consultant</i> services and court costs) arising out of or as a consequence of any default of the <i>Contractor</i> under this <i>Contract</i>.
		11.2.4 The <i>Contractor</i> shall be responsible for notifying the surety company of any changes made to the <i>Contract</i> during the course of construction.

11.2.5	The premiums for bonds required by the Contract Documents shall be included in the
	Contract Price.
11.2.6	Should the <i>Owner</i> require additional bonds by the <i>Contractor</i> or any of his <i>Subcontractors</i> , after the receipt of bids for the <i>Work</i> , the <i>Contract Price</i> shall be increased by all direct costs attributable to providing such bonds. The <i>Contractor</i> shall promptly provide the
	<i>Owner</i> , through the <i>Consultant</i> , with any such bonds that may be required."

PART 12 OWNER TAKEOVER

GC 12.1 READY-FOR-TAKEOVER

SC55.1	12.1.1	Delete GC 12.1.1 in its entirety and replace it with the following: "12.1.1 Ready-for-Takeover shall be achieved when all of the following has occurred, as verified and approved by the Owner: .1 Substantial Performance of the Work has been achieved, as certified by the Consultant; .2 a permit for occupancy of the Place of the Work has been obtained from the authorities having jurisdiction; .3 the Work to be performed under the Contract has satisfied the requirements for
		deemed completion in accordance with Section 2(3) of the Construction Act,
		.4 final cleaning and waste removal, as required by the <i>Contract Documents</i> ;
		.5 the <i>Contractor</i> has delivered to the <i>Consultant</i> and the <i>Owner</i> all inspection certificates from authorities having jurisdiction with respect to any component of the <i>Work</i> which has been completed;
		.6 subject only to GC 12.1.2, the entire <i>Work</i> has been completed to the requirements of the <i>Contract Documents</i> , including completion of all items on the punch list prepared at the time of <i>Substantial Performance of the Work</i> and the <i>Work</i> is being used for its intended purpose, and is so certified by the <i>Consultant</i> ;
		.7 subject only to GC 12.1.2, the <i>Contractor</i> has submitted to the <i>Owner</i> and the <i>Consultant</i> in a collated and organized matter, all <i>Close-Out Documentation</i> and any other materials or documentation required by the <i>Contract Documents</i> ;
		.8 subject only to GC 12.1.2, all <i>Products</i> , systems and components of the <i>Project</i> have been commissioned and certified for operation and accepted by the <i>Owner</i> and <i>Consultant</i> , and
		9 subject only to GC 12.1.2, the <i>Contractor</i> has submitted to the <i>Owner</i> and the <i>Consultant</i> full and complete as-built drawings and <i>Specifications</i> revised by the <i>Contractor</i> to reflect the as-built state of the <i>Work</i> , clearly showing changes to the <i>Drawings</i> and <i>Specifications</i> from the original <i>Contract Documents</i> , all of which have been approved by the <i>Owner</i> acting reasonably."
SC55.2	12.1.2	Delete GC 12.1.2 in its entirety and <u>replace</u> it with the following:

		"12.1.2 The Owner may, in its sole, absolute, and unfettered discretion, waive compliance with a requirement, or a part thereof, for achieving Ready-for-Takeover set out in GC 12.1.1.6 to 12.1.1.9 (inclusive). Where the Owner exercises the discretion afforded under this GC 12.1.2, the Contractor shall be required to comply with GC 5.5.1.2 as part of its application for final payment and the Owner and the Contractor, in consultation with the Consultant, shall establish a reasonable date for completing the Work."
SC55.3	12.1.3	DeleteGC 12.1.3 in its entirety and replace"12.1.3When the Contractor considers the Work Ready-for-Takeover, it shall submit a written application to the Owner and the Consultant for review."
SC55.4	12.1.4	In GC 12.1.4, <u>delete</u> the words "list and" from the second line.
SC55.5	12.1.5	Delete GC 12.1.5 in its entirety and <u>replace</u> it with the following: "12.1.5 Following the confirmation of the date of <i>Ready-for-Takeover</i> by the <i>Consultant</i> and as confirmed by the <i>Owner</i> , the <i>Contractor</i> may submit a final application for payment in accordance with GC 5.5 – FINAL PAYMENT."
SC55.6	12.1.6	Delete GC 12.1.6 in its entirety.

GC 12.2 EARLY OCCUPANCY

SC56.1	GC	Delete GC 12.2 – EARLY OCCUPANCY BY THE OWNER in its entirety, including all
	12.2	subparagraphs thereunder and <u>replace</u> it with the following:
		"12.2.1 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 the Work may not have reached Substantial Performance of the Work. Where the Work extends beyond the Contract Time, progress and completion of the Work shall not unduly interfere with the delivery of scheduled school programs. 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 Project nor shall it relieve the Contractor of any of its obligations under the Contract.
		12.2.2 Whether the Project contemplates Work by way of renovations in buildings which will be in use or be occupied during the course of the Work or where the Project involves Work that is adjacent to a structure which is in use or is occupied, 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 and to avoid conditions likely to propagate mould or fungus of any kind and all other steps reasonably necessary to promote and maintain the safety and comfort of the users and occupants of such structures or adjacent structures."

GC 12.3 WARRANTY

SC57.1	12.3.1	Delete from the first line of paragraph 12.3.1 the words "one year" and replace it with the words
		"two years"
	12.3.2	<u>Delete</u> from the first line of paragraph 12.3.2 the word "The" and <u>replace</u> it with the words "Subject to GC 1.1.3, the"
	12.3.7 to	Add new paragraphs 12.3.7 to 12.3.12 as follows:
	12.3.12	"12.3.7 Where required by the <i>Contract Documents</i> , the <i>Contractor</i> shall provide a maintenance
		bond as security for the performance of the <i>Contractor's</i> obligations as set out in GC 12.3 WARRANTY.
		12.3.8 The <i>Contractor</i> shall provide fully and properly completed and signed copies of al warranties and guarantees required by the <i>Contract Documents</i> , containing:
		.1 the proper name of the <i>Owner</i> ;
		.2 the proper name and address of the <i>Project</i> ;
		.3 the date the warranty commences, which shall be at the " <i>Ready-for-Takeover</i> " unless otherwise agreed upon by the <i>Consultant</i> in writing.
		.4 a clear definition of what is being warranted and/or guaranteed as required by the <i>Contract Documents</i> ; and
		.5 the signature and seal (if required by the governing law of the <i>Contract</i>) of the company issuing the warranty, countersigned by the <i>Contractor</i> .
		12.3.9 Should any <i>Work</i> need to be repaired or replaced during the time period for which it is covered by the specified warranty, a new warranty shall be provided under the same conditions and for the same period as specified herein before. The new warranty shall commence at the completion of the repair or replacement.
		12.3.10 The <i>Contractor</i> shall ensure that its <i>Subcontractors</i> are bound to the requirements of GC 12.3 – WARRANTY for the <i>Subcontractor's</i> portion of the <i>Work</i> .
		12.3.11 The <i>Contractor</i> shall ensure that all warranties, guarantees or other obligations for <i>Work</i> , services or <i>Products</i> performed or supplied by any <i>Subcontractor</i> , <i>Supplier</i> or other person in connection with the <i>Work</i> are obtained and available for the direct benefit of the <i>Owner</i> . In the alternative, the <i>Contractor</i> shall assign to the <i>Owner</i> al warranties, guarantees or other obligations for <i>Work</i> , services or <i>Products</i> performed or supplied by any <i>Subcontractor</i> , <i>Supplier</i> or other person in connection with the <i>Work</i> 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 <i>Owner</i> under the <i>Contractor</i> .
		12.3.12 The <i>Contractor</i> shall commence or correct any deficiency within 2 <i>Working Days</i> after receiving a <i>Notice in Writing</i> from the <i>Owner</i> or the <i>Consultant</i> , and shall complete the <i>Work</i> as expeditiously as possible, except in the case where the deficiency prevents maintaining security or where basic systems essential to the ongoing business of the <i>Owner</i> and/or its tenants cannot be maintained operational as designed. In those circumstances all necessary corrections and/or installations of temporary replacements shall be carried out immediately as an emergency service. Should the <i>Contractor</i> fail to provide this emergency service within 8 hours of a request being made during the

normal business hours of the Contractor, the Owner is authorized, notwithstanding GC
3.1, to carry out all necessary repairs or replacements at the Contractor's expense."

PART 13 INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

SC58.1	GC 13.1	Delete GC	13.1 – INDEMNIFICATION in its entirety and <u>replace</u> it with the following:
		"13.1.1	The <i>Contractor</i> shall indemnify and hold harmless the <i>Owner</i> , its parent, subsidiaries and affiliates, their respective partners, trustees, officers, directors, agents and employees and the <i>Consultant</i> from and against any and all claims, liabilities, expenses, demands, losses, damages, actions, costs, suits, or proceedings (hereinafter called "claims"), whether in respect of claims suffered by the <i>Owner</i> or in respect of claims by third parties, that directly or indirectly arise out of, or are attributable to, the acts or omissions of the <i>Contractor</i> , its employees, agents, <i>Subcontractors, Suppliers</i> or any other persons for whom it is in law responsible (including, without limitation, claims that directly or indirectly arise out of, or are attributable to, loss of use or damage to the <i>Work</i> , the <i>Owner's</i> property or equipment, the <i>Contractor's</i> property or equipment or requipment or property adjacent to the <i>Place of the Work</i> or death or injury to the <i>Contractor's</i> personnel).
		13.1.2	The Owner shall indemnify and hold the Contractor, its agents and employees harmless from and against claims, demands, losses, costs, damages, actions, suits or proceedings arising out of the Contractor's performance of the Contract which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the Place of the Work.
		13.1.3	The provisions of GC 13.1 - INDEMNIFICATION shall survive the termination of the <i>Contract,</i> howsoever caused and no payment or partial payment, no issuance of a final certificate of payment and no occupancy in whole or in part of the <i>Work</i> shall constitute a waiver or release of any of the provisions of GC 13.1
		13.1.4	Notwithstanding the provisions of GC1.1 - CONTRACT DOCUMENTS, GC 1.1.6, GC13.1 - INDEMNIFICATION shall govern over the provisions of GC 1.3.1 of GC1.3 – RIGHTS AND REMEDIES."

GC 13.2 WAIVER OF CLAIMS

13.2.1	In paragraph 13.2.1 in the third line after the word "limitation" <u>add</u> the words "claims for delay pursuant to GC 6.5 DELAYS"
	-and-
	add the words "(collectively "Claims")" after "Ready-for-Takeover" in the fourth line.
13.2.1.1	In subparagraph 13.2.1.1, in each instance change the word "claims" to "Claims" and change the word "claim" to "Claim".

13.2.1.2	In subparagraph 13.2.1.2 change the word "claims" to "Claims".
13.2.1.3	Delete subparagraph 13.2.1.3 in its entirety.
13.2.1.4	In paragraph 13.2.1.4 change the word "claims" to "Claims".
13.2.2.1	In paragraph 13.2.2.1 <u>delete</u> the words "in paragraphs 13.2.1.2 and 13.2.1.3" and <u>replace</u> them with "in paragraph 13.2.1.2"
	-and-
	change the word "claims" to "Claims" in both instances and change the word "claim" to "Claim".
13.2.3	Delete paragraph 13.2.3 in its entirety.
13.2.4	Delete paragraph 13.2.4 in its entirety.
13.2.5	Delete paragraph 13.2.5 in its entirety.
 13.2.6	In paragraph 13.2.6 change the word "claim" to "Claim" in all instances in the paragraph.
 13.2.8	In paragraph 13.2.8 change "The party" to "The Contractor
	-and-
	change the word "claim" to "Claim" in all instances in the paragraph.
13.2.9	In paragraph 13.2.9 <u>delete</u> the words "under paragraphs 13.2.1 or 13.2.3" and <u>replace</u> them with "under paragraph 13.2.1"
	-and-
	change both instances of the words "the party" to "the <i>Contractor</i> ". Change the word "claim" to "Claim" in all instances in the paragraph.

NEW PART 14 OTHER PROVISIONS

4.1	Add new PART 14 – OTHER PROVISIONS as follows:
	"PART 14 OTHER PROVISIONS
	GC 14.1 OWNERSHIP OF MATERIALS
4	.1

	14.1.1 Unless otherwise specified, all materials existing at the <i>Place of the Work</i> at the time of execution of the <i>Contract</i> shall remain the property of the <i>Owner</i> . All <i>Work</i> and <i>Products</i> delivered to the <i>Place of the Work</i> by the <i>Contractor</i> shall be the property of the <i>Owner</i> . The <i>Contractor</i> shall remove all surplus or rejected materials as its property when notified in writing to do so by the <i>Consultant</i> ."
14.2	Add new GC 14.2 – CONSTRUCTION LIENS as follows:
	"GC 14.2 LIENS
	14.2.1 Notwithstanding any other provision in the <i>Contract</i> , the <i>Consultant</i> shall not be obligated to issue a certificate, and the <i>Owner</i> shall not be obligated to make payment, subject to the <i>Owner</i> 's requirement to issue a <i>Notice of Non-Payment</i> (Form 1.1) to the <i>Contractor</i> , if at the time such certificate or payment was otherwise due:
	 .1 a claim for lien has been registered against the <i>Project</i> lands by a <i>Subcontractor</i> or a <i>Supplier</i> that has not been vacated or discharged by the <i>Contractor</i> in accordance with the requirements of this <i>Contract</i>, or
	.2 if the <i>Owner</i> or a mortgagee of the <i>Project</i> lands has received a written notice of a lien that has not been resolved by the <i>Contractor</i> through the posting of security or otherwise.
	14.2.2 In the event a construction lien arising from the performance of the <i>Work</i> is registered or preserved against the <i>Project</i> lands by a <i>Subcontractor</i> or a <i>Supplier</i> , or a written notice of a lien is given or a construction lien action is commenced against the <i>Owner</i> by a <i>Subcontractor</i> or a <i>Supplier</i> , then the <i>Contractor</i> shall, at its own expense:
	.1 within 10 calendar days of registration of the construction lien, vacate or discharge the lien from title to the premises (i.e. the <i>Place of the Work</i>). If the lien is merely vacated, the <i>Contractor</i> shall, if requested, undertake the <i>Owner</i> 's defence of any subsequent action commenced in respect of the lien, at the <i>Contractor</i> 's sole expense;
	.2 within 10 calendar days of receiving notice of a written notice of a lien, post security with the Ontario Superior Court of Justice so that the written notice of a lien no longer binds the parties upon whom it was served; and
	.3 satisfy all judgments and pay all costs arising from such construction liens and actions and fully indemnify the <i>Owner</i> against all costs and expenses arising from same, including legal costs on a full indemnity basis.
	14.2.3 In the event that the <i>Contractor</i> fails or refuses to comply with its obligations pursuant to paragraph 14.2.2, the <i>Owner</i> shall, at its option, be entitled to take all steps necessary to address any such construction liens including, without limitation and in addition to the <i>Owner's</i> rights under paragraph 13.2.4, the posting of security with the Ontario Superior Court of Justice to vacate the claim for lien from title to the <i>Project</i> lands, and in so doing will be entitled to a full indemnity from the <i>Contractor</i> for all legal fees, security,

 disbursements and other costs incurred and will be entitled to deduct same fro amounts otherwise owing to the <i>Contractor</i>. 4.2.4 In the event that any <i>Subcontractor</i> or <i>Supplier</i> registers any claim for lien with respect to all or part of the <i>Place of Work</i>, the <i>Owner</i> shall have the right to withhold, in addition to the statutory holdback, the full amount of said claim for lien plus either: (a) \$250,00 if the claim for lien is in excess of \$1,000,000 or (b) 25% of the value of the claim for lien
 certificate of action in respect of that lien, in accordance with Section 44 of the Act, paying into court as security the amount withheld. 4.2.5 Nothing in this GC 14.2 serves to preclude the Contractor from preserving and perfecting its lien in the event of non-payment by the Owner."

APPENDIX 1 to the Supplementary Conditions

Project-specific requirements for a "Proper Invoice"

To satisfy the requirements for a *Proper Invoice*, the following criteria, as may be applicable in each case, must be included with the *Contractor's* application for payment:

- .1 the written bill or request for payment must be in writing;
- .2 the Contractor's name and current address;
- .3 the *Contractor*'s HST registration number;
- .4 the date the application for payment was prepared by the *Contractor*;
- .5 the period of time in which the services or materials were supplied to the *Owner*;
- .6 the purchase order number provided by the *Owner*;
- .7 reference to the provisions of the *Contract* under which payment is being sought (e.g. GC 5.3 PAYMENTS for progress payments, GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK GC 5.5 FINAL PAYMENT for final payment, etc.);
- .8 a description, including quantities where appropriate, of the services or materials, or a portion thereof, that were supplied and form the basis of the *Contractor's* request for payment;
- .9 the amount the *Contractor* is requesting to be paid by the *Owner*, set out in a statement based on the schedule of values approved under GC 5.2.4, separating out any statutory or other holdbacks, set-offs and HST;
- .10 a sworn Statutory Declaration in the form CCDC 9A-2018, only for second and subsequent progress payments;
- .11 a current Workplace Safety Insurance Board clearance certificate;
- .12 a pre-approved schedule of values, supplied by the *Contractor*, for Divisions 1 through 14 of the *Specifications* (or equivalent Construction Specifications Institute Masterformat) of the *Work*, aggregating the total amount of the *Contract Price*, including all supporting invoicing;
- .13 a separate pre-approved schedule of values, supplied by each *Subcontractor*, for each of Division 15, 16, and 17 of the *Specifications* (or equivalent Construction Specifications Institute Masterformat) of the *Work*, aggregating the total amount of the *Contract Price*, including all supporting invoicing;

- .14 invoices and other supporting documentation for all claims against the cash allowance;
- .15 a current, acceptable, and up to date *Construction Schedule Update*;
- .16 if requested by the Owner, a current and valid certificate(s) of insurance as required under GC 11.1 INSURANCE;
- .17 the name, title, telephone number and mailing address of the person at the place of business of the *Contractor* to whom payment is to be directed;
- .18 a current, up to date, and approved *Shop Drawing* log;
- .19 in the case of the *Contractor's* application for final payment, in addition to the foregoing requirements (as applicable):
 - (a) any *Close-Out Documentation*, together with complete and final as-built drawings;
 - (b) the *Contractor's* written request for release of the deficiency holdback, including a statement that no written notices of lien have been received by it;
 - (c) the *Contractor's* written certification that there are no outstanding claims, pending claims or future claims from the *Contractor* or their *Subcontractors* or *Suppliers*; and
 - (d) sufficient evidence of the *Contractor's* compliance with GC 3.11.

END OF AMENDMENTS TO CCDC 2 - 2020

DIVISION 01 - GENERAL REQUIREMENTS

01 14 00 – Work Restrictions

1.0 GENERAL

1.1. SECTION INCLUDES

- .1 Connecting to existing services
- .2 Special scheduling requirements

1.2. RELATED SECTIONS

- .1 Section 01 53 00 Temporary Construction.
- .2 Section 01 33 00 Submittal Procedures.
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3. EXISTING SERVICES

- .1 Notify Owner and Consultant and utility companies of intended interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give Consultant and Owner forty-eight (48) hours of notice for necessary interruption of mechanical or electrical service throughout the course of work.
 - .1 Keep duration of interruptions minimum.
 - .2 Perform interruptions after normal working hours of occupants, preferably on weekends.
- .2 Provide for vehicular, pedestrian and personnel traffic.
- .3 Construct barriers in accordance with Section 01 53 00.

1.2. AFTER HOURS WORK

- .1 Schedule Work with school staff through the Board's contact so as to limit disruption to school operations. Include for any overtime, to ensure orderly and continuous progression of Work and operation of school.
- .2 Direct calls from Contractors to Board staff to adjust alarms and to arrange for access will not be accepted. All correspondence must be through the Project Manager.
- .3 Arrange 48 hours in advance with the Board to obtain an access card and adjust security alarms for after hours Work.

- .4 Bidders are cautioned that the Board will be compensated by the Contractor for false alarms. Any costs associated with each false alarm will be levied against the Contractor for false fire alarm activation or security alarm activation. These costs may include, but are not limited to:
 - .1 Fines or penalties imposed by the local Fire Services,
 - .2 Fines or penalties imposed by the local Police Services,
 - .3 Overtime costs borne by the Board.
- .5 Contractors are responsible for ensuring doors and windows are secured prior to leaving school.
- .6 Unless specifically stated otherwise school activities take precedence over Contractor's activities.

1.3. SPECIAL REQUIREMENTS

- .1 Schedule and perform work in occupied areas to the Board Representative's approval.
- .2 Schedule and perform noise generating work to the Board Representative's approval.
- .3 Submit schedule of special requirements or disruptions in accordance with Section 01 33 00.
- .4 All Contractor personnel are restricted to the job site and necessary access routes. No personnel shall visit other areas or buildings without specific authorization.

END OF SECTION

01 19 00 – Specifications and Documents

1.0 GENERAL

1.1. RELATED DOCUMENTS

.1 This section describes requirements applicable to all sections within Divisions 02 to 49.

1.2. WORDS AND TERMS

.1 Conform to definitions and their defined meanings in the Agreement and Definitions portion of CCDC 2 for Supplementary Words and Terms listed in Section 00 56 13.

1.3. COMPLEMENTARY DOCUMENTS

- .1 Generally, drawings indicate graphically, the dimensions and location of components and equipment. Specifications indicate specific components, assemblies, and identify quality.
- .2 Drawings, specifications, diagrams and schedules are complementary, each to the other, and what is required by one, to be binding as if required by all.
- .3 Should any conflict or discrepancy appear between documents, which leaves doubt as to the intent or meaning, apply the Precedence of Documents article below or obtain guidance or direction from Consultant.
- .4 Examine all discipline drawings, specifications, schedules, diagrams and related Work to ensure that Work can be satisfactorily executed.
- .5 All specification sections of the Project Manual and Drawings are affected by requirements of Division 01 sections.

1.4. PRECEDENCE OF DOCUMENTS

- .1 In the event of conflict within and between the Contract Documents, the order of priority within specifications and drawings for this project are from highest to lowest:
 - .1 the Agreement and Definitions between the Owner and the Construction
 - .2 the Defined Terms, Definitions;
 - .3 Supplementary Conditions;
 - .4 the General Conditions;
 - .5 Sections of Division 01 of the specifications;
 - .6 Technical specifications Sections of Divisions 02 through 49 of the specifications.

- .7 Schedules and Keynotes:
 - .1 Material and finishing schedules within the specifications, then;
 - .2 Material and finishing schedules on drawings, then;
 - .3 Keynotes and definitions thereto, then;
- .8 Drawings:
 - .1 Drawings of larger scale shall govern over those of smaller scale of the same date, then;
 - .2 Dimensions shown on drawings shall govern over dimensions scaled from drawings, then;
 - .3 Location of utility outlets indicated on architectural detail drawings takes precedence over positions or mounting heights located on mechanical or electrical Drawings.
- .9 Later dated documents shall govern over earlier documents of the same type.

1.5. SPECIFICATION GRAMMAR

- .1 Specifications are written in the imperative command mode, in an abbreviated form.
- .2 Imperative language of the technical sections is always directed to the Contractor identified as a primary constructor, as sole executor of the Contract, unless specifically noted otherwise.
 - .1 This form of imperative command mode statement requires the primary constructor to perform such action or Work.
 - .2 Perform all requirements of the Contract Documents whether stated imperatively or otherwise.
- .3 Division of the Work among subcontractors, suppliers, or others is solely the prime contractor's responsibility. The Consultant(s) and specification authors assume no responsibility to function or act as an arbiter to establish subcontract scope or limits between sections or divisions of Work.

END OF SECTION

01 21 00 – Allowances

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 45 00 Quality Control.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. GENERAL

- .1 Allowances included herein are for items of Work which could not be fully quantified prior to Bidding.
- .2 Expend each allowance as directed by the Consultant. Work covered by allowances shall be performed for such amounts and by such persons as directed by Consultant.
- .3 Funds will be expended by means of Cash Allowance allocations and contingency allowance allocations.
- .4 Progress payments for Work and Products authorized under allowances will be made in accordance with the payment terms set out in the Conditions of the Contract.
- .5 The Contractor shall bid the work involved and submit the Bids received to the Consultant and the Board, for approval
- .6 The Contractor shall submit 3 bids unless directed by the Board.

1.3. CASH ALLOWANCES

- .1 Cash allowances, cover the net cost to the Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage, installation where indicated, and other authorized expenses incurred in performing the Work. Cash allowances shall not be included by a subcontractor in the amount for their subcontract work.
- .2 Supply only allowances shall include:
 - .1 Net cost of Products.
 - .2 Delivery to Site.
 - .3 Applicable taxes and duties, excluding HST.
- .3 Supply and install allowances shall include:
 - .1 Net cost of Products.
 - .2 Delivery to Site.
 - .3 Unloading, storing, handling or products on site.

- .4 Installation, finishing and commissioning of products.
- .5 Applicable taxes and duties, excluding HST.
- .4 Inspection and testing allowances shall include:
 - .1 Net cost of inspection and testing services.
 - .2 Applicable taxes and duties, excluding HST.
- .5 Other costs related to work covered by cash allowances are not covered by the allowance, but shall be included in the Contract Price.
- .6 Where costs under a cash allowance exceed the amount of the allowance, the Contractor will be compensated for any excess incurred and substantiated plus an allowance for overhead and profit as set out in the Contract Documents.
- .7 Progress payments on accounts of work authorized under cash allowances shall be included in the monthly certificate for payment.
- .8 Submit, before application for final payment, copies of all invoices and statements from suppliers and subcontractors for work which has been paid from cash allowances.

1.4. ALLOWANCES SCHEDULE

Include in the Bid Price a cash allowance of to address the cost of the following items:

1	Designated Substance Removal. (Additional removal not already identified in the ACM Summary report)	\$9,000
2	Independent Testing & Inspection (cementitious spray fireproofing etc) (As directed by the Consultant)	\$1,000.00
	Total of All Allowances:	\$10,000.00

END OF SECTION

01 31 00 – Project Managing and Coordination

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 32 00 Construction Progress Documentation.
- .2 Section 01 33 00 Submittal Procedures.
- .3 Section 01 53 00 Temporary Construction Facilities
- .4 Section 01 61 00 Product Requirements
- .5 Section 01 78 10 Closeout Submittals and Requirements
- .6 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. PROJECT COORDINATION

- .1 Perform coordination of progress schedules, submittals, use of site, temporary utilities, construction facilities and construction Work, with progress of Work of other contractors, under instructions of the Consultant.
- .2 The Contractor shall have total control of the Work and shall effectively direct and supervise the Work so as to ensure conformity with the Contract Documents and within the Contract Time.
- .3 The Contractor shall be solely responsible for the construction means, methods, sequences, and procedures and for coordinating parts of the Work under the contract.
- .4 Coordinate progress of the Work, progress schedules, submittals, use of site, temporary utilities, construction facilities, safety regulations and fire protection, as per authorities having jurisdiction codes.
- .5 The Consultant has the authority to stop the Work:
 - .1 whenever they observe or are made aware of unsafe conditions.
 - .2 whenever it is deemed necessary to protect the interests of the Board,
 - .3 whenever materials or workmanship are in contravention to the Contract Documents.

1.3. SITE SUPERVISOR AND PROJECT MANAGER

- .1 If requested, the Contractor shall provide the Consultant, in writing, the name of the Project Manager and Site Supervisor, and proof of competent experience in similar projects.
- .2 Performance of the Contractors Project Manager and Site Supervisor

- .1 If the Board and or the Consultant become concerned with any of: Site Safety, Project Schedule, or general compliance with the tender documents due to the performance of the Site Supervisor or Project Manager, the Consultant and or the Board will identify the concerns in writing to the Contractor.
- .2 The Contractor shall respond in writing to the Board and Consultant with a corrective action for each item within 24 hours.
- .3 If it is found that any of the corrections are not immediately implemented, the Consultant and the Board shall meet with the General Contractor to review the credentials including curriculum vitae and comparable experience of a replacement Site Supervisor and or Project Manager proposed by that Contractor.
- .4 All outstanding concerns initiating the replacement of the personnel will be immediately addressed to the satisfaction of the Consultant and the Board.
- .3 If the Board and or the Consultant become concerned with site safety, project schedule or general compliance with the tender documents due to the performance of the Site Supervisor or the Project Manager, the Consultant or the Board will issue the concerns in writing to the Contractor. The Contractor shall respond in writing within 24 hours to the Consultant and the Board. If any of the corrections are not immediately implemented, the Consultant or the Board will schedule a meeting with the Consultant, General Contractor and the Board. At this meeting the Contractor will introduce the new Project Manager, and or Site Supervisor and present the Curriculum Vitae for each showing proof of comparable experience in similar projects. The Contractor will then address the outstanding concerns to the satisfaction of the Consultant and the Board.
- .4 The Project Manager, and/or Site Supervisor shall not be replaced by the Contractor without prior written approval from the Board and the Consultant.

1.4. PERMITS

.1 The Board will obtain & pay for all building permits, but the Contractor is responsible for all other permits, including electrical inspection and fire alarm verification.

1.5. CONSTRUCTION DOCUMENTS

 The Consultant will provide the Contractor with PDF copies of both the drawings and the specification and CAD format files of the drawings at no charge to the Contractor. All printing will be at the cost of the Contractor including the AS-BUILT documents.

1.6. PRE-CONSTRUCTION MEETING

- .1 Immediately prior to construction and upon notification by the Consultant of a time and date, the Contractor shall attend the preconstruction meeting at a location as determined by the Consultant, along with authoritative representatives of certain key subcontractors as specifically indicated in the conference notice. Agenda to include following:
 - .1 Appointment of official representative of participants in Work.
 - .2 Project communications procedures
 - .3 Schedule of Work, progress scheduling (including long lead items, cash allowance items) as specified in Section 01 32 00.
 - .4 Schedule of submission of shop drawings, samples, colour chips as specified in Section 01 33 00.
 - .5 Requirements for temporary facilities, washrooms, refuse bin, site sign, offices, storage sheds, utilities, fences as specified in Section 01 53 00.
 - .6 Delivery schedule of specified equipment as specified in Section 01 61 00.
 - .7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements.
 - .8 Owner furnished products.
 - .9 Record drawings as specified in Section 01 78 10.
 - .10 Maintenance material and data as specified in Section 01 78 10.
 - .11 Take-over procedures, acceptance, and warranties as specified in Section 01 78 10.
 - .12 Monthly progress claims, administrative procedures, photographs, and holdbacks.
 - .13 Appointment of inspection and testing agencies
 - .14 Insurances and transcript of policies.
 - .15 Review Vendor Performance Evaluation for the Contractor and Subcontractors
 - .16 Hot Work Permit Process
 - .17 Security Access, Fire Alarm shutdown procedures
 - .18 Any other items as required by the owner, contractor, or Consultant.

1.7. ON-SITE DOCUMENTS

- .1 Maintain at job site at all times, one copy (written or digital) each of the following:
 - .1 Complete set of Contract drawings.
 - .2 Specifications.
 - .3 All Addenda.

- .4 Site Instructions and Sketches
- .5 Reviewed shop drawings and samples.
- .6 Change Orders and Contemplated Change Orders.
- .7 Other modifications to Contract.
- .8 Site Instructions
- .9 Colour schedule
- .10 Hardware List
- .11 Field test reports.
- .12 Copy of approved Work schedule.
- .13 Manufacturers' installation and application instructions.
- .14 Progress reports and meeting minutes.
- .15 Approved building permit documents.
- .16 Copy of current Ontario Building Code and National Building Code.
- .17 CSA Standard, CGSB Specifications. ASTM Documents and other standards referenced to in the specifications.
- .18 Labour conditions and wage schedules.
- .19 Applicable current editions of municipal regulations and by-laws. Current building codes, complete with addenda bulletins applicable to the Place of the Work.

1.8. SCHEDULES

- .1 Within three weeks following the award of the Contract, submit a detailed, trade by trade progress schedule for the work in a bar chart form acceptable to the Consultant.
- .2 Submit preliminary construction progress schedule as specified in Section 01 32 00 to Consultant coordinated with Consultant's project schedule.
- .3 After review, revise and resubmit schedule to comply with revised project schedule.
- .4 During progress of Work revise and resubmit as directed by the Consultant.
- .5 Provide schedule updates every month with request for Payment, for duration of Contract.

1.9. CONSTRUCTION PROGRESS MEETINGS

- .1 Prior to the commencement of the Work, the Contractor together with the Consultant shall mutually agree to a sequence for holding regular "on site meetings".
- .2 The Contractor will organize site meetings. Ensure persons, whose presence is required, are present and relative information is available to allow meetings to be conducted efficiently.

- .3 Contractor, major subcontractors and consultants involved in Work are to be in attendance.
- .4 Post and forward copies of progress schedules for advice of Subcontractors, Owner and Consultant.
- .5 Notify parties minimum five (5) days prior to meetings.
- .6 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within two (2) days after meeting.
- .7 Agenda to include following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.
 - .3 Field observations, problems, conflicts.
 - .4 Problems which impede construction schedule.
 - .5 Review of off-site fabrication delivery schedules.
 - .6 Corrective measures and procedures to regain projected schedule.
 - .7 Revision to construction schedule.
 - .8 Progress schedule, during succeeding work period.
 - .9 Review submittal schedules: expedite as required.
 - .10 Maintenance of quality standards.
 - .11 Review proposed changes for effect on construction schedule and on completion date.
 - .12 Review site security issues.
 - .13 Other business.
- .8 Schedule additional meetings, to expedite progress, should work require it.
- .9 Keep Owner and Consultant informed of progress, of delays and potential delays during all stages of Work. Do everything possible to meet progress schedule
- .10 Schedule and administer pre-installation meetings when specified in sections and when required to coordinate related or affected Work.

1.10. SUBMITTALS

- .1 Prepare and issue submittals to Consultant for review.
- .2 Submit preliminary Shop Drawings, product data and samples for review for compliance with Contract Documents; for field dimensions and clearances, for relation to available space, and for relation to Work of other contracts. After review, revise and resubmit for transmittal to Consultant.
- .3 Submit requests for payment for review, and for transmittal to Consultant.
- .4 Submit requests for interpretation of Contract Documents, and obtain instructions through Consultant.

- .5 Process substitutions through Consultant.
- .6 Process change orders through Consultant.
- .7 Deliver closeout submittals for review and preliminary inspections, for transmittal to Consultant.

1.11. RECORD (AS-BUILT) DOCUMENTS AND SAMPLES

- .1 Procedures for record as-built documents and samples as specified in Section 01 78 10.
- .2 Keep as-built documents and samples available for inspection by the Consultant.

1.12. CLOSEOUT PROCEDURES

- .1 Take-over procedures, acceptance, and warranties as specified Section 01 78 10
- .2 Notify Consultant and Board when Work is considered ready for Substantial Performance.
- .3 Accompany Consultant and Board on preliminary inspection to determine items listed for completion or correction.
- .4 Comply with Consultant's instructions for correction of items of Work listed in executed certificate of Substantial Performance.
- .5 Notify Consultant of instructions for completion of items of Work determined in Consultant's final inspection.

END OF SECTION

01 32 00 – Construction Progress Documentation

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 33 00 Submittal Procedures.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. SCHEDULES

- .1 Within seven 7 days following the award of the Contract, submit a detailed cash flow chart broken down on a monthly basis, in a manner acceptable to the Consultant. Cash flow chart shall indicate anticipated Contractor's monthly progress billings from commencement of work until completion.
- .2 Update cash flow chart whenever changes occur to scheduling and in manner and at times satisfactory to Consultant.
- .3 Submit schedule of values at least fourteen (14) days before the first application
- .4 Submit schedules as follows:
 - .1 Submittal Schedule for Shop Drawings and Product Data.
 - .2 Submittal Schedule for Samples.
 - .3 Submittal Schedule for timeliness of Owner-furnished Products.
 - .4 Product Delivery Schedule.
 - .5 Cash Allowance Schedule for acquiring Products and Installation.
 - .6 Shutdown or closure activity.

1.3. CONSTRUCTION PROGRESS SCHEDULING

- Submit initial schedule to the Consultant and the Board in duplicate within seven
 (7) days after following the award.
- .2 Schedule Format.
 - .1 Prepare schedule in form of a horizontal bar chart.
 - .2 Split horizontally for projected and actual performance.
 - .3 Provide horizontal time scale identifying each Working Day of each week.
- .3 Schedule Submission.
 - .1 Consultant will review schedule and return reviewed copies within five (5) days after receipt.
 - .2 Submit schedules in electronic format, forward to the Consultant and Owner as a pdf. file.

- .3 Resubmit finalized schedule within five (5) days after return of review copy.
- .4 Submit revised progress schedule with each application for payment.
- .5 Distribute copies of revised schedule to:
 - .1 Job site office.
 - .2 Subcontractors.
 - .3 Other concerned parties.
- .6 Instruct Consultant to report to Contractor within ten (10) days, any problems anticipated by timetable shown in schedule.
- .4 Submit revised schedules with Application for Payment, identifying changes since previous version.
- .5 Select either of the following paragraphs to identify the type and format of schedule required.
- .6 Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- .7 Indicate estimated percentage of completion for each item of Work at each submission.
- .8 Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.
- .9 Include dates for commencement and completion of each major element of construction:
 - .1 Site clearing.
 - .2 Site utilities.
 - .3 Foundation Work.
 - .4 Structural framing.
 - .5 Subcontractor Work.
 - .6 Equipment Installations.
 - .7 Finishes.
- .10 Indicate projected percentage of completion of each item as of first day of month.
- .11 Indicate progress of each activity to date of submission schedule.
- .12 Indicate changes occurring since previous submission of schedule:
 - .1 Major changes in scope.
 - .2 Activities modified since previous submission.
 - .3 Revised projections of progress and completion.
 - .4 Other identifiable changes.
- .13 Provide a written report to define:

- .1 Problem areas, anticipated delays, and impact on schedule.
- .2 Corrective action recommended and its effect.
- .3 Effect of changes on schedules of other subcontractors.

1.4. PROGRESS PHOTOGRAPHS

- .1 Digital Photography:
 - .1 Submit electronic copy of progress photographs of project, Digital format, minimum 300 in megapixel resolution.
 - .2 Identification: Name and number of project and date of exposure indicated.
 - .3 Provide both interior and exterior photographs.
 - .4 Number of Viewpoints: Locations of viewpoints determined by Consultant.
 - .5 Frequency: Monthly with progress statement. Provide the required number of pictures to accurately reflect the submitted progress percentage.

1.5. SHOP DRAWING SUBMITTAL SCHEDULE

- .1 Include schedule for submitting shop drawings, product data, samples
- .2 Indicate dates for submitting, review time, resubmission time, and last date for meeting fabrication schedule.
- .3 Include dates when shop drawings and samples will be required for Ownerfurnished products.
- .4 Include dates when reviewed submittals will be required from Consultant.
- .5 Provide final signed off copies of the shop drawings in digital format to the Board.

END OF SECTION

01 33 00 – Submittal Procedures

1.0 GENERAL

1.1 RELATED SECTIONS

- 1. Section 01 32 00 Construction Progress Documentation.
- 2. Section 01 78 10 Closeout Submittals.
- This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.1 ADMINISTRATIVE

- Submit to Consultant submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- 2. Work affected by submittal shall not proceed until review is complete.
- 3. Present Shop Drawings, product data, samples and mock-ups in Metric (SI) units. Shop drawings containing imperial measurements will be rejected.
- 4. Where items or information is not manufactured or produced in SI Metric units, converted values within the metric measurement to the next largest imperial size available. Tolerances of .0625 acceptable.
- 5. Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents.
- Submittals not stamped, signed, dated, identified as to specific project, and attesting to their being reviewed will be returned without being examined and shall be considered rejected.
- 7. Shop drawings which require the approval of a legally constituted authority having jurisdiction shall be submitted by Contractor to such authority for approval. Such shop drawings shall receive final approval of authority having jurisdiction before Consultant's final review.
- 8. No work, requiring a shop drawing submission, shall be commenced until the submission has received Consultant's final review. Only shop drawings bearing Consultant's review stamp are to be sent and used on the job site.
- 9. Notify Consultant, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

- 10. Shop drawings shall not contain substituted materials unless such substitutions have been requested in advance and approved by Consultant.
- 11. Verify field measurements and affected adjacent Work are coordinated.
- 12. Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submittals.
- 13. Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant review.
- 14. Keep one (1) reviewed copy of each submission on site.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "Shop Drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 The term "design team" means Consultant and Sub-consultants whether Subconsultants are employees of Consultant or not, and includes structural, mechanical, electrical, etc.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow fourteen (14) days for Consultant's review of each submission.
- .5 Adjustments made on Shop Drawings by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.
- .6 Make changes in Shop Drawings as Consultant may require, consistent with Contract Documents. When resubmitting, notify Consultant in writing of any revisions other than those requested.
- .7 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .8 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 Contractor's 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 other parts of the Work.
- .9 After Consultant's review, distribute copies.
- .10 Submit Shop Drawings in Pdf. format for each requirement requested in specification Sections and as consultant may reasonably request.
- .11 Submit product data sheets or brochures in Pdf. format for requirements requested in specification sections and as requested by Consultant where Shop Drawings will not be prepared due to standardized manufacture of product.
- .12 Delete information not applicable to project.
- .13 Supplement standard information to provide details applicable to project.
- .14 If upon review by Consultant, no errors or omissions are discovered or if only minor corrections are made, the drawings will be stamped as reviewed or reviewed as modified and will be returned. At this point fabrication and installation of Work may proceed. If Shop Drawings are rejected, noted copy will be returned and resubmission of corrected Shop Drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .15 Signed drawings shall be returned to and retained by Contractor who is then responsible for distribution of copies of corrected shop drawing to appropriate

Subcontractors for appropriate action and to municipal building department for their records of those subjects required by authorities.

.16 The Consultant's review is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean the Consultant approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and this review shall not relieve the Contractor of his responsibility for meeting the requirements of the Contract Documents. 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 coordination of the work of all subtrades.

1.3 SAMPLES

- .1 Submit for review to the Consultant three (3) samples as requested in respective specification Sections.
- .2 Submit samples with identifying labels bearing material or component description, manufacturer's name and brand name, Contractor's name, project name, location in which material or component is to be used, and date.
- .3 Deliver samples prepay any shipping charges involved for delivering samples to destination point and returning to point of origin if required.
- .4 Provide samples of special products, assemblies, or components when so specified.
- .5 No work requiring a sample submission shall commence until submission has received Consultant's final review.
- .6 Notify Consultant in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .7 Where colour, pattern or texture is criterion, submit full range of samples.
- .8 Adjustments made on samples by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.
- .9 Make changes in samples which Consultant may require, consistent with Contract Documents.
- .10 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.4 MOCK-UP

.1 Erect mock-ups to Section 01 45 00.

1.5 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, and prior to commencing the work submit the performance bond and the labour and materials payment bond as described in the bid documents.
- .2 Submit transcription of certified true copies of insurance immediately after award of Contract.
- .3 A current WSIB clearance certificate
- .4 The bidder's health and safety policy for the project.
- .5 A copy of the notice of project issued by the ministry of labour for the project
- .6 Building materials, components and elements specified without the use of trade or proprietary names shall meet requirements specified. If requested by Consultant, submit evidence of meeting requirements specified. Evidence shall consist of certification based on tests carried out by an independent testing agency. Certification based on previous tests for same materials, components or elements is acceptable. Certification shall be in form of written test reports prepared by testing agency.

END OF SECTION

01 35 17 – Fire Safety Procedures

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 14 00 Work Restrictions.
- .2 Section 01 31 00 Project Managing and Coordination.
- .3 Section 01 33 00 Submittal Procedures.
- .4 Section 01 35 23 Health and Safety
- .5 This section describes requirements applicable to all Sections within Divisions 02 to 49.
- .6 Appendix 01 35 17A Contractor Hot Work Permit

1.2. FIRE SAFETY PLAN

- .1 Contractors and their personnel will be familiar with this section and its requirements.
- .2 The contractor must take all necessary precautions during the carrying out of the work to prevent the possibility of fire occurring.

1.3. FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by the governing codes, regulations and bylaws.
- .2 The contractor will, at all times, when welding, brazing and performing any operation with an open flame, combustible adhesives or flammable solvents keep a portable, operable fire extinguisher within 3 meters of the operation.

1.4. HOT WORK

- .1 Take all precautions to Work safely and to provide the necessary protection to persons and property from Hot Work. This includes, but is not limited to Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding. With all such activity these steps are to be followed:
 - .1 Whenever possible, complete Hot Work in a welding shop or out of doors at the school.
 - Flammable liquids, dust lint and oily deposits to be removed from within 50-ft (15m) of Work. Remove other combustibles where possible. Otherwise protect with fire-resistive tarpaulins or metal shields.

- .3 Explosive atmosphere in area eliminated. Floors swept clean. Combustible floors wet down, covered with damp sand or fire-resistive tarpaulins.
- .4 All wall and floor openings covered. Fire-resistive tarpaulins suspended beneath Work.
- .5 For on-site Work (indoor and out of doors), advise the Head Custodian, Principal, Consultant (if assigned) and Project Coordinator prior to Work being performed, and of related dangers.
- .6 Where the Fire Alarm system is required to be set to stand-by to discourage false alarms from smoke detectors provide a firewatch throughout the building or structure being worked on. NEVER put the fire alarm system in stand-by mode when the building is occupied by staff or students.
- .7 In the event of a fire as a result of the Hot Work, notify the fire department immediately. Report incident to the head custodian, the Consultant, if assigned, and Project Coordinator immediately, whether extinguished or not. Provide a fire incident report to the Board.
- .8 Barriers must be set up to protect staff and students (i.e. pylons, shields, and caution tape) from exposure to arc flash and smoke migration.
- .9 Have all necessary doors, windows and/or drapes closed. Confer with the Head Custodian to shut down all fan systems in the area to reduce or eliminate smoke distribution.
- .10 Provide and keep fire extinguishers handy and in good Working condition. Temporarily cover all smoke detectors in the area during time of Work.
- .11 Provide a fire watch/spot check for several hours after Work is completed. Uncover smoke detectors.
- .12 On new construction, the requirements of the Hot Wok permit may be waived, until such time as either Substantial Completion or Occupancy is granted, whichever comes first.
- .13 On additions to existing buildings, the requirements for Hot Work permits shall remain in place.

1.5. HOT WORK PERMIT

- .1 A sample Hot Work Permit is attached to the specifications refer to attached Appendix 01 35 17-A
- .2 Each permit is valid for seven (7) days only and must be renewed prior to its expiration date
- .3 The contractor must obtain Hot Work Permits from the School Board's representative prior to the start of work.

- .4 The contractor must complete the form as required and must keep the form on site.
- .5 Return each completed form to the School Board's representative on the date of expiration.
- .6 The most current version of the Permit and its requirements shall be used for the purposes of the Work.

1.6. FIRE PROTECTION SYSTEMS

- .1 Any Modifications to Fire Alarm system and its devices including service, additions and changes in device location must be performed only by a Certified Fire Alarm Technician as per the Ontario Fire Code section 1.1, subsection 1.1.5.
- .2 The Contractor will receive from the Board's contact a contact number for the monitoring service and a school system number.
- .3 Bidders are cautioned that the Board will be reimbursed for the cost of false alarms. Refer to Section 01 14 00 Work Restrictions, Para. 1.4.4.
- .4 An approved inspection firm shall verify all new fire alarm devices, in accordance with CSA regulations. Certificate of Verification is required before occupancy.

1.7. FIRE ALARM SHUT-DOWN PROCEDURE

- .1 Plan the operation such that the required work minimizes system down time to the least amount possible. Do not shut the system down or engage silence mode when the building is occupied by students. Only shut the system down when necessary.
- .2 For the purposes of this section, unoccupied shall mean when the school is not occupied by students.
- .3 Wherever possible, shut down only the zone needing work,
- .4 and schedule down time in unoccupied school hours.
- .5 Contractor(s) shall ensure all costs are included in their bid price for work related to the fire alarm system outside of regular hours and/or during unoccupied school hours. This shall include evening and weekend work.
- .6 A fire alarm system must remain active when the building is not occupied by school or contractor's forces and should never be offline overnight.
- .7 Procedure

The following procedure shall be followed when a fire alarm system is completely or partially affected by maintenance, shutdown, bypass, silence, loss of power, or any other nomenclature that affects the proper operation of the complete system.

.1 Inform both the principal and head custodian whenever the fire alarm system is to be disabled prior to any partial or whole system shut down. Where

school staff are not available, ensure that the Project Coordinator and/or area supervisor are informed.

- .2 Ensure that the school or building administration has advised all staff when the fire alarm system is disabled and/or when it is back online. This will include instructions to call 911 if they detect smoke or a fire.
- .3 Immediately prior to alarm system shutdown and upon restoring the fire alarm system, the person supervising the shutdown must:
 - 1.7.7.1.3.1. obtain the school account number, located on a red decal attached to the fire alarm panel. This number will be formatted as 20-9xxx, with the xxx being the school location code,
 - 1.7.7.1.3.2. contact Direct Detect at 519-741-2494 (the fire alarm monitoring company), to inform them of the state of the fire alarm and the approximate amount of time the fire alarm will be offline. They will require the building name and account number, the contact name, the contractor name as well as any other information they request, and
 - 1.7.7.1.3.3. contact Bestell at 519-741-2494 (the current security monitoring company), to inform them of the state of the fire alarm and the approximate amount of time the fire alarm will be offline. They may require the building name and account number as well as any other information they request.
- .4 A fire watch, at the Contractor's expense, shall be undertaken by a person with the sole and express purpose of completing the following tasks and in the event of the detection of smoke, fire, or any other emergency, notifying the fire department, and the building occupants. The fire watch patrol shall:
 - 1.7.7.1.4.1. patrol all halls and high-risk areas affected,
 - 1.7.7.1.4.2. have access to a phone and call 911 if they see or detect smoke or fire,
 - 1.7.7.1.4.3. report any other problems they encounter,
 - 1.7.7.1.4.4. notifying the building occupants in the event of an emergency and
 - 1.7.7.1.4.5. remain on patrol until the fire alarm system is reactivated and fully operational.
- .5 Contact Direct Detect, Bestell, and school administration to inform them that the fire alarm is back online.
- .6 In the event that a fire alarm system is activated, whether by smoke, fire or accidentally, the system must not be reset until authorized by the Fire

Department (verbally or in person) and the cause of the alarm has been investigated.

1.8. FIRE PROTECTION EQUIPMENT IMPAIRMENT

- .1 Fire Protection Equipment referred to in this section includes sprinkler systems, special fire suppression systems, and kitchen hood suppression systems.
- .2 The Contractor will take all precautions including restrict all Hot Work operations and shut down hazardous processes during all Fire protection equipment impairment.
- .3 Do not shut the Fire protection equipment down unless necessary. Plan the operation required to reduce system impairment time to the least amount possible.
- .4 Wherever possible, shut down only the Fire protection equipment needing Work and schedule this impairment time for unoccupied school hours. Allow for this in your bid pricing.
- .5 Discuss the possible down time with the head custodian and principal prior to any partial or whole system impairment.
- .6 The school administration shall advise all staff of Fire protection equipment shut down. This will include instructions to call 911 if they see a fire and when system is back online
- .7 The Contractor will plan to use temporary protection such as extra extinguishers, charged hose lines and temporary sprinkler protection during all Fire protection equipment impairment.
- .8 If the sprinkler system is restorable, either in whole or in part, the Contractor or subcontractor shall assign someone to restore the system promptly in the event of a fire.
- .9 A fire patrol may need to be established and will include the following at the Contractor's expense:
 - .1 Patrol all halls and high-risk areas affected.
 - .2 Fire patrol shall have access to a phone and call 911 if they see a fire.
 - .3 Report all other problems they encounter.
 - .4 Remain on patrol until the system is back on.
- .10 The Contractor shall inform all sub trades that the Board has a Red Tag Permit System and it shall be used for all Fire protection equipment impairment.
- .11 For ease of use, a Factory Mutual hanging wall kit has been put in place at all Board Fire protection equipment locations. Supplies of Red Tag Permits are provided there.

1.9. FIRE ALARM MODIFICATIONS AND MAINTENANCE

- .1 Very important changes to Ontario Building Code as they relate to the Standard for the Verification of Fire Alarm Systems CAN/ULC-S537-M have taken effect December 24, 1999. (Minister's Ruling 99-BC-01)
 - .1 Clause 5.1; "Addition of conventional field device(s), or modification(s), to existing input circuit(s) or output circuit(s) shall require re-verification of all devices served by those input circuit(s) or output circuit(s)." If one device is added to a zone, the entire zone or in the case of a single zone panel the entire system is to be verified.
 - .2 Clause 5.2 "Addition of input circuit(s) or output circuit(s) to an existing fire alarm system shall require verification of the new circuit(s) in accordance with this standard, and shall also require all previously existing circuit(s) to be tested as follows:
 - .3 TEST: One conventional field device on each circuit shall be operated to confirm activation of all output circuits in accordance with the systems design." Even though no other zones have been touched, one device per input zone is to be tested when the Fire Alarm system is modified.
 - .4 Clause 5.5 "Where a transponder is added to an existing system, the transponder shall be verified in accordance with subsections 3.2, Wiring; and subsection 3.3 Control Units; and with CAN/ULC-S536, Standard for the Inspection and Testing of Fire Alarm Systems as well as re-verification of existing field devices and verification of new conventional field devices." If a new addressable device is added to a system, the new device is to be tested; as well a test must be conducted on all addressable devices on the loop.
 - .5 Clause 5.6 "Where an existing fire alarm system control unit is replaced with a new control unit, it shall be verified in accordance with CAN/ULC-S536, Standard for the Inspection and Testing of Fire Alarm Systems. Replacement of any control panel will require the testing of all existing fire alarm devices.
- .2 The Contractor and subcontractors shall include in the bid price for the above ULC Standards requirements referenced in the Ontario Building Code.

1.10. INSTALLATION AND/OR REPAIR OF ROOFING

- .1 The Contractor will review with the Consultant and the Board's representative of the location of any asphalt kettles and the dates the kettles will be in use. The Contractor, in the course of performing roofing work, will ensure all personnel utilize the following precautions:
 - .1 Use only kettles equipped with thermometers or gauges in good working order.
 - .2 Locate kettles in a safe place outside of the building.
 - .3 Maintain continuous supervision while kettles are in operation and provide metal covers for the kettles to smother any flames in case of fire.
 - .4 All roofing materials stored in locations no closer than 15 meters to any structures.

1.11. FIRE DEPARTMENT ACCESS

.1 Designated fire routes must be maintained. The Fire Department must be advised of any work that would impede fire apparatus response.

1.12. SMOKING PRECAUTIONS

.1 Smoking is not permitted anywhere on Board properties. Workers who wish to smoke must leave the property, and not within sight of students. Any worker found to be in contravention of the Ontario Smoke Free Act will be subject to legislated fines.

1.13. FLAMMABLE LIQUIDS

- .1 The handling and storage on site of flammable liquids are to be governed by the current National Fire Code of Canada.
- .2 Flammable liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 10 imperial gallons provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval.
- .3 Transfer of flammable liquids is prohibited within buildings.
- .4 Transfer of flammable liquids must not be carried out in the vicinity of open flame or any type of heat producing devices.
- .5 Flammable liquids having a flashpoint below 100° F (37.7°C) such as naphtha or gasoline must not be used as solvents or cleaning agents.
- .6 Flammable waste liquids, for disposal, must be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum.

END OF SECTION

Appendix 013517-A Contractor Hot Work Permit

	Appendix - 013517-A								
Waterloo Region District School Board		Facility Services							
CO	CONTRACTOR HOT WORK PERMIT								
Ausid ha	STOP!								
	ot work or seek an alternative method if possible.								
This includes but is not	i. Verify precautions taken in Section A ii. Complete Section C during <u>each day</u> that Hot Wo tot Works III. Return Part 2 to Board Supervsor/ Manager/Proj Post	orks takes place							
Section A Indicate Precautions Taken	Section B Authorization Granted								
Available sprinklers, hose streams, and extinguishers available and in service	Board Supervisor/Manager/Proj. Coordinator: Print Name	Signature							
Within 35' or 11m of hot work	Permit Valid from / to: (max. 7 days)	Io Ihis Date							
Flammable iquid, dust, lint and oily deposits removed Explosive atmosphere in area eliminated	(Maximum 7 days or until end of hot work whichever	is sooner)							
Floors swept clean All wall and floor openings covered	Section C Contractor and Location Affected								
Combustible floors covered with fire resistant sheets Protect or shut down ducts that might earry sparks/smoke	Dates: Name of Contractor Name & signature of individual (msw 7 days) conducting hot work assigned to fire watch	Name & signature of Individual assigned to fire monitoring							
Hot work on walle, ceiling or roofs Construction is noncombustible and without combustible covering or insulation Combustible materials on other side of walls, ceilings or roofs moved away Combustible structure wetted down									
Hot work on enclosed equipment Endosed equipment cleaned of all combusible maternal Containers purged offlammable liquid/vapour Pressurized vessels, piping & equipment removed from service, isolated & vented									
Fire watch/hot work and monitoring Fire watch will be provided <u>during</u> and for <u>1 hour</u> after work including break Fire watch is trained and supplied with suitable extinguishers Fire watch is trained in the use of sounding fire									
alam Fire watch conducted in adjoiring areas, above and below the space where appropriate Monitor hot work area for an additional <u>2 hours</u> after fire watch	School: Ruom/Area								
Other precautions taken (please detail):	Nature of Job: I verify the above location has been examined <u>each day</u> the precautions listed in Sec <u>each day</u> , and permission is authorized for this work. I further acknowledge that if activity is during <u>school operational hours</u> , that appropriat <u>to school</u> administration. Hot Works Contractor:								
	Signature								
	School Administrator notified: Print Name in Case of Emergency call: 911 - Then call: 519-570-	0003 Ext. 4123							

It/Facility Srv/Controller/Board Procedures/2014-15/Hot Work Permit - Contractors - Final.xls

01 35 23 – Health And Safety

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 31 00 Project Managing and Coordination.
- .2 Section 01 33 00 Submittal Procedures.
- .3 Section 01 35 17 Fire Safety Requirements
- .4 Section 01 35 43 Hazardous Materials
- .5 Section 01 41 00 Regulatory Requirements
- .6 Section 01 53 00 Temporary Construction Facilities
- .7 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. REFERENCES

.1 Province of Ontario, including requirements for a "Prime Contractor" as defined by the Act.

1.3. SAFETY PLAN

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site. The Health and Safety Plan must address project specifications.
- .2 Consultant may respond in writing, where deficiencies or concerns are noted and may request resubmission with correction of deficiencies or concerns.
- .3 Be governed by pertinent safety requirements of Federal or Provincial Governments and of municipal bodies having authority, particularly the Ontario Construction Safety Act, The Occupational Health and Safety Act for Ontario, and regulations of Ontario Ministry of Labour, and work in conjunction with proper safety associations operating under the authority of Ontario Workers' Compensation Act. Protect Owner, Owner's employees, the public and those employed on the Work from bodily injury and to protect adjacent public and private property and Owner's property from damage. Furnish and maintain protection, such as warning signs, tarpaulins, guard rails, barriers, guard lights, night lights, railings around shafts, pits and stairwells, etc. as required. Remove temporary protective measures when no longer required.

1.4. TEMPORARY WORK

- .1 Temporary work requiring engineering proficiency for the design, erection, operation maintenance and removal shall be designed and bear the stamp of the registered professional Engineer or Architect. Detail drawings will be submitted to the Consultant for review prior to commencing any work.
- .2 Before a temporary structure is used, the person responsible for design, or their representative, shall inspect the structure and certify it has been constructed according to their design.

1.5. RESPONSIBILITY

- .1 The "Prime Contractor" according to applicable local jurisdiction, is responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to the extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
- .3 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, and follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Health and Safety Act having jurisdiction. Advise the Board and the Consultant verbally and in writing.
- .4 The Contractor shall make their own arrangements for emergency treatment of accidents. Any accidents shall be reported immediately to the Board contact.
- .5 The Contractor agrees to hold the Board harmless of any and all liability of every nature and description, which may be suffered through bodily injuries, involving deaths of any persons, by reasons of negligence of the Contractor, his agents, employees, or his subcontractors.

1.6. SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00.
- .2 Submit site-specific Health and Safety Plan: Within ten (10) days after the date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation
- .3 Submit one (1) copy of Contractor's authorized representative's work site health and safety inspection reports to Consultant and Owner.

- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit Material Safety Data Sheets (MSDS) to Consultant.
- .7 Consultant's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .8 Medical Surveillance: Where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Consultant.
- .9 On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.
- .10 File Notice of Project with the Ministry of Labour prior to commencement of Work.

1.7. SAFETY ACTIVITIES

- .1 Perform site specific safety hazard assessment related to the project.
- .2 Schedule and administer Health and Safety meeting with Consultant prior to commencement of Work.
- .3 Perform Work in accordance with Section 01 41 00 Regulatory Requirements and this section.

1.8. HEALTH AND SAFETY COORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Coordinator. Health and Safety Coordinator must:
 - .1 have previous experience as a Health & Safety coordinator,
 - .2 have working knowledge of occupational safety and health regulations,
 - .3 be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work,
 - .4 be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan, and
 - .5 be on site during execution of Work.

1.9. POSTING OF DOCUMENTS

.1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Health and Safety Act having jurisdiction, and in consultation with Consultant.

1.10. CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Consultant or by the Board.
- .2 Provide Consultant and/or Board with written report of action taken to correct noncompliance of health and safety issues identified.
- .3 Consultant and or the Board may stop Work if non-compliance of health and safety regulations is not corrected.

1.11. PROJECT/SITE CONDITIONS

- .1 Work at site will involve contact with:
 - .1 Refer to Section 01 35 43 Hazardous Materials

1.12. HAZARDOUS WORK

.1 Blasting or other use of explosives is not permitted at the place of work.

1.13. WORK STOPPAGE

.1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

1.14. LOCKOUT PROCEDURES

- .1 All Work to be done on electrical systems or machinery, where the unexpected switching on of the system or machinery could result in personal injury to a student, staff, employee, or the Contractor's employee, must be done in accordance with the Contractor's standard lockout procedure.
- .2 The Contractor shall provide his/her own locks for the above procedure.
- .3 The lock shall include contact information for the person(s) locking out such devices.

1.15. OVERHEAD LIFTING

- .1 Under no circumstances will a crane or lifting device be used over an occupied space.
- .2 When working adjacent to occupied spaces, ensure a clearance of one (empty) classroom, or a minimum of 10m between any occupied space and the furthest possible reach of the crane.

1.16. WARNING SIGNS AND NOTICES

.1 Notices shall be posted advising of the hazard but will not be considered a substitute for providing approved protection, separation, and space from the hazard.

1.17. FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by the governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.
- .3 Maintain placed or installed Fire Protection to protect the portions of the Work during construction.

1.18. SCENT-FREE ENVIRONMENT

- .1 The Board requires that, where advised, a building may be deemed scent-free and as such, the wearing of scented products is prohibited.
- .2 Any methods or materials that are found to create negative responses in staff or students shall cease and be removed under advisement of the Consultant and or the Board, until alternate methods can be determined.

END OF SECTION

01 35 43 – Hazardous Materials

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 35 23 Health and Safety Requirements.
- .2 Section 01 41 00 Regulatory Requirements.
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. REFERENCES

.1 Province of Ontario, including requirements for a "Prime Contractor" as defined by the Act.

1.3. ASBESTOS and OTHER REGULATED SUBSTANCES

- .1 An Asbestos Audit, as prepared by MTE Consultants Inc. for this facility, is attached under Appendix 013543 A. A duplicate set is also available in the Facilities Services Departments located in the Education Centre. Unless specifically covered by a Cash Allowance or Contingency Allowance that states otherwise, include in this Contract the required removal of all asbestos containing materials (ACM) to complete the work. No claims for extra costs will be accepted for areas known to contain ACM that are within the scope of this Work.
- .2 Comply with applicable legislation regarding asbestos. Should the Contractor encounter asbestos not noted in the referenced Asbestos Audit that would be disturbed during the course of the Work, they should stop the work in that immediate area and report the same to the Consultant and Board contact.
- .3 In addition, Lead, Mercury, Silica, and Isocyanates are anticipated to be present in existing facilities. New construction, renovations, or alterations require compliance by the Contractor with the applicable legislation.

1.4. PROTOCOL FOR ABATEMENT WORK

- .1 This Protocol establishes the requirements to be followed by all Asbestos Abatement Contractors involved with the Board. It applies to Type 1, Type 2 and Type 3 Operations as stated in the Regulations and applies to emergency and nonemergency work (directly retained or working as a sub-contractor).
- .2 Asbestos Abatement Contractors must maintain appropriate insurance coverage and WISB certification.

- .3 Contractors retained for asbestos abatement work shall use personnel certified by the Ontario College of Trades and must provide the Consultant and Board with proof of asbestos certification (AAS and AAW) for all supervisors / all staff involved.
- .4 School Access
 - .1 During school hours all asbestos contractors are to report to the school office upon arrival. After school hours, ensure card-in / card-out procedures are followed and building security is maintained.
- .5 Communication
 - .1 Establish communication contact list with email and phone numbers that shall include:
 - .1 Principal / Vice Principal
 - .2 Area Facility Manager
 - .3 Head Custodian
 - .4 Environmental Officer
 - .5 Manager of Mechanical, Electrical and Environmental Services
 - .6 Manager of Health Safety & Security
 - .7 Contractor staff
 - .8 Consultant
 - .2 Contact the School Principal / Vice to set up a firm date for the abatement (removal / repair). Schedule to allow at least 72 hours notice ahead of the work.
 - .3 Confirm the date by notifying via email the following:
 - .1 Principal / Vice-principal,
 - .2 Area Facility Manager, and
 - .3 Environmental Officer.
 - .4 Consultant
 - .4 Indicate the date, the start time, the anticipated completion time for the work and the work areas in the school.
 - .5 Identify personnel managing the project and provide current cell numbers for emergency contacts.
 - .6 For emergency work, as requested by Area Supervisors, Facility Managers or Environmental Officer, no notification to the school is required.
 - .7 Additionally, for Type 3 work also contact:
 - .1 Manager of Health, Safety & Security, and
 - .2 Notify the MOL (also for Type 2) where required by regulation.
 - .3 Consultant

- .8 Discussions with other groups, school staff, media and others is discouraged and shall be directed to the Board Communication Officer where warranted.
- .6 Asbestos Operations
 - .1 Emergency work shall be carried out the same day (evening/night) or under exceptional conditions the following day / evening / night. Contractors shall exercise discretion when working in the school to minimize anxiety of staff/school community. Where warranted, contact Area Supervisor, Facility Manager or Environmental Officer to obtain further direction.
 - .2 For non-emergency work, contractor is to assess the work on site and provide a cost estimate to the Environmental Officer, (daniela_budure@wrdsb.on.ca) and Consultant. Some work will require discussion with the Facility Manager or Environmental Officer to assess if additional work should be done as to completely remove all ACM material form the area or similar.
 - .3 Where the MTE report shows ACM requiring repair, remove and re-insulate where required.
 - .4 Before beginning any Type 1, Type 2 or Type 3 Operations, the work area must be secured, doors closed, warning signs added to all entrances, caution tape used in open areas and signs used to restrict access to the work area so as to keep persons not involved in the work from entering in the work area.
 - .5 Provide "Construction" warning signs on solid barriers between the Work and public areas. Install a sufficient number of "asbestos abatement" warning signs behind the barriers, posted to warn of the hazard, and that access to the work area is restricted to persons wearing protective clothing and equipment.
 - .6 The contactor is responsible to disable the mechanical ventilation serving the work area and positively prevent operation using Lock-out / Tag-out devices for each air handling unit /fan. Exercise caution during heating season to ensure areas of the building are maintained above freezing and ensure equipment is turned back on after abatement / air clearance completed.
 - .7 Contractor's employees shall put on / take off PPE within work area marked by construction signs. No employee shall leave the work area wearing PPE.
 - .8 All dust and waste is to be cleaned up and removed at frequent / regular intervals as the work proceeds and immediately upon completion. No waste bags or similar are to be left behind.

1.5. SUBMITTALS

.1 Once the abatement is completed, forward a Letter of Completion to the Environmental Officer, (daniela_budure@wrdsb.on.ca). This letter shall be

received no later than 72 hours after completion and shall include any sample results.

- .2 For those projects requiring Air Clearance, ensure this info is sent without delay but in all cases no later than 24 hours after sampling. All Type 3 work must take into account that the initial samples may not pass and the contactor must allow one additional day to re-clean and re-sample before school is to resume operations. For those projects not under the direct supervision of a Environmental Consultant, the contactor is to expedite the air clearance sampling with the lab of their choice and carry these costs.
- .3 Forward Air Clearance results to:
 - .1 Principal / Vice-principal,
 - .2 Facility Manager,
 - .3 Environmental Officer,
 - .4 Manager of Mechanical, Electrical and Environmental Services, and
 - .5 Manager of Health, Safety & Security.
 - .6 Consultant

1.6. ACKNOWLEDGEMENT

- .1 The protocols for asbestos work must be read and understood by Asbestos Contractor.
- .2 Submit a signed copy of the most current copy of <u>PROTOCOL FOR ABATEMENT</u> <u>WORK (ASBESTOS ABATEMENT CONTRACTORS)</u> to the General Contractor, the Consultant, and the Board's Environmental Officer.

END OF SECTION

Appendix 01 35 43A Asbestos Audit Reports



Grand River Collegiate Institute

2025 Asbestos Audit Update Report

Project Location: 175 Indian Road, Kitchener, Ontario

Prepared for: Waterloo Region District School Board 51 Ardelt Avenue, Kitchener, Ontario

Prepared by: Safetech Environmental Limited 100 Hanson Avenue, Kitchener, Ontario, N2C 2E2

Date of Issue: March 5, 2025

Safetech Project Number 2-3240073







March 5, 2025

Waterloo Region District School Board 51 Ardelt Avenue, Kitchener, Ontario N2C 2R5

Re: 2025 Asbestos Audit Update Report– Grand River Collegiate Institute 175 Indian Road, Kitchener, Ontario Safetech Project No.: 2-3240073

1.0 INTRODUCTION

Safetech Environmental Limited (Safetech) was authorized by the Waterloo Region District School Board (hereinafter referred to as the "Board") to conduct the 2025 Asbestos Audit Update for Grand River Collegiate Institute located at 175 Indian Road, Kitchener, Ontario (subject site).

The audit was conducted in accordance with the Ontario Ministry of Labour, Immigration, Training and Skills Development (MLITSD), Regulation 278/05- Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05).

The purpose of the assignment was to re-assess and document the location, type, and condition of identified asbestos-containing materials (ACM) present within the building and make appropriate recommendations for management, abatement or remedial activities, as required.

This report documents the findings of our on-site inspection that was conducted on January 3, 2025. This report shall replace ALL previous Asbestos Audit Update reports.







2.0 SCOPE OF WORK

The Scope of Work for this assessment included the following activities:

- Review of existing and historical reports and documentation pertaining to ACM within the building;
- Visual inspection to assess the condition of previously identified ACM, excluding portable structures;
- Collection of building material samples that are suspect ACM, as applicable;
- Submission of samples to an accredited laboratory, as applicable;
- Photographic log of damaged materials; and
- Preparation of this report with findings and recommendations.

3.0 METHODOLOGY & ASSESSMENT CRITERIA

This investigation was conducted by visual and laboratory identified methods (where applicable) for the assessment of ACM and their corresponding location, use, condition and friability. The areas outlined in Section 2.0 were inspected limited to building components, materials and service connections.

Where applicable, bulk sampling followed by laboratory analysis was conducted to confirm the presence/absence of asbestos in building materials. Bulk samples are retrieved in accordance with Section 3 and Table 1 of Ontario Regulation 278/05, *Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05),* made under the Occupational Health and Safety Act. The number of samples collected for each material is based on the type and quantity of the material present within the area(s) investigated.

Each individual sample is placed in a labelled, sealable, plastic bag for transportation to an independent laboratory for bulk asbestos fibre analysis. Analysis for asbestos content is performed by the independent laboratory in accordance with the U.S. Environmental Protection Agency (EPA) Test Method EPA/600/R-93-116: Method for the Determination of Asbestos in Bulk Building Materials. June 1993. This method identifies the asbestos fibre content of building materials using polarized light microscopy (PLM) analytical techniques, with confirmation of presence and type of asbestos made by dispersion staining optical microscopy. This analytical method meets the requirements set forth in Section 3 of O. Reg. 278/05.

Where sampling could cause consequential damage to the property or compromise a materials function, sampling was not conducted. Therefore, these materials shall be deemed (visually confirmed) to be asbestos-containing.



Sampling of materials that are visually confirmed to be asbestos-containing shall be conducted prior to disturbance (i.e. prior to renovation or demolition) to confirm or refute the material as asbestos-containing. Alternatively, treat visually confirmed materials as asbestos-containing and remove and dispose in accordance with O. Reg. 278/05.

Destructive testing was not conducted as part of this assessment. Details regarding the possible presence of ACM in enclosed locations were provided on a case-by-case basis where our visual inspection indicated this possibility. Notwithstanding that, all reasonable attempts were made to identify all ACM's, the possibility of concealed materials exists and may not become visible or accessible until substantial demolition occurs and are therefore currently undocumented. This includes the following:

- Locations that may be hazardous to the surveyor, such as electrical equipment;
- Where invasive inspection could cause consequential damage to the property or impair the integrity of the equipment, such as roof systems, underground services or components of mechanical equipment;
- Locations concealed by building finishes that require substantial demolition or removal for access to ACMs; and,
- Materials that are present in such an inconsistent fashion that without complete removal of finishes, the extent cannot be determined.

It should be noted that the following items and conditions were not assessed under the scope of this assignment:

- Occupant items such as stored products, furnishings, and personal items; or,
- Settled general dust or airborne agents, unless otherwise specified.

3.1 Classification & Action of ACM

During this investigation, the general condition of ACM's were observed and noted. Materials which are damaged can pose an exposure risk to workers, building occupants and the public. As per Board request, abatement items were grouped into two (2) categories to aid in remedial prioritization based on the condition, type of material and accessibility of the material:

Monitor Annually

These are non-friable asbestos-containing materials which display minor damage; however, do not pose a risk to building occupants from exposure to asbestos fibres due to the current physical condition of the material and/or location. These items should be monitored on an annual basis for evidence of continued degradation. Should the condition of the material change, an evaluation should be completed by a competent person to determine remedial action.



Abatement Action Required

Any asbestos-containing material which displays moderate to significant damage and requires timely clean-up, repair, or removal due to the potential risk to building occupants from exposure to asbestos fibres due to physical condition and/or location of the material.

4.0 FINDINGS

An inspection of the building was conducted by Safetech on January 3, 2025. The Grand River Collegiate Institute facility is a two-storey structure built circa 1965 with additions constructed in 2002 and 2018. The inspection did not include areas of post 1986 construction or renovation (where all building finishes have been removed and replaced), as applicable.

The Asbestos Management Database is provided in **Appendix A** and associated Figures are provided in **Appendix B**. These documents together provide a current summary of the ACM identified throughout the building.

The Internal Abatement Management summary and corresponding photographs are provided in **Table 1** of **Appendix C**. This provides a summary of all ACM identified throughout the building that requires annual monitoring or Type 1 operations in accordance with O. Reg 278/05.

The External Abatement Management summary and corresponding photographs are provided in **Table 2** of **Appendix C**. This provides a summary of all ACM that has been identified as requiring Type 2, Type 2 Glove Bag, or Type 3 Operations in accordance with O. Reg 278/05.

The bulk asbestos sample location and analytical summary is provided in Appendix C.

4.1 Analytical Results

During this inspection, no samples were collected.

4.2 Removed ACM

A summary of ACM that have been removed since the previous audit and inspections is provided below:

Location FR#'s B-103, B-105, 3-1A, 3-100, 3-107, T-123A, and 2-201A:

• Parged cement pipe fitting insulation

Location FR# B-103C:

• Flex Joint Ducting



Location FR#'s 2-102, 2-104, 3-103E, 7-202, 7-204, and 7-206:

• 1'x1' Large and Small Pinhole Fixed-in-Place Ceiling Tiles

Location FR#'s 3-104, 3-105, 3-105B, and 1-219:

• 1'x1' Long Fissure Fixed-in-Place Ceiling Tiles

Location FR# 4-105:

• 2'x2' Medium Fissure and Random Pinhole Lay-in Ceiling Tiles

Location FR#'s 7-100, 7-102, 7-200, and 7-202:

• 9"x9" Beige Vinyl Floor Tiles and associated mastic

Location FR#'s 1-217, 1-219, 3-203, 7-204, and 7-206:

• 9"x9" Brown and White Vinyl Floor Tiles and associated mastic

Location FR#'s 3-211:

• 9"x9" Light Red Vinyl Floor Tiles and associated mastic

Location FR#'s 3-207:

• 9"x9" Grey with White Streaks Vinyl Floor Tiles and associated mastic

4.3 Discovery of Additional ACM

No additional ACM or suspect ACM was identified since the previous assessment.

4.4 Damaged ACM

Damaged ACM was identified. Refer to Appendix C, Tables 1 and 2 for a detailed summary of required actions, specific to each material. At the time of the audit, all other ACM at the building was noted to be in good condition.

5.0 RECOMMENDATIONS

5.1 Remedial

Damaged ACM was identified. Refer to Appendix C, Tables 1 and 2 for a detailed summary of required actions, specific to each material. At the time of the audit, all other ACM at the building was noted to be in good condition.

Type 1 abatement Operations may be conducted internally by trained and qualified WRDSB staff. All other abatement work must be conducted by certified asbestos contractors trained and qualified to conduct the type of work required.



5.2 Long Term Management

The purpose of this investigation was for the long term management of ACMs within the subject building. Prior to any future construction or renovation projects, additional project-specific assessment and/or sampling may be required.

Currently, there are no requirements under legislation to remove ACM from a building because it is present. However, O. Reg. 278/05 does require that an Asbestos Management Plan be developed, implanted and maintained on an annual basis. Asbestos awareness training should be provided for any staff that may come into contact with ACM during routine duties or in an emergency situation.

ACM that will be disturbed, or has the potential to be disturbed, during building maintenance, renovations, construction, or demolition activities shall be handled and disposed of in accordance with the procedures stipulated by O. Reg. 278/05.

ACM may be present in concealed locations. If any construction, renovation, alteration, or maintenance activities are required or planned, a project-specific intrusive investigation into concealed locations to assess for potential ACM must be performed. Should any suspect ACM be discovered, work should cease and the materials should be assessed by a competent person. Suspect ACM shall be treated as asbestos-containing or sampled to confirm or refute asbestos content.

6.0 LIMITATIONS

The information and recommendations detailed in this report were carried out by trained professional and technical staff in accordance with generally accepted environmental and industrial hygiene work practices and procedures. Recommendations provided in this report have been generated in accordance with current regulations, accepted industry guidelines and practices. These regulations, guidelines and practices are considered acceptable as of the date of this report.

In preparation of this report, Safetech Environmental Limited (Safetech) relied on information supplied by others including testing services provided by independent laboratories. Except as expressly set out in this report, Safetech has not made any independent verification of this information provided by independent entities. The collection of samples at the location noted was consistent with the scope of work agreed-upon with the person or entity to whom this report is addressed and the information obtained concerning prior site investigations. As conditions between samples may vary, the potential remains for the presence of unknown additional contaminants for which there were no known indicators. Conclusions are based on site conditions at the time of inspection and can only be extrapolated to an undefined limited area around inspected locations. The extent of the limited area depends on building construction and conditions. Safetech cannot warrant against undiscovered environmental liabilities.



If any information becomes available that differs from the findings in this report, we request that we be notified immediately to reassess the conclusions provided herein.

No other person or entity is entitled to use or rely upon this report without the express written consent of Safetech Environmental Limited and the person or entity to who it is addressed. Any use that a third party makes of this report, or any reliance based on conclusions and recommendations made, are the responsibility of such third parties. Safetech accepts no responsibility for damages suffered by third parties as a result of actions based on this report.

Should you require any further information, please contact our office.

Sincerely,

Safetech Environmental Limited

Per: Alyssa Nagy, B.Sc., Occupational Health & Safety Technician anagy@safetechenv.com

Reviewer: Jeremy J. Gore, C.E.T., EP Regional Manager – SWO jgore@safetechenv.com

Attached Appendix A: Asbestos Management Database Appendix B: Figures Appendix C: Tables

Per: Shannon Deline, B.A., Project Coordinator sdeline@safetechenv.com



PURPOSE

Appendix A Asbestos Management Database

- 5

	School Name	Legend:	Notes:	
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities Update R	
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled		
2	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates provi	
SSTRICT SCHOOL BOR	Addition(s): 2002, 2018	NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
Structure										
biluciule										
	Original 1965 Building	Structure	Deck	Steel		Non ACM				
	Original 1965 Building	Structure	Concrete	Concrete		Non ACM			-	-
	Original 1965 Building	Structure	Spray-applied Fire Proofing	Off-white	F	ACM	- Sl	- S02,31682-S01 to 31682-S07	- 21-Dec-09	- 5% -6.8% Chrysotile
	Original 1965 Building	Structure	Spray-applied Fire Proofing	Tinted Blue (2010 onwards)		Non ACM		302,31002-301 10 31002-301	21-Dec-03	
	Original 1965 Building	Facade	Spandrel	Metal	-	Non ACM	-			
	Original 1965 Building	Facade	Brick Veneer	Brick and Mortar	-	Non ACM	-	-	-	-
	Original 1965 Building	Overhangs	Plaster	White Textured Plaster	NF	ACM	-	S01ABC	- 06-Nov-18	0.5% Chrysotile
	Original 1965 Building	Roof	Roofing Materials	R-A 2008, R-B 2008, R-C 2008, R-D 1995			2023 P C/ 2010 P			-
	Original 1965 Building	Windows	Interior Aluminum Frames	Grey	NF	ACM	2023, 11-04 2019, 1	S05F, S02A (Nov 18)		10%, 0.5% Chrysotile
	Original 1965 Building	Windows	Interior Aluminum Frames	Black Sealant - Tech Wing	INI	Non ACM	SL	S03ABC	06-Nov-18	ND
	Original 1965 Building	Windows	Exterior Frames	White Sealant	-	Non ACM	SL	S05ABC	13-Apr-18	ND
	Original 1965 Building		Exterior Frames	White Sealant	-	Non ACM	SL	S05C	13-Apr-18	ND
		Garage Door			-			S05C		
	Original 1965 Building Original 1965 Building	Door Spandrel	Exterior Frames	Black Black	-	Non ACM Non ACM	SL	S05E S05D	13-Apr-18	ND
	0 0	Doors	Exterior Frames	DIACK	-		SL		13-Apr-18	ND
	Original 1965 Building	Ceiling	Mastic CT 1 x 1 (cellulose)	Brown	-	Non ACM	HM	S01ABCD	13-Apr-18	ND
	Original 1965 Building	Floor	Floor Tile Mastic	Black	NF	ACM	SL	S04	13-Apr-18	0.5% -2% Chrysotile
Basement										
B-1	Corridor	Floor	Terrazzo	-	-	Non ACM	_	-		-
	Corridor	Wall	Concrete	-	_	Non ACM	_	_	_	_
	Corridor	Wall	Ceramic Tile	-	_	Non ACM	_	-	_	
	Corridor	Ceiling	Ceiling Tile 2 x 4	Bumpy Pinhole (1999)		Non ACM		-	_	
	Corridor	Ceiling	Drywall	Drywall Joint Compound	_	Non ACM	НМ	S20	21-Dec-09	ND
	Corridor	Deck	Metal Pan	Steel		Non ACM	-	-	-	-
	Corridor	Piping	Pipe Insulation	Fibreglass insulation		Non ACM	_	-	_	
	Corridor	Piping	Pipe Fitting	Parged Cement	-	ACM	- HM	- 1680.330-01	- June, 1990	- >75% Chrysotile
	Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)		Non ACM				
	Classroom	Wall	Concrete			Non ACM			_	- Space Renovated 2017-2018
	Classroom	Deck	Metal Pan	- Steel		Non ACM		-	-	Space Renovated 2017-2018
	Washroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	Space Renovated 2017-2018 Space Renovated 2017-2018
	Washroom	Wall	Concrete		-	Non ACM	-	-	-	Space Renovated 2017-2018
	Washroom			- White Textured Pinhole (2019)	-		-	-	-	Space Renovated 2017-2018 Space Renovated 2017-2018
D-IUTA		Ceiling	Ceiling Tile 2 x 4	Steel	-	- Non ACM	-	-	-	Space Renovated 2017-2018 Space Renovated 2017-2018
P 101A	Washroom	Deck	Metal Pan	Stool						Shace Renovated 1017 1010

	School Name	Legend:	Notes:	
WATERLOO REGIOZ	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re	
		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
SET HICT SCHOOL BOR	Addition(s): 2002, 2018	NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
B-101B	Washroom	Wall	Concrete Block	-	-	Non ACM	-	-	-	Space Renovated 2017-2018
B-101B	Washroom	Ceiling	Ceiling Tile 2 x 4	White Textured Pinhole (2019)	-	-	-	-	-	Space Renovated 2017-2018
B-101B	Washroom	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	Space Renovated 2017-2018
B-101C	Washroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	Space Renovated 2017-2018
B-101C	Washroom	Wall	Concrete Block	-	-	Non ACM	-	-	-	Space Renovated 2017-2018
B-101C	Washroom	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	Space Renovated 2017-2018
B-102	Room	Floor	Vinyl Sheet Flooring	Grey (Post 2021)		Non ACM	-	-	-	-
B-102	Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-102	Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
B-102	Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	SL	S18a, S01D	21-Dec-09, 18-Jan-18	ND
B-102	Room	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
B-103	Custodial Room	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
B-103	Custodial Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-103	Custodial Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	HM	S18	21-Dec-09	ND
B-103	Custodial Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
B-103A	Storage Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-103A	Storage Room	Wall	Concrete		-	Non ACM	-	-	-	-
B-103A	Storage Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	HM	S18	21-Dec-09	ND
	Storage Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
B-103A	Storage Room	Piping	Pipe Insulation	High Density Foam under Canvas Wrap	-	Non ACM	-	-	-	-
B-103B	Storage Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-103B	Storage Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-103B	Storage Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	SL	S18b	21-Dec-09	ND
B-103B	Storage Room	Deck	Concrete	-	-	Non ACM	-	-	-	-
B-103B	Storage Room	Piping	Pipe Insulation	High Density Foam under Canvas Wrap	-	Non ACM	-	-	-	-
B-103C	Storage Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-103C	Storage Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-103C	Storage Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	SL	S01B	18-Jan-18	ND
B-103C	Storage Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
B-103C	Storage Room	Piping	Pipe Insulation	High Density Foam under Canvas Wrap	-	Non ACM	-	-	-	-
	Room	Floor	Laminate	Faux Wood	-	Non ACM	-	-	-	-
	Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Room	Ceiling	Ceiling Tile 2 x 4	White Textured Pinhole (2019)	-	Non ACM	-	-	-	-
	Room	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
	Boiler Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
	Boiler Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Boiler Room	Wall	Textured Plaster	Plaster	-	Non ACM	SL	S01F		ND
B-105	Boiler Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	SL	S18e, S01A	12/21/2009, 01/18/202	ND

	School Name	Legend:	Notes:	
WATERLOO REGION	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro	
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov	
STATICT SCHOOL BOR		NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
B-105	Boiler Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
B-105	Boiler Room	Piping	Pipe Fitting	Fibreglass / PVC	-	Non ACM	-	-	-	-
B-105A	Storage Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-105A	Storage Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-105A	Storage Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S20	21-Dec-09	ND
B-105A	Storage Room	Ceiling	Textured Plaster	Plaster		Non ACM	HM	S18	21-Dec-09	ND
B-105A	Storage Room	Deck	Spray-applied Fire Proofing	Cellulose (Post 2021)	-	Non ACM	-	-	-	-
B-105B	Pump Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-105B	Pump Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-105B	Pump Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-105B	Pump Room	Deck	Spray-applied Fire Proofing	Cellulose (Post 2021)	-	Non ACM	-	-	-	-
B-105B	Pump Room	Piping	Pipe Insulation	High Density Foam under Canvas Wrap	-	Non ACM	-	-	-	-
B-105C	Chiller Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-105C	Chiller Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-105C	Chiller Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
B-105C	Chiller Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	HM	S18	21-Dec-09	ND
B-105C	Chiller Room	Deck	Spray-applied Fire Proofing	Cellulose (Post 2021)	-	Non ACM	-	-	-	-
B-105D	Electrical Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
B-105D	Electrical Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-105D	Electrical Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
	Electrical Room	Ceiling	Textured Plaster	Plaster	-	Non ACM	HM	S18	21-Dec-09	ND
	Electrical Room	Mechanical	Flex Joint	White	NF	ACM	VC	Sample prior to removal /disturbance	-	-
	Electrical Room	Deck	Spray-applied Fire Proofing	Cellulose (Post 2021)	-	Non ACM	-	-	-	-
	Storage	Floor	Concrete	-	-	Non ACM	-	-	-	-
	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Storage	Ceiling	Textured Plaster	Plaster	-	Non ACM	HM	S18	21-Dec-09	ND
B-108A		Floor	Carpet	-	-	Non ACM	-	-	-	-
B-108A		Wall	Concrete	-	-	Non ACM	-	-	-	-
B-108A		Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
B-108A		Ceiling	Ceiling Tile 2 x 4	White Textured Pinhole (2019)	-	Non ACM	-	-	-	-
B-108A		Deck	Concrete	-	-	Non ACM	-	-	-	-
B108-B		Floor	Terrazzo	-	-	Non ACM	-	-	-	-
B108-B		Wall	Concrete	-	-	Non ACM	-	-	-	-
B108-B		Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
	Classroom	Floor	Vinyl Sheet Flooring	Grey (2019)	-	Non ACM	-	-	-	-
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
B-110	Classroom	Ceiling	Ceiling Tile 2 x 4	White Textured Pinhole (2019)	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:	
WATERLOO REGIOZ	Grand River Collegiate Institute		All quantities	
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re	
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov	
STANCT SCHOOL BOR	Addition(s): 2002, 2018	── NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
B-110	Classroom	Deck	Concrete	-	-	Non ACM	-	-	-	-
B-110	Classroom	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
B-110	Classroom	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Classroom	Piping	Pipe Insulation	Foam insulation	-	Non ACM	-	-	-	-
B-110A	Classroom	Floor	Vinyl Sheet Flooring	Grey (2019)	-	Non ACM	-	-	-	-
B-110A	Classroom	Wall	Drywall	Drywall Joint Compound		Non ACM	SL	S20abc	21-Dec-09	ND
B-110A	Classroom	Wall	Concrete	-		Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 2 x 4	White Textured Pinhole (2019)	-	Non ACM	-	-	-	-
B-110A	Classroom	Deck	Concrete	-	-	Non ACM	-	-	-	-
B-112	Change Room/Storage	Floor	Floor Tile 12x12	Beige Oatmeal	-	Non ACM	HM	S17	21-Dec-09	ND
B-112	Change Room/Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
B-112	Change Room/Storage	Wall	Textured Plaster	Plaster	-	Non ACM	HM	S18	21-Dec-09	ND
B-112	Change Room/Storage	Ceiling	Textured Plaster	Plaster	-	Non ACM	SL	S18c	21-Dec-09	ND
903	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
903	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
903	Stairwell	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
903	Stairwell	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
905	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
905	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
905	Stairwell	Wall	Ceramic Tile		-	Non ACM	-	-	-	-
905	Stairwell	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
906	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
906	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
906	Stairwell	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
906	Stairwell	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S20	21-Dec-09	ND
909	Stairwell	Floor	Concrete	-	-	Non ACM	-	-	-	-
909	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
909	Stairwell	Ceiling	Textured Plaster	Plaster	-	Non ACM	SL	S01B	18-Jan-18	ND
909	Stairwell	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
909	Stairwell	Piping	Pipe Insulation	High Density Foam under Canvas Wrap	-	Non ACM	-	-	-	-
_evel 1										
1-1	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
1-1	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-1	Corridor	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
1-1	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-1	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND

	School Name	Legend:	Notes:	
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update R	
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov	
STRUCT SCHOOL BOR	Addition(s): 2002, 2018	NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
1-1A	Stage Landing	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
1-1A	Stage Landing	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-1A	Stage Landing	Ceiling	Ceiling Tile 2 x 2	Fibreglass	-	Non ACM	-	-	-	-
1-1A	Stage Landing	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	-	-	-	-
1-100	Classroom	Floor	Floor Tile 9x9	Green	NF	ACM	HM	S09ABC	21-Dec-09	1.3% Chrysotile
1-100	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-100	Classroom	Wall	Drywall	Drywall Joint Compound (Post 2008)		Non ACM	-	-	-	-
1-100	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-100	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-102	Classroom	Floor	Floor Tile 9x9	Blue, White & Black	NF	ACM	HM	S04ABC	21-Dec-09	1.5% Chrysotile
1-102	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-102	Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
1-102	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-104	Classroom	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	HM	S07ABC	21-Dec-09	ND
1-104	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
1-104	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-104	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
1-106	Classroom	Wall	Concrete		-	Non ACM	-	-	-	-
1-106	Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
1-106	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-108	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
1-108	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-108	Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Floor	Floor Tile 12x12	White & blue	-	Non ACM	SL	S10ABC	21-Dec-09	ND
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Floor	Floor Tile 9x9	Blue, White & Black	NF	ACM	HM	S04ABC	21-Dec-09	1.5% Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-112	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:	
WATERLOO REGION	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re	
5	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov	
FERRICT SCHOOL BOR		- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
1-112A	Office	Floor	Floor Tile 9x9	Blue, White & Black	-	ACM	HM	S04ABC	21-Dec-09	1.5% Chrysotile
1-112A		Wall	Concrete	-	-	Non ACM	-	-	-	-
1-112A		Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
1-112A		Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	_
1-112A		Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	_
1-113	Storage	Floor	Terrazzo	·		Non ACM	-	-	-	_
1-113	Storage	Wall	Concrete	-						
	Storage	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
1-113	Storage	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Classroom	Floor	Floor Tile 9x9	Light Red	-	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Girls Washroom	Floor	Terrazzo	- / ()	-	Non ACM	-	-	-	-
	Girls Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Girls Washroom	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
	Girls Washroom	Ceiling	Ceiling Tile 2 x 2	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Girls Washroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Floor	Floor Tile 9x9	Beige	-	ACM	НМ	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Floor	Floor Tile 9x9	Light Red	NF	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
	Classroom	Wall	Plaster	Plaster	-	Non ACM	SL	S03ABC	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Learning Services Office	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
	Learning Services Office	Wall	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
	Learning Services Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Learning Services Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Learning Services Office	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-118	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
SET HICT SCHOOL BOP	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
1-118	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-118	Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
1-118	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-118	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-118	Classroom	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
1-119	Classroom	Floor	Floor Tile 12x12	Brown Cobblestone (Post 2008)		Non ACM	-	-	-	-
1-119	Classroom	Wall	Concrete	-		Non ACM	-	-	-	-
1-119	Classroom	Wall	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
1-119	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-119	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-120	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	<0.25 Chrysotile
1-120	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-120	Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
1-120	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-120	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-120	Classroom	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
2-1	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
2-1	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-1	Corridor	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
2-1	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-1	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-1	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
2-1A	Hallway	Floor	Floor Tile 12x12	White & blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
2-1A	Hallway	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-1A	Hallway	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-1A	Hallway	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
2-1A	Hallway	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-1A	Hallway	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	НМ	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
2-100	Classroom	Floor	Floor Tile 12x12	White & blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
2-100	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	SL	S02ABC	01-Jan-15	ND
	Classroom	Wall	Plaster	Plaster	-	Non ACM	SL	S01C	01-Jan-15	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
	Business Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
	Business Office	Floor	Floor Tile 12x12	White & blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
	Business Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Business Office	Wall	Drywall	Drywall Joint Compound	-		НМ	S08ABCDE	21-Dec-09	ND

	School Name	Legend:	Notes:
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
P	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
DETRICT SCHOOL BOR	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Room Reference Number Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
2-100A Business Office	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
2-100A Business Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-100A Business Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
2-100B Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
2-100B Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-100B Office	Wall	Drywall	Drywall Joint Compound		Non ACM	HM	S08ABCDE	21-Dec-09	ND
2-100B Office	Wall	Plaster	Plaster		Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
2-100B Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-100B Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
2-100C V&H Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
2-100C V&H Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-100C V&H Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
2-100C V&H Room	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
2-100C V&H Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-100C V&H Room	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
2-101 AV Office	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	HM	S07ABC	21-Dec-09	ND
2-101 AV Office	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	ND
2-101 AV Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-101 AV Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
2-101 AV Office	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
2-102 SAC Office	Floor	Floor Tile 12x12	White & blue	-	Non ACM	HM	S10ABC	21-Dec-09	ND
2-102 SAC Office	Wall	Concrete		-	Non ACM	-	-	-	-
2-102 SAC Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
2-102 SAC Office	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
2-102 SAC Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-102 SAC Office	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
2-103 Storage	Floor	Floor Tile 12x12	White & Beige	-	Non ACM	HM	S02ABC	21-Dec-09	ND
2-103 Storage	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	HM	S07ABC	21-Dec-09	ND
2-103 Storage	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
2-103 Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-103 Storage	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-104 Testing Room	Floor	Floor Tile 12x12	White & blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
2-104 Testing Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-104 Testing Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-104 Testing Room	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
2-104 Testing Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-104 Testing Room	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
2-106 Storage	Floor	Floor Tile 12x12	White & blue	-	Non ACM	HM	S10ABC	21-Dec-09	ND

	School Name	Legend:	Notes:	
WATERLOO REGION	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re	
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DSTRICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
2-106 \$	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-106	Storage	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-106	Storage	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
2-106	Storage	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-106	Storage	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
3-1 (Corridor	Floor	Terrazzo	-		Non ACM	-	-	-	-
3-1 (Corridor	Wall	Concrete	-		Non ACM	-	-	-	-
3-1 (Corridor	Wall	Ceramic Tile	Ceramic Tile	-	Non ACM	-	-	-	-
3-1 (Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-1 (Corridor	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
3-1 (Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
3-1A I	Hallway	Floor	Concrete	-	-	Non ACM	-	-	-	-
3-1A I	Hallway	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-1A I	Hallway	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
3-100 H	Kitchen	Floor	Ceramic Tile	Ceramic Tile	-	Non ACM	-	-	-	-
3-100 H	Kitchen	Wall	Concrete	- / /) `	-	Non ACM	-	-	-	-
3-100 H	Kitchen	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
3-100 H	Kitchen	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-100 H	Kitchen	Ceiling	Ceiling Tile 2 x 2	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-100 H	Kitchen	Deck	Steel Deck		-	Non ACM	-	-	-	-
3-100A I	Kitchen Storage/Office	Floor	Ceramic Tile	Ceramic Tile	-	Non ACM	-	-	-	-
3-100A I	Kitchen Storage/Office	Wall	Concrete		-	Non ACM	-	-	-	-
3-100A I	Kitchen Storage/Office	Ceiling	Drywall	-	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-102 H	Kitchen Classroom	Floor	Vinyl Sheet Flooring	Grey (2021)	-	Non ACM	-	-	-	-
3-102 H	Kitchen Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-102 H	Kitchen Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-102 H	Kitchen Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-102 H	Kitchen Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
3-102 H	Kitchen Classroom	Ceiling	Drywall	Drywall (No Compound)	-	Non ACM	-	-	-	-
3-103 F	Receiving	Floor	Concrete	-	-	Non ACM	-	-	-	-
3-103 F	Receiving	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Receiving	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Receiving	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
3-103A \$		Floor	Concrete	-	-	Non ACM	-	-	-	-
3-103A \$		Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-103A \$		Wall	Concrete	-	-	Non ACM	-	-	-	-
3-103A \$		Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-103A \$	Storage	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-

BAR BOR
SCHOOL

School Name	Legend:	Notes:
Grand River Collegiate Institute		All quantities
Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update R
Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
Addition(s): 2002, 2018	F - Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
3-103C	Custodial Staff Room	Floor	Vinyl Sheet Flooring	Grey (2021)	-	Non ACM	-	-	-	-
3-103C	Custodial Staff Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-103C	Custodial Staff Room	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
3-103C	Custodial Staff Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
3-103D	Custodial Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
3-103D	Custodial Office	Wall	Drywall	Drywall Joint Compound (Post 2021)		Non ACM	-	-	-	-
3-103D	Custodial Office	Wall	Concrete	-		Non ACM	-	-	-	-
3-103D	Custodial Office	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
3-103E	Washroom	Floor	Vinyl Sheet Flooring	Grey (2021)	-	Non ACM	-	-	-	-
3-103E	Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-103E	Washroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-103E	Washroom	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
3-104	Kitchen Classroom	Floor	Vinyl Sheet Flooring	Grey (2021)	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
3-104	Kitchen Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-104	Kitchen Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-104	Kitchen Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-104	Kitchen Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
3-104	Kitchen Classroom	Ceiling	Drywall	Drywall (No Compound)	-	Non ACM	-	-	-	-
3-105	Classroom	Floor	Vinyl Sheet Flooring	Grey Cobblestone	-	Non ACM	HM	S05ABC	21-Dec-09	ND
3-105	Classroom	Wall	Concrete		-	Non ACM	-	-	-	-
3-105	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-105	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-105	Classroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-105	Classroom	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
3-105A	Storage	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
3-105A	Storage	Wall	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
3-105A	Storage	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
3-105A	Storage	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Washroom	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
3-105B	Washroom	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
3-105B	Washroom	Ceiling	Drywall	Drywall Joint Compound (Post 2021)	-	Non ACM	-	-	-	-
3-105B	Washroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Staff Lounge	Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	ND
	Staff Lounge	Wall	Concrete	-	-	Non ACM	-	-		
3-106	Staff Lounge	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Staff Lounge	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02A	13-Apr-18	5% Amosite
3-106A		Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	ND
3-106A		Wall	Concrete	-	-	Non ACM	-	-		

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
SET HICT SCHOOL BOP	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
3-106A	Office	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
3-106A	Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
3-106C	Washroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	ND
	Washroom	Wall	Concrete	-	-	Non ACM	-	-		
3-106C	Washroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
3-106C	Washroom	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
3-106D	Washroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	ND
3-106D	Washroom	Wall	Concrete	-	-	Non ACM	-	-		
3-106D	Washroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
3-106D	Washroom	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02A	13-Apr-18	5% Amosite
3-107	Special Needs Classroom	Floor	Vinyl Sheet Flooring	Grey Cobblestone	-	Non ACM	SL	S05ABC	21-Dec-09	ND
3-107	Special Needs Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-107	Special Needs Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	SL	S08ABC	21-Dec-09	ND
3-107	Special Needs Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-107	Special Needs Classroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-109	Office	Floor	Floor Tile 9x9	Blue, White & Black	NF	ACM	HM	S04ABC	21-Dec-09	1.5% Chrysotile
3-109	Office	Wall	Concrete		-	Non ACM	-	-	-	-
3-109	Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-109	Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-109	Office	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-109	Office	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
3-111	Classroom	Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
3-111	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-111	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-111	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-111	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
3-112	Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
3-112	Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-112	Washroom	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
3-112	Washroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-112	Washroom	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
3-113	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	<0.25 Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	<0.25 Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
DET ALCT SCHOOL BOR		VC - Visually Confirmed - material not sampled, deemed	Dates prov
	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
3-114	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-114	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-114	Classroom	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
3-115	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	SL	S02ABC	21-Dec-09	<0.25 Chrysotile
3-115	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-115	Classroom	Wall	Drywall	Drywall Joint Compound		Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-115	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)		Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
3-116	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
3-116	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-116	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-116	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-117	Classroom	Floor	Floor Tile 9x9	Grey & White	NF	ACM	SL	S01ABC	21-Dec-09	1.1% Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-117	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-117	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Ceramic Tile		-	Non ACM	-	-	-	-
	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
4-1	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
4-1A	Main Foyer	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
	Main Foyer	Wall	Wood	-	-	Non ACM	-	-	-	-
	Main Foyer	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Main Foyer	Ceiling	Textured Finish	-	-	Non ACM	НМ	S13ABCDE	21-Dec-09	ND
	Cafeteria	Floor	Floor Tile 12x12	White & beige & yellow & blue	-	Non ACM	НМ	S02ABC	21-Dec-09	<0.25 Chrysotile
	Cafeteria	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Cafeteria	Wall	Textured Finish	-	-	Non ACM	SL	S13ABCDE	21-Dec-09	ND
	Cafeteria	Ceiling	Textured Finish	-	-	Non ACM	SL	S13ABCDE	21-Dec-09	ND
4-103A		Floor	Wood	Wood	-	Non ACM	-	-	-	-
4-103A		Wall	Concrete	-	-	Non ACM	-	-	-	-
4-103A		Ceiling	Concrete	-	-	Non ACM	-	-	-	-
	Custodial	Floor	Floor Tile 9x9	Beige	NF	ACM	НМ	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
	Custodial	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Custodial	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
4-105	Servery	Floor	Ceramic Tile	Ceramic Tile	-	Non ACM	-	-	-	-

WATERLOO REGIOL	School Name	Legend:	Notes:
WATERLOO REGIO	Grand River Collegiate Institute		All quantities
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro
2		VC - Visually Confirmed - material not sampled, deemed	Dates prov
DET RICT SCHOOL BOR	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Room Reference Number Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
4-105 Servery	Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	<0.25 Chrysotile
4-105 Servery	Wall	Concrete	-	-	Non ACM	-	-	-	-
4-105 Servery	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2024)	-	Non ACM	-	-	-	-
4-105 Servery	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
4-106 Duct Shaft	Floor	Concrete	-	-	Non ACM	-	-	-	-
4-106 Duct Shaft	Wall	Concrete	-		Non ACM	-	-	-	-
4-107 Tuck Shop	Floor	Floor Tile 9x9	Light Red	NF	ACM	SL	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
4-107 Tuck Shop	Wall	Concrete	-	-	Non ACM	-	-	-	-
4-107 Tuck Shop	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
4-107A Storage	Floor	Floor Tile 9x9	Light Red	NF	ACM	НМ	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
4-107A Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
4-107A Storage	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-1 Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
5-1 Corridor	Wall	Brick	-	-	Non ACM	-	-	-	-
5-1 Corridor	Wall	Ceramic Tile	-	-	-	-	-	-	-
5-1 Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2010)	-	Non ACM	-	-	-	-
5-1 Corridor	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-			
5-1A Hallway	Floor	Laminate	Grey / Brown	-	Non ACM	-	-	-	-
5-1A Hallway	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-1A Hallway	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-1A Hallway	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-			
5-1B Hallway	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
5-1B Hallway	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-1B Hallway	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-1B Hallway	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
5-1C Hallway	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
5-1C Hallway	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-1C Hallway	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-1C Hallway	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
5-1D Corridor	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	HM	S07ABC	21-Dec-09	ND
5-1D Corridor	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
5-1D Corridor	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
5-1E Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
5-1E Corridor	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
5-1E Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-1E Corridor	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
5-1E Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2010)	-	Non ACM	-	-	-	-
5-1E Corridor	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro
DER BOR		VC - Visually Confirmed - material not sampled, deemed	Dates prov
	Addition(s): 2002, 2018	NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
5-1F	Hallway	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
5-1F	Hallway	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-1F	Hallway	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-1H	Hallway	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
5-1H	Hallway	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-1H	Hallway	Ceiling	Drywall	Drywall Joint Compound		Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-103A	Staff Washroom	Floor	Laminate	-		Non ACM	-	-	-	-
5-103A	Staff Washroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-103A	Staff Washroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-103B	Staff Washroom	Floor	Laminate	-	-	Non ACM	-	-	-	-
5-103B	Staff Washroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-103B	Staff Washroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-101	VP Office	Floor	Laminate	-	-	Non ACM	-	-	-	-
5-101	VP Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-101	VP Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-101	VP Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
5-102	Custodial	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
5-102	Custodial	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-102	Custodial	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
5-103	Vice Principal Office	Floor	Laminate	-	-	Non ACM	-	-	-	-
5-103	Vice Principal Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-103	Vice Principal Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-103	Vice Principal Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-103	Vice Principal Office	Ceiling	Drywall	Drywall (No Compound)	-	Non ACM	-	-	-	-
5-105	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105	Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-105	Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-105	Office	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-105A	Records Storage	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105A	Records Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105A	Records Storage	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-105A	Records Storage	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-105A	Records Storage	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-105B	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105B	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105B		Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-105B	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update R
DER BOR	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
	Addition(s): 2002, 2018	─NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
5-105C	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105C	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105C	Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-105C	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
5-105D	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105D	Office	Wall	Concrete	-		Non ACM	-	-	-	-
5-105D	Office	Wall	Drywall	Drywall Joint Compound		Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-105D	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
5-105E	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105E	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105E	Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-105E	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
5-105F	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105F	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105F	Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-105F	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
5-105G	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105G	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105G	Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-105G	Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-105H	Optimist Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-105H	Optimist Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-105H	Optimist Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-105H	Optimist Room	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
5-1051	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-1051	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-1051		Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-1051	Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-1051	Office	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
5-107	Staff Room	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	HM	S07ABC	21-Dec-09	ND
	Staff Room	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Staff Room	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
	Staff Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Staff Washroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Staff Washroom	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
	Office	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	HM	S07ABC	21-Dec-09	ND
	Office	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
5-109	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND

WATERLOO REGIOZ	School Name	Legend:	Notes:
	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
DET HICT SCHOOL BOP	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
5-109A	Staff Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
5-109A	Staff Washroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
5-109A	Staff Washroom	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
	Office	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	HM	S07ABC	21-Dec-09	ND
5-111	Office	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
5-111	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
5-113	Office	Floor	Floor Tile 12x12	Brown Cobblestone		Non ACM	HM	S07ABC	21-Dec-09	ND
5-113	Office	Wall	Plaster	Plaster	-	Non ACM	SL	S08C	21-Dec-09	ND
5-113	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	SL	S09ABC	21-Dec-09	ND
5-113A	Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
5-113A	Office	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
5-113A	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
5-113B	Office	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
5-113B	Office	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
5-113B	Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
5-113E	Work Room	Floor	Carpet	- / /)	-	Non ACM	-	-	-	-
5-113E	Work Room	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
5-113E	Work Room	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
5-113F	Work Room	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
5-113F	Work Room	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
5-113F	Work Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
5-115	Storage Room	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
5-115	Storage Room	Wall	Plaster	Plaster	-	Non ACM	SL	S08AB	21-Dec-09	ND
5-115	Storage Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Storage Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-117	Cardio Room	Floor	Vinyl Sheet Flooring	Yellow, Blue (Post 2008)	-	Non ACM	-	-	-	-
5-117	Cardio Room	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
5-117	Cardio Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
5-117	Cardio Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
5-117	Cardio Room	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	НМ	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Cardio Room	Floor	Vinyl Sheet Flooring	Yellow, Blue (Post 2008)	-	Non ACM	-	-	-	-
	Cardio Room	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
	Cardio Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Cardio Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Cardio Room	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	НМ	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Storage	Floor	Floor Tile 9x9	Light Red	-	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
	Storage	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
	Storage	Wall	Concrete	1_		Non ACM	1_	-	_	-

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro
		VC - Visually Confirmed - material not sampled, deemed	Dates prov
SET ALCT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
5-117B	Storage	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Seminar Room	Floor	Floor Tile 12x12	White & blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
5-118	Seminar Room	Wall	Drywall	Drywall Joint Compound (2000)	-	Non ACM	-	-	-	-
5-118	Seminar Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2000)	-	Non ACM	-	-	-	-
5-118	Seminar Room	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
5-119	Seminar Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
5-119	Seminar Room	Wall	Drywall	Drywall Joint Compound (2000)		Non ACM	-	-	-	-
5-119	Seminar Room	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
5-120	Seminar Room	Floor	Floor Tile 12x12	White & blue	-	Non ACM	HM	S10ABC	21-Dec-09	ND
5-120	Seminar Room	Wall	Drywall	Drywall Joint Compound (2000)	-	Non ACM	-	-	-	-
5-120	Seminar Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2000)	-	Non ACM	-	-	-	-
5-120	Seminar Room	Deck	Metal Pan	Steel	-	Non ACM	-	-	-	-
6-1	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
6-1	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
6-1	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2010)	-	Non ACM	-	-	-	-
6-1	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
6-100	Main Office	Floor	Laminate	-	-	Non ACM	-	-	-	-
6-100	Main Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
6-100	Main Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
6-100	Main Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2000)	-	Non ACM	-	-	-	-
6-100	Main Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	HM	S09ABC	21-Dec-09	ND
6-100A	Principal's Office	Floor	Laminate	-	-	Non ACM	-	-	-	-
6-100A	Principal's Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
6-100A	Principal's Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Principal's Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2000)	-	Non ACM	-	-	-	-
	Principal's Office	Ceiling	Drywall	Drywall (No Compound)	-	Non ACM	-	-	-	-
	Washroom	Floor	Laminate	-	-	Non ACM	-	-	-	-
	Washroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Washroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	VP Office	Floor	Carpet	-	-	Non ACM	-	-	-	-
	VP Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	VP Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
	VP Office	Ceiling	Ceiling Tile 1 x 1	Medium Fissure Random Pinhole	-	Non ACM	НМ	S09ABC	21-Dec-09	ND
6-100D		Not Inspected								
6-100E		Floor	Laminate	-	-	Non ACM	-	-	-	-
6-100E		Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
6-100E		Wall	Concrete	-	-	Non ACM	-	-	-	-
6-100E	Office	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND

	School Name	Legend:	Notes:	
WATERLOO REGION	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update R	
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DET RICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
6-101	Copy Room	Floor	Floor Tile 9x9	Light Red	NF	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
6-101	Copy Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
6-101	Copy Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
6-101	Copy Room	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Office	Floor	Floor Tile 9x9	Light Red	-	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
	Office	Wall	Concrete	-		Non ACM	-	-	-	-
6-103	Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02F	13-Apr-18	5% Amosite
6-103	Office	Deck	Concrete	-	-	Non ACM	-	-	-	-
	Storage	Floor	Floor Tile 9x9	Light Red	NF	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
6-103A	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Storage	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
6-106	Girls Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
6-106	Girls Washroom	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
6-106	Girls Washroom	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
6-106A	Boys Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
6-106A	Boys Washroom	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
6-106A	Boys Washroom	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
7-1	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2010)	-	Non ACM	-	-	-	-
7-1	Corridor	Ceiling	Drywall	Drywall Joint Compound (Post 2008)	-	Non ACM	-	-	-	-
7-100	Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
7-100	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-100	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
7-100	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
7-100	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Gym 1	Floor	Wood	-	-	Non ACM	-	-	-	-
7-101	Gym 1	Wall	Concrete	Concrete	-	Non ACM	-	-	-	-
7-101	Gym 1	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
7-101A	Storage Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
	Storage Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Storage Room	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
7-101B		Floor	Concrete	-	-	Non ACM	-	-	-	-
7-101B		Wall	Concrete	-	-	Non ACM	-	-	-	-
7-101B		Ceiling	Concrete		-	Non ACM	-	-	-	-
7-101C		Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
7-101C		Wall	Concrete	-	-	Non ACM	-	-	-	-
7-101C	Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro
5 A 8	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
STATICT SCHOOL BOR	Addition(s): 2002, 2018	F - Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
7-101D	Office	Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
7-101D	Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-101D		Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
7-101E		Floor	Concrete	Concrete	-	Non ACM	-	-	-	-
7-101E		Wall	Concrete	Concrete	-	Non ACM	-	-	-	-
7-101E	Office	Ceiling	Concrete	Concrete	-	Non ACM	-	-	-	-
7-101F	Storage Room	Floor	Concrete	Concrete		Non ACM	-	-	-	-
7-101F	Storage Room	Wall	Concrete	Concrete	-	Non ACM	-	-	-	-
7-101F	Storage Room	Ceiling	Concrete	Concrete	-	Non ACM	-	-	-	-
7-102	Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
7-102	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-102	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-102	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
7-102	Classroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-102	Classroom	Piping	Rain Water Leader	Transite	NF	ACM	VC	Sample prior to removal/disturbance	-	-
7-104	Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
7-104	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-104	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-104	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
7-104	Classroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-106	Change Room	Floor	Terrazzo	Terrazzo	-	Non ACM	-	-	-	
7-106	Change Room	Wall	Concrete Block	-	-	Non ACM	-	-	-	
7-106	Change Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-108	Custodial	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
7-108	Custodial	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-108	Custodial	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-110	PhysEd Office	Floor	Vinyl Sheet Flooring	Blue (Post 2018)	-	Non ACM	-	-	-	-
7-110	PhysEd Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
	PhysEd Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
7-110B	Washroom	Floor	Vinyl Sheet Flooring	Blue (Post 2018)	-	Non ACM	-	-	-	-
7-110B	Washroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-110B	Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Washroom	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
8-1	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-1	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Ceiling Tile 2 x 2	Short Fissure Random Pinhole (2010)	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
8-1	Corridor	Deck	Spray-applied Fire Proofing	Off-white	F	ACM	HM	S02,31682-S01 to 31682-S07	21-Dec-09	5% -6.8% Chrysotile

	School Name	Legend:	Notes:
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
		VC - Visually Confirmed - material not sampled, deemed	Dates prov
DESTRICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
8-1	Corridor	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
8-100	Team Change Room	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-100	Team Change Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-100	Team Change Room	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC	21-Dec-09	ND
8-100A	Shower Room	Floor	Ceramic Tile	Ceramic Tile	-	Non ACM				
8-100A	Shower Room	Wall	Ceramic Tile	Ceramic Tile		Non ACM				
8-100A	Shower Room	Ceiling	Plaster	Plaster		Non ACM	НМ	S03ABC	21-Dec-09	ND
8-101	Gym Store	Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
8-101	Gym Store	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-101	Gym Store	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-102	Gym 2	Floor	Wood	-	-	Non ACM	-	-	-	-
8-102	Gym 2	Wall	Concrete	Concrete	-	Non ACM	-	-	-	-
8-102	Gym 2	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
8-102	Gym 2	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
8-103	Change Room	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-103	Change Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-103	Change Room	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-103A	Change Room Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-103A	Change Room Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-103A	Change Room Washroom	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC	21-Dec-09	ND
8-103B	Change Room Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-103B	Change Room Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-103B	Change Room Washroom	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC	21-Dec-09	ND
8-104	Gym 3	Floor	Wood	-	-	Non ACM	-	-	-	-
8-104	Gym 3	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-104	Gym 3	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
8-104	Gym 3	Piping	Rain Water Leader	Transite	NF	ACM	VC	Sample prior to removal/disturbance	-	-
8-104A	Instructor's Office	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-104A	Instructor's Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-104A	Instructor's Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
8-104B	Instructor's Office	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-104B	Instructor's Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-104B	Instructor's Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	НМ	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
8-104C		Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-104C	Instructor Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-104C	Instructor Washroom	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-104D	Instructor Shower	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
8-104D	Instructor Shower	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
		VC - Visually Confirmed - material not sampled, deemed	Dates prov
FRANCT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
8-104D	Instructor Shower	Ceiling	Ceramic Tile	-	-	Non ACM	-	-	-	-
8-104E	Instructor Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-104E	Instructor Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-104E	Instructor Washroom	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-104F	Instructor Shower	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
8-104F	Instructor Shower	Wall	Ceramic Tile	-		Non ACM	-	-	-	-
8-104F	Instructor Shower	Ceiling	Ceramic Tile	-		Non ACM	-	-	-	-
8-104G	Storage	Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
8-104G	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-104G	Storage	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-104H	Instructor Office	Floor	Floor Tile 9x9	Grey & White	NF	ACM	SL	S01ABC	21-Dec-09	1.1% Chrysotile
8-104H	Instructor Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-104H	Instructor Office	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-105	Team Change Room	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-105	Team Change Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
8-105	Team Change Room	Wall	Ceramic Tile	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-105	Team Changeroom	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC	21-Dec-09	ND
8-105B	Shower Room	Floor	Ceramic Tile	Ceramic Tile	-	Non ACM				
	Shower Room	Wall	Ceramic Tile	Ceramic Tile	-	Non ACM				
8-105B	Shower Room	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-105C	Change Room Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
8-105C	Change Room Washroom	Wall	Concrete		-	Non ACM	-	-	-	-
8-105C	Change Room Washroom	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
8-106	Team Change Room	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Team Change Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Team Change Room	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
	Shower Room	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
	Shower Room	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
	Shower Room	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC	21-Dec-09	ND
	Change Room Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Change Room Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Change Room Washroom	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC	21-Dec-09	ND
	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2010)	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Drywall	Drywall Joint Compound (Post 2008)						
T-1	Corridor	Piping	Rain Water Leader	Horsehair	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:
BRITHICT SCHOOL BORS	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
T-1A (Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
T-1A (Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-1A (Corridor	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
T-1A (Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2010)	-	Non ACM	-	-	-	-
T-101	Art Room	Floor	Wood	-	-	Non ACM	-	-	-	-
	Art Room	Wall	Concrete	-		Non ACM	-	-	-	-
	Art Room	Ceiling	Fibreboard	-		Non ACM	-	-	-	-
	Art Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Art Room	Piping	Pipe Fitting	Parged Cement	F	ACM	НМ	1680.330-01	June, 1990	>75% Chrysotile
	Classroom	Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	_
	Classroom	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	НМ	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Vorkroom	Floor	Floor Tile 9x9	Beige	NF	ACM	HM	32523-GRCI-FT-S03ABC	21-Dec-09	1.3% Chrysotile
	Vorkroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Vorkroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	_
	Vorkroom	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	НМ	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Art Room	Floor	Floor Tile 9x9	Green	NE	ACM	HM	S09ABC	21-Dec-09	1.3% Chrysotile
	Art Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Art Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Art Room	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	НМ	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Exterior Storage	Floor	Concrete		-	Non ACM	_	-	_	-
	Exterior Storage	Wall	Concrete	_	_	Non ACM	-	-		
	Exterior Storage	Ceiling	Concrete	-	_	Non ACM	-	-		-
	Drama Storage	Floor	Floor Tile 9x9	Green	NF	ACM	НМ	S09ABC	21-Dec-09	1.3% Chrysotile
	Drama Storage	Wall	Concrete	-	_	Non ACM	_	-		-
	Drama Storage	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)		Non ACM		-		
	Drama Storage	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S07ABC	21-Dec-09	1.3% Amosite 0.25% Chrysotile
	Vashroom	Floor	Terrazzo		-	Non ACM	-	-	-	
	Vashroom	Wall	Ceramic Tile	-		Non ACM		-		
	Washroom	Ceiling	Ceiling Tile 2 x 2	Short Fissure Random Pinhole (1990)	-	Non ACM		-	-	-
	Vashroom	Ceiling	Drywall	Drywall (No Compound)		Non ACM	1_	-	-	-
	Theater Arts	Floor	Wood			Non ACM		-		
	Theater Arts	Wall	Concrete	-	-	Non ACM		-	-	-
	Theater Arts	Ceiling	Fibreboard	-		Non ACM		-		
	Theater Arts	Piping	Pipe Insulation	Fibreglass insulation		Non ACM		-		
	Theater Arts	Piping	Pipe Fitting	Parged Cement	F	ACM	- HM	- 1680.330-01	June, 1990	>75% Chrysotile
	Career Centre	Floor	Floor Tile 12x12	Pink Cobblestone		Non ACM	SL	S03ABC	21-Dec-09	ND

	School Name	Legend:	Notes:	
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re	
5		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DET AICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
T-108	Career Centre	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-108	Career Centre	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
T-108	Career Centre	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02B	13-Apr-18	5% Amosite
T-109	Music Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
T-109	Music Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-109	Music Room	Ceiling	Fibreboard	-	•	Non ACM	-	-	-	-
T-109	Music Room	Piping	Pipe Insulation	Fibreglass insulation		Non ACM	-	-	-	-
T-109	Music Room	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
T-109A	Music Practice Room	Floor	Carpet	-	-	-	-	-	-	-
T-109A	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109A	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109B I	Music Practice Room	Floor	Carpet	-	-	-	-	-	-	-
T-109B I	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109B I	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109C	Music Practice Room	Floor	Carpet	-	-	-	-	-	-	-
T-109C	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109C	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109D I	Music Practice Room	Floor	Carpet	-	-	-	-	-	-	-
T-109D I	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109D I	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109E I	Music Practice Room	Floor	Carpet	-)	-	Non ACM	-	-	-	-
T-109E	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109E I	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109F I	Music Practice Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
T-109F	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109F I	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-109G I	Music Practice Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
T-109G I	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Music Practice Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Music Practice Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
	Music Practice Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Music Practice Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Storage	Floor	Concrete	-	-	Non ACM	-	-	-	-
	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-110	Storage	Deck	Steel Deck		-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
STRICT SCHOOL BOR	Addition(s): 2002, 2018	⊣NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
T-110	Storage	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Custodial	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Custodial	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-112	Custodial	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Floor	Floor Tile 9x9	Light Red	NF	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8% Chrysotile
	Classroom	Floor	Carpet	-		Non ACM	-	-	-	-
	Classroom	Wall	Concrete	-		Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Floor	Wood	-	-	Non ACM	-	_	-	-
	Classroom	Wall	Concrete	-	_	Non ACM	_	_	_	
	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Deck	Steel Deck	-	_	Non ACM	_	-	-	-
	Classroom	Ceiling	Fibreboard	-	-	Non ACM	-	_	-	-
	Classroom	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
	Classroom	Floor	Wood	-	-	Non ACM	_	-	-	-
	Classroom	Floor	Floor Tile 9x9	Brown & White	_	ACM	HM	S04ABC	21-Dec-09	1.5 Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Drywall	Drywall Joint Compound	_	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Fibreboard	-	_	Non ACM	_	_	_	
	Classroom	Piping	Pipe Insulation	Fibreglass insulation	_	Non ACM		_		
	Classroom	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
	Storage/Office	Floor	Wood		-	Non ACM	_	-	-	-
	Storage/Office	Wall	Concrete		_	Non ACM		-		
	Storage/Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Storage/Office	Deck	Steel Deck			Non ACM	-	-	-	-
	Storage/Office	Ceiling	Fibreboard	-		Non ACM	_	-	_	
	Storage/Office	Piping	Pipe Insulation	Fibreglass insulation	_	Non ACM	_		_	
	Storage/Office	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	- 1680.330-01	June, 1990	>75% Chrysotile
T-117B		Floor	Wood	-	-	Non ACM	-	-	-	-
T-117B		Wall	Concrete	-	-	Non ACM	-	-	_	-
T-117B		Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	 21-Dec-09	ND
T-117B		Deck	Steel Deck	-	-	Non ACM	-	-	-	-
T-117B		Ceiling	Fibreboard	-	-	Non ACM	-	-	_	-
T-117B		Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-		-	
T-117C		Floor	Wood		-	Non ACM	-	-	-	
	Storage	Wall	Concrete		-	Non ACM	-		-	

	School Name	Legend:	Notes:	
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro	
2		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
BATHICT SCHOOL BOR	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
T-117C	Storage	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
T-117C	Storage	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
T-117C	Storage	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
T-117C	Storage	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Storage	Floor	Wood	-	-	Non ACM	-	-	-	-
T-117D	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-117D	Storage	Wall	Drywall	Drywall Joint Compound		Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-117D	Storage	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
T-117D	Storage	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
T-117D	Storage	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Classroom	Floor	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Classroom	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
	Classroom	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Classroom	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
	Edit Room	Floor	Floor Tile 12x12	White & Blue	-	Non ACM	HM	S10ABC	21-Dec-09	ND
	Edit Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Edit Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Edit Room	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
	Edit Room	Ceiling	Fibreboard		-	Non ACM	-	-	-	-
	Edit Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
T-119	Art Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
	Art Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Art Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Art Room	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
	Art Room	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
	Art Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Art Room	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
T-119A		Not Inspected								
	Classroom	Floor	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
	Classroom	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
T-120	Classroom	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile

	School Name	Legend:	Notes:	
WATERLOO REGION	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro	
		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DESTRICT SCHOOL BORT	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
T-120A	Dark Room	Floor	Floor Tile 12x12	White & Blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
T-120A	Dark Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-120A	Dark Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
T-120A	Dark Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-120A	Dark Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
T-121	TV Studio	Floor	Floor Tile 9x9	Grey	NF	ACM	HM	S09ABC	21-Dec-09	1.3 Chrysotile
T-121	TV Studio	Wall	Concrete	-		Non ACM	-	-	-	-
T-121	TV Studio	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	TV Studio	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S01ABC	21-Dec-09	2.3% Amosite 0.25% Chrysotile
T-121A	Storage	Floor	Wood	-	-	Non ACM	-	-	-	-
T-121A	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-121A	Storage	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
	Paint Storage	Floor	Concrete	-	-	Non ACM	-	-	-	-
T-122	Paint Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-122	Paint Storage	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
	Classroom	Floor	Wood	-	-	Non ACM	-	-	-	-
T-123	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-123	Classroom	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
T-123	Classroom	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
T-123	Classroom	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
T-123A	Storage	Floor	Floor Tile 9x9	Green	NF	ACM	HM	S09ABC	21-Dec-09	1.3 Chrysotile
T-123A	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
T-123A	Storage	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
T-123A	Storage	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
T-124	Cyclone	Not Inspected								
T-125	Computer Lab	Floor	Mastic Tile 12x12	White & Blue	-	Non ACM	HM	S10ABC	21-Dec-09	ND
	Computer Lab	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Computer Lab	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
T-125	Computer Lab	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
T-125	Computer Lab	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
	Computer Lab	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Computer Lab Edit	Floor	Mastic Tile 12x12	White & Blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
	Computer Lab Edit	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Computer Lab Edit	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Computer Lab Edit	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
	Computer Lab Edit	Ceiling	Fibreboard	-	-	Non ACM	-	-	-	-
	Computer Lab Edit	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
901	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro
		VC - Visually Confirmed - material not sampled, deemed	Dates prov
FETRICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
901	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Stairwell	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Stairwell	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
	Stairwell	Floor	Terrazzo		-	Non ACM	-	-	-	-
903	Stairwell	Wall	Concrete	-		Non ACM	-	-	-	-
903	Stairwell	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
904	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
904	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
904	Stairwell	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
905	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
905	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
905	Stairwell	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
906	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
906	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
906	Stairwell	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
907	Stairwell	Floor	Concrete	-	-	Non ACM	-	-	-	-
907	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
907	Stairwell	Deck	Steel Deck		-	Non ACM	-	-	-	-
908	Stairwell	Floor	Concrete	-	-	Non ACM	-	-	-	-
908	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
908	Stairwell	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
910	Stairwell	Floor	Concrete	-	-	Non ACM	-	-	-	-
910	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
910	Stairwell	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
evel 2	•		·	·			•	·		- ·
1-2	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Drywall	Drywall Joint Compound	-		НМ	S08ABCDE	21-Dec-09	ND
	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Study Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
	Study Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Study Room	Wall	Drywall	Drywall Joint Compound	1_		НМ	S08ABCDE	21-Dec-09	ND

	School Name	Legend:	Notes:
BST ALCT SCHOOL BONS	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
	Addition(s): 2002, 2018	F - Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
1-200	Study Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-200	Study Room	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-200A	Study Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
1-200A	Study Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-200A	Study Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-200A	Study Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-200A	Study Room	Ceiling	Ceiling Tile 1 x 1	Cellulose		Non ACM	-	-	-	-
1-204	Study Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
1-204	Study Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-204	Study Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
1-204	Study Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-204	Study Room	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-204A	Study Room	Floor	Carpet	-	-	Non ACM	-	-	-	-
1-204A	Study Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-204A	Study Room	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-204A	Study Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-204A	Study Room	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-206	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
1-206	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-206	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-206	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-206	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-208	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
1-208	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-208	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-208	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-210	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Staff Office	Floor	Floor Tile 9x9	Brown & White	-	ACM	HM	S04ABC	21-Dec-09	1.5 Chrysotile
	Staff Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Staff Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Staff Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Staff Office	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	<0.25 Chrysotile

	School Name	Legend:	Notes:
BUT ALCT SCHOOL BOX	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
	Addition(s): 2002, 2018	− NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Room Reference Number Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
1-214 Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-214 Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-214 Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-214 Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-216 Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
1-216 Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-216 Classroom	Wall	Drywall	Drywall Joint Compound		Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-216 Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-216 Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-217 Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
1-217 Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-217 Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-217 Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
1-217 Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-217 Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-218 Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
1-218 Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-218 Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-218 Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-218 Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-219 Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
1-219 Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-219 Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-219 Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
1-219 Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-219 Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-220 Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
1-220 Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-220 Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-220 Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-220 Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
1-221 Classroom	Floor	Floor Tile 9x9	Light Red	NF	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8 Chrysotile
1-221 Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
1-221 Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
1-221 Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
1-221 Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
1-221 Classroom	Ceiling	Ceiling Tile 1 x 1	Long Fissure	NF	ACM	SL	S03A	13-Apr-18	5% Amosite
2-2 Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:	
WATERLOO REGION	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro	
		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DESTRICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
2-2	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-2	Corridor	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-2	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
2-2	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-2	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
2-200	Gallery - Cafetorium	Floor	Concrete	-		Non ACM	-	-	-	-
2-200	Gallery - Cafetorium	Wall	Concrete Block	-	-	Non ACM	-	-	-	-
2-200	Gallery - Cafetorium	Deck	Concrete	-	-	Non ACM	-	-	-	-
2-201	Fan Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
2-201	Fan Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-201	Fan Room	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
2-201A	Fan Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
2-201A	Fan Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-201A	Fan Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-201A	Fan Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
2-201A	Fan Room	Piping	Pipe Fitting	PVC	-	Non ACM	-	-	-	-
2-201A	Fan Room	Ducting	Flex Joint		NF	ACM	VC	Sample prior to removal/disturbance	-	-
2-203	Girls Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
2-203	Girls Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-203	Girls Washroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-203	Girls Washroom	Ceiling	Ceiling Tile 2 x 2	Fibreglass	-	Non ACM	-	-	-	-
2-203	Girls Washroom	Ceiling	Drywall	Drywall (No Compound)	-	Non ACM	-	-	-	-
2-205	Fly Gallery	Floor	Concrete	-	-	Non ACM	-	-	-	-
2-205	Fly Gallery	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-205	Fly Gallery	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-206	Boy's Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
2-206	Boy's Washroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
2-206	Boy's Washroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
2-206	Boy's Washroom	Ceiling	Ceiling Tile 2 x 2	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
2-206	Boy's Washroom	Ceiling	Drywall	Drywall (No Compound)	-	Non ACM	-	-	-	-
	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
	Hallway	Floor	Mastic Tile 12x12	White & blue	-	Non ACM	HM	S10ABC	21-Dec-09	ND
	Hallway	Wall	Concrete	-	-	Non ACM	-	-	-	_

	School Name	Legend:	Notes:	
WHITERLOO REGIOZ	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update R	
5		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DISTRICT SCHOOL BOR	Addition(s): 2002, 2018	NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
3-2A	Hallway	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-2A	Hallway	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-2A	Hallway	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02C	13-Apr-18	5% Amosite
3-201	Storage	Floor	Floor Tile 9x9	Green with white streaks	NF	ACM	HM	S09ABC	21-Dec-09	1.3% Chrysotile
3-201	Storage	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-201	Storage	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	HM	S02C	13-Apr-18	5% Amosite
3-202	Classroom	Floor	Floor Tile 9x9	Beige (Tan with Brown and White Streak	s) NF	ACM	НМ	S03ABC	21-Dec-09	1.3% Chrysotile
3-202	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-202	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-202	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-202	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
3-203	Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
3-203	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-203	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-203	Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
3-203	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-203	Classroom	Ceiling	Ceiling Tile 1 x 1	Long Fissure	NF	ACM	HM	S05ABC	21-Dec-09	1.5% Amosite 0.25% Chrysotile
3-204	Classroom	Floor	Floor Tile 9x9	Light Red	NF	ACM	НМ	32523-GRCI-FT-S08ABC	21-Dec-09	1.8 Chrysotile
3-204	Classroom	Floor	Floor Tile 9x9	Green with white streaks	NF	ACM	НМ	S09ABC	21-Dec-09	1.3% Chrysotile
3-204	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-204	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-204	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
3-207	Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
3-207	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-207	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-207	Classroom	Wall	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
3-207	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-207	Classroom	Ceiling	Ceiling Tile 1 x 1	Long Fissure	NF	ACM	НМ	S05ABC	21-Dec-09	1.5% Amosite 0.25% Chrysotile
3-208	Staff Office	Floor	Mastic Tile 12x12	White & blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
3-208	Staff Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-208	Staff Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-208	Staff Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-208	Staff Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02C	13-Apr-18	5% Amosite
3-208A	Staff Office	Floor	Mastic Tile 12x12	White & blue	-	Non ACM	HM	S10ABC	21-Dec-09	ND
3-208A	Staff Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-208A	Staff Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
	Staff Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-208A	Staff Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02C	13-Apr-18	5% Amosite

	School Name	Legend:	Notes:	
WATERLOO REGIOZ	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Re	
		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DSTRICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
3-208B	Staff Office	Floor	Mastic Tile 12x12	White & blue	-	Non ACM	НМ	S10ABC	21-Dec-09	ND
3-208B	Staff Office	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-208B	Staff Office	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
3-208B	Staff Office	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-208B	Staff Office	Ceiling	Ceiling Tile 1 x 1	Large & Small Hole	NF	ACM	SL	S02C	13-Apr-18	5% Amosite
	Storage	Floor	Floor Tile 9x9	Light Red	NF	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8 Chrysotile
3-209	Storage	Wall	Concrete	-		Non ACM	-	-	-	-
3-209	Storage	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-209	Storage	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
3-209	Storage	Ceiling	Ceiling Tile 1 x 1	Long Fissure	NF	ACM	HM	S05ABC	21-Dec-09	1.5% Amosite 0.25% Chrysotile
3-210	Mechanical Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
3-210	Mechanical Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-210	Mechanical Room	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
3-210	Mechanical Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
3-210	Mechanical Room	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
3-210	Mechanical Room	Piping	Pipe Insulation	Mag Block	F	ACM	HM	1680.330-03	June, 1990	25-50% Amosite, >75% Chrysotile
3-210	Mechanical Room	Ducting	Flex Joint	-	NF	ACM	VC	Sample prior to removal/disturbance	-	-
3-211	Classroom	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
3-211	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-211	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-211	Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
3-211	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-211	Classroom	Ceiling	Ceiling Tile 1 x 1	Long Fissure	NF	ACM	HM	S05ABC	21-Dec-09	1.5% Amosite 0.25% Chrysotile
3-213	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
3-213	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-213	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-213	Classroom	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
3-213	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
3-213	Classroom	Ceiling	Ceiling Tile 1 x 1	Long Fissure	NF	ACM	HM	S05ABC	21-Dec-09	1.5% Amosite 0.25% Chrysotile
3-214	Science Classroom	Floor	Floor Tile 12x12	Grey Cobblestone (2016)	-	Non ACM				
3-214	Science Classroom	Floor	Floor Tile 12x12	Black Cobblestone (2016)	-	Non ACM				
	Science Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Science Classroom	Wall	Drywall	Drywall Joint Compound (2016)	-	Non ACM				
	Science Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
3-214	Science Classroom	Deck	Steel Deck	Tinted Spray-applied fireproofing (2016)	-	Non ACM	-	-	-	-
3-216	Storage/Prep Room	Floor	Floor Tile 12x12	Grey Cobblestone (2016)	-	Non ACM				
3-216	Storage/Prep Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-216	Storage/Prep Room	Wall	Drywall	Drywall Joint Compound (2016)	-	Non ACM				

	School Name	Legend:	Notes:
WATERLOO REGIOZ	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update R
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
STAICT SCHOOL BOR	Addition(s): 2002, 2018	−NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number		Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
3-216	Storage/Prep Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
3-216	Storage/Prep Room	Deck	Steel Deck	Tinted Spray-applied fireproofing (2016)	-	Non ACM	-	-	-	-
3-217	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	HM	S02ABC	21-Dec-09	<0.25 Chrysotile
3-217	Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-217	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
3-217	Classroom	Wall	Plaster	Plaster		Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
3-217	Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)		Non ACM	-	-	-	-
	Classroom	Ceiling	Ceiling Tile 1 x 1	Long Fissure	NF	ACM	HM	S05ABC	21-Dec-09	1.5% Amosite 0.25% Chrysotile
3-218	Science Classroom	Floor	Floor Tile 12x12	Grey Cobblestone (2016)	-	Non ACM				
3-218	Science Classroom	Floor	Floor Tile 12x12	Black Cobblestone (2016)	-	Non ACM				
	Science Classroom	Wall	Concrete	-	-	Non ACM	-	-	-	-
3-218	Science Classroom	Wall	Drywall	Drywall Joint Compound (2016)	-	Non ACM				
	Science Classroom	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
3-218	Science Classroom	Deck	Steel Deck	Tinted Spray-applied fireproofing (2016)	-	Non ACM	-	-	-	-
3-219	Classroom	Floor	Floor Tile 12x12	White & beige	-	Non ACM	НМ	S02ABC	21-Dec-09	<0.25 Chrysotile
	Classroom	Wall	Concrete	· / /) ·	-	Non ACM	-	-	-	-
3-219	Classroom	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Classroom	Ceiling	Ceiling Tile 1 x 1	Cellulose	-	Non ACM	-	-	-	-
	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Concrete		-	Non ACM	-	-	-	-
	Corridor	Wall	Ceramic Tile		-	Non ACM	-	-	-	-
	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
4-2	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
4-201	Boy's Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
4-201	Boy's Washroom	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
	Boy's Washroom	Ceiling	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Projection Room	Floor	Floor Tile 9x9	Light Red	NF	ACM	HM	32523-GRCI-FT-S08ABC	21-Dec-09	1.8 Chrysotile
4-202	Projection Room	Wall	Plaster	Plaster	-	Non ACM	HM	S03ABC, S12ABCDE	21-Dec-09	ND
	Projection Room	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
	Projection Room	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
	Lecture Hall	Floor	Floor Tile 9x9	Brown & White	NF	ACM	HM	S11ABC	21-Dec-09	0.75 Chrysotile
	Lecture Hall	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Lecture Hall	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Corridor	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
6-2	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:
WATERLOO REGION	Grand River Collegiate Institute		All quantities
	Date Built:	HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update Ro
	Original: 1965	VC - Visually Confirmed - material not sampled, deemed	Dates prov
BUTHICT SCHOOL BOR	Addition(s): 2002, 2018	NF - Non-Friable F - Friable	indicates date

WRDSB Fixed Reference Number	Room Description	Inspected Item	Inspected Material	Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
6-2	Corridor	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
6-2	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
6-200	Girl's Washroom	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
6-200	Girl's Washroom	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
6-200	Girl's Washroom	Ceiling	Plaster	Plaster	-	Non ACM	НМ	S03ABC, S12ABCDE	21-Dec-09	ND
6-201	Fitness Room - Gym & 2	Floor	Concrete	-		Non ACM	-	-	-	-
6-201	Fitness Room - Gym & 2	Wall	Concrete	-		Non ACM	-	-	-	-
6-201	Fitness Room - Gym & 2	Deck	Steel Deck	-	-	Non ACM	-	-	-	-
6-201A	Gallery - Gym 1 & 2	Floor	Concrete	-	-	Non ACM	-	-	-	-
	Gallery - Gym 1 & 2	Wall	Concrete	-	-	Non ACM	-	-	-	-
6-201A	Gallery - Gym 1 & 2	Deck	Steel Deck		-	Non ACM	-	-	-	-
7-2	Corridor	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
7-2	Corridor	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-2	Corridor	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
7-2	Corridor	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
7-2	Corridor	Ceiling	Drywall	Drywall (No Compound)	-	Non ACM	-	-	-	-
7-2	Corridor	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
7-200	Kitchen	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
7-200	Kitchen	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-200	Kitchen	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
7-200	Kitchen	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
7-200	Kitchen	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
7-202	Kitchen	Floor	Ceramic Tile	-	-	Non ACM	-	-	-	-
7-202	Kitchen	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
7-202	Kitchen	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-202	Kitchen	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-202	Kitchen	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (2016)	-	Non ACM	-	-	-	-
7-202	Kitchen	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
7-204	Laundry	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
7-204	Laundry	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-204	Laundry	Wall	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-204	Laundry	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-
7-204	Laundry	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
7-206	Servery	Floor	Vinyl Sheet Flooring	Grey (Post 2021)	-	Non ACM	-	-	-	-
7-206	Servery	Floor	Floor Tile 12x12	Brown Cobblestone	-	Non ACM	НМ	S07ABC	21-Dec-09	ND
7-206	Servery	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-206	Servery	Wall	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
7-206	Servery	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	-	Non ACM	-	-	-	-

	School Name	Legend:	Notes:	
WATERLOO REGIOL	Grand River Collegiate Institute		All quantities	
		HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled	Update R	
		VC - Visually Confirmed - material not sampled, deemed	Dates prov	
DET RICT SCHOOL BOR	Addition(s): 2002, 2018	- NF - Non-Friable F - Friable	indicates date	

WRDSB Fixed Reference Number	ference Number Description Item Material		Material Description	Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type	
7-206	Servery	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
7-207	Custodial Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
7-207	Custodial Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-207	Custodial Room	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
7-207	Custodial Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
7-207	Custodial Room	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
7-207	Custodial Room	Piping	Pipe Insulation	Mag Block	F	ACM	НМ	1680.330-03	June, 1990	25-50% Amosite, >75% Chrysotile
7-207A	Mechanical Room	Floor	Concrete	-	-	Non ACM	-	-	-	-
7-207A	Mechanical Room	Wall	Concrete	-	-	Non ACM	-	-	-	-
7-207A	Mechanical Room	Ceiling	Concrete	-	-	Non ACM	-	-	-	-
7-207A	Mechanical Room	Piping	Pipe Insulation	Fibreglass insulation	-	Non ACM	-	-	-	-
7-207A	Mechanical Room	Piping	Pipe Fitting	Parged Cement	F	ACM	HM	1680.330-01	June, 1990	>75% Chrysotile
7-207A	Mechanical Room	Piping	Pipe Insulation	Mag Block	F	ACM	HM	1680.330-03	June, 1990	25-50% Amosite, >75% Chrysotile
7-207A	Mechanical Room	Ducting	Flex Joint	-	NF	ACM	VC	Sample prior to removal/disturbance	-	-
901	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
901	Stairwell	Wall	Concrete	- / / / /	-	Non ACM	-	-	-	-
901	Stairwell	Wall	Brick		-	Non ACM	-	-	-	-
901	Stairwell	Ceiling	Ceiling Tile 2 x 2	Fibreglass	-	Non ACM				
901	Stairwell	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
902	Stairwell	Floor	Terrazzo		-	Non ACM	-	-	-	-
902	Stairwell	Wall	Concrete	-)	-	Non ACM	-	-	-	-
902	Stairwell	Wall	Ceramic Tile		-	Non ACM	-	-	-	-
902	Stairwell	Ceiling	Ceiling Tile 2 x 2	Fibreglass	-	Non ACM				
902	Stairwell	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	НМ	S08ABCDE	21-Dec-09	ND
903	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
903	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
903	Stairwell	Ceiling	Ceiling Tile 2 x 2	Fibreglass	-	Non ACM				
903	Stairwell	Ceiling	Drywall	Drywall Joint Compound	-	Non ACM	HM	S08ABCDE	21-Dec-09	ND
904	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Stairwell	Wall	Ceramic Tile	-	-	Non ACM	-	-	-	-
	Stairwell	Ceiling		Fibreglass	-	Non ACM				
	Stairwell	Ceiling		Fibreglass	-	Non ACM				
905	Stairwell	Floor	Terrazzo	-	-	Non ACM	-	-	-	-
905	Stairwell	Wall	Concrete	-	-	Non ACM	-	-	-	-
	Stairwell	Ceiling	Ceiling Tile 1 x 1	Fibreglass	-	Non ACM				
	Stairwell Stairwell	Floor Wall	Terrazzo Concrete	-	-	Non ACM Non ACM	-	-	-	
906	Stairwell	Ceiling	Ceiling Tile 2 x 4	Short Fissure Random Pinhole (1990)	<u> </u>	Non ACM		- _	-	

Date Built: HM - Homogenous Material - homogeneous with previously sampled material SL - Sample Location - material sampled		School Name	Legend:	Notes:
Date Built: HM - Homogenous Material - homogeneous with previously sampled material U SL - Sample Location - material sampled U	NATERLOO REGO	Grand River Collegiate Institute		All quantities
		Date Built:	SL - Sample Location - material sampled VC - Visually Confirmed - material not sampled, deemed	Update R
		Original: 1965		Dates prov
	ALCT SCHOOL BOR	Addition(s): 2002, 2018		indicates date

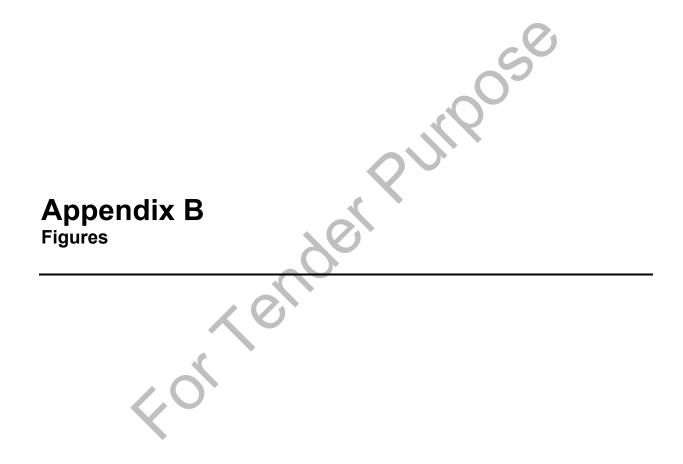
WRDSB Fixed Reference Number	Description	Inspected Item	Inspected Material	Material Description		Friability	Asbestos Classification	Sample / Identification Summary	Sample ID	Sample Date	% Asbestos & Fibre Type
906	Stairwell	Ceiling	Ceiling Tile 1 x 1	Fibreglass	-		Non ACM				
907	Stairwell	Floor	Concrete	-	-		Non ACM	-	-	-	-
	Stairwell	Wall	Concrete	-	-		Non ACM	-	-	-	-
	Stairwell	Deck	Steel Deck	-	-		Non ACM	-	-	-	-
908	Stairwell	Floor	Concrete	-	-		Non ACM	-	-	-	-
908	Stairwell	Wall	Concrete	-	-		Non ACM	-	-	-	-
908	Stairwell	Deck	Steel Deck	-	-		Non ACM	-	-	-	-
											<u>.</u>
Summary of Potential A	CM Hidden or Not Assesse	d									
-											
	Throughout Building	Not Inspected	Not Inspected	Wall Cavity Insulation							
	Throughout Building	Not Inspected	Not Inspected	Door Core Insulation							

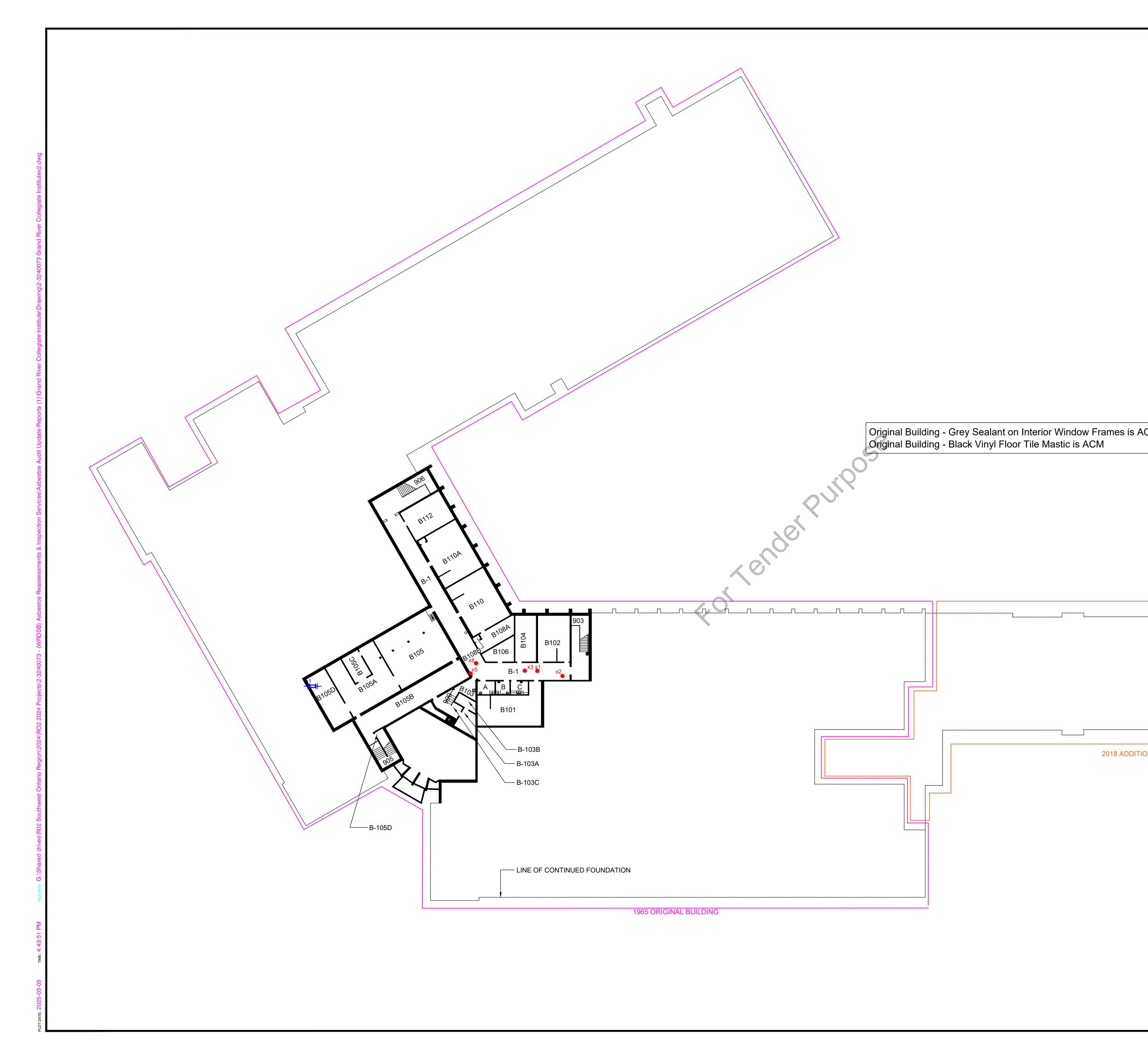
Summary of Potential A	CM Hidden or Not Assessed					
	Throughout Building	Not Inspected	Not Inspected	Wall Cavity Insulation		
	Throughout Building	Not Inspected	Not Inspected	Door Core Insulation		

Door Core Insulation

es provided on Figures, if known. Refer to the Asbestos Audit Report for condition of ACM and recommended actions.







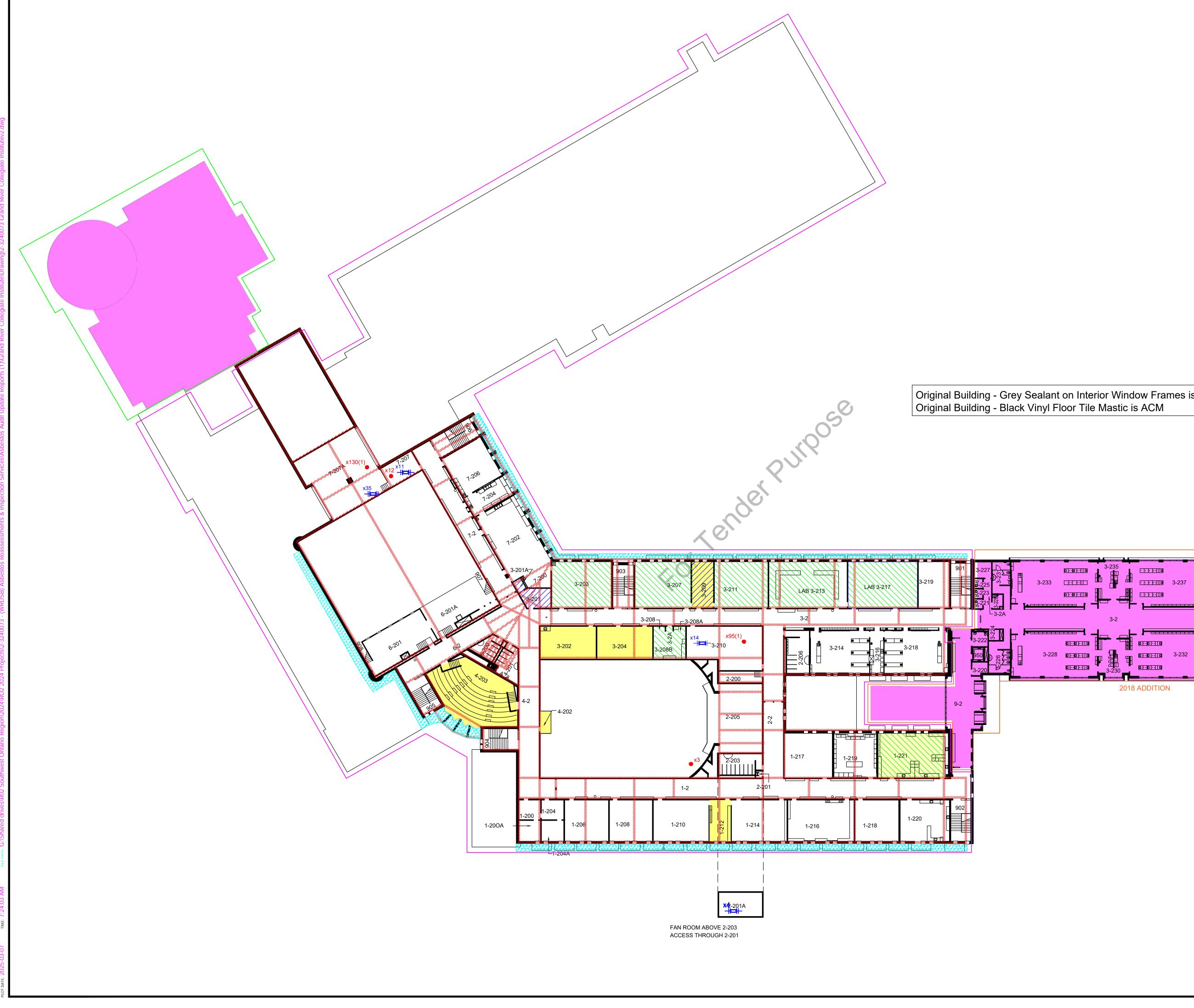
	NOTES: 1. ALL DRAWINGS TO BE REFERENCED WITH THE ASSOCIATED REPORT, LOCATIONS AND QUANTITIES ARE
	APPROXIMATE.
	2. ALL KNOWN OR SUSPECT ASBESTOS-CONTAINING MATERIALS AND/OR DESIGNATED MATERIALS ARE NOT DEPICTED ON THIS DRAWING. REFER TO THE REPORT FOR A COMPLETE LIST OF IDENTIFIED MATERIALS.
	3. THIS FIGURE IS COLOUR DEPENDENT, PHOTOCOPIES MAY LATER INTERPRETATION OF THE FIGURE. ALWAYS REFER TO ORIGINAL DRAWINGS AND REPORT.
	4. FIXED REFERENCE NUMBERS FOR ROOMS AND/OR AREAS HAVE BEEN PROVIDED BY WRDSB AS PART OF THEIR ESTABLISHED SCHOOL IDENTIFICATION NUMBERING SYSTEM.
	5. INACCESSIBLE ROOMS ARE CONTROLLED BY ENOVA POWER, AND ARE THEREFORE NOT ACCESSIBLE TO SURVEYORS AT THE TIME OF ASSESSMENT.
	6. ASBESTOS-CONTAINING FIREPROOFING, AS WELL AS FIREPROOFING DEBRIS IS PRESENT ON CONCEALED STRUCTURAL BEAMS, ABOVE SECONDARY CEILINGS THROUGHOUT THE BUILDING.
	Legend
	13 Fixed Reference Number for Room/Area
	No Access
	Post 1986 Construction
	Asbestos-Containing Materials (ACM):
	Vinyl Floor Tile
	Vinyl Sheet Flooring
	Ceiling Tile
	Ceiling Tile (Located Above Drop Ceiling)
	Friable Soft Textured Ceiling
	Non-Friable Hard Textured Ceiling
	Spray-On Fire Proofing
	+ + + + Trowel Applied Fire Proofing
	Transite (Asbestos Cement) Paneling
	Duct Insulation
	×2 Pipe Fitting Insulation w/ Quantity
	 Pipe Insulation (Vertical and Horizontal)
	• Transite (Asbestos Cement) Pipe (Vertical and Horizontal)
	x2 -++=-++- Duct Expansion Joints w/ Quantity
1	Friable Debris
	Safe tech
	ENVIRONMENTAL LTD.
	work. play. live. safe.
	CLIENT WATERLOO REGION
	DISTRICT SCHOOL BOARD
	PROJECT
	PROJECT 2025 ASBESTOS AUDIT UPDATE
	2025 ASBESTOS
	2025 ASBESTOS AUDIT UPDATE DRAWING GRAND RIVER
	2025 ASBESTOS AUDIT UPDATE DRAWING GRAND RIVER COLLEGIATE
	2025 ASBESTOS AUDIT UPDATE DRAWING GRAND RIVER COLLEGIATE INSTITUTE
	2025 ASBESTOS AUDIT UPDATE DRAWING GRAND RIVER COLLEGIATE INSTITUTE BASEMENT
	2025 ASBESTOS AUDIT UPDATE DRAWING GRAND RIVER COLLEGIATE INSTITUTE



3-133	3-135 S S S S S S S S S S S S S
3-1	3-1C
3-126	3-128 3-132 3-132

2018 ADDITION

NOTES: 1. ALL DRAWINGS TO BE REFERENCED WITH THE ASSOCIATED REPORT, LOCATIONS AND QUANTITIES ARE APPROXIMATE. 2. ALL KNOWN OR SUSPECT ASBESTOS-CONTAINING MATERIALS AND/OR DESIGNATED MATERIALS ARE NOT DEPICTED ON THIS DRAWING. REFER TO THE REPORT FOR A COMPLETE LIST OF IDENTIFIED MATERIALS. 3. THIS FIGURE IS COLOUR DEPENDENT, PHOTOCOPIES MAY LATER INTERPRETATION OF THE FIGURE. ALWAYS REFER TO ORIGINAL DRAWINGS AND REPORT. 4. FIXED REFERENCE NUMBERS FOR ROOMS AND/OR AREAS HAVE BEEN PROVIDED BY WRDSB AS PART OF THEIR ESTABLISHED SCHOOL IDENTIFICATION NUMBERING SYSTEM. 5. INACCESSIBLE ROOMS ARE CONTROLLED BY ENOVA POWER, AND ARE THEREFORE NOT ACCESSIBLE TO SURVEYORS AT THE TIME OF ASSESSMENT. 6. ASBESTOS-CONTAINING FIREPROOFING, AS WELL AS FIREPROOFING DEBRIS IS PRESENT ON CONCEALED STRUCTURAL BEAMS, ABOVE SECONDARY DRYWALL CEILINGS THROUGHOUT THE BUILDING.. Legend 13 Fixed Reference Number for Room/Area No Access Post 1986 Construction Asbestos-Containing Materials (ACM): Vinyl Floor Tile Vinyl Sheet Flooring Ceiling Tile Ceiling Tile (Located Above Drop Ceiling) Friable Soft Textured Ceiling Non-Friable Hard Textured Ceiling Spray-On Fire Proofing + + Trowel Applied Fire Proofing Transite (Asbestos Cement) Paneling Duct Insulation x2 Pipe Fitting Insulation w/ Quantity Pipe Insulation (Vertical and Horizontal) 0— Transite (Asbestos Cement) Pipe (Vertical and Horizontal) 0 x2 Duct Expansion Joints w/ Quantity ++=++-Friable Debris **Fe**tech Q ENVIRONMENTAL LTD work. play. live. safe. CLIENT WATERLOO REGION DISTRICT SCHOOL BOARD PROJECT 2025 ASBESTOS AUDIT UPDATE DRAWING **GRAND RIVER** COLLEGIATE INSTITUTE LEVEL ONE Project Manager J.J.G. March 2025 ^{roject No.} 2-3240073 Design By WRDSB Drawn By J.M. Drawing No. **AS-02** Scale N.T.S.



	NOTES:
	1. ALL DRAWINGS TO BE REFERENCED WITH THE ASSOCIATED REPORT, LOCATIONS AND QUANTITIES ARE APPROXIMATE.
	2. ALL KNOWN OR SUSPECT ASBESTOS-CONTAINING MATERIALS AND/OR DESIGNATED MATERIALS ARE NOT DEPICTED ON THIS DRAWING. REFER TO THE REPORT FOR A COMPLETE LIST OF IDENTIFIED MATERIALS.
	3. THIS FIGURE IS COLOUR DEPENDENT, PHOTOCOPIES MAY LATER INTERPRETATION OF THE FIGURE. ALWAYS REFER TO ORIGINAL DRAWINGS AND REPORT.
	4. FIXED REFERENCE NUMBERS FOR ROOMS AND/OR AREAS HAVE BEEN PROVIDED BY WRDSB AS PART OF THEIR ESTABLISHED SCHOOL IDENTIFICATION NUMBERING SYSTEM.
	5. INACCESSIBLE ROOMS ARE CONTROLLED BY ENOVA POWER, AND ARE THEREFORE NOT ACCESSIBLE TO SURVEYORS AT THE TIME OF ASSESSMENT.
	6. ASBESTOS-CONTAINING FIREPROOFING, AS WELL AS FIREPROOFING DEBRIS IS PRESENT ON CONCEALED STRUCTURAL BEAMS, ABOVE SECONDARY DRYWALL CEILINGS THROUGHOUT THE BUILDING.
	Legend
	13 Fixed Reference Number for Room/Area
	No Access
	Post 1986 Construction
	Asbestos-Containing Materials (ACM):
	Vinyl Floor Tile
	Vinyl Sheet Flooring
	Ceiling Tile
indow Frames is ACM	Ceiling Tile (Located Above Drop Ceiling)
ic is ACM	Friable Soft Textured Ceiling
	Non-Friable Hard Textured Ceiling
	Spray-On Fire Proofing
	+ + + + + + Trowel Applied Fire Proofing
	Transite (Asbestos Cement) Paneling
	Duct Insulation
	 ×2 Pipe Fitting Insulation w/ Quantity
	O Pipe Insulation (Vertical and Horizontal)
	 Transite (Asbestos Cement) Pipe (Vertical and Horizontal)
	→ Duct Expansion Joints w/ Quantity
	Friable Debris
2018 ADDITION	
	.\xref\safetech logo.jpg
	CLIENT WATERLOO REGION
	DISTRICT SCHOOL BOARD
	PROJECT 2025 ASBESTOS
	AUDIT UPDATE
	DRAWING
	GRAND RIVER
	COLLEGIATE INSTITUTE
	LEVEL TWO
	Project Manager J.J.G. Date March 2025
	Design By WRDSB Project No. 2-3240073
	Drawn By J.M. Scale NITS AS-03
	N.T.S.

2018 ADDITION

3-2



Appendix C Tables

TABLE 1 –	INTERNAL A	BATEMENT M	IANAGEMENT			
				Grand River Collegiate Institute		
Material	WRDSB Fixed Reference Number	Material Description	Approximate Quantity	Photograph- Context	Photograph- Detail	Required Action
Asbestos Non- Friable	3-106	1'x1' Large and Small Hole Fixed- in-Place Ceiling Tiles	12 Tiles			Monitor Annually
Asbestos Non- Friable	3-106A	1'x1' Large and Small Hole Fixed- in-Place Ceiling Tiles	5 Tiles			Monitor Annually
Asbestos Non- Friable	6-101	1'x1' Large and Small Hole Fixed- in-Place Ceiling Tiles	5 Tiles			Monitor Annually

Asbestos Non- Friable	6-103	1'x1' Large and Small Hole Fixed- in-Place Ceiling Tiles	5 Tiles	Monitor Annually
Asbestos Non- Friable	7-110	1'x1' Large and Small Hole Fixed- in-Place Ceiling Tiles	1 Tile	Monitor Annually
Asbestos Non- Friable	8-104A	1'x1' Large and Small Hole Fixed- in-Place Ceiling Tiles	2 Tiles	Monitor Annually

Asbestos Non- Friable	T-105	9"x9" Green with White Streak Vinyl Floor Tiles	2 Tiles	Monitor Annually
Asbestos Non- Friable	3-201	1'x1' Long Fissure Fixed-in- Place Ceiling Tiles	2 Tiles	Monitor Annually
Asbestos Non- Friable Notes:	3-201	1'x1' Large and Small Hole Fixed- in-Place Ceiling Tiles	3 Tiles	Monitor Annually

 A copy of this report should be provided to all prospective contractors prior to tender or quotation, in accordance with Section 30 of the Occupational Health and Safety Act.
 Recommended actions are the minimum required actions, as prescribed by the appropriate Acts, regulations, guidelines, standards, codes and general best practice measures. The Contractor may choose to alter the approach and combine or break out sections of work. This is acceptable provided that the appropriate Acts, regulations, guidelines, standards, and codes are followed and afford protection for the health and safety of workers, occupants and the public that is at least equal to the protection that would be provided by complying with the minimum requirements.

3) All waste generated is subject to characterization and disposal in accordance with Ontario Regulation 347.

				Grand River Collegiate Institute		
Material	WRDSB Fixed Reference Number	Material Description	Approximate Quantity	Photograph- Context	Photograph- Detail	Required Action
Asbestos Friable	2-100	Fireproofing Debris	<1m²			Remove debris on ceiling tiles and repair secondary ceiling in accordance with O. Reg. 278/05 as a Type 2 Operation
Asbestos Friable	2-104	Fireproofing Debris	<1m²			Remove debris on ceiling tiles and repair secondary ceiling in accordance with O. Reg. 278/05 as a Type 2 Operation
Asbestos Friable	3-1A	Insulation on Pipe Fittings	2 Fittings			Repair/Removal in accordance with O. Reg. 278/05

Asbestos Friable	T-118	Insulation on Pipe Fittings	1 Fitting	Repair/Removal in accordance with O. Reg. 278/05
Asbestos Friable	7-207	Insulation on Pipe Fittings	1 Fitting	Repair/Removal in accordance with O. Reg. 278/05

Notes:

1) A copy of this report should be provided to all prospective contractors prior to tender or quotation, in accordance with Section 30 of the Occupational Health and Safety Act. 2) Recommended actions are the minimum required actions, as prescribed by the appropriate Acts, regulations, guidelines, standards, codes and general best practice measures. The Contractor may choose to alter the approach and combine or break out sections of work. This is acceptable provided that the appropriate Acts, regulations, guidelines, standards, and codes are followed and afford protection for the health and safety of workers, occupants and the public that is at least equal to the protection that would be provided by complying with the minimum requirements.

3) All waste generated is subject to characterization and disposal in accordance with Ontario Regulation 347.

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ABLE 3: BULK ASBESTOS SAMPLING SUMMARY						
Sample #	Location	Material Description	Asbestos Content (%)	Fibre Type	Is Material ACM	
		2009 Asbestos Audit L	Jpdate			
32523-GRCI-S01a			0.25	Chrysotile	Yes	
	1161	1 'x 1' Ceiling Tile - Large and Small Pinhole	2.3	Amosite		
32523-GRCI-S01b 32523-GRCI-S01c			NA NA		Yes Yes	
32523-GRCI-S02a			ND	-	No	
32523-GRCI-S02b	1150	1' x 1' Ceiling Tile Mastic	ND	-	No	
32523-GRCI-S02c			ND	-	No	
32523-GRCI-S03a			ND (layer 1)	-	No	
			ND (layer 2) ND (layer 1)			
32523-GRCI-S03b	1013	Wall Plaster	ND (layer 2)	-	No	
32523-GRCI-S03c			ND (layer 1)		No	
32323-GRCI-303C			ND (layer 2)	-	INO	
32523-GRCI-S04a	2056		ND (layer 1)	-	No	
		4	ND (layer 2) ND (layer 1)			
32523-GRCI-S04b	2056	Duct Parging	ND (layer 2)	-	No	
		1	ND (layer 1)			
32523-GRCI-S04c	2057		ND (layer 2)		No	
			ND (layer 3)	Chrypotilo		
32523-GRCI-S05a			0.25 1.5	Chrysotile Amosite	Yes	
2323-61(01-5058	2053	1 'x 1' Ceiling Tile - Long Fissure	ND (layer 2)	Amosite	103	
32523-GRCI-S05b	2000		NA NA		Yes	
32523-GRCI-S05c			ND (layer 2)	-	Yes	
32523-GRCI-S06a			ND	-	No	
32523-GRCI-S06b	Fan Rm.	Texture Coat Finish - Along Ladder Entrance	ND	-	No	
32523-GRCI-S06c			ND	-	No	
32523-GRCI-S07a			0.25	Chrysotile	Yes	
32523-GRCI-S07b	1076	1 'x 1' Ceiling Tile - Large and Small Pinhole	NA	Amosite	Yes	
32523-GRCI-S07c			NA	-	Yes	
	4404		ND (layer 1)			
32523-GRCI-S08a	1121		ND (layer 2)	-	No	
32523-GRCI-S08b	1121	Wall Plaster	ND (layer 1)	-	No	
	1120		ND (layer 2) ND			
32523-GRCI-S08c 32523-GRCI-S09a	1120		ND	-	No No	
32523-GRCI-S09a	1120	1 'x 1' Ceiling Tile - Medium Fissure Random Pinhole	ND ND	-	No	
32523-GRCI-S09c			ND	-	No	
32523-GRCI-S10a			ND	-	No	
32523-GRCI-S10b	1099	2 'x 2' Ceiling Tile - Medium & Small Fissure	ND	-	No	
32523-GRCI-S10c			ND	-	No	
523-GRCI-FT-S01a			1.1	Chrysotile	Yes	
523-GRCI-FT-S01b	1035	9"x9" Floor Tile - Grey and White	NA	-	Yes	
523-GRCI-FT-S01c			NA	- Ohan 411 -	Yes	
523-GRCI-FT-S02a 523-GRCI-FT-S02b	1036	12"x12" Floor Tile - White and Beige	<0.25 ND	Chrysotile	Yes Yes	
523-GRCI-FT-S020	1030	12 ATZ FIOOF FILE - WITHLE ATTU DEIGE	ND	-	Yes	
			1.3 (layer 1)			
2523-GRCI-FT-S03a	4000		ND (layer 2)	Chrysotile	Yes	
523-GRCI-FT-S03b	1038	9"x9" Floor Tile - Beige	ND ND	-	Yes	
523-GRCI-FT-S03c			ND	-	Yes	
2523-GRCI-FT-S04a			1.5	Chrysotile	Yes	
523-GRCI-FT-S04b	1039	9"x9" Floor Tile - Blue, white and black	NA	-	Yes	
2523-GRCI-FT-S04c			NA	-	Yes	

Sample #	Location	Material Description	Asbestos Content (%)	Fibre Type	Is Material ACM
32523-GRCI-FT-S05a			ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S05b	1040	Vinyl Sheet Flooring - Grey Cobblestone	ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S05c		· · · · · · · · · · · · · · · · · · ·	ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S06a			ND (layer 3) ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S06b	1040	12"x12" Floor Tile - Mint Green with black streaks	ND (layer 2) ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S06c			ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S07a			ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S07b	1031	12"x12" Floor Tile - Brown Cobblestone	ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S07c			ND (layer 2)	-	No
32523-GRCI-FT-S08a			1.8 (layer 1) ND (layer 2)	Chrysotile	Yes
32523-GRCI-FT-S08b	1050	9"x9" Floor Tile - Light Red	NA (layer 1) ND (layer 2)		Yes
32523-GRCI-FT-S08c			NA (layer 1) ND (layer 2)		Yes
32523-GRCI-FT-S09a	1010		1.3 (layer 1) ND (layer 2)	Chrysotile	Yes
32523-GRCI-FT-S09b		9"x9" Floor Tile - Green	ND	-	Yes
32523-GRCI-FT-S09c			ND	-	Yes
32523-GRCI-FT-S10a			ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S10b	1005	12"x12" Floor Tile - White and blue	ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S10c			ND (layer 1) ND (layer 2)	-	No
32523-GRCI-FT-S11a			0.75 (layer 1) ND (layer 2)	Chrysotile	Yes
32523-GRCI-FT-S11b	2016	9"x9" Floor Tile - Brown and white	NA (layer 1) ND (layer 2)	-	Yes
32523-GRCI-FT-S11c			NA (layer 1) ND (layer 2)	-	Yes
32523-GRCI-FT-S12a			ND	-	No
32523-GRCI-FT-S12b	1149	12"x12" Floor Tile - Pink cobblestone	ND	-	No
32523-GRCI-FT-S12b			ND	-	No
S01a S01b	1034	12"v12" Elect Tile Prown and dance flock	ND ND	-	No No
S015	1034	12"x12" Floor Tile - Brown and dense fleck	ND	-	No
S02a			5-10	Chrysotile	Yes
S02b	1045	Firespray	NA	-	Yes
S02c			NA	-	Yes
S03a			0.5-5.0	Amosite	Yes
S03b	1019	2' x 2' Ceiling Tile - Long Fissure Random Pinhole	NA	-	Yes
S03c			NA	-	Yes
S04a			ND	-	No
S04b	1032	12"x12" Floor Tile - Beige Dense Fleck	ND	-	No
S04c			ND	-	No
S05a			ND	-	No
S05b	1032	Ceiling Tile Mastic	ND	-	No
S05c			ND	-	No
S06a			ND	-	No
S06b	1042	Vinyl Sheet Flooring - Grey	ND	-	No
S06c			ND	-	No

	ESTOS SAMPL	ING SUMMARY			
Sample #	Location	Material Description	Asbestos Content (%)	Fibre Type	Is Material ACM
S07a			10-25	Amosite	Yes
S07b	1042	1' x 1' Ceiling Tile - Long Fissure	NA	-	Yes
S07c			NA	-	Yes
S08a			ND	-	No
S08b	1043		ND	-	No
S08c		Drywall Joint Compound	ND	-	No
S08d	1041		ND	-	No
S08e	-		ND	-	No
S09b	1039	9"x9" Floor Tile - Grey/white/dark grey	ND	-	No
S09c		- ··· · ··· · ··· · ··· · ··· · ··· · ····	ND	-	No
S10a			ND	-	No
S10b	1020	12"x12" Floor Tile - Grey & White	<0.5	Chrysotile	Yes
S10c			ND	-	No
S11a			10-25	Amosite	Yes
S11b	1030	1' x 1' Ceiling Tile - Large & Medium Pinhole	NA	-	Yes
S11c			NA	-	Yes
S12a			ND		No
S12b			ND		No
S12c	First Floor	Plaster	ND		No
S12d			ND		No
S12e			ND		No
S13a			ND	-	No
S13b			ND		No
S13c	1019	Texture Coat - Wall/Ceiling	ND	-	No
S13d			ND	-	No
S13e			ND	-	No
S14a			ND	-	No
S14b	1019	12"x12" Floor Tile - Blue	ND	-	No
S14c	1013		ND		No
S140			ND		
	1019	12"x12" Floor Tile - Yellow			No
S15b	1019	12"X12" Floor Tile - Yellow	ND	-	No
S15c			ND	-	No
S16a	1050		ND	-	No
S16b	1058	9"x9" Floor Tile - Beige and White	ND	-	No
S16c			ND	-	No
32523-GRCI - S17a			ND	-	No
32523-GRCI - S17b	0011	12"x12" Floor Tile - Beige Oatmeal	ND	-	No
32523-GRCI - S17c			ND	-	No
32523-GRCI - S18a			ND	-	No
32523-GRCI - S18b			ND	-	No
32523-GRCI - S18c	0009	Texture Coat - Ceiling	ND	-	No
32523-GRCI - S18d			ND	-	No
32523-GRCI - S18e			ND	-	No
32523-GRCI - S19a		1' x 1' Ceiling Tile - Medium Fissure Pinhole	2.8	Amosite	Yes
32523-GRCI - S19b	0006		ND	-	Yes
32523-GRCI - S19c			ND	-	Yes
32523-GRCI - S20a			ND	-	No
32523-GRCI - S20b	0003	Drywall Joint Compound	ND	-	No
32523-GRCI - S20c			ND	-	No
32523-GRCI - S21a			50	Chrysotile	Yes
32523-GRCI - S21b	0015	Boiler Breaching	NA	-	Yes
32523-GRCI - S21c			NA	-	Yes
32523-GRCI - S22a			ND	-	No
32523-GRCI - S22b	0015	Pipe Wrap - Orange Wrap	ND	-	No
32523-GRCI - S22c			ND	-	No
31682-3-213-S01a			Trace	Chrysotile	Yes
31682-3-213-S01b	213	Firespray - Grey Cementitious	Trace	Chrysotile	Yes
31682-3-213-S01c			Trace	Chrysotile	Yes
31682-S01-2014	2014	Firespray - Off-white	5.2	Chrysotile	Yes
	2014 2nd Floor				
31682-S02	Locker	Firespray - Off-white	6.8	Chrysotile	Yes
31682-S03-2054	2054	Firespray - Off-white	5.7	Chrysotile	Yes
31682-S04-1011	1011	Firespray - Off-white	5.5	Chrysotile	Yes
31682-S05-1159	1159	Firespray - Off-white	6.7	Chrysotile	Yes
31682-S06-1096	1096	Firespray - Off-white	6.0	Chrysotile	Yes
31682-S07-1046	1098	Firespray - Off-white	5.8	Chrysotile	Yes
51002-307-1040	1040	2012 Asbestos Audit L			162
		2012 Aspestos Audit U	ND		Nia Nia
CO1A Mantan			INI J	-	No
S.01A – Mortar	Comider 0	Duial Mautan Our			NL-
S.01B – Mortar	Corridor 3	Brick Mortar - Grey	ND	-	No
	Corridor 3	Brick Mortar - Grey 2014 Asbestos Audit L	ND ND	-	No No

				-	
Sample #	Location	Material Description	Asbestos Content (%)	Fibre Type	Is Material ACM
Boiler Refractory 2	0017	Brick Refractory	ND	-	No
Boiler Refractory 3			ND	-	No
Boiler Insulation 1			15-30	Chrysotile	Yes
Boiler Insulation 2 Boiler Insulation 3	0017	Insulation	NA NA		Yes Yes
Boller Insulation 3		2015 Additional Sam			tes
S01A	1026 (3-114)	Wall Plaster (white skim coat)	ND	-	No
S01A	1026 (3-114)	Wall Plaster (grey plaster)	ND	-	No
S01B	1027 (3-116)	Wall Plaster (white skim coat)	ND	-	No
S01B	1027 (3-116)	Wall Plaster (grey plaster)	ND	-	No
S01C	1022 (2-100)	Wall Plaster (white skim coat)	ND	-	No
S01C S02A	1022 (2-100) 1022 (2-100)	Wall Plaster (grey plaster) Drywall Joint Compound	ND ND		No No
S02A S02B	1022 (2-100)	Drywall Joint Compound	ND	-	No
S02D	1022 (2-100)	Drywall Joint Compound	ND	-	No
		2016 Additional Sam		44	
S01A	unknown	Dust Collector Insulation	70	Chrysotile	Yes
S01B	unknown	Dust Collector Insulation	NA		Yes
S01C	unknown	Dust Collector Insulation	NA		Yes
0044 4000	4000 (0.400)	2017 Additional Sam	· J		
S01A-1039	1039 (3-109)	Plaster	ND	· ·	No
S01B-1039 S01C-1039	1039 (3-109) 1039 (3-109)	Plaster Plaster	ND ND		No No
0010-1038	1009 (0-109)	2018 Additional Sam		I	UNI
S01A	0017 (B105)	Plaster Ceiling	ND		No
S01A	0017 (B105)	Plaster Ceiling	ND	-	No
S01B	0015 (B103C)	Plaster Ceiling	ND	-	No
S01B	0015 (B103C)	Plaster Ceiling	ND	-	No
S01C	0005 (B108A)	Plaster Ceiling	ND	-	No
S01C	0005 (B108A)	Plaster Ceiling	ND	-	No
S01D	0009 (B102)	Plaster Ceiling	ND	-	No
S01D	0009 (B102)	Plaster Ceiling	ND	-	No
S01E S01E	0006 (B108) 0006 (B108)	Plaster Ceiling Plaster Ceiling	ND ND		<u>No</u> No
	0008 (B108) 0017 (B105)	Plaster Wall	ND	-	No
S01F	0017 (B105)	Plaster Wall	ND	-	No
S01A-T-116	1152 (T116)	Insulation (Black Paper)	ND	-	No
S01B-T-116	1152 (T116)	Insulation (Black Paper)	ND	-	No
S01C-T-116	1152 (T116)	Insulation (Black Paper)	ND	-	No
S01A	0017 (B105)	Boiler Insulation	3	Amosite	Yes
S01B	0017 (B105)	Boiler Insulation	NA	-	Yes
S01C	0017 (B105)	Boiler Insulation	NA	-	Yes
0014	4000 (0.444)	2018 Asbestos Audit L		1	N -
S01A S01B	1038 (3-111) 1150 (T-114)	1'x1' Ceiling Tile Mastic 1'x1' Ceiling Tile Mastic	ND ND	-	No No
S01D	1081	1'x1' Ceiling Tile Mastic	ND	-	No
S01D	1037	1'x1' Ceiling Tile Mastic	ND	-	No
S02A	1030	1'x1' Ceiling Tile Medium and Large Holes	5	Amosite	Yes
S02B	1149	1'x1' Ceiling Tile Medium and Large Holes	5	Amosite	Yes
S02C	2023	1'x1' Ceiling Tile Medium and Large Holes	5	Amosite	Yes
S02D	1125	1'x1' Ceiling Tile Medium and Large Holes	5	Amosite	Yes
S02E	1081	1'x1' Ceiling Tile Medium and Large Holes	5	Amosite	Yes
S03A S03B	2015 2048*	1'x1' Ceiling Tile Medium Fissure Pinhole	5	Amosite	Yes
S03B S03C	2048*	1'x1' Ceiling Tile Medium Fissure Pinhole 1'x1' Ceiling Tile Medium Fissure Pinhole	5	Amosite Amosite	Yes Yes
	1035	Black Floor Tile Mastic	ND S	-	No
S04B	1037	Black Floor Tile Mastic	0.5	Chrysotile	Yes
S04C	1018	Black Floor Tile Mastic	2	Chrysotile	Yes
S04D	1145	Black Floor Tile Mastic	2	Chrysotile	Yes
S04E	2021	Black Floor Tile Mastic	2	Chrysotile	Yes
S05A	Exterior 1164	Window sealant (white)	ND	-	No
S05B	Exterior 1041	Window sealant (white)	ND	-	No
S05C	Exterior 1164	Garage Door Sealant (Brown/grey)	ND	-	No
S05D S05E	Exterior 1105 Exterior 1044	Exit Door Sealant (Grey) Door Spandrel Sealant (Grey)	ND ND	-	No No
S05E	Interior 1044	Corridor Glazing Sealant (Grey)	10	- Chrysotile	Yes
S06A	1034	2'x2' Ceiling Tile Medium Fissure Pinhole	0.5/1	Amosite/Chrysotile	Yes
S06B	1034	2'x2' Ceiling Tile Medium Fissure Pinhole	0.5/1	Amosite/Chrysotile	Yes
S06C	1034	2'x2' Ceiling Tile Medium Fissure Pinhole	0.5/1	Amosite/Chrysotile	Yes
S01A (Nov 2018)	901 (exterior)	Overhang Hard Texture Plaster	0.5	Chrysotile	Yes
S01B (Nov 2018)	903 (exterior)	Overhang Hard Texture Plaster	0.5	Chrysotile	Yes
S01C (Nov 2018)	906 (exterior)	Overhang Hard Texture Plaster	0.5	Chrysotile	Yes

TABLE 3: BULK ASE	ABLE 3: BULK ASBESTOS SAMPLING SUMMARY							
Sample #	Location	Material Description	Asbestos Content (%)	Fibre Type	Is Material ACM			
S02A (Nov 2018)	4-1A (Lobby)	Glazing Sealant - Grey	0.5	Chrysotile	Yes			
S02B (Nov 2018)	903	Glazing Sealant - Grey	ND	-	No			
S02C (Nov 2018)	S-11	Glazing Sealant - Grey	ND	-	No			
S03A (Nov 2018)	T-1 Tech Exit	Glazing Sealant - Black	ND	-	No			
S03B (Nov 2018)	T-1 Tech Exit	Glazing Sealant - Black	ND	-	No			
S03C (Nov 2018)	T-1 Tech Exit	Glazing Sealant - Black	ND	-	No			
A: Not Analyzed due to s	A: Not Analyzed due to stop positive method ND: No asbestos fibres detected above the laboratory minimum detection limit * incorrectly labeled on Chain of Custody as 1065							

A bulk material sample containing 0.5% or more asbestos therefore establishes that material as asbestos-containing. In accordance with Table 1 of O. Reg. 278/05, a minimum number of samples for the material to be classified as non asbestos. A homogeneous material is defined by O. Reg. 278/05 "as material that is uniform in colour and texture". Homogeneous samples are identified by an alphabetical suffix to sample names to represent multiple samples of a homogeneous material. When a homogeneous material is analysed it is determined to be asbestos-containing upon the first positive detection of asbestos equal to or greater than 0.5%. Subsequent samples of the same material are therefore not analysed. Some bulk samples are comprised of multiple layers and as such will require multiple analysis In such cases each layer is isolated at the laboratory and analysed individually to determine asbestos content. As a result the laboratory may report additional samples beyond the submitted number of samples or include multiple analyses as subsets within a sample.



PROJECT-SPECIFIC DESIGNATED SUBSTANCE & HAZARDOUS MATERIALS ASSESSMENT

Grand River Collegiate Institute 175 Indian Road Kitchener, Ontario

Prepared for:

Jeff Cull, Environmental Officer

Waterloo Region District School Board 51 Ardelt Avenue Kitchener, Ontario N2C 2R5

Prepared by: Safetech Environmental Limited

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Per: Shannon Deline, B.A., Project Coordinator

Reviewer: Jeremy J. Gore, C.E.T., EP Regional Manager – SWO

Safetech Project Number 2-3230106

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TABLE OF CONTENTS

EXEC	UTIVE	E SUMMARYi
1.0	INTR	ODUCTION
1.1	Bac	kground and Objectives1
1.2	Sco	ppe of Work2
1.3	Pas	st Environmental Reports2
2.0	MET	HODOLOGY
2.1	Des	signated Substances4
2.	1.1	Asbestos 4
2.	1.2	Lead 5
2.	1.3	Mercury5
2.	1.4	Silica
2.	1.5	Other Designated Substances
2.2	Oth	er Hazardous Materials6
2.	2.1	Chemical Hazards
2.	2.2	Biological Hazards
2.	2.3	Environmental Hazards7
3.0	RES	ULTS7
3.1	Des	signated Substances
3.	1.1	Asbestos 8
3.	1.2	Lead
3.	1.3	Mercury13
3.	1.4	Silica13
З.	1.5	Other Designated Substances13
3.2	Oth	er Hazardous Materials
3.	2.1	Chemical Hazards13
3.	2.2	Biological Hazards14
3.	2.3	Environmental Hazards14







4.0	CON	CLUSIONS AND RECOMMENDATIONS	. 15
4.1	l Des	signated Substances	. 15
4	4.1.1	Asbestos	15
4	4.1.2	Lead	16
4	4.1.3	Mercury	17
4	4.1.4	Silica	17
4	4.1.5	Other Designated Substances	18
4.2	2 Oth	er Hazardous Materials	. 18
4	4.2.1	Chemical Hazards	18
4	4.2.2	Biological Hazards	18
4	4.2.3	Environmental Hazards	18
5.0	Limit	ations	. 19

LIST OF TABLES

Table 1	Bulk Sample Analytical Results for Determination of Asbestos Content
Table 2	Results of Assessment for Asbestos-Containing Materials
Table 3	Results of Paint Condition and Lead Content Assessment

LIST OF APPENDICES

- Appendix A Condition Assessment Criteria for Asbestos-Containing Materials
- Appendix B Figures AS01 and AS02: Extent of Assessment Area and Sample Locations
- Appendix C Laboratory Certificates of Analysis Asbestos and Lead
- Appendix D Site Photographs
- Appendix E Background Information on Designated Substances and Other Hazardous Materials







EXECUTIVE SUMMARY

Safetech Environmental Limited (Safetech) was retained by Jeff Cull with Waterloo Region District School Board, to conduct a project-specific designated substance and hazardous materials (DSHM) assessment in preparation of upcoming renovation work within Grand River Collegiate Institute located at <u>175 Indian Road in Kitchener, Ontario</u>. The building will herein be referred to as the "site".

The objective of our assessment was to determine the presence, location, condition, and approximate quantities (where possible) of designated substances and other hazardous materials within project-specific work areas that have the potential to be disturbed as part of upcoming renovation activities so that appropriate abatement and other control measures can be implemented to protect workers during work and control/classify waste materials, as mandated by Ontario regulations.

A summary of the designated substances and hazardous materials identified is provided below. This should be considered a summary only. Please refer to the Results (Section 3) and Conclusions and Recommendations (Section 4) of our report for additional details.

Asbestos

Asbestos was confirmed present in the following building materials:

- 9"x9" light red vinyl floor tiles present within Rooms 1-117 and 1-221;
- 9"x9" brown vinyl floor tiles with white streaks within Room 1-219;
- Black floor mastic associated with vinyl floor tiles throughout the areas assessed;
- 1'x1' long fissure ceiling tiles above 2'x4' lay-in ceiling within Room 1-221;
- Textured overspray on steel beams above 1'x1' long fissure ceiling tiles within Room 1-221; and,
- Black glazing compound on window panes throughout the areas assessed.

No other asbestos-containing materials were identified or are suspected present within the project-specific work areas. This assessment was limited to sampling of materials that have the potential to be impacted by planned renovation work. <u>Assessment of other areas or materials within the building was not conducted</u>. Refer to Figures AS-01 and AS-02 in Appendix B for the extent of this assessment.







Lead

Results of paint chip analysis for the determination of lead content indicated that all paints collected for analysis were found to have a *'de minimis'* or 'virtually safe' level of lead in paint in accordance with the Environmental Abatement Council of Canada (EACC) "Lead Guideline" (October 2014).

Lead is suspected present in minor quantities as solder in pipe fittings and electrical equipment. Any disturbance of lead materials should be conducted in accordance with the procedures outlined in the EACC "Lead Guideline" (October 2014) and the Ministry of Labour, Immigration, Training and Skills Development (MLITSD) "Lead on Construction Projects" guideline (April 2011). The extent of procedures required depends on the type of work to be conducted.

Mercury

Mercury is deemed present in the form of mercury vapour within sealed fluorescent lamps. Lamps should be handled with care and kept intact to avoid potential exposure to mercury. R.R.O 1990 Regulation 347, waste mercury produced in amounts less than 5 kilograms (kg) are exempt from hazardous waste registration, treatment and disposal requirements and can be disposed of in landfill as regular waste.

Silica

Silica is deemed present in drywall and associated joint compounds, plaster finishes, layin acoustic ceiling tiles, texture finishes, caulking, mastics, ceramic tiles and grout, brick and associated mortar and all concrete materials and finishes. Work involving the disturbance of silica-containing materials should follow the procedures outlined in the MLITSD "Silica on Construction Projects" Guideline (April 2011). The appropriate engineering controls, work practices, hygiene practices, personal protective measures and training necessary to conduct the work in a safe manner are provided in this guideline.

Mould

Mould was visually identified as minor growth (i.e. less than 10 m²) on non-asbestos pressed cellulose ceiling tiles and gypsum ceiling board above lay in ceiling tiles within Room 1-119. Any mould growth identified should be cleaned following mould abatement procedures described in the Environmental Abatement Council of Canada (EACC)'s Mould Abatement Guidelines.

This assessment satisfies the Owner's requirements under Section 30 of the Ontario Occupational Health and Safety Act (OHSA), Revised Statues of Ontario 1990, as amended.



Should you have any questions regarding the information contained in the report, please contact our office at 519.954.2732.

Safetech Environmental Limited

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Per: Shannon Deline, B.A., Project Coordinator sdeline@safetechenv.com

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Reviewer: Jeremy J. Gore, C.E.T., EP Regional Manager – SWO jgore@safetechenv.com



February 16, 2024

Waterloo Region District School Board 51 Ardelt Avenue Kitchener, Ontario N2C 2R5

Attention: Jeff Cull, Environmental Officer Jeff_cull@wrdsb.ca

RE: Project-Specific Designated Substance & Hazardous Materials Assessment Grand River Collegiate Institute 175 Indian Road, Kitchener, Ontario

1.0 INTRODUCTION

1.1 Background and Objectives

Safetech Environmental Limited (Safetech) was retained by Jeff Cull with Waterloo Region District School Board, to conduct a project-specific designated substance and hazardous materials (DSHM) assessment in preparation of upcoming renovation work within Grand River Collegiate Institute located at 175 Indian Road in Kitchener, Ontario (site). The objective of our assessment was to determine the presence, location, condition and approximate quantities of designated substances and other hazardous materials within project-specific work areas that have the potential to be disturbed as part of upcoming renovation activities so that appropriate abatement and other control measures can be implemented to protect workers during work and control/classify waste materials, as mandated by Ontario regulations.

This assessment satisfies the requirements under Section 30 of the Ontario Occupational Health and Safety Act (OHSA), Revised Statues of Ontario 1990, as amended. Section 30(1) requires an assessment to determine if there are any designated substances present at a project site prior to construction or demolition activity. Sections 30(2), (3) and (4) require the constructor for a project to provide the findings in this report as part of the tendering information for any tendered project or to prospective contractors (and subcontractors) of a project before entering into a binding contract.

This report documents the findings of our on-site inspection that was conducted on January 5, 2024, and provides conclusions and recommendations based on our findings and knowledge of the planned renovation project.







1.2 Scope of Work

Our scope of work included the following activities:

- A review of existing environmental assessment report(s) provided by Jeff Cull of the Waterloo Region District School Board.
- A visual assessment of all project areas specific to the renovation project to identify the presence, location, condition and approximate quantities of designated substances and other hazardous building materials that may be present.
- Collection, analysis and interpretation of representative bulk samples of suspect asbestos-containing building materials for the determination of asbestos content and material classification (limited to the project-specific work areas) only where deemed necessary if a data gap was identified by past environmental reports or a material was noted that does not match a reported description.
- Collection, analysis and interpretation of representative paint chip samples of suspect lead-containing paint for the determination of lead content and material classification (limited to the project-specific work areas).
- Preparation of a report to document findings and provide recommendations regarding control measures and/or special handling procedures for designated substances or specific hazardous materials that may be removed or disturbed as part of planned demolition activities.

This assessment only identified designated substances and hazardous materials that were deemed to be part of the building or somehow otherwise incorporated into the building structure and its finishes. Assessing occupant items such as stored products, furnishings, and items, etc., were beyond the scope of this assessment. In addition, our assessment did not include an investigation for underground materials or equipment (vessels, drums, underground storage tanks, pipes, cables, etc.). Furthermore, this assessment was limited to the areas investigated, and more specifically, to those materials that are readily accessible without demolition or alteration of building components for access.

1.3 Past Environmental Reports

Data from past environmental surveys was referenced in terms of understanding previous assessment results and obtaining a general understanding of the overall asbestos-containing material conditions. Where possible, Safetech relied upon results indicated in past surveys and only collected confirmatory samples as necessary.

The following environmental report was provided to Safetech:

• '2021 Asbestos Audit Update – Grand River Collegiate Institute, 175 Indian Road, Kitchener, Ontario' completed by MTE Consultants, dated August 3, 2021.



Based on our review of the previous asbestos reassessment report, the following asbestos-containing materials are present within the project-specific work areas:

- 9"x9" light red vinyl floor tiles within Rooms 1-117 and 1-221.
- 9"x9" brown vinyl floor tiles with white streaks within Room 1-219.
- 1'x1' long fissure ceiling tiles above 2'x4' lay-in ceiling within Room 1-221.
- Black floor mastic associated with vinyl floor tiles throughout the original 1965 building.

2.0 METHODOLOGY

The presence of hazardous materials was assessed by visual inspection. For the purpose of this assessment and this document, hazardous materials include designated substances as well as other chemical, biological and environmental hazards as defined below:

- Designated Substances (as prescribed by Ontario Regulation 490/09):
 - Acrylonitrile, Arsenic, Asbestos, Benzene, Coke Oven Emissions, Ethylene Oxide, Isocyanates, Lead, Mercury, Silica and Vinyl Chloride.
- Other Hazardous Materials:
 - Chemical Hazards Urea Formaldehyde Foam Insulation (UFFI) and other obvious potential chemical hazards
 - *Biological Hazards* Mould Contamination
 - *Environmental Hazards* Polychlorinated Biphenyls (PCBs) and Ozone Depleting & Global Warming Substances

For background information regarding the above hazardous materials, please refer to Appendix E.

Destructive testing was not conducted as part of this assessment. Concealed locations such as above solid ceilings, within wall cavities, enclosed mechanical/pipe shafts and bulkheads, etc. were not investigated. Similarly, motors, blowers, electrical panels, etc., were not de-energized or disassembled to examine concealed conditions. Building materials that are not detailed within this assessment due to inaccessibility at the time of our site visit and/or uncovered during renovation activities should be assessed by a qualified person prior to their disturbance.

Bulk sampling followed by laboratory analysis was also conducted to confirm the presence/absence of selected hazardous materials. Bulk sampling was limited to asbestos in building materials and lead in paint. <u>All other hazardous materials were identified by visual inspection only</u>.



Where possible, observations regarding the location, quantity and condition of the hazardous materials identified were made in order to determine the potential for exposure and provide appropriate recommendations for remedial action, if necessary. Specific methodology for each individual hazardous material assessed is further detailed below.

2.1 Designated Substances

2.1.1 Asbestos

A visual inspection for the presence of both friable and non-friable asbestos-containing material (ACM) was performed within the assessment area. The condition of ACM was rated as Good, Fair or Poor based on our assessment criteria provided in Appendix A.

Although destructive testing was not conducted, details regarding the possible presence of ACM in enclosed locations were provided on a case-by-case basis where our visual inspection indicated this possibility. Materials that may be present in the surveyed area(s) that were not tested intrusively should be considered asbestos-containing until proven otherwise. This includes materials such as elevator brakes, roofing felts, mastics, high voltage wiring, mechanical packing and gaskets, vermiculite inside wall cavities or inaccessible ceiling spaces, and underground services or piping. These materials are recommended to be sampled immediately prior to renovation work if they are to be removed or have a potential to be disturbed.

Bulk samples of building materials were retrieved for all accessible building materials within the investigated areas that were suspected to be asbestos-containing, based on the historical use of the material and surveyor knowledge and experience. Bulk samples were retrieved in accordance with Section 3 and Table 1 of Ontario Regulation 278/05, *Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05),* made under the Occupational Health and Safety Act. The number of samples collected for each material was based on the type and quantity of the material present within the area(s) investigated.

Each individual sample was placed in a labelled, sealable, plastic bag for transportation to an independent laboratory (EMC Scientific Inc.). EMC Scientific Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fibre analysis. Analysis for asbestos content was performed by the independent laboratory in accordance with the U.S. Environmental Protection Agency (EPA) Test Method EPA/600/R-93-116:Method for the Determination of Asbestos in Bulk Building Materials. June 1993. This method identifies the asbestos fibre content of building materials using polarized light microscopy (PLM) analytical techniques, with confirmation of presence and type of asbestos made by dispersion staining optical microscopy. This analytical method meets the requirements set forth in Section 3 of O. Reg. 278/05.



In accordance with O. Reg. 278/05, an asbestos-containing material is defined as material that contains 0.5 per cent or more asbestos by dry weight. The laboratory was instructed to conduct "stop-positive" analysis for all materials. If a sample was found to be asbestos-containing no further analysis was conducted for samples taken from the same homogeneous material. The Laboratory Certificate of Analysis is included in Appendix C. Locations where ACM have been identified are detailed in this report. Recommendations pertaining to ACM were made based on the friability, accessibility, and condition of the material.

2.1.2 Lead

An assessment for lead in paint was conducted by retrieving paint chip samples from representative surfaces within the areas assessed. The condition of the painted surface from which each sample was taken was also visually assessed for signs of deterioration such as cracking, chipping, flaking, bubbling and deterioration due to friction. The condition of these surfaces were assessed as good, fair or poor based on the degree and extent of deterioration. The paint chip sample was retrieved by scraping the paint down to the base material substrate to ensure collection of all layers of paint. Care was taken to avoid collection of the underlying substrate to reduce analytical substrate matrix interference.

Upon completion of our assessment, the paint chip samples were submitted to an independent laboratory (Caduceon Environmental Laboratories) for the determination of lead content. This laboratory participates in and is accredited by the EPA (U.S. Environmental Protection Agency) for analysis of lead in paint chips through the American Industrial Hygiene Association (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP). Analysis was conducted by the laboratory following the EPA Method 6010. Result of analysis was reported by the laboratory in micrograms per gram (μ g/g). The Laboratory Certificate of Analysis is included in Appendix C.

The presence of lead in other materials, such as lead sheeting, pigmented mortar, lead piping, lead solder, etc. were noted where observed but were not sampled to verify lead content.

Lead can be present in these materials to varying degrees, depending on their age of application (refer to Appendix E for additional details) and should be considered lead-containing until proven otherwise.

2.1.3 Mercury

The type, quantity, and location of mercury-containing equipment and devices within the areas assessed were determined by visual inspection based on appearance, age and knowledge of historical uses. Sampling for mercury-containing building materials and dismantling of suspect mercury-containing equipment was not performed.



Where possible, attempts were made to verify the presence/absence of mercury by gathering additional information such as equipment model number, serial number, etc.

2.1.4 Silica

The presence of crystalline silica in building materials was determined through visual inspection of building materials only, based on knowledge of the historic use of silicacontaining materials in certain building materials. Sampling to verify the presence/absence of silica in building materials was not performed.

2.1.5 Other Designated Substances

Other designated substances (i.e. acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride) are typically not expected to be encountered in building materials as significant constituents or in a form that would represent an exposure concern. These substances were not included in our assessment unless specific information regarding their use (e.g. in a manufacturing process) was provided to us. Please refer to Appendix E for information regarding where these designated substances are typically found or used. No sampling for these designated substances was performed.

2.2 Other Hazardous Materials

2.2.1 Chemical Hazards

Urea Formaldehyde Foam Insulation (UFFI)

A visual inspection to evaluate the possible presence of Urea Formaldehyde Foam Insulation (UFFI) was conducted within the area(s) assessed. Our visual inspection was limited to looking for evidence of possible UFFI installation (i.e. repaired nozzle holes in walls) and overspray at wall/ceiling joints, etc. No material sampling was conducted as part of our assessment.

2.2.2 Biological Hazards

Mould Contamination

A visual inspection to determine the possibility of indoor mould growth was conducted within the area assessed. Our assessment was limited to looking for evidence of mould growth and water damage (staining, material deterioration, efflorescence, etc.) on the surface of building materials, which may be an indicator of hidden mould growth. No moisture content readings of building materials were taken to determine their current condition. Additionally, destructive testing to confirm the presence/absence of hidden mould growth and material sampling to verify the presence/absence of mould on suspect surfaces was beyond the scope of this assessment.



2.2.3 Environmental Hazards

Polychlorinated Biphenyls (PCBs)

The presence of PCB-containing electrical equipment within the area(s) assessed was identified through visual inspection and knowledge of the timeline of historical use.

For stand-alone transformers and capacitors, information from the manufacturer nameplate (such as the date of manufacture, dielectric fluid trade name or "Type Number", etc.) was gathered, where possible, to further evaluate if the equipment may contain PCBs. This information was then compared to the information provided in the Environment Canada document entitled "*Handbook on PCB's in Electrical Equipment*" (Third Edition, April 1988) to aid in identification. Transformers and capacitors confirmed to be manufactured after 1979 were assumed to not contain PCBs. If appropriate information could not be obtained it was assumed that the transformer or capacitor contained PCBs.

No sampling of materials or fluids within equipment was conducted to verify the presence/absence of PCBs. Inspection and testing of other materials for PCB content, including (but not limited to) caulking, asphalt, oil-based paint, plastics, switches, oil residue, electric cables and hydraulic fluids was beyond the scope of our assessment.

Ozone Depleting and Global Warming Substances

The presence of fixed equipment likely to contain ozone-depleting substances (ODS) and/or global-warming substances (GWS) was identified through visual inspection and knowledge of the timeline of historical use. This included equipment such as chillers, air-conditioners and fixed dry-chemical fire extinguishers, where chemicals such as hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs) or halons may be present. Where possible, information regarding the type and quantity of refrigerant present was obtained from the manufacturer nameplate.

Our visual assessment was limited to fixed equipment within the area(s) assessed and did not include portable equipment such as stand-alone refrigerators, freezers, water coolers, air-conditioners and fire extinguishers, etc.

3.0 RESULTS

Results of our visual assessment and bulk sample analytical findings are summarized in the sections below. Photographs of conditions observed are referenced in the appropriate section where applicable (as **P#**) and are included in Appendix D.



3.1 Designated Substances

3.1.1 Asbestos

Results of bulk sample analysis for the determination of asbestos content are summarized in Table 1. Materials have been classified as "ACM" or "Non-ACM" based on analytical results. Please refer to the Limitations section of this report (Section 5.0) for additional details. The Laboratory Certificate of Analysis is included in Appendix C.

TABLE 1Bulk Sample Analytical Results for Determination of Asbestos Content175 Indian Road Kitchener, OntarioSample Collection Date: January 5, 2024

Sample No.	Material Description	Sample Location	Asbestos Content	Material Classification	
GR-01A		Room 1-119			
GR-01B	Interior Grey Window Caulking	None Detected			Non-ACM
GR-01C	oddinning	Room 1-117			
GR-02A	Black Window	Room 1-119	0.5% Chrysotile		
GR-02B	Glazing – Interior	KUUIII 1-115		ACM	
GR-02C	Panes	Room 1-117	Not Analyzed		
GR-03A		Learning Services			
GR-03B	12"x12" Beige Mottled Vinyl Floor Tile	Office – Rooms 1-117	None Detected	Non-ACM	
GR-03C		/ 1-119			
GR-04A			10% Chrysotile		
GR-04B	Textured Overspray on Steel Beams	Room 1-221		ACM	
GR-04C			Not Analyzed		

¹ As per O. Reg. 278/05, ACM contains ≥0.5% asbestos by dry weight.

 2 Not Analyzed = Not analyzed due to positive asbestos result in previous sample.

Materials assessed for asbestos content are summarized in Table 2 based on the type/use of the material. The condition and friability of materials confirmed or suspected to be asbestos-containing (based on our visual assessment and results of bulk sample analysis) is provided. Condition (Cond.) ratings are provided as Good (G), Fair (F) or Poor (P) based on our Assessment Criteria provided in Appendix A. Estimates of quantity have only been provided for confirmed or suspected asbestos-containing materials that were deemed to have a potential to be disturbed as part of the upcoming renovation project. Any quantities provided should be considered rough estimates only.



TABLE 2Results of Assessment for Asbestos-Containing Materials175 Indian Road Kitchener, OntarioDates of Assessment: January 5, 2024

Sprayed and Loose Fill Insulating Materials	Location/Description	Cond.	Est. Quantity	Friability
Sprayed Fireproofing	None identified in project-specific work areas.	N/A	N/A	N/A
Sprayed Insulation	None identified in project-specific work areas.	N/A	N/A	N/A
Loose Fill / Vermiculite Insulation	None identified in project-specific work areas.	N/A	N/A	N/A
Thermal System Insulation	Location/Description	Cond.	Est. Quantity	Friability
Mechanical Pipe Insulation – Straights	Mechanical pipe straights within the areas assessed were observed to be uninsulated or insulated with non- asbestos fibreglass. No asbestos-containing pipe straight insulation was identified within project-specific work areas. The past environmental survey identified asbestos- containing insulation on mechanical pipe straights within the building (refer to the report referenced in Section 1.3). Although not visually identified within the assessment area, it is possible that asbestos- containing insulation is present within concealed locations (i.e. above solid ceilings or within wall cavities).	N/D	N/D	N/D
Mechanical Pipe Insulation – Fittings (elbows, valves, tees, hangars, etc.)			N/D	N/D



HVAC Duct Insulation	None identified in project-specific work areas.	N/A	N/A	N/A
Breeching / Exhaust Insulation	None identified in project-specific work areas.	N/A	N/A	N/A
Tank Insulation	None identified in project-specific work areas.	N/A	N/A	N/A
Boiler Insulation	None identified in project-specific work areas.	N/A	N/A	N/A
Other Mechanical Equipment Insulation	No other mechanical equipment insulation was identified within the project area.	N/A	N/A	N/A
Architectural Finishes & Finishing Materials	Location/Description	Cond.	Est. Quantity	Friability
Sprayed Texture / Stucco Finishes	Textured overspray was identified on steel beams above asbestos-containing 1'x1' ceiling tiles within Room 1-221. The material was sampled and determined to contain 10% Chrysotile asbestos (refer to sample set GR-04 in Table 1 and Photograph P1).	Good	~ 30 m²	Friable
Plaster Finishes	Smooth plaster finishes were identified within Rooms 1-117, 1-219 and 1-221. The material was sampled during a previous environmental survey and has been determined to not contain asbestos (refer to the report referenced in Section 1.3).	N/A	N/A	N/A
Drywall Joint Compound	Drywall finishes were identified throughout the areas assessed. The associated joint compound was sampled during a previous environmental survey and		N/A	N/A
Ceiling Tiles	Location/Description		Est. Quantity	Friability
Lay-in Acoustic Ceiling Tiles	2'x4' random fleck and pinhole patterned ceiling tiles were identified throughout the areas assessed. The tiles contained manufacturer's stamps indicating they were manufactured in 1993 when asbestos was no longer in use for this material.	N/A	N/A	N/A
Fixed-in- Place Ceiling Tiles	1'x1' white ceiling tiles with a pinhole pattern were identified above lay-in acoustic ceiling tiles within Rooms 1-119 and 1-219. The material was noted to be composed of non-asbestos pressed cellulose and mechanically fastened to a gypsum backing.	N/A	N/A	N/A



Fixed-in- Place Ceiling Tiles	1'x1' long fissure ceiling tiles were identified above lay- in acoustic ceiling tiles within Room 1-221. The material was sampled during a previous environmental survey and was determined to be asbestos-containing (refer to the report referenced in Section 1.3 and Photograph P2). Asbestos-containing ceiling tiles were observed to be in poor condition, and debris was identified on the backside of non-asbestos lay-in ceiling tiles throughout Room 1-221.	Poor	∼ 40m ²	Non- Friable
Transite Ceiling Panels	None identified in project-specific work areas.	N/A	N/A	N/A
Flooring	Location/Description	Cond.	Est. Quantity	Friability
	9"x9" light red vinyl floor tiles were identified within Rooms 1-117 and 1-221. The material was sampled during a previous environmental survey and was determined to be asbestos-containing (refer to the report referenced in Section 1.3).	Good	~ 80m²	Non- Friable
Vinyl Floor	9"x9" brown vinyl floor tiles with white streaks were identified within Room 1-219. The material was sampled during a previous environmental survey and was determined to be asbestos-containing (refer to the report referenced in Section 1.3).	Good	~ 40m ²	Non- Friable
Tiles	12"x12" brown mottled (cobblestone) vinyl floor tiles were identified within Room 1-119. The material was sampled during a previous environmental survey and has been determined to not contain asbestos (refer to the report referenced in Section 1.3).	N/A	N/A	N/A
	12"x12" beige mottled vinyl floor tiles were identified within the Learning Services Office between Rooms 1- 117 and 1-119. The material was sampled and determined to not contain asbestos (refer to sample set GR-03 in Table 1).	N/A	N/A	N/A
Floor Mastic	Black floor mastic associated with vinyl floor tiles is present throughout the areas assessed. The material was sampled during a previous environmental survey throughout the original 1965 building, and has been determined to be asbestos-containing (refer to the report referenced in Section 1.3).	Good	N/D	Non- Friable
Vinyl Sheet Flooring	None identified in project-specific work areas.	N/A	N/A	N/A
Asbestos Cement Products	Location/Description	Cond.	Est. Quantity	Friability
Piping	None identified in project-specific work areas.	N/A	N/A	N/A
Roofing, Siding, Wallboard	None identified in project-specific work areas.	N/A	N/A	N/A
Other Cement Products	None identified in project-specific work areas.	N/A	N/A	N/A



Misc. Materials	Location/Description	Cond.	Est. Quantity	Friability
	Grey caulking was identified at interior windows throughout the areas assessed. The material was sampled and determined to not contain asbestos (refer to sample set GR-01 in Table 1).	N/A	N/A	N/A
Caulking	Black window glazing was identified on interior window panes throughout the areas assessed. The material was sampled and determined to contain 0.5% Chrysotile asbestos (refer to sample set GR-02 in Table 1 and Photograph P3).	Good	N/D	Non- Friable
Other Materials	Asbestos may be a component of other materials within the areas assessed which were not sampled due to inaccessibility. Any additional materials uncovered that are suspected of containing asbestos must be sampled prior to proceeding with any work.	N/D	N/D	N/D

Notes: N/A=Not Applicable; N/D=Not Determined

3.1.2 Lead

Laboratory analytical results for paints and surface coatings tested to determine lead content are summarized below in Table 3. The Laboratory Certificate of Analysis is included in Appendix C.

TABLE 3Results of Paint Condition and Lead Content Assessment175 Indian Road Kitchener, OntarioSample Collection Date: January 5, 2024

Sample No.	Location	Surface	Paint Colour	Condition	Lead Conc. (µg/g)	EACC Classification
LP01	Room 1-119	Concrete Block Wall	Beige	Good	68	' <i>de minimis</i> ' level of lead
LP02	Room 1-221	Concrete Block Wall	Off White	Good	377	' <i>de minimis</i> ' level of lead
LP03	Room 1-219	Concrete Block Wall	Yellow	Good	111	' <i>de minimis</i> ' level of lead

All paint samples collected for lead content analysis were found to have lead concentrations below 1000 μ g/g (0.1% Lead by Weight) and are considered to have a '<u>de</u> <u>minimis</u>' level of lead in paint (virtually safe) in accordance with the October 2014 Environmental Abatement Council of Canada (EACC) publication Lead Guideline for Construction, Renovation, Maintenance or Repair.



Additional minor lead-containing materials suspected present within project-specific work areas include the following:

• Lead solder used in pipe fittings or electrical equipment.

3.1.3 Mercury

Mercury is deemed present in vapour form within fluorescent light tubes located throughout the areas assessed. No other equipment suspected of containing mercury was identified within the assessed areas.

3.1.4 Silica

A number of building materials were identified within the surveyed areas that are suspected to contain crystalline silica. This includes the following materials:

- Drywall and associated joint compounds;
- Plaster finishes;
- Texture finishes;
- Lay-in acoustic ceiling tiles;
- Caulking;
- Mastics;
- Ceramic tiles and grout;
- Brick and associated mortar; and,
- All concrete finishes and materials.

3.1.5 Other Designated Substances

Acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride were not included in our assessment as these substances are not expected to be a significant component of building materials or present in a form that would represent an exposure concern. Additionally, no specific information regarding their use was provided to us.

3.2 Other Hazardous Materials

3.2.1 Chemical Hazards

No visible evidence of UFFI installation (i.e. injection openings) or overspray of foam insulation at wall/ceiling joints was identified. In addition, UFFI insulation within interior wall cavities is not suspected. No other hazardous materials were identified nor are they suspected present.



3.2.2 Biological Hazards

Mould Contamination

Minor mould growth was visually identified on non-asbestos 1'x1' cellulose ceiling tiles, and the gypsum ceiling board, above non-asbestos lay in ceiling tiles within Room 1-119. Approximately 1 m² of growth was observed (**P4**).

3.2.3 Environmental Hazards

Polychlorinated Biphenyls (PCBs)

Fluorescent light fixtures were identified throughout the areas assessed. Lamp types that are ballast dependent were noted to be retrofitted with newer T8 lamps, and are therefore not suspected of containing PCBs.

Ozone Depleting and Global Warming Substances

No Ozone Depleting / Global Warming Substances were identified within the assessed areas at the time of the assessment.



4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Designated Substances

4.1.1 Asbestos

Results of our assessment indicated that the following asbestos-containing materials are present within project-specific work areas that may be disturbed as part of the planned renovation project:

Friable Asbestos-Containing Materials

• Textured overspray on steel beams above 1'x1' long fissure ceiling tiles within Room 1-221.

Non-Friable Asbestos-Containing Materials

- 9"x9" light red vinyl floor tiles present within Rooms 1-117 and 1-221.
- 9"x9" brown vinyl floor tiles with white streaks within Room 1-219.
- Black floor mastic associated with vinyl floor tiles throughout the areas assessed.
- 1'x1' long fissure ceiling tiles above 2'x4' lay-in ceiling within Room 1-221.
- Black glazing compound on window panes throughout the areas assessed.

No other materials suspected of containing asbestos were identified through bulk sample analysis or visual confirmation as part of our assessment. All suspect materials shall be assumed to be asbestos-containing until proven otherwise by bulk sample analysis. Alternatively, treat all suspect materials as asbestos-containing and remove/dispose of them prior to disturbance.

Non-friable asbestos-containing materials in GOOD condition can be managed in place until activities which could result in disturbance of this material. In the event the non-friable asbestos-containing materials are removed, Type 1 operations apply (provided that the material is wetted down and removed using non-powered hand held tools) as outlined in Ontario Regulation 278/05, *Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations* – made under the Ontario Occupational Health and Safety Act. If the material cannot be adequately wetted, Type 2 operations apply.



The use of power tools on non-friable asbestos-containing materials will classify the work as a Type 3 Operation unless the equipment is connected to a HEPA filtered dust collection device. Given that floor tile mastic is difficult to remove, it is recommended to be removed by using grinders equipped with an individual HEPA filtered dust collection assembly following Type 2 asbestos procedures.

As per O. Reg. 278/05, removal or disturbance of less than 1 square metre of friable ACM is classified as a Type 2 operation provided the removal is performed using non-powered hand tools only. Removal of greater 1 square metre of friable ACM shall be conducted as a Type 3 operation.

The removal or disturbance of ACM must follow the measures and procedures indicated in Ontario Regulation 278/05. This work should be conducted by workers who have received proper training by a "competent person" in the hazards of asbestos exposure, personal hygiene and work practices, and the use and care of respirators and protective clothing. Any worker/supervisor who works in a Type 3 operation must successfully complete the Asbestos Abatement Worker or Supervisor Training Program approved by the Ministry of Training, Colleges and Universities.

It is recommended that work involving the removal or disturbance of ACM be subject to inspection and testing to document conformance with Ontario Regulation 278/05 requirements. The degree of inspection and testing is dependent on site-specific conditions such as the type, duration, size and location of the work.

4.1.2 Lead

All paint samples collected for lead content analysis were found to have a '*de minimis*' level of lead in paint (virtually safe) in accordance with the October 2014 EACC Lead Guideline. Provided these materials are disturbed in a non-aggressive manner and the work is performed using normal dust control procedures, then worker protection from the inhalation of lead is not required. General health and safety precautions must still be implemented, such as prohibiting eating, drinking, smoking and chewing in the work area, implementing dust suppression techniques and providing washing facilities for workers to wash hands and face.

Lead may also be present as a component in solder in pipe fittings and electrical equipment. Removal or disturbance of these materials, if applicable, should be performed using non-powered hand tools and no hot work should be performed on pipes containing solder.

If practicable, all bulk lead waste materials should be separated from other wastes and sent to a recycling facility. If not practicable, lead-containing waste should be handled and disposed of according to R.R.O. 1990 Regulation 347 (Reg. 347), *General – Waste Management*, made under the Environmental Protection Act.



Under this regulation (and depending on the quantity of waste generated) the waste may be subject to analysis following the Toxicity Characteristic Leaching Procedure (TCLP) to determine if it is a "leachate toxic waste" based on the leachate quality criteria provided in Schedule 4 of the regulation. Such wastes must meet specific treatment requirements (Schedule 5) or undergo alternative treatment for hazardous debris (Schedule 8) prior to land disposal.

4.1.3 Mercury

Fluorescent light fixtures should be handled with care and kept intact to avoid potential exposure to mercury vapour present within the lamps/bulbs. Under Reg. 347, waste mercury produced in amounts less than 5 kilograms (kg) are exempt from hazardous waste registration, treatment and disposal requirements and can be disposed of in landfill as regular waste. Larger quantities of waste mercury must be treated and disposed of in accordance with the requirements of Reg. 347.

Although no mercury was visibly identified in other equipment, dismantling of equipment (if present) was not conducted to verify the presence/absence of mercury. It is cautioned that thermometers, barometers, and other measuring devices (pressure gauges/sensors, vacuum gauges, manometers, etc.), thermostats, and a variety of other electrical switches (temperature sensitive, tilt switches, float switches, etc.) may contain mercury that may not be visible without dismantling the equipment. Such devices should be assumed to contain mercury until proven otherwise and similar precautions to those outlined above should be taken if any of those items are to be disturbed or taken out of service in the future.

4.1.4 Silica

Suspect silica-containing materials were identified throughout the assessed areas. In their current state, building materials containing silica do not represent a risk to building occupants or construction workers. Risks associated with exposure to silica arise during demolition activities that cause silica dust to be created (particularly grinding, drilling or cutting operations and during major demolition), resulting in a crystalline silica inhalation hazard.

If any materials suspected to contain silica are to be removed or otherwise disturbed as a result of renovation or demolition activities it is recommended that procedures be put in place to control the generation of dust (such as routine water misting) and thus reduce the potential for worker exposure. Workers that have the potential to be exposed to airborne silica should also wear appropriate protective clothing and respiratory protection.

Any work involving the disturbance of silica-containing materials should follow the procedures outlined in the MLITSD *"Silica on Construction Projects"* guideline (April 2011).



The appropriate engineering controls, work practices, hygiene practices, personal protective measures and training necessary to conduct the work in a safe manner are provided in this guideline. The general measures and procedures (or Type of operation) necessary depends on the type of work to be conducted.

4.1.5 Other Designated Substances

No other designated substances are expected to be a component of building materials within the surveyed area in a form that would represent an exposure concern. Therefore, no protective measures or procedures specific to acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride are considered necessary.

4.2 Other Hazardous Materials

4.2.1 Chemical Hazards

As no UFFI was identified or is suspected to be present within the surveyed area no further action is required. However, although intrusive testing was conducted, there is a remote possibility that UFFI could be hidden within locations such as exterior wall cavities that were not investigated. If suspect foam insulation is identified during demolition activities work should be stopped and the area should be re-assessed to evaluate conditions and determine appropriate control measures and worker protection, if necessary.

4.2.2 Biological Hazards

Mould Contamination

Approximately 1 m² of visible mould growth was identified on non-asbestos 1'x1' cellulose ceiling tiles, and gypsum ceiling board, above non-asbestos lay in ceiling tiles within Room 1-119. Mould contamination should be remediated following mould abatement procedures described in the Environmental Abatement Council of Canada (EACC)'s Mould Abatement Guidelines. Given the quantity identified, Level 1 mould abatement procedures apply.

4.2.3 Environmental Hazards

Polychlorinated Biphenyls (PCBs)

None identified in the area(s) assessed, no action required.

Ozone Depleting and Global Warming Substances

None identified in the area(s) assessed, no action required.



5.0 LIMITATIONS

The information and recommendations detailed in this report were carried out by trained professional and technical staff in accordance with generally accepted environmental and industrial hygiene work practices and procedures. Recommendations provided in this report have been generated in accordance with accepted industry guidelines and practices. These guidelines and practices are considered acceptable as of the date of this report.

In preparation of this report, Safetech Environmental Limited (Safetech) relied on information supplied by others, including without limitation, information pertaining to the history and operation of the site, and testing services provided by independent laboratories. Except as expressly set out in this report, Safetech has not made any independent verification of information provided by independent entities.

The collection of samples at the location noted was consistent with the scope of work agreed-upon with the person or entity to whom this report is addressed and the information obtained concerning prior site investigations. As conditions between samples may vary, the potential remains for the presence of unknown additional contaminants for which there were no known indicators.

The analytical method used for determination of asbestos content meets the requirements of O.Reg. 278/05. However, small asbestos fibres may be missed by PLM due to resolution limitations of the optical microscope. Interfering binder/matrix and/or low asbestos content may also hinder positive identification by PLM. These conditions are common for vermiculite attic insulation (VAI) and non-friable organically bound (NOB) materials such as vinyl floor tiles, roofing materials, mastics and caulking and can lead to "false negative" results. If PLM analytical results for these types of materials indicate no asbestos detected they have been reported as "Presumed Non-ACM". Due to limitations of the analytical method we cannot confirm that low quantities of asbestos are not present in these samples using solely PLM analysis. Additional analytical procedures should be considered for such materials to rule out false negative results.

Conclusions are based on site conditions at the time of inspection and can only be extrapolated to an undefined limited area around inspected locations. The extent of the limited area depends on building construction and conditions. Building materials that are not detailed within this survey due to inaccessibility during the time of survey and/or are uncovered during demolition activities should be properly assessed by a qualified person prior to their disturbance. Safetech cannot warrant against undiscovered environmental liabilities. If any information becomes available that differs from the findings in this report, we request that we be notified immediately to reassess the conclusions provided herein.



No other person or entity is entitled to use or rely upon this report without the express written consent of Safetech Environmental Limited and the person or entity to who it is addressed. Any use that a third party makes of this report, or any reliance based on conclusions and recommendations made, are the responsibility of such third parties. Safetech accepts no responsibility for damages suffered by third parties as a result of actions based on this report.



Appendix A Condition Assessment Criteria for Asbestos-Containing Materials



The condition of asbestos-containing materials identified within the surveyed area(s) was assessed as Good (G), Fair (F) or Poor (P). The assessment criteria used to determine condition is dependent on material characteristics, such as friability. The following Table summarizes the criteria used by Safetech to evaluate the condition of ACM.

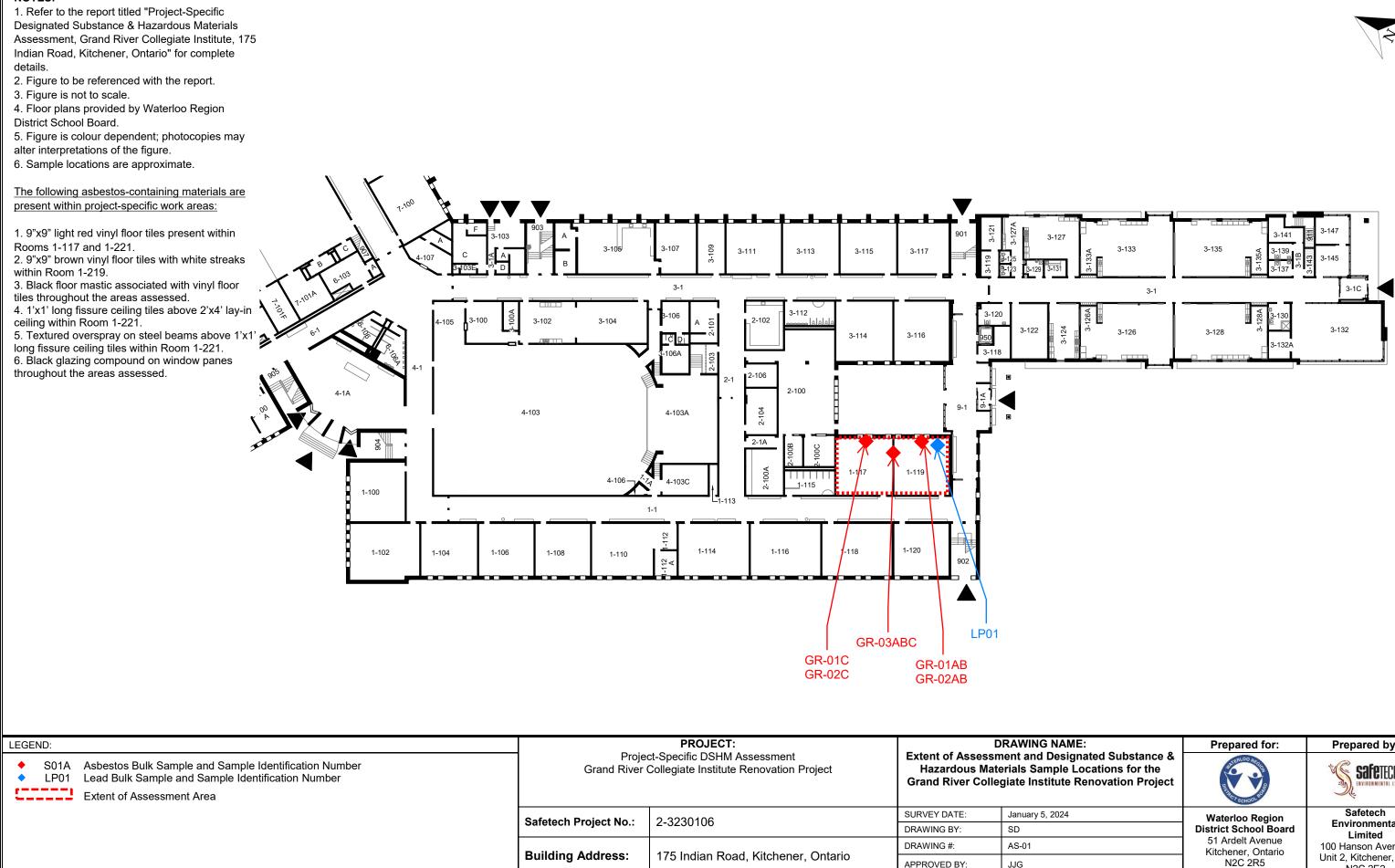
Condition Assessment Criteria for Asbestos-Containing Materials

Sprayed Fi	reproofing, Sprayed Insulation and Sprayed Texture Finishes							
	• Surface shows no significant signs of damage, deterioration, or delamination (i.e. <1%).							
	• Unencapsulated or unpainted fireproofing or texture finishes, where no delamination or							
	damage is observed.							
	 Encapsulated fireproofing or texture finishes where encapsulation applied after damage or fallout. 							
Fair	 Not utilized as part of condition assessment for these materials. 							
	Greater than 1% damage, delamination, or deterioration to surface.							
	where damage exists in isolated locations, both Good and Poor may be applicable.							
Mechanica	I Insulation (boilers, breeching, ductwork, piping, tanks, equipment, etc.)							
Good	 Insulation completely covered in jacketing and exhibits no evidence of damage or deterioration. 							
	 Jacketing may have minor damage (i.e. scuffs or stains), but is not penetrated. 							
	 Minor penetrating damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination). 							
Fair	 Undamaged insulation that had never been jacketed. 							
Fall	 Insulation is exposed but not showing surface disintegration. 							
	 Extent of missing insulation ranges from minor to none. 							
	Damage that can be repaired.							
	 Original insulation jacket is missing, damaged, deteriorated, or delaminated. 							
Poor	 Insulation is exposed and significant areas have been dislodged. 							
	 Damage that cannot be easily repaired. 							
drywall compo	e and Potentially Friable Materials (includes materials such as plaster finishes, bund, ceiling tiles, asbestos cement products, vinyl asbestos tile and asbestos paper heet flooring, etc., which have the potential to become friable when handled)							
	 No significant damage. 							
Good	 Material may be cracked or broken but is stable and not likely to become friable upon casual contact. 							
	 No friable debris present 							
Fair	 Not utilized as part of condition assessment for these materials. 							
	 Material is severely damaged. 							
Poor	 Debris is present or binder has disintegrated to the point where the material has become friable. 							
Asbestos-0	Containing Debris (noted separately from the presumed source material)							
Poor	Debris is always considered to be in Poor condition.							



Appendix B Figures AS01 and AS02





Prepared for:	Prepared by:
A THE SCHOOL RECEIPTION OF THE SCHOOL RECEIPTI	SAFETECH
Waterloo Region District School Board	Safetech Environmental Limited
51 Ardelt Avenue Kitchener, Ontario N2C 2R5	100 Hanson Avenue, Unit 2, Kitchener, ON N2C 2E2
	Waterloo Region District School Board 51 Ardelt Avenue Kitchener, Ontario

NOTES:

1. Refer to the report titled "Project-Specific Designated Substance & Hazardous Materials Assessment, Grand River Collegiate Institute, 175 Indian Road, Kitchener, Ontario" for complete details.

- 2. Figure to be referenced with the report.
- 3. Figure is not to scale.

4. Floor plans provided by Waterloo Region

District School Board.

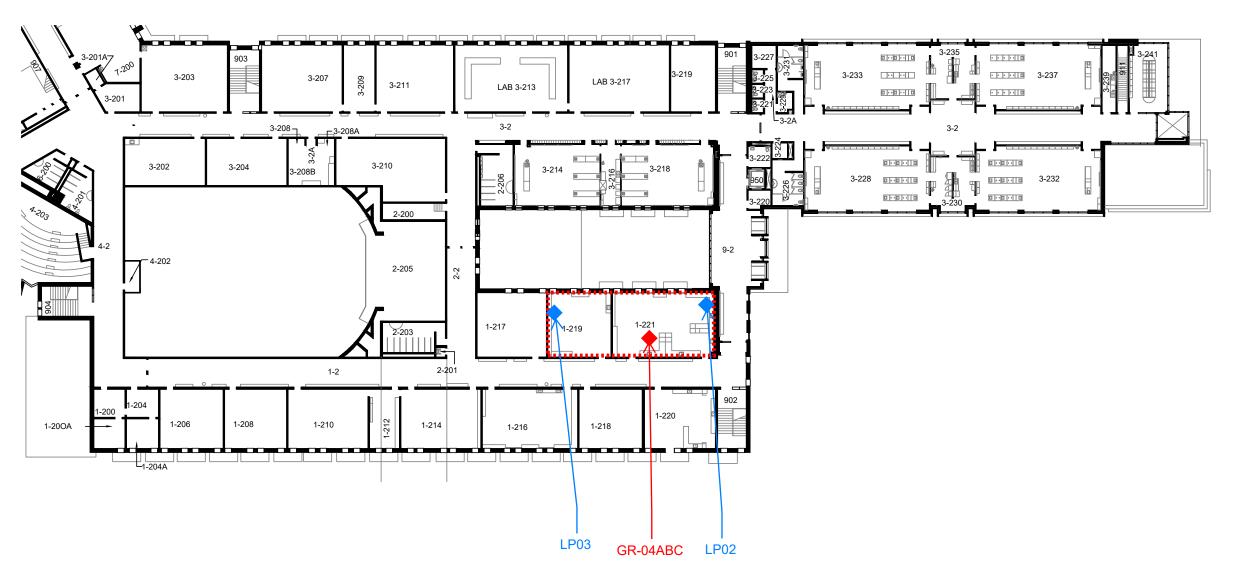
5. Figure is colour dependent; photocopies may

- alter interpretations of the figure.
- 6. Sample locations are approximate.

The following asbestos-containing materials are present within project-specific work areas:

1. 9"x9" light red vinyl floor tiles present within Rooms 1-117 and 1-221.

- 2. 9"x9" brown vinyl floor tiles with white streaks
- within Room 1-219. 3. Black floor mastic associated with vinyl floor
- tiles throughout the areas assessed.
- 4. 1'x1' long fissure ceiling tiles above 2'x4' lay-in ceiling within Room 1-221.
- 5. Textured overspray on steel beams above 1'x1' long fissure ceiling tiles within Room 1-221.
 6. Black glazing compound on window panes
- throughout the areas assessed.



LEGEND:		PROJECT: Project-Specific DSHM Assessment		DRAWING NAME:		Prepared by:
 S01A Asbestos Bulk Sample and Sample Identification Number LP01 Lead Bulk Sample and Sample Identification Number Extent of Assessment Area 	tification Number Grand River		Extent of Assessment and Designated Substance & Hazardous Materials Sample Locations for the Grand River Collegiate Institute Renovation Project		ALC SP	Safetech
	Safatash Brojast No.	afetech Project No.: 2-3230106	SURVEY DATE:	January 5, 2024	Waterloo Region	Safetech
	Saletech Project No		DRAWING BY:	SD	District School Board	Environmental Limited 100 Hanson Avenue,
	Decilding Addresses	175 Indian Road, Kitchener, Ontario	DRAWING #:	AS-02	51 Ardelt Avenue Kitchener. Ontario	
	Building Address:		APPROVED BY:	JJG	N2C 2R5	Unit 2, Kitchener, ON N2C 2E2



Appendix C Laboratory Certificates of Analysis – Asbestos & Lead



Laboratory Analysis Report

To:

Shannon Deline

Safetech Environmental Ltd. 100 Hanson Avenue, Unit 2 Kitchener, Ontario N2C 2E2

EMC LAB REPORT NUMBER: <u>A99409</u>

Reviewed By: Chengming Li

Job/Project Name: Grand River PS Analysis Method: Polarized Light Microscopy – EPA 600 Date Received: Jan 9/24 Date Analyzed: Jan 16/24 Analyst: Fabio Anunciacao No. of Phases Analyzed: 8 Job No: 2-3230106 Number of Samples: 12 Date Reported: Jan 16/24

	Lab Sample No.	Description/Location		SAMPLE COMPONENTS (%)			
Client's Sample ID			Sample Appearance	Asbestos Fibres		Non- asbestos Fibres	Non- fibrous Material
GR-01A	A99409-1	Grey window caulking	White, caulking	ND			100
GR-01B	A99409-2	Grey window caulking	White, caulking	ND			100
GR-01C	A99409-3	Grey window caulking	White, caulking	ND			100
GR-02A	A99409-4	Black window glazing	Black, caulking	Chrysotile	0.5		99.5
GR-02B	A99409-5	Black window glazing	NA	NA			
GR-02C	A99409-6	Black window glazing	NA	NA			
GR-03A	A99409-7	12x12 beige mottled VFT	White, vinyl floor tile	ND			100
GR-03B	A99409-8	12x12 beige mottled VFT	White, vinyl floor tile	ND			100
GR-03C	A99409-9	12x12 beige mottled VFT	White, vinyl floor tile	ND			100
GR-04A	A99409-10	Texture overspray	White, cementitious material with fibres	Chrysotile	10		90
GR-04B	A99409-11	Texture overspray	NA	NA			
GR-04C	A99409-12	Texture overspray	NA	NA			

Note:

1. Bulk samples are analyzed using Polarized Light Microscopy (PLM) and dispersion staining techniques. The analytical procedures are in accordance with EPA 600/R-93/116 method.

2. The results are only related to the samples analyzed. ND = None Detected (no asbestos fibres were observed), NA = Not Analyzed (analysis stopped due to a previous positive result)

EMC Scientific Inc. 5800 Ambler Drive • Suite 100 • Mississauga • Ontario • L4W 4J4 • T. 905 629 9247 • F. 905 629 2607 EMC Scientific Inc. is Accredited by NVLAP (NVLAP Code 201020-0) for Bulk Asbestos Analysis



EMC LAB REPORT NUMBER: <u>A99409</u> Client's Job/Project Name/No.: 2-3230106

Analyst: Fabio Anunciacao

3. This report may not be reproduced, except in full without the written approval of EMC Scientific Inc. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

4. The Ontario Regulatory Threshold for asbestos is 0.5%. The limit of quantification (LOQ) is 0.5%.

5. Vinyl floor tiles may contain very fine asbestos fibres which the PLM method cannot detect. TEM analysis may be necessary to confirm the absence of asbestos.

CERTIFICATE OF ANALYSIS

CADUCEZ ENVIRONMENTAL LABORATORIE Client committed. Quality assured. Canadian owned.

C.O.C.: -

Report To: EMC Scientific Inc.

5800 Ambler Dr. #100 Mississauga, ON L4W 4J4

CADUCEON Environmental Laboratories 2378 Holly Lane

Ottawa, ON K1V 7P1

Attention: Alister Haddad

DATE RECEIVED: DATE REPORTED: SAMPLE MATRIX:	2024-Jan-10 2024-Jan-11 Paint Chips	an-11		-	CUSTOMER PROJEC P.O. NUMBER:	••••••••	Grand River P.S. 2-3230106	
Analyses		Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method	
ICP/OES (Solid)		3	OTTAWA	NHOGAN	2024-Jan-11	D-ICP-02	EPA 6010	

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an *

		Parameter	Lead
		Units	µg/g
		R.L.	5
Client I.D.	Sample I.D.	Date Collected	-
LP01 Beige on concrete	24-001116-1	2024-Jan-05	68
LP02 Off-white on concrete	24-001116-2	2024-Jan-05	377
LP03 Yellow on concrete	24-001116-3	2024-Jan-05	111

Michelle Dubien Data Specialist

Final Report

REPORT No: 24-001116 - Rev. 0



Appendix D Site Photographs





P1 – Asbestos-Containing Textured Overspray

Photograph of asbestos-containing texture overspray identified on steel beams above asbestos-containing 1'x1' ceiling tiles, above non-asbestos lay-in acoustic ceilings throughout Room 1-221.



P2 – Asbestos-Containing Ceiling Tiles

Photograph of asbestos-containing 1'x1' long fissure ceiling tiles identified above non-asbestos 2'x4' lay in ceiling tiles throughout Room 1-221. The tiles are in POOR condition.





P3 – Asbestos-Containing Window Glazing

Photograph of asbestos-containing black window glazing identified on interior window panes throughout the areas assessed.



P4 – Mould Contamination

Photograph of mould growth observed on non-asbestos cellulose ceiling tiles, and gypsum ceiling board within Room 1-119.



Appendix E

Background Information on Designated Substances and Other Hazardous Materials



DESIGNATED SUBSTANCES

The Occupational Health and Safety Act of Ontario (OHSA) allows for certain toxic substances to be especially designated. The OHSA defines a designated substance as "a biological, chemical, or physical agent or combination thereof prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited, or controlled." Ontario Regulation 490/09 - Designated Substances (O. Reg. 490/09), made under the Occupational Health and Safety Act outlines required steps to control exposure of workers to designated substances. Under O. Reg. 490/09 there are eleven (11) designated substances; acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride. This regulation applies to every employer and worker at a workplace where the designated substances are present, produced, processed, used, handled or stored and at which a worker is likely to be exposed to the designated substance.

Section 14 of O. Reg. 490/09 exempts an employer and the workers of an employer who engage in construction from the requirements of the regulation. However, designated substances are still required to be identified prior to the beginning of a demolition or renovation project to ensure that construction workers (and potentially building occupants) are adequately protected from the hazards posed by the presence of these materials if the planned work may cause them to be disturbed. Accordingly, under Section 30 of the OHSA building owners are required to perform an assessment to determine whether any designated substances are present at the project site before the beginning of the project. The owner is also required to prospective constructors before entering into a binding contract with the constructor. This way, contractors and construction workers are made aware of designated substances present within the work area so that appropriate measures can be taken during the work to limit exposure to these substances.

Designated Substances and Hazardous Materials Assessments are conducted to conform to the requirements of Section 30 of the OHSA. The assessments are performed to identify designated substances (and other hazardous materials) within the work area that may present a hazard to workers if disturbed. These substances are commonly a component of building materials or equipment found in buildings. Additional information regarding the eleven designated substances including their properties, uses and health effects are provided below.



Acrylonitrile

Acrylonitrile (ACN) is a clear, colourless or pale yellow liquid with a pungent onion- or garlic-like, irritating odour. It is highly flammable and as such is a severe fire and explosion hazard.

Acrylonitrile is used mainly as a monomer or comonomer in the production of acrylic fibres, plastics, resins and nitrile rubbers. Historically, a mixture of acrylonitrile and carbon tetrachloride was used as a pesticide; however, all pesticide uses have stopped. Based on its use as a chemical intermediate, exposure to acrylonitrile is primarily occupational, via inhalation during its manufacture and use. Therefore, this designated substance is not expected to be encountered in buildings where it is not either produced or used in a manufacturing process.

Acute (short-term) exposure of workers to acrylonitrile has been observed to cause mucous membrane irritation, headaches, dizziness, and nausea. More significant exposures may lead to symptoms such as limb weakness, labored and irregular breathing, impaired judgment, cyanosis, collapse, and convulsions. Exposure of the skin to high concentrations of acrylonitrile in the air may irritate the skin and cause it to turn red while direct skin contact with acrylonitrile may cause the skin to blister and peel. The International Agency for Research on Cancer (IARC) concluded that there is inadequate evidence in humans for the carcinogenicity of acrylonitrile, but has classified it as possibly carcinogenic to humans (Group 2B).

<u>Arsenic</u>

Arsenic is a naturally occurring mineral, widely distributed in the earth's crust. Elemental arsenic (sometimes referred to as metallic arsenic) is a silver-gray or white brittle metal. However, arsenic is usually found in the environment combined with other elements such as oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Arsenic has no odour and is almost tasteless.

Arsenic and its compounds have a variety of commercial uses. Inorganic arsenic compounds are mainly used as a wood preservative. Copper chromated arsenic (CCA) is used to make "pressure-treated" lumber. CCA-treated wood is no longer used for residential applications but may still be used in industrial applications. Arsenic is also used in metallurgy for hardening copper, lead and certain metal alloys, in pigment production, in the manufacture of certain types of glass, and in semiconductors and light-emitting diodes. Inorganic arsenic compounds are no longer used as pesticides in agriculture; however, organic arsenic compounds, namely cacodylic acid, disodium methylarsenate (DSMA), and monosodium methylarsenate (MSMA), are used, as yet, as pesticides – principally on cotton.



Today, workplace exposure to arsenic may still occur in some occupations that use arsenic, such as copper or lead smelting, wood treating, or pesticide application. Exposure to arsenic within buildings other than where it is used as part of the manufacturing process is unlikely and therefore arsenic is not expected to be encountered as part of a routine hazardous building materials assessment.

Human exposure to arsenic can cause both short and long term health effects. Shortterm or acute effects can occur within hours or days of exposure. If you breathe high levels of inorganic arsenic, then you are likely to experience a sore throat and irritated lungs. Longer exposure at lower concentrations can lead to skin effects (such as darkened patches of skin and areas of thickened skin), and also to circulatory and peripheral nervous disorders. An important concern is the ability of inhaled inorganic arsenic to increase the risk of cancer. Long term exposure to arsenic has been linked to cancer of the bladder, lungs, skin, kidneys, nasal passages, liver and prostate. The IARC classifies arsenic and arsenic compounds as "carcinogenic to humans" (Group 1).

<u>Asbestos</u>

Asbestos is the name given to a number of naturally occurring fibrous minerals found in the environment. Ontario Regulation 490/09 (Designated Substances) defines asbestos as any one of the following fibrous silicates: actinolite; amosite; anthophyllite; chrysotile; crocidolite; and tremolite. Asbestos fibres have several desirable characteristics such as high textile strength, the ability to be spun and woven, and resistance to heat and most chemicals. These characteristics have resulted in the historical use of asbestos in a wide variety of building materials and other manufactured goods. Examples of products where asbestos has been used include roofing shingles, ceiling and floor tiles, insulation, sprayed fireproofing, gaskets, and friction products such as automotive brakes and clutches.

The peak years for asbestos use were in the 1960s and early 1970s. Therefore, asbestos is commonly found in building materials of this era. The use of asbestos in building materials and other products has decreased significantly since this time. Friable asbestos-containing materials (material that when dry can be crumbled, pulverized or powdered by hand pressure), such as sprayed fireproofing and sprayed insulation, ceased use circa 1973. Mechanical thermal system insulation ceased use circa 1981 while sprayed acoustic texture coat finishes ceased use circa 1982. Non-friable asbestos-containing materials were generally manufactured for a longer period of time (with the exception of plaster finishes which ceased use circa 1960's). Asbestos-containing drywall joint compound ceased use circa 1980. Vinyl floor tiles, vinyl sheet flooring and acoustic ceiling tile ceased use 1982. Other non-friable materials continued to be produced into the 1990's, including roofing materials (ceased use circa 1991) and floor adhesives (ceased use circa 1992). Today, asbestos is a controlled substance, and is banned for use in most products sold in Canada under the Hazardous Products Act (with the exception of certain roof shingles, clutch facings and brake linings).



Potentially harmful exposure to asbestos occurs through inhalation of air containing asbestos fibres. The greatest risk for workplace exposure to airborne asbestos is in occupations that produce and use asbestos, such as in mining and milling operations or in the manufacture of products containing asbestos. Exposure to airborne asbestos fibres may also occur to construction workers, trades people, maintenance workers and other building occupants in buildings constructed with asbestos-containing materials; especially during building renovations or repairs or if the materials are in poor condition or are otherwise disturbed.

Health risks associated with asbestos exposure are dependent on several factors such as the type and airborne concentration of asbestos, and period of exposure. In general, the greater the exposure to asbestos, the greater the chance of developing harmful health effects. Typically, chronic, daily exposure to elevated airborne concentrations of asbestos over a period of years is required for health effects to eventually manifest themselves. Health effects associated with exposure to asbestos can result in asbestosis (a scarring of the lungs which makes breathing difficult), mesothelioma (a rare cancer of the lining of the chest or abdominal cavity) and lung cancer. The link between exposure to asbestos and other types of cancers and health effects is less clear.

<u>Benzene</u>

Benzene is a clear, colourless liquid with a characteristic, sweet or aromatic hydrocarbon odour. It is a liquid at room temperature but evaporates into the air very quickly, making it a highly flammable vapour as well as an extremely flammable liquid.

Benzene is formed from both natural processes and human activities. Natural sources of benzene include volcanoes and forest fires. Benzene is also a natural part of crude oil, gasoline, and cigarette smoke. It is produced from petroleum and coal sources and is used mainly in the manufacture of other chemicals which are used to make plastics, resins, and nylon and synthetic fibres. Benzene is also used to make some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides.

Exposure to pure benzene within buildings other than where it is produced or used as part of a manufacturing process is unlikely. Therefore benzene is not expected to be encountered as part of a routine hazardous building materials assessment.

Exposure to benzene primarily occurs through inhalation of airborne vapours. Short-term (acute) health effects associated with overexposure to benzene vapours can result in symptoms such as headache, nausea, dizziness, drowsiness and confusion, with unconsciousness or even death at very high levels. Long-term (chronic) exposure to Benzene may cause blood and bone marrow effects which can lead to anemia and leukemia (cancer of the blood-forming organs) as well as cause damage to the immune system, increasing the chance for infection. The IARC classifies benzene as "carcinogenic to humans" (Group 1).



Coke Oven Emissions

Coke Oven Emissions refers to the benzene soluble fraction of total particulate matter emitted during the destructive distillation or carbonization of coal for the production of coke (pure carbon). These emissions are a mixture of coal tar, coal tar pitch, volatiles (including benzene, toluene and xylene), creosote, polycyclic aromatic hydrocarbons (PAHs – including benzo(a)pyrene, benzanthracene, chrysene and phenanthrene), and metals (including cadmium, arsenic, beryllium and chromium). Condensed coke oven emissions are a brownish, thick liquid or semisolid with a naphthalene-like odour, while uncondensed coke oven emissions are vapours that escape when the ovens are changed and emptied and are a component of fugitive emissions.

The coke produced is used as a component in the manufacturing of iron and steel. Coke is also used to synthesize calcium carbide and to manufacture graphite and electrodes. Additional chemicals recovered from the coke oven emissions (such as benzene, toluene, naphthalene, sulfur, and ammonium sulfate) are used as raw materials for plastics, solvents, dyes, drugs, waterproofing, paints, pipe coating, roads, roofing, insulation, and as pesticides and sealants.

Coke oven emissions would only be present within facilities producing or using coke as part of the manufacturing process and thus occupational exposure is limited to those workers in the aluminum, steel, graphite, electrical, and construction industries. Therefore, coke oven emissions are not a contaminant of concern during a routine hazardous building materials assessment.

Chronic (long-term) exposure to coke oven emissions can result in chronic bronchitis (particularly those who smoke) and additional health effects such as conjunctivitis, severe dermatitis, and lesions of the respiratory system and digestive system. However, the greatest concern regarding chronic exposure to coke oven emissions is the increased risk of cancer. The IARC classifies coke production as "carcinogenic to humans" (Group 1). The site at which excess cancer rates have been identified most commonly among workers in coke production is the lung. Excess risk for kidney cancer has also been associated with work in coke plants. Additional studies have also reported excess risks for other types of cancers such as cancer of the large intestine and pancreas.



Ethylene Oxide

Ethylene oxide is colourless gas with a somewhat sweet odour. It is extremely flammable and also dangerously reactive. Ethylene oxide exists as a compressed gas that has been produced since the early 1900s. It is used primarily as a chemical intermediate in the production of ethylene glycol, glycol ethers, non-ionic surfactants and other industrial chemicals. Much smaller amounts are used as a non-explosive mixture with nitrogen or carbon dioxide for sterilizing medical instruments and supplies in hospitals and industrially for the fumigation of spices.

Most people are not likely to be exposed to ethylene oxide because it is not commonly found in the environment. Exposure to ethylene oxide is generally limited to those facilities where it is made or used. Therefore, ethylene oxide is not a contaminant of concern during a routine hazardous building materials assessment, although the presence of it should be determined in buildings such as hospitals if construction activities are to occur in or adjacent to areas where it is used or stored.

Exposure to ethylene oxide can result in irritation to the skin or eyes; however, the greatest risk for health effects is through inhalation. This can result in irritation to the nose, throat and respiratory tract, with damage to the central nervous system at higher concentrations. Exposure to high concentrations may cause headache, nausea, dizziness, drowsiness, and incoordination. Exposure to ethylene oxide is also a cancer hazard and possible reproductive hazard. In epidemiological studies of exposure to ethylene oxide, the most frequently reported association has been with lymphatic and haematopoietic cancer. The IARC has concluded that there is limited evidence for the carcinogenicity of ethylene oxide in humans and sufficient evidence for carcinogenicity in experimental animals, classifying ethylene oxide as "carcinogenic to humans" (Group 1).

<u>Isocyanates</u>

Isocyanates are a family of highly reactive, low molecular weight, manufactured chemicals containing one or more isocyanate groups (-NCO). An isocyanate that has two isocyanate groups is known as a diisocyanate, which are the most common type of isocyanates used for manufacturing other products. The most commonly used diisocyanates include methylene diphenyl diisocyanate (MDI), toluene diisocyanate (TDI), and hexamethylene diisocyanate (HDI).

When isocyanates are combined with other compounds that contain free hydroxyl functional groups (i.e. –OH) they react and begin to form polyurethane polymers. These polyurethanes find significant application in the manufacture of rigid and flexible foams. Flexible foam is primarily used for cushioning, while rigid foam is used mainly for insulation. Polyurethanes are also used in the production of adhesives, elastomers, and coatings and are increasingly used in the automobile industry, autobody repair, and building insulation materials.



This diversity of applications means that exposures to isocyanates can occur in a broad range of production facilities from small workshops to automated production lines. Jobs that may involve exposure to isocyanates include painting, foam-blowing, and the manufacture of many polyurethane products. Exposure to isocyanates within buildings where it is not produced or used as part of manufacturing is unlikely, as products such as rigid foam insulation that may be used in buildings has already undergone the curing process. Completely cured products are fully reacted and therefore are considered to be inert and non-toxic. However, some products such as spray foams, coatings, sealants and adhesives may be sold and used in an uncured form. An example would be an adhesive, which is sold to be initially applied in an uncured form and as it cures (hardens), bonds two pieces of wood together. Such products can provide potential exposure to building occupants and construction workers during the application and use of these products. However, for the purposes of a routine hazardous building materials assessment, products that may have contained isocyanate as part of the manufacturing process (e.g. rigid foam) or during the application/installation process (e.g. spray foam, adhesives and sealants) are assumed to be fully cured and would no longer contain free isocyanate.

Direct skin contact with isocyanates can cause marked skin irritation, resulting in reddening, swelling and blistering. However the greatest route of exposure to isocyanates is through inhalation of fine vapours or droplets. Airborne exposure to isocyanates can result in irritation to the mucous membranes of the eyes and respiratory tracts. This results in symptoms such as excessive tear secretion, dry throat, dry cough, chest pains and difficulty in breathing. Isocyanates are also a major cause of work-related asthma worldwide. Increased exposure to isocyanates can lead to sensitization. Once sensitized, individuals are subject to severe asthma attacks (which in some cases has been reported to result in death) if they are re-exposed.

<u>Lead</u>

Lead is a naturally occurring metal found in small amounts in the earth's crust. It is usually found in ore with zinc, silver and (most abundantly) copper, and is extracted together with these metals. Metallic lead is bluish-white in colour but soon tarnishes to a dull grey when exposed to air. When melted into liquid form it has a shiny chrome-silver appearance.

Lead is soft, dense, highly malleable and resistant to corrosion, with poor electrical conductivity as compared to most other metals. Such properties have resulted in lead being used in many applications, including products and materials commonly found in buildings. It is present as a component of lead-acid batteries, ammunition, PVC plastics, and older brass and chrome-plated brass faucets. As a building component, lead has been used in water distribution piping, as an alloy in solder, in electrical conduits, roofs and roofing details, and as an additive to paints, ceramic glazes and mortars as pigments



or for anti-corrosion properties. Lead has also used as sheeting inside buildings for shielding X-rays and for sound attenuation.

Exposure to lead can occur for workers in workplaces that produce the above materials but also to construction workers, building maintenance personnel and the general population due to the widespread historical use of lead in building materials and consumer products. Most exposure to lead occurs through ingestion or inhalation, with the health effects being the same. Overexposure to lead can result in damage to nervous connections and can cause blood and brain disorders, severe damage to the kidneys and ultimately death. Infants and young children are especially vulnerable to the health effects of lead, as overexposure has been proven to result in the permanent reduction in cognitive capacity. In pregnant women, high levels of exposure to lead may cause miscarriage. The IARC has concluded that lead and inorganic lead compounds are "possibly carcinogenic to humans" (Group 2B).

The known serious health effects associated with lead exposure has brought about widespread reduction in its use. The use of lead in building materials and consumer products has decreased substantially since the 1970s to where lead is no longer being used in building materials and consumer products or is present at significantly lower concentrations. For example, unleaded gasoline was introduced in Canada in 1975, after which leaded gasoline was phased out and banned in 1990. Lead-based solder has been banned since the1980s and most solder used today is either lead-free or has very low lead concentrations. Up until the 1960s, lead was added to paints in significant quantities. Since that time, the concentration of lead in paint has decreased. The federal government began reducing the amount of lead allowed in interior paint in 1976 (to 0.5% by weight). By 1991, paint manufacturers in Canada and the U.S. voluntarily stopped adding lead to paint, reducing lead concentrations to background levels. In 2005 the Surface Coating Materials Regulations came into effect to limit the concentration of lead in paint (to 0.06% by weight) for both interior and exterior paints sold to consumers. This was since amended in 2011 to further reduce the allowable lead limit (to 0.009% by weight) and extended to include all consumer paints and coatings.

<u>Mercury</u>

Mercury is a naturally occurring element found in the earth's crust, with natural deposits generally found as a vermilion red ore called cinnabar. Mercury can exist as metallic mercury, organic mercury or inorganic mercury. Metallic or elemental mercury has unique properties as compared to other metals. It is the only pure metal that is a liquid at room temperature, having a silvery-white, shiny appearance. Mercury is the densest liquid known, which produces a colourless, odourless vapour at room temperature.

The unique properties of mercury have resulted in it being used in a wide variety of applications. Properties such as its coefficient of expansion and ability to conduct electricity has resulted in mercury being used in thermometers, barometers and other



measuring devices (blood pressure gauges, vacuum gauges, manometers, etc.), thermostats and a variety of other electrical switches (temperature sensitive, tilt switches, float switches, etc.). Mercury is also used in antifouling paints, dry cell or button batteries, and numerous lighting products, including fluorescent lamps and a variety of High Intensity Discharge (HID) lamps such as mercury vapour, metal halide and high pressure sodium lamps. HID lamps are used for street lights, floodlights and industrial lighting applications. Because of the wide variety of uses mercury can be found as a component of machinery, equipment and lighting within buildings; although many of its uses have been phased out over the years.

The health effects of mercury exposure depend on its chemical form (elemental, inorganic or organic), the route of exposure (inhalation, ingestion or skin contact), and the level of exposure. Vapours from liquid elemental mercury and methyl mercury are more easily absorbed than inorganic mercury salts and can, therefore, cause more harm. Exposure to mercury occurs mainly from breathing contaminated air or ingesting contaminated water and food. Mercury is a neurotoxin, which means it can adversely affect the central nervous system. Upon exposure, mercury tends to accumulate quickly in the brain where it tightly binds with the tissue and is released at a very slow rate. The nervous system effects of mercury toxicity are sometimes referred to as "Mad Hatter's Disease" since mercurous nitrate was used in making felt hats. High levels of exposure to mercury can also lead to harmful effects on the digestive and respiratory systems, and the kidneys. Many mercury compounds may also be teratogenic or capable of causing birth defects.

Mercury compounds can also be toxic at low levels in the environment. The characteristics of mercury that make it an environmental problem are its toxicity and persistence in the environment, and its ability to accumulate and bioconcentrate as methyl mercury in fish and fish-eating predators such as large fish or loons. Therefore, proper disposal of mercury-containing materials is essential. The improper disposal of mercury-containing products such as fluorescent light bulb tubes, high intensity discharge lamps, mercury vapour lamps, mercury thermometers and thermostats can lead to the release of mercury from municipal landfills. Used fluorescent and HID lamps may be classified as hazardous waste due to their mercury content and should be recycled if possible rather than being disposed of in landfill.

<u>Silica</u>

Silica (silicon dioxide) is the name of a group of minerals that contain silicon and oxygen in a chemical combination and have the general formula SiO₂. It is one of the most common minerals in the earth's crust. Silica can be present as crystalline silica (free silica) or amorphous silica (combined silica), and exists in many forms. The three most common crystalline forms of silica encountered in the workplace environment are quartz, tridymite, and cristobalite. Quartz is by far the most common crystalline silica found in nature, being abundant in most rock types, notably granites, sandstones, quartzites and in sands and soils. Cristobalite and tridymite are found in volcanic rocks. Amorphous silica is found in



nature as biogenic silica and as silica glass of volcanic origin. One form of biogenic silica, diatomaceous earth, originates from the skeletons of diatoms deposited on sea floors. From a health perspective it is the crystalline silica forms that raise the biggest concerns.

Silica is present in numerous building materials and products, including concrete, brick, stone, terrazzo, refractory brick, etc. Low concentrations of silica are also possible in plaster, drywall, acoustical ceiling tiles, drywall joint compound, mortars and adhesives. Because of the wide usage of quartz-containing materials, workers may be exposed to crystalline silica in a large variety of industries and occupations. Occupational exposure to silica dust occurs in cement and brick manufacturing, asphalt pavement manufacturing, china and ceramic manufacturing, and the tool and die, steel and foundry industries. Exposure to silica also occurs during many different construction and maintenance activities. The most severe exposures to crystalline silica result from abrasive blasting activities using silica sand. Other activities that may produce crystalline silica dust include jack hammering, rock/well drilling, concrete mixing, concrete drilling, tuck pointing, and brick and concrete block cutting and sawing. Additionally, crystalline silica exposures occur in the maintenance, repair and replacement of refractory brick furnace linings.

Adverse health effects associated with silica exposure result from inhalation of the respirable fraction of crystalline silica, which can arise from many of the activities outlined above. The main health effects associated with silica exposure are lung cancer and silicosis. The IARC has concluded that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is "carcinogenic to Humans" (Group 1). Silicosis is caused by scarring of the lung tissue from breathing in silica dust. This scarring is permanent and causes a reduction in the lungs' ability to take in oxygen, making it difficult to breathe and in severe cases can be disabling, or even fatal. Since silicosis affects lung function, it also makes one more susceptible to lung infections like tuberculosis.

Vinyl Chloride

Vinyl chloride is a manufactured substance that does not occur naturally. It is used as a chemical intermediate and not an end product. Vinyl chloride exists in liquid form if kept under high pressure or at low temperatures. At room temperature, it is a colourless gas. It burns easily and is not stable at high temperatures.



Most of the vinyl chloride produced is used to make a polymer called polyvinyl chloride (PVC). PVC is used to make a variety of plastic products including pipes, wire and cable coatings, vinyl flooring, vinyl wallpaper and window frames. It is also used to make furniture, upholstery and packaging materials. One of the concerns regarding PVC is that upon burning it will emit toxic fumes. Contaminants emitted when PVC is burned include hydrochloric acid, carbon monoxide, and carbon dioxide, along with lesser amounts of dioxin and furan.

Vinyl chloride is reported to be slightly irritating to the eyes and respiratory tract in humans. Central nervous system effects (including dizziness, drowsiness, fatigue, headache, visual and/or hearing disturbances, memory loss, and sleep disturbances) as well as peripheral nervous system symptoms (peripheral neuropathy, tingling, numbness, weakness, and pain in fingers) have been reported in workers exposed to vinyl chloride. Short-term (acute) exposure to extremely high levels of vinyl chloride has also reportedly caused loss of consciousness, lung and kidney irritation, and inhibition of blood clotting in humans. The most significant health effect associated with exposure to vinyl chloride is that it is a known human carcinogen that causes a rare cancer of the liver. It has been classified by the IARC as "carcinogenic to humans" (Group 1). Brain cancer, lung cancer, and some cancers of the blood also may be connected with breathing vinyl chloride over long periods.

OTHER HAZARDOUS MATERIALS

CHEMICAL HAZARDS

Urea Formaldehyde Foam Insulation

Urea-formaldehyde foam insulation (UFFI) was developed in as an improved means of insulating difficult-to-reach cavities. It was typically made at the construction site from a mixture of urea-formaldehyde resin, a foaming agent and compressed air. When the mixture is injected into the wall, urea and formaldehyde unite and "cure" into an insulating foam plastic. Its appearance is like ordinary shaving cream. Dry, it can be a white or tan colour, and fluffy like styrofoam. Over time UFFI shrinks significantly and may begin to degrade due to its crumbly texture.

UFFI was installed primarily in wall cavities during the 1970's as an energy conservation measure. The insulation was used most extensively from 1975 to 1978, during the period of the Canadian Home Insulation Program (CHIP), when financial incentives were offered by the government to upgrade home insulation levels. In addition to detached homes it can be found in common areas and walls of semi-detached homes, apartment buildings and condominiums. UFFI was also used to a lesser degree in some commercial and industrial buildings.



UFFI installation has been banned in Canada under the Hazardous Products Act (HPA) since December, 1980 due to concerns regarding the health effects of exposure to formaldehyde. Formaldehyde is a colourless, pungent-smelling gas. Health effects include eye, nose, and throat irritation; wheezing and coughing; fatigue; skin rash; nausea; headache; dizziness; and severe allergic reactions.

Sometimes, a slight excess of formaldehyde was often added to ensure complete "curing" with the urea to produce the urea-formaldehyde foam. The excess formaldehyde was given off after installation during the initial curing process, which typically took a few days to a week to complete. UFFI was sometimes improperly installed or used in locations where it should not have been, resulting in continued off-gassing of formaldehyde past the initial curing stage. Since UFFI was last installed in 1980, it should have little effect on indoor formaldehyde levels today. However, if UFFI comes in contact with water or moisture, it could begin to break down. Due to the age of the insulation UFFI may also begin to degrade and crumble into a fine powder. Under these conditions UFFI may release more formaldehyde and consideration should be given to removing the material using properly trained remediation personnel.

BIOLOGICAL HAZARDS

<u>Mould</u>

Mould is part of the fungi kingdom, which also includes mushrooms and yeasts. They are a naturally occurring and essential part of our environment since they break down dead organic material in the outdoor environment (such as leaves, wood and other plant debris), which they use as a food source.

Mould reproduces by means of tiny spores that are so small they can't be seen by the naked eye. Because of their small size mould spores easily become airborne and can travel long distances, entering indoor environments through ventilation systems, open windows or doors, or tracked in on footwear. Therefore, mould spores are a commonly detected in indoor air and as a component of settled dust.

Under normal conditions, the presence of indoor mould is not an issue. However, if conditions exist that allow it to grow and multiply indoors it can become a potential hazard. Several factors will affect what moulds will grow within a building and how fast they will grow. This includes parameters such as temperature, airflow, and the pH (i.e. acidity/alkalinity) of the food substrate. However, the most important parameter affecting mould growth is water availability, as all moulds need some amount of moisture for them to be able to grow. Buildings that have had a history of water damage are at greater risk of indoor mould growth.

Indoor mould growth may present a risk to the building structure itself through decomposition of building materials. Health risks to building occupants may also occur as



a result of indoor mould growth. Construction or renovation work which disturbs mouldcontaminated materials increases this risk of exposure to building occupants and the construction workers themselves. Health effects associated with exposure to mould most commonly results in allergic type reactions such as runny nose, cough, congestion, eye irritation and aggravation of asthma, headache and fatigue. Exposure to very high concentrations of airborne mould spores (such as those that may be observed during disturbance of mould-contaminated building materials) can result in more serious health effects such as Organic Dust Toxic Syndrome (ODTS) or Hypersensitivity Pneumonitis (HP), where flu-like symptoms (fever, chills, cough, fatigue, shortness of breath, body aches, etc.) are exhibited. The chronic form of HP may occur from long-term exposure to lower levels of mould and results in a continued worsening in shortness of breath or cough. A variety of species of mould have also been documented to cause serious invasive infections, which are generally limited to individuals whose immune systems are already somehow compromised.

ENVIRONMENTAL HAZARDS

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are a class of man-made organic chemicals known as chlorinated hydrocarbons. They vary in consistency from thin, light-coloured liquids to yellow or black waxy solids. They were manufactured in the United States from 1929 until their manufacture was banned in 1979. Although PCBs were not manufactured in Canada, they were imported from the U.S. over the years. Canada banned the import, manufacture and sale of PCBs in 1977.

PCBs are non-flammable, chemically stable over a wide range of temperature and physical conditions, not soluble in water, unaffected by acids, base or corrosive chemicals, and have a high dielectric or electrical insulating capacity. Due to these unique properties PCBs were used in hundreds of industrial and commercial applications, most commonly in electrical transformers and capacitors, including those capacitors found in light ballasts. They were also used as coolants, fire retardants and as insulation and in a number of other commercial applications including carbonless copy paper, dust suppressors for roads, hydraulic fluids, caulking compounds, plasticizers and lubricating oils and heat-transfer applications.

Although PCBs were found to be extremely useful in many industrial and commercial applications some of their chemical properties also made them an environmental and health hazard. PCBs are nearly indestructible and therefore persist if released into the natural environment. Their high fat and low water solubility result in a build-up (bioaccumulation) of PCBs in the fatty tissue of animals and humans if ingested/inhaled. Because PCBs persist in the fatty tissue of animals their concentration will tend to increase the higher up the food chain.



Most of what is known about the human health effects of PCBs is based on exposures due to accidental releases or job-related activities. These exposures are much higher than the levels normally found in the environment. The adverse health effects include a severe form of acne (chloracne), swelling of the upper eyelids, discolouring of the nails and skin, numbness in the arms and/or legs, weakness, muscle spasms, chronic bronchitis, and problems related to the nervous system. The International Agency for Research on Cancer (IARC) classifies PCBs as "probably carcinogenic to humans" (Group 2A) based on limited evidence that long-term, high-level occupational exposure can lead to increased incidence of liver and kidney cancers. The long-term impact of low-level exposures to PCBs that is common in the general population is unclear. The current state of knowledge suggests that low-level exposures to PCBs are unlikely to cause adverse health effects. However, people eating large amounts of certain sports fish, wild game and marine mammals are at increased risk for higher exposures and possible adverse health effects.

Ozone Depleting and Global Warming Substances

There are several different types of chemicals that are being or have been used as refrigerants in commercial, home and vehicle air conditioners and refrigerators or as fire extinguishing agents in portable and fixed fire extinguishing equipment. This includes chlorofluorocarbons groups of chemical compounds known as (CFCs), hydrochlorofluorocarbons (HCFCs) and halons. Some of these chemicals have also been used as foam blowing agents, as cleaning solvents for electrical components, as aerosol spray propellants, and in hospital sterilization procedures. Fixed halon fire extinguishing systems have historically been used in areas such as data centers, IT rooms, museums, libraries, surgical suites, and other locations where use of water-based suppressants could irreparably damage electronics or vital archival collections. There is a large number of halon fire extinguishing systems still in service in Canada.

The concern regarding past and present use of many of the chemicals used as refrigerants or fire extinguishing agents is that they are ozone-depleting substances (ODS). When released into the environment these chemicals break down in the stratosphere and release chlorine or bromine, which destroy the stratospheric ozone layer. The ozone layer screens the earth from some of the sun's harmful ultraviolet rays (UVB). As the ozone layer is depleted, higher UVB levels reach the earth, resulting in increased exposure to UVB. Increased exposure to UVB can cause skin cancer and plays a major role in malignant melanoma development. It can also increase the likelihood of cataracts and may also suppress proper functioning of the body's immune system and the skin's natural defenses.

CFCs, HCFCs and halons are also known to be greenhouse gases and contribute to global warming due to the build-up of these heat-trapping gases in the atmosphere. Hydrofluorocarbons (HFCs) are a common replacement chemical for CFC and HCFC



refrigerants; and although they do not have any ozone depleting potential they are a potent greenhouse gas.

Due to the ozone-depleting potential and/or global warming potential of CFCs, HCFCs, HFCs and halons it is important to control their use and emission into the environment. The manufacture and use of CFCs has stopped while transitional refrigerants (HCFCs) are scheduled to be phased out of production. No phase-out dates are currently planned for any HFCs. In Ontario, Regulation 463/10, "Ozone Depleting Substances and Other Halocarbons" (made under the Environmental Protection Act) enhances the control and management of substances that deplete the ozone layer and contribute to global warming. This regulation has requirements to prevent or minimize ozone-depleting substances and other halocarbons emissions, which serves a dual environmental benefit of lowering emissions that destroy the ozone layer and contribute to climate change.

Appendix 01 35 34B– Lead Report – Not Applicable

01 42 00 - References

1.0 GENERAL

1.1. SECTION INCLUDES

- .1 References and standards.
- .2 Standards producing industry organizations and their addresses.

1.2. RELATED SECTIONS

- .1 Section 01 61 00 Product Requirements.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3. REFERENCES

- .1 For Products or quality specified by association, trade, or other references or consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- .2 Conform to reference standard by Ontario Building Code except where a specific date is established or required by code.
- .3 Obtain copies of standards where required by product specification sections.
- .4 Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Consultant shall be altered from the Contract Documents by mention or inference otherwise, in any reference document.

1.4. STANDARDS

- .1 The following associations and organizations are cited in specification sections. Acronym, name, address, and Internet URL addresses are as follows:
- .2 Canadian Organizations:
 - .1 Street, Suite 616, Ottawa, ON K1P 5G4; URL: http://www.acec.ca.
 - .2 **AWMAC** Architectural Woodwork Manufacturers Association of Canada, 516-4 Street West, High River, AB T1V 1B6; URL: http://www.awmac.com.
 - .3 **Canada Green Building Council**, 330 55 rue Murray Street, Ottawa, ON. K1N5M3; Tel: 613-241-1184, Fax: 613-241-5750; URL: http://www.cagbc.org.
 - .4 **CCA** Canadian Construction Association, 75 Albert St., Suite 400, Ottawa, ON K1P 5E7; URL: http://www.cca-acc.com.
 - .5 **CCDC** Canadian Construction Documents Committee, Refer to ACEC, CCA, CSC or RAIC; URL: http://www.CCDC.org.
 - .6 **CGA** Canadian Gas Association, 20 Eglinton Avenue West, Suite 1305, Toronto, ON M4R 1K8; URL: http://www.cga.ca..

- .7 **CGSB** Canadian General Standards Board, Place du Portage, Phase III, 6B1, 11 Laurier Street, Hull, QC K1A 0S5; URL: http://w3.pwgsc.gc.ca/cgsb.
- .8 **CISC** Canadian Institute of Steel Construction, 201 Consumers Road, Suite 300, Willowdale, ON M2J 4G8; URL: http://www.cisc-icca.ca.
- .9 **CLA** Canadian Lumbermen's Association, 27 Goulburn Avenue, Ottawa, ON K1N 8C7; URL: http://www.cla-ca.ca.
- .10 **CNLA** Canadian Nursery Landscape Association, RR #4, Stn. Main,7856 Fifth Street, Milton, ON L9T 2X8; URL: http://www.canadanursery.com.
- .11 **CRCA** Canadian Roofing Contractors Association, 155 Queen Street, Suite 1300, Ottawa, ON K1P 6L1; URL: http://www.roofingcanada.com.
- .12 **CSA** Canadian Standards Association International, 178 Rexdale Blvd., Toronto, ON M9W 1R3; URL: http://www.csa-international.org.
- .13 **CSC** Construction Specifications Canada, 120 Carlton Street, Suite 312, Toronto, ON M5A 4K2; URL: http://www.csc-dcc.ca.
- .14 **CSDMA** Canadian Steel Door Manufacturers Association, One Yonge Street, Suite 1801, Toronto, ON M5E 1W7; URL: http://www.csdma.org.
- .15 **CSPI** Corrugated Steel Pipe Institute, 652 Bishop Street N, Unit 2A, Cambridge, ON N3H 4V6; URL: http://www.cspi.ca.
- .16 **CSSBI** Canadian Sheet Steel Building Institute, 652 Bishop St. N., Unit 2A, Cambridge, ON N3H 4V6; URL: http://www.cssbi.ca.
- .17 **CUFCA** Canadian Urethane Foam Contractor's Association, Box 3214, Winnipeg, MB R3C 4E7; URL: http://www.cufca.ca.
- .18 **CWC** Canadian Wood Council, 1400 Blair Place, Suite 210, Ottawa, ON. K1J 9B8; URL: http://www.cwc.ca.
- .19 **EC** Environment Canada, Conservation and Protection, Inquiry Centre, 351 St. Joseph Blvd, Hull, QC KIA 0H3; URL: http://www.ec.gc.ca.
- .20 **EFC** Electro Federation of Canada, 5800 Explorer Drive, Suite 200, Mississauga, ON L4W 5K9; URL: http://www.electrofed.com.
- .21 **MPI** The Master Painters Institute, 4090 Graveley Street, Burnaby, BC V5C 3T6; URL: http://www.paintinfo.com.
- .22 NABA National Air Barrier Association, PO Box 2747, Winnipeg, MB R3C 4E7; URL: http://www.naba.ca.
- .23 NLGA National Lumber Grades Authority, 406-First Capital Place, 960 Quayside Drive, New Westminster, BC V3M 6G2; URL: http://www.nlga.org.
- .24 NRC National Research Council, Building M-58, 1200 Montreal Road, Ottawa, ON K1A 0R6; URL: http://www.nrc.gc.ca.

- .25 QPL Qualification Program List, c/o Canadian General Standards Board, Place du Portage, Phase III, 6B1, 11 Laurier Street, Hull, QC K1A 1G6; URL: http://www.pwgsc.gc.ca/cgsb.
- .26 **RAIC** Royal Architectural Institute of Canada, 55 Murray Street, Suite 330, Ottawa, ON K1N 5M3; URL: http://www.raic.org.
- .27 SCC Standards Council of Canada, 270 Albert Street, Suite 2000, Ottawa, ON K1P 6N7; URL: http://www.scc.ca.
- .28 **TTMAC** Terrazzo, Tile and Marble Association of Canada, 30 Capston Gate, Unit 5 Concord, ON L4K 3E8; URL: http://www.ttmac.com.
- .29 ULC Underwriters' Laboratories of Canada, 7 Crouse Road, Toronto, ON M1R 3A9; URL: http://www.ulc.ca.
- .3 USA Organizations:
 - .1 **AA** Aluminum Association, 900 19th Street N.W., Washington, DC 20006; URL: http://www.aluminum.org.
 - .2 **AASHTO** American Association of State Highway and Transportation Officials, 444 N Capitol Street N.W., Suite 249, Washington, DC 20001; URL: http://www.aashto.org.
 - .3 **AHA** American Hardboard Association, 1210W Northwest Hwy, Palatine, IL 60067; URL: http://www.hardboard.org.
 - .4 **AITC** American Institute of Timber Construction, 7012 S. Revere Parkway, Suite 140, Englewood, CO 80112; URL: http://www.aitc-glulam.org.
 - .5 **AMCA** Air Movement and Control Association Inc., 30 West University Drive, Arlington Heights, IL 60004-1893; URL: http://www.amca.org.
 - .6 **ANSI** American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, NY 10036; URL: http://www.ansi.org.
 - .7 **APA** The Engineered Wood Association, P.O. Box 11700, Tacoma, WA 98411-0700; URL: http://www.apawood.org.
 - .8 **API** American Petroleum Institute, 1220 L St. Northwest, Washington, DC 20005-4070; URL: http://www.api.org.
 - .9 **ARI** Air Conditioning and Refrigeration Institute, 4100 N Fairfax Drive, Suite 200, Arlington, VA 22203; URL: http://www.ari.org.
 - .10 ASHRAE American Society of Heating, Refrigeration and Air-Conditioning Engineers, 1791 Tullie Circle NE, Atlanta, GA 30329; URL: http://www.ashrae.org.
 - .11 **ASME** American Society of Mechanical Engineers, ASME Headquarters, 3 Park Avenue, New York, NY 10016-5990; URL: http://www.asme.org.

- .12 **ASTM International**, 100 Barr Harbor Drive West, Conshohocken, PA 19428-2959; URL: http://www.astm.org.
- .13 **AWCI** Association of the Wall and Ceiling Industries International, 803 West Broad Street, Suite 600 , Falls Church, UA 22046; URL: http://www.awci.org.
- .14 **AWPA** American Wire Producer's Association, 801 N Fairfax Street, Suite 211, Alexandria, VA 22314-1757; URL: http://www.awpa.org.
- .15 **AWPA** American Wood Preservers' Association, P.O. Box 5690, Granbury TX 76049-0690; URL: http://www.awpa.com
- .16 **AWS** American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126; URL: http://www.amweld.org.
- .17 **AWWA** American Water Works Association, 6666 W. Quincy Avenue, Denver, CO 80235; URL: http://www.awwa.org.
- .18 **EIMA** EIFS Industry Manufacturer's Association, 3000 Corporate Center Drive, Suite 270, Morrow, GA 30260; URL: http://www.eima.com.
- .19 **ISAP** International Society for Asphalt Paving, 400 Selby Avenuse, Suite 1, St. Paul, MN 55102; URL: http://www.asphalt.org.
- .20 **IEEE** Institute of Electrical and Electronics Engineers, IEE Corporate Office, 3 Park Avenue, 17th Floor, New York, NY 10016-5997;URL: http://www.ieee.org
- .21 MSS Manufacturers Standardization Society of the Valve and Fittings Industry, 127 Park Street, N.E., Vienna, VA 22180-4602; URL: http://www.mss-hq.com.
- .22 NAAMM National Association of Architectural Metal Manufacturers, 8 South Michigan Avenue, Suite 1000, Chicago, IL 60603;URL: http://www.naamm.org.
- .23 **NEMA** National Electrical Manufacturers Association, 1300 N 17th Street, Suite 1847, Rosslyn, VA 22209; URL: http://www.nema.org.
- .24 **NFPA** National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101Quincy, MA 02269-9101; URL: http://www.nfpa.org.
- .25 **NFSA** National Fire Sprinkler Association, P.O. Box 1000, Patterson, NY 12563; URL: http://www.nfsa.org.
- .26 **NHLA** National Hardwood Lumber Association, 6830 Raleigh-La Grange Road, Memphis, TN 38184-0518; URL: http://www.natlhardwood.org.
- .27 **NSPE** National Society of Professional Engineers, 1420 King Street, Alexandria, VA 22314-2794; URL: http://www.nspe.org.
- .28 **PCI** Prestressed Concrete Institute, 209 W. Jackson Blvd., Suite 500, Chicago, IL 60606-6938; URL: http://www.pci.org.

- .29 **PEI** Porcelain Enamel Institute, PO Box 920220, Norcross, GA 30010; URL: http://www.porecelainenamel.com.
- .30 **SSPC** The Society for Protective Coatings, 40 24th Street, 6th Floor, Pittsburgh, PA 15222-4656;URL: http://www.sspc.org.
- .31 **TPI** Truss Plate Institute, 583 D'Onofrio Drive, Suite 200, Madison, WI 53719; URL: http://www.tpinst.org.
- .32 UL Underwriters' Laboratories, 333 Pfingsten Road, Northbrook, IL60062-2096; URL: http://www.ul.com.

END OF SECTION

01 45 00 – Quality Control

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 21 00 Allowances.
- .2 Section 01 78 10 Closeout Submittals and Requirements
- .3 Section 01 79 00 Demonstration and Training
- .4 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. REFERENCES

- .1 **ISO/IEC** 17025-2005 General Requirements for the Competence of Testing and Calibration Laboratories.
- .2 **SCC** (Standards Council of Canada).

1.3. INSPECTION BY AUTHORITY

- .1 Allow Authorities Having Jurisdiction access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection whenever portions of the Work are designated for special tests, inspections or approvals, either when described in the Contract Documents or when required by law in the Place of the Work.
- .3 If 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 inspections or tests satisfactorily completed and make good such Work.

1.4. REVIEW BY CONSULTANT

- .1 Consultant may order any part of the Work to be reviewed or inspected if Work is suspected to be not in accordance with Contract Documents.
- .2 If, upon review such work is found not in accordance with Contract Documents, correct such Work and pay the cost of additional review and correction.
- .3 If such Work is found in accordance with Contract Documents, The owner will pay the cost of review and replacement.

1.5. INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection and Testing Agencies will be engaged by Contractor for the purpose of inspecting and testing portions of Work.
- .2 The Board may, at their discretion, request that the Consultant direct the Contractor to engage independent inspecting and or testing agencies to review or test the Work.
- .3 Allocate Costs for inspections and testing to Section 01 21 00.
- .4 Provide equipment required for executing inspection and testing by appointed agencies.
- .5 Employment of inspection and testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .6 If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection and testing to ascertain the full degree of defect. Correct defects and irregularities as advised by the Consultant at no cost to the Owner. Contractor shall pay costs directly to the inspection agency for retesting and re-inspection.

1.6. ACCESS TO WORK

- .1 Allow inspection and testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Cooperate to provide reasonable access and facilities for such access.

1.7. CONTRACTOR RESPONSIBILITIES

- .1 Notify appropriate agency minimum 48 hours in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.8. DUTIES & AUTHORITY OF TESTING AGENCY

- .1 Testing agency is expected to do the following:
 - .1 Act in a professional and unprejudiced basis and carry out inspection and testing functions to establish compliance with requirements of Contract Documents.

- .2 Check work as it progresses and prepare reports stating results of tests and conditions of work and state in each report whether specimens tested conform to requirements of Contract Documents, specifically noting deviations.
- .3 Distribute reports as follows
 - .1 Consultant
 - .2 Owner
 - .3 Contractor
- .2 Testing agency is not authorized to amend or release any requirements of Contract Documents, nor to approve or accept any portion of work.

1.9. REJECTED WORK

- .1 The Contractor shall remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by the Consultant as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If, it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, the Owner may choose to accept the condition. The difference in value between Work performed and that called for by Contract Documents shall be deducted from the Contract value via Change Order. The amount of this change shall be determined by the Consultant. The Contractor shall warrant the work performed for the time period specified as if it were performed in accordance with the Contract Documents.

1.10. TESTING OF EXCAVATION & BACKFILL

- .1 The Consultant must approve all Sample and fill tests prior to purchase.
- .2 In coordination with the Consultant and Contractor, inspect and test backfill and fill to ensure the degree of compaction specified has been obtained.
- .3 Inspect excavation at required levels in regard to bearing values for footings, foundations and floor slabs.
- .4 Authorization and calculation of extra excavation work, if required, due to unsatisfactory bearing shall be adjusted by Unit Price.

1.11. CONCRETE STRENGTH TESTS

.1 Review the proposed concrete mix design and check test if considered necessary.

- .2 Obtain representative samples of fresh concrete for each mix design of concrete placed in any one day as directed by the Consultant.
- .3 Make standard slump tests.
- .4 Mould three (3) standard 150mm diameter cylindrical test specimens from each sampling of fresh concrete. Store specimens as per best practice while they are on the site. Cure all cylinders in the laboratory under standard moisture and temperature conditions. Compression test one of the cylinders at 7 days and the remaining two at 28 days after sampling. Each concrete cylinder test report shall contain the specific location of concrete represented by sample, design strength, aggregate size, admixtures used, date, hour and temperature at time of sampling, percentage air content, unit weight and test strength of cylinder.
- .5 When concrete is placed under the conditions of "Cold Weather Requirements" make one additional cylinder; store it in a heated enclosure for 24 hours and then store it on the job site in a place protected from disturbance and off the ground. Compressive test this cylinder 7 days after sampling.
- .6 Determine the air content of air entrained standard weight concrete.
- .7 Determine the air content and unit weight of light weight concrete by the volumetric method.
- .8 Additional testing required because of changes in materials or proportions of the mix requested by the Contractor as well as any extra testing of concrete or materials occasioned by their failure to meet specification requirements or testing of the structure or performance of the structure, including load testing, shall be carried out at the Contractor's expense.

1.12. INSPECTION OF STRUCTURAL STEEL

- .1 Ensure all steel has mill test reports that comply with the Specification prior to purchase.
- .2 Inspect fabrication of steel in the plant.
- .3 Inspect erection work at site including fit-up, placing, plumbing, levelling, temporary bracing, field cutting and alterations.
- .4 Shop and field inspect welded and bolted connections and painting.
- .5 High strength bolts the installation and testing of bolts shall conform to the requirements of CSA S16-1969. Check one representative connection in ten by torque testing every bolt, and check each bolt in every connection with a tap of hammer for soundness. Enforce requirements of connection type.
- .6 Examine visually all welded joints for inclusions, porosity, lack of fusion penetration or even contour, undercuts and cracks. Root passes shall be checked for penetration

and cracks from the back of the joint. Any suspect welds shall be checked ultrasonically.

1.13. INSPECTION OF METAL DECK

- .1 Check deck for gauge, type and protective coating thickness to ensure compliance with Specification.
- .2 Inspect erection work at the site including anchorage.

1.14. INSPECTION AND TESTING OF PAVING

- .1 Testing shall be carried out in three stages as described below by means of sufficient site visits to ensure satisfactory results but in no case less than three site visits.
- .2 Test within 16 hours from time called to do so by the Contractor, since paving is a critical item at the end of the project.
- .3 Stage One:
 - .1 Visual inspection and compaction tests of subsoil.
- .4 Stage Two:
 - .1 Inspection of granular sub-base (after each layer is placed or after the last layer is placed and compacted).
 - .2 On site density tests.
 - .3 Verify thickness of various levels. (Minimum of 4 checks shall be done on thickness in a paved area of 250m2 or less, and 1 additional check for each additional 250m2 or part thereof).
 - .4 Laboratory tests: moisture content and grading of materials.
- .5 Stage Three:
 - .1 Inspection of asphalt installation.
 - .2 Checking of thickness and density of material and checking suitability of equipment used.
- .6 Standard Proctor Test shall be carried out for all projects.
- .7 Further, grain size analysis and Marshall test shall be carried out if visual inspection is not satisfactory or, if there is reason to suspect materials supplied are not acceptable.
- .8 All laboratory tests shall be performed according to A.S.T.M. methods, latest revisions
- .9 Paving Contractor shall obtain from their supplier grading tables of materials used and submit them to the testing laboratory for approval. The paving contractor shall ensure material delivered complies with grading tables.

- .10 Be responsible for all approvals given to the Paving Contractor. At completion of the paving project, inform the Consultant all tests were performed according to the Specifications and the Contractor's performance has been approved.
- .11 The Consultant will not entertain any credits for work either not performed or incorrectly performed by the contractor. If thicknesses or consistencies of sub-base are not as specified, or if asphaltic material is not as specified, then the Contractor shall remove the same at their expense and provide proper specified materials.

1.15. BUILDING THERMOGRAPHIC SCAN

- .1 Upon completion of the Work, the Consultant and/or Owner may arrange for an independent agency to carry out a thermographic scan of the building to determine acceptability of thermal performance of the building envelope.
- .2 Consultant, prior to start of construction work, will designate a sample area of the building to include a portion of exterior wall and roof.
- .3 Consultant will implement a special inspection program for this sample area to be carried out as construction progresses. Contractor shall not cover any completed work until notifying the Consultant and receiving acceptance of completed work. Contractor shall remove and replace any work which is installed in contravention of this requirement.
- .4 Results of a thermographic scan of the entire building will be evaluated and compared to those of the sample area to determine acceptance or rejection of any part of the building envelope.
- .5 Contractor shall carry out remedial work as required to bring the quality of any rejected portion of the building envelope to that of the sample area. Contractor shall pay for costs of any follow-up thermographic scans required to determine acceptability of remedial work. This procedure shall be repeated until all parts of the building envelope have been accepted.

1.16. TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as may be requested.
- .2 The cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work shall be appraised by Consultant and may be authorized as recoverable.

1.17. МОСК-UP

.1 Prepare mock-up for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.

- .2 Prepare mock-ups for Consultants review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .3 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .4 If requested, Consultant will assist in preparing a schedule fixing dates for preparation.
- .5 Remove mock-up at conclusion of Work or when acceptable to the Consultant. Repair any damage and clean-up at place of mock-up.
- .6 Approved mock-up may remain as part of Work.

1.18. EQUIPMENT AND SYSTEMS

- .1 Submit adjustment and balancing reports for mechanical and electrical systems to the consultant.
- .2 Refer to Sections 01.78.10 and 01.79.00 for definitive requirements.

END OF SECTION

01 51 00 – Temporary Utilities

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 52 00 Construction Facilities.
- .2 Section 01 53 00 Temporary Construction.
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. INSTALLATION AND REMOVAL

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Location of temporary facilities shall be subject to the Consultant's approval.
- .3 Salvage and assist in recycling products for potential reuse wherever possible.
- .4 Remove temporary facilities from the site when directed by the Consultant.

1.3. DEWATERING

.1 Provide temporary drainage and pumping facilities to keep excavations and the site free from standing water. Provide necessary pumps (including spare pumps) and temporary drainage for keeping the Work free of water throughout the construction period. Locate sumps away from foundation elements. Control grading around excavation to prevent surface water from draining into excavation and from damaging adjoining property.

1.4. WATER SUPPLY

- .1 Provide continuous supply of potable water for construction use until such time as permanent municipal water supply is available.
- .2 Hose extensions to be provided by subcontractors requiring them.
- .3 For New Builds, arrange for connection with the appropriate utility company and pay all costs for installation, maintenance, removal, and usage costs until occupancy has been achieved.
- .4 For Additions and renovations the contractor can use existing Board service unless noted otherwise.

1.5. TEMPORARY HEATING AND VENTILATION

.1 Provide temporary heating required during construction period, including unit rental costs, maintenance.

- .2 Provide temporary heating fuel, if not already available on site, until such time as a permanent natural gas line is installed, and thereafter fuel costs shall be borne by the Board. The Contractor shall provide all connections and piping between the permanent fuel source and the heating appliance(s).
- .3 Provide temporary heat and ventilation in enclosed areas as required to:
 - .1 Facilitate progress of Work.
 - .2 Protect Work and products against dampness and cold.
 - .3 Prevent moisture condensation on surfaces.
 - .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
 - .5 Provide adequate ventilation to meet health regulations for a safe working environment.
- .4 Maintain temperatures of minimum:
 - .1 10 degrees C in areas where construction is in progress, until takeover by the Board. Contractor to ensure temporary enclosures remain sealed and penetrations are repaired or closed in a timely fashion.
 - .2 16 degrees C in areas where finishes are in progress.
 - .3 16 degrees C in building once it is enclosed.
 - .4 Refer to other Sections for intermittent heating requirements up to 21 degrees
 C. Provide insulated tarp enclosures for openings as required to enclose the building after completion of main building shell components and roof.
 - .5 If the Contractor fails to ensure the temporary enclosures remained sealed (including temp doors when not in use) the Consultant and or the Board shall require the contractor to pay 40% of that months usage charge
- .5 Use forced hot air heaters. Open-flame type heaters or salamanders are not permitted. Ventilate direct fired heating units to the outside.
- .6 Uniformly distribute heat to avoid hot and cold areas and to prevent excessive drying.
- .7 Early heating of the building shell will be required to expedite interior finishing to meet the project schedule.
- .8 Ventilating:
 - .1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction.
 - .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into the atmosphere of occupied areas.
 - .3 Dispose of exhaust materials in a manner that will not result in harmful exposure to persons.

- .4 Ventilate storage spaces containing hazardous or volatile materials.
- .5 Ventilate temporary sanitary facilities.
- .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.
- .7 Provide minimum 1 air change per hour for enclosed areas receiving architectural finishes.
- .8 Do not allow excessive build-up of moisture inside the building.
- .9 The permanent mechanical systems for the new building, when installed in safe operating conditions, may be used for temporary heating or cooling if approved in writing by the Consultant, without penalty to the warranty.
- .10 Follow the requirements of "Temporary Use of New Permanent Services and Equipment" if the permanent heating system installed under the contract is intended to be used for temporary heating during the construction.
- .11 Provide competent persons to operate and maintain permanent systems for the duration of temporary use period.
- .12 Perform required repairs and maintenance immediately after each inspection. Pay for operating costs. Upon termination of temporary use period, services and equipment shall be inspected, tested, adjusted, fitters replaced, balanced, cleaned and lubricated.
- .13 Permanent services and equipment shall be turned over to the Owner in new and perfect operating condition.
- .14 Use of permanent systems and equipment as temporary facilities shall not affect the guarantee conditions and guarantee period for such systems and equipment. Make due allowance to ensure Owner will receive full benefits of the equipment manufacturer's warranty from the date of Substantial Performance.
- .15 Ensure date of Substantial Performance of the Work and Warranties for heating system do not commence until entire system is in as near original condition as possible and is certified by Consultant.
- .16 Maintain strict supervision of operation of temporary heating and ventilating equipment to:
 - .1 Conform with applicable codes and standards.
 - .2 Enforce safe practices.
 - .3 Prevent abuse of services.
 - .4 Prevent damage to finishes.
 - .5 Vent direct-fired combustion units to outside.
- .17 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

1.6. TEMPORARY POWER AND LIGHT

- .1 Provide temporary electrical service and system including lighting and power system for use by all Sections.
- .2 Contractor will provide a source for, and pay the costs of temporary power during construction for temporary lighting and operating of power tools until such time as a permanent source is available.
- .3 Contractor to ensure that the use of power from a source provided by the Board shall not exceed the capacity of the current use required for the operation of any existing facility.
- .4 Install and maintain temporary electrical service and systems in accordance with Construction Safety Association's "Temporary Wiring Standards on Construction Sites", the Ontario Electrical Code and other authorities having jurisdiction.
- .5 Provide at least one temporary panel on each floor with service capacity suitable for construction requirements and to authorities and utilities approval.
- .6 Provide temporary wiring with lighting to all areas of each floor to provide adequate lighting.
 - .1 Lighting levels must be maintained at a minimum of 10 foot candles, or to suit the particular location or operation, whichever is greater.
 - .2 Do not use materials of the temporary service in permanent installation.
 - .3 Increase lighting levels equivalent to the final requirements when finishing operations are underway.
- .7 Extension cords, lights, etc., required by various subcontractors and run from above outlet positions will be supplied and maintained by the party or parties requiring the same.
- .8 Follow requirements of "Temporary Use of New Permanent Services and Equipment" if electrical power and lighting systems installed under the contract are intended to be used for temporary electricity and lighting during the construction.
- .9 Electrical power and lighting systems installed under this contract can be used for construction provided damages are made good and all lamps that have been used for more than two months are replaced with new lamps.
- .10 For New Builds, arrange for connection with the appropriate utility company and pay all costs for installation, maintenance, removal and usage costs until occupancy has been achieved.
- .11 For Additions and renovations the contractor can use existing Board service unless noted otherwise.

.12 Provide and pay for temporary power for electric cranes and other equipment requiring temporary power in excess of above noted requirements.

1.7. TEMPORARY COMMUNICATION FACILITIES

- .1 Contractor to provide and pay for temporary Phone, e-mail and printer hook up, for the duration of contract until completion for use by the contractor.
- .2 The site superintendent is to have email access and a printer on site.

END OF SECTION

01 53 00 – Temporary Construction Facilities

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Section 01 51 00 Temporary Utilities.
- .2 Section 01 35 23 Health and Safety
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. INSTALLATION AND REMOVAL

- .1 Provide temporary construction facilities in order to execute work expeditiously.
- .2 Remove temporary facilities from the site when directed by the Consultant.

1.3. PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

1.4. PROTECTION OF SURROUNDING WORK

- .1 Provide protection for finished and partially finished Work from damage.
- .2 Provide necessary cover and protection.
- .3 Be responsible for damage incurred due to lack of or improper or inappropriate protection.

1.5. ROOF AND STRUCTURE PROTECTION

- .1 Ensure no part of Work or existing structures are subjected to a load, which will endanger its safety or will cause permanent deformation.
- .2 The Contractor when indicated by the Board Contact or Consultant shall provide roof protection. Ensure all precautions are taken to avoid liability for roof damage.
- .3 Typical roof protection shall consist of a layer of 1 inch rigid foam insulation set directly on the roof surface and a layer of 19 mm (3/4 inch) plywood in all places under scaffold legs, ladder legs and in areas of foot traffic or falling debris.

1.6. WORK SITE ENCLOSURE & SAFETY BARRIERS

.1 Erect and maintain for the duration of the work:

- .1 a minimum 1800 mm high chain link fence or self-supporting, heavy duty, interconnected fence panels (commonly referred to as Insta-fence)for a temporary site enclosure (hoarding) completely around perimeter of work site,
- .2 any temporary posts shall be completely removed by the contractor prior to occupancy,
- .3 under no circumstance shall t-bar posts be used on board property
- .4 any additional safety devices including full hoarding as required and noted on the drawings, to protect the students, staff, public and private property from injury and damage,
- .5 any additional requirements as regulated by authorities having jurisdiction, local by-laws and zoning.
- .2 The Contractor is to assume full responsibility for any injury or damage caused due to failure to comply with Paragraph 1 above.
- .3 Any hazardous conditions identified outside of the main fenced area will be barricaded with a fence complying to the above.
- .4 Provide lockable truck entrance gate/gates and at least one (1) pedestrian door as directed and conforming to applicable traffic restrictions on adjacent streets. Equip gates with locks and keys with restricted availability, in the project office.
- .5 Erect and maintain pedestrian walkways including roof and side covers, complete with signs and electrical lighting as required by law.
- .6 Provide barriers around trees and plants designated to remain.
- .7 Protect from damage by equipment and construction procedures.

1.7. TREE PROTECTION

- .1 Protect all existing trees to remain from damage during construction period. Make good, at Contractor's expense, trees damaged during construction.
- .2 Confine movement of heavy equipment, storage of same, and storage of materials to a predetermined area. Do not store materials or place equipment over root systems of any existing trees to remain.
- .3 Install fencing or approved equal at limits of drip line of existing trees to remain unless directed otherwise. Where this case is not practical, and only if approved by the Consultant, the trunks shall be protected with an approved tree guard.
- .4 No rigging cables shall be wrapped around or installed in trees. Do not flush concrete trucks or cement mixing machines over root systems or near trees. Flush concrete trucks or cement mixing machines in areas approved by the Consultant.
- .5 Areas where root systems of trees are exposed directly adjacent to a structure will be backfilled with good loam only.

- .6 Whenever excavating is required within branch spread of trees that are to remain, the contractor shall contact the consultant for direction prior to the start of work.
- .7 If any existing tree to remain is injured and does not survive the following year, it will, as determined by the Board, be removed in its entirety and be replaced with a tree of similar size and value, as directed by the Consultant.
- .8 Should the destroyed tree be of such a size or shape that it cannot be feasibly replaced, the Contractor shall compensate the Owner for the minimum sum of five thousand dollars (\$5,000.00) per destroyed tree.

1.8. GUARD RAILS AND BARRIERS

- .1 Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stairwells, open edges of floors and roofs.
- .2 Erect and maintain for the duration of the Work, safety devices and barricades including hoarding, as required, to protect the staff, students, public and private property, from injury and damage.
- .3 The Contractor is to ensure that all requirements from authorities having jurisdiction and all requirements from the Owner are met.
- .4 The Contractor is to assume full responsibility for any damage caused due to his failure to comply with paragraph 2 above.
- .5 Hazardous conditions on the exterior shall be fenced.

1.9. WEATHER ENCLOSURES

- .1 Provide weather-tight closures to unfinished door and window openings, tops of shafts and other openings in floors and roofs.
- .2 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work for temporary heat.
- .3 Design enclosures to withstand wind pressure.

1.10. DUST TIGHT BARRIERS

- .1 Provide dust tight barriers and screens or partitions to localize dust generating activities, and for protection of workers, finished areas of Work and public.
- .2 Maintain and relocate protection until such work is complete.
- .3 Where required, adjust air handling units to eliminate migration of dust.

1.11. SCAFFOLDING

.1 Erect scaffolding independent of walls and use in such a manner limiting interference with other work. When not in use, move scaffolding as necessary to permit installation of other work. Construct and maintain scaffolding in a rigid, secure and safe manner. Remove it promptly when no longer required. Protect the surface on which scaffolding is bearing.

1.12. SHORING, BRACING, PILING

- .1 Provide shoring, bracing, piling, sheeting and sheet piling and underpinning required to support soil banks, existing work and property in accordance with Construction Safety Act and other applicable regulations. Maintain shoring until the building is strong enough and sufficiently braced to withstand pressure of backfilling. Make construction aids free of permanent work so they may be removed entirely when no longer required, without damaging the Work. Locate construction aids so adequate room is left for damp-proofing foundation walls, laying substructure drainage and other work.
- .2 Shoring and false work over one tier in height shall be designed and shall bear the stamp of a registered professional engineer, having experience in this field.

1.13. HOISTING

- .1 Provide, operate and maintain services required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.
- .2 Machinery shall be operated by qualified operator.

1.14. OVERHEAD LIFTING

.1 Any condition requiring the use of a crane or lifting device over a Board structure must follow the requirements of Health and Safety Section 01 35 23, Paragraph 1.15 Overhead Lifting.

1.15. ELEVATORS/LIFTS

- .1 When elevators/lifts are to be used by construction personnel, provide protective coverings for finish surfaces of elevator cabs and entrances.
- .2 Co-ordinate use of elevator cabs with Consultant and the Board.

1.16. USE OF THE WORK

.1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with Products.

.2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.

1.17. CONSTRUCTION PARKING

- .1 Construction personnel vehicle parking, to be confined to the work site enclosure, or.
- .2 Parking will be permitted on site only where and if it does not disrupt the employees of the place of work as directed by the Board
- .3 Permission to park vehicles on site does not imply any liability or responsibility for safe keeping of vehicles and contents thereof by the School Board.

1.18. ACCESS TO SITE

- .1 Provide and maintain adequate access to the project site.
- .2 Build and maintain temporary roads where necessary and provide snow removal within the area of work, and access to the work, during the period of Work. The area shall be restored to the satisfaction of the Board at the completion of the project.
- .3 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads.
- .4 Clean roadways and taxi areas where used by Contractor's equipment.

1.19. SECURITY

- .1 The Contractor shall ensure the security of the work site, contents, and built structures for the duration of the project.
- .2 The Contractor shall be responsible to provide and pay for security personnel to guard the site and contents of the site after working hours and during holidays as required.
- .3 Notify the Board of the use of security guards or systems.
- .4 The Board shall not be responsible for the loss, theft, or vandalism.

1.20. OFFICES

- .1 Provide and maintain, until completion of Contract, for Contractor's use, a temporary office, large enough to accommodate site administrative activities and site meetings, complete with light, heat, air conditioning, ventilation, table and chairs. Do not store materials in the office area; keep clean and tidy.
- .2 Provide a clearly marked and fully stocked first-aid case in a readily available location.

.3 Subcontractors may provide their own offices as necessary. Direct location of these offices.

1.21. EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds and platforms for storage of tools, equipment and materials.
- .2 Review storage areas on site with the Consultant. Store materials and equipment to ensure preservation of quality of product and fitness for the Work. Store materials and equipment on wooden platforms or other hard, clean surfaces, raised above the ground or in water tight storage sheds of sufficient size for storage of materials and equipment which might be damaged by storage in the open. Locate stored materials and equipment to facilitate prompt inspection.
- .3 Store packaged materials and equipment undamaged, in their original wrappings or containers, with manufacturer's labels and seals intact.
- .4 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.
- .5 Storage sheds required by subcontractors shall be provided by them.

1.22. SANITARY FACILITIES

- .1 Provide weatherproof temporary toilet/sanitary facilities for the work force in accordance with governing regulations and ordinances.
- .2 Service temporary toilet/sanitary facilities as required by authorities but not less than weekly.
- .3 Post notices and take such precautions as required by local health authorities.
- .4 The use of existing washroom facilities is not allowed unless specifically approved by the Board. The Contractor will be required to clean and maintain the existing washrooms to Board standards.
- .5 Except where connected to the municipal sewer system, periodically remove wastes from Site.
- .6 Keep toilet/sanitary facilities clean and sanitary and protect from freezing.
- .7 Keep sanitary facilities clean and fully stocked with the necessary supplies at all times.

01 54 00 – Materials and Equipment

1.0 GENERAL

1.1. RELATED SECTIONS

.1 This section describes requirements applicable to all Sections within Divisions 02 to 49

1.2. PRODUCT AND MATERIAL QUALITY

- .1 Products, materials, equipment and articles referred to as "Products"; throughout the specifications incorporated in the Work, shall be new, not damaged or defective, and of the best quality, compatible with specifications for the purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Defective products will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is a precaution against oversight or error. Remove and replace defective products at own expense, and be responsible for delays and expenses caused by rejections.
- .3 Should any dispute arise as to the quality or fitness of products, the decision rests strictly with the Board contact, based upon requirements of the Contract Documents.
- .4 Current Material Safety Data Sheets shall be on file with the successful Contractor and shall be provided to the Board contact upon request, within twenty-four (24) hours.
- .5 Material safety data sheets are not required for products currently WHMIS exempt.

1.3. EQUIPMENT/TOOL MATERIALS STORAGE, HANDLING, AND PROTECTION

- .1 Handle and store products in a manner to prevent damage, adulterations, deterioration, and soiling, and in accordance with manufacturer's instructions.
- .2 Store packaged or bundled products in original and undamaged condition, with manufacturer's seals and labels intact.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Provide and maintain tools, equipment and materials in a clean and orderly condition. Board tools, ladders, lifts, power cords, flashlights etc. are not to be used.
- .5 Materials are to be stored in a manner to cause the least interference with WorK activities.

- .6 The Contractor shall determine with the Board contact, prior to ordering materials, those locations that are suitable for receiving and storage of materials and equipment.
- .7 All materials and equipment shall be kept in a secure area, at Contractor's expense, or removed from the job site when Work is not actually in progress.
- .8 Vehicles, trailers or other similar apparatus may not be stored or parked overnight at site without written authorization from Board contact. Written requests are to be forwarded directly to the Board contact.
- .9 Approval for parking does not imply any liability or responsibility for safe keeping by the Board.
- .10 The Contractor may use the existing electrical and water services, as required, for the Work, and the costs of these services shall be borne by the Board.

1.4. WORKMANSHIP

- .1 Workmanship shall be the best quality, executed by Workers experienced and skilled in the respective duties for which they are employed. Immediately notify the Consultant if required Work is such as to make it impractical to produce required results.
- .2 Do not employ any unfit persons or anyone unskilled in their required duties.
- .3 Decisions as to the quality or fitness of Workmanship in cases of dispute rest solely with the Board contact, whose decision is final.
- .4 All Contractor personnel are restricted to the job site and necessary access routes. No personnel shall visit other areas or buildings without specific authorization.
- .5 The Contractor shall make their own arrangements for emergency treatment of accidents.
- .6 Any accidents shall be reported immediately to the Board contact.
- .7 The Contractor agrees to hold the Board harmless of any and all liability of every nature and description, which may be suffered through bodily injuries, involving deaths of any persons, by reasons of negligence of the Contractor, his agents, employees, or his Subcontractors.
- .8 The Contractor shall supply constant on-site supervision in the form of a Project Superintendent. The Project Superintendent shall have within their authority to negotiate minor changes regarding scheduling, manpower and equipment.

1.5. MANUFACTURER'S INSTRUCTIONS

.1 Unless otherwise indicated in the specifications, install, apply or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.

1.6. TOOLS OF THE TRADE

.1 The Board will not pay the Awarded Bidder a fee for tools and equipment that are considered "tools of the trade" that are required to perform the work in this Tender or any change orders.

1.7. EXISTING EQUIPMENT

.1 Contractor shall demolish and dispose of all existing equipment specified to be removed and or replaced including obsolete services not being reused. The Board shall have first rights of refusal on all demolished equipment and or parts and the Contractor shall provide a minimum of (5) working days notice prior to disposal of the equipment, parts, or equipment and set aside same in a suitable location to be recovered by Board technicians.

01 61 00 – Product Requirements

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 This section describes requirements applicable to all Sections within Divisions 02 to 49.
- .2 Section 01 31 00 Project Managing and Coordination

1.2. TERMINOLOGY

- .1 New: Produced from new materials.
- .2 Renewed: Produced or rejuvenated from an existing material to like-new condition to serve a new or existing service.
- .3 Defective: A condition determined exclusively by the Consultant.

1.3. PRODUCT QUALITY

- .1 The term 'new' in the following paragraph does not exclude re-manufactured products that have some or all of the materials recycled from other sources. Preference in recycling is for post-consumer recycled materials.
- .2 Products, materials, equipment, parts or assemblies (referred to as Products) incorporated in Work:
- .3 New Product, not damaged or defective, of best quality (compatible with specification requirements) for purpose intended. If requested, provide evidence as to type, source and quality of Products provided.
- .4 Defective Products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective Products at own expense and be responsible for delays and expenses caused by rejection.
- .5 Should any dispute arise as to the quality or fitness of Products, decision rests strictly with Consultant.
- .6 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout the building.

1.4. AVAILABILITY

.1 Immediately upon receipt of the Board's Purchase Order, review Product delivery requirements and anticipate foreseeable supply delays for any items.

- .2 Immediately upon receipt of the Board's Purchase Order the Contractor shall issue Purchase Orders and or Contracts to all Sub-trades. Provide proof to the Consultant and the Board within 3 days. The Subcontractors shall identify in writing any delivery issues within 14 days of receiving the Contractor's purchase order or contract. The Schedule noted in 01-31 00 1.7.1 shall incorporate all deliveries and installation.
- .3 If delays in supply of Products are foreseeable, notify Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .4 In the event of failure to notify Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Consultant reserves the right to substitute more readily available Products of similar character, at no increase in Contract Price or Contract Time.

1.5. STORAGE AND PROTECTION

- .1 Store and protect Products in accordance with manufacturers' written instructions.
- .2 Store with seals and labels intact and legible.
- .3 Store sensitive Products in weather tight, climate controlled, enclosures in an environment favourable to Product.
- .4 For exterior storage of fabricated Products, place on sloped supports above ground.
- .5 Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of Products.
- .6 Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- .7 Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- .8 Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

1.6. TRANSPORTATION AND HANDLING

- .1 Transport and handle Products in accordance with manufacturer's written instructions.
- .2 Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.
- .3 Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.
- .4 Suitably pack, crate and protect products during transportation to site to preserve their quality and fitness for the purpose intended.

- .5 Store products in original, undamaged condition with manufacturer's labels and seals intact until they are being incorporated into completed work.
- .6 Protect materials from damage by extreme temperatures or exposure to the weather.

1.7. EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum disturbance to the owner.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in a manner approved by authority having jurisdiction. Stake and record location of capped service.

1.8. MANUFACTURER'S WRITTEN INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect Products to manufacturer's written instructions. Do not rely on labels or enclosures provided with Products. Obtain written instructions directly from manufacturers.
- .2 Notify Consultant in writing, of conflicts between specifications and manufacturer's instructions, so that Consultant may establish course of action.
- .3 Improper installation or erection of Products, due to failure in complying with these requirements, authorizes Consultant to require removal and reinstallation at no increase in Contract Price or Contract Time.

1.9. QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Consultant if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Consultant and or Board reserves right to require dismissal from site any workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Consultant, whose decision is final.
- .4 Products, materials, systems and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the applicable manufacturer's printed directions.

.5 Where specified requirements are in conflict with manufacturer's written directions, follow manufacturer's directions. Where specified requirements are more stringent than manufacturer's directions, comply with specified requirements.

1.10. COORDINATION

- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.
- .3 Contractor is responsible to ensure suppliers or distributors of materials specified or alternatives accepted, which he intends to use, have materials with original schedule, and similarly it shall be the responsibility of all subcontractors and suppliers to so inform the Contractor.
- .4 Contractor shall contact Consultant immediately upon receipt of information indicating materials or items, will not be available on time, in accordance with the latest approved schedule, and similarly it shall be the responsibility of all subcontractors and suppliers to so inform the Contractor.
- .5 The above, in no way releases the Contractor, or their subcontractors and suppliers of their responsibility for ensuring timely ordering of materials and items required, including the necessary expediting, to complete the Work as scheduled in accordance with the Contract Documents including temp accommodations and or materials to ensure occupancy date is achieved.

1.11. CONCEALMENT

- .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation, inform the Consultant if there is interference. Install as directed by the Consultant at no additional cost to the Board.

1.12. REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.13. LOCATION OF FIXTURES

.1 Inform Consultant of conflicting installation. Install as directed.

1.14. 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 Type 304 or 316 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.

1.15. PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of any part of the Project.
- .2 Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated, without written approval of the Consultant.

01 70 00 – Examination and Preparation

1.0 GENERAL

1.1. RELATED SECTIONS

.1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. REFERENCES

.1 Owner's identification of existing survey control points and property limits.

1.3. SUBMITTALS

- .1 Submit name and address of Surveyor to Consultant.
- .2 On request of Consultant, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying that elevations and locations of completed Work conforms with Contract Documents.

1.4. QUALIFICATIONS OF SURVEYOR

.1 Qualified registered land surveyor, licensed to practice in the Place of the Work.

1.5. SURVEY REFERENCE POINTS

- .1 Existing base horizontal and vertical control points are designated on Drawings.
- .2 Locate, confirm and protect control points prior to starting site Work. Preserve permanent reference points during construction.
- .3 Make no changes or relocations without prior written notice to the Consultant.
- .4 Report to Consultant when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- .5 Require the surveyor to replace control points in accordance with original survey control.

1.6. SURVEY REQUIREMENTS

- .1 Establish existing and new permanent bench marks on site, referenced to established benchmarks by survey control points.
- .2 Record locations, with horizontal and vertical data in Project Record Documents.
- .3 Establish lines and levels, locate and lay out, by instrumentation.
- .4 Establish pipe invert elevations.

- .5 Stake batter boards
- .6 Establish foundation and floor elevations.
- .7 Establish lines and levels for mechanical and electrical work.

1.7. SUBSURFACE CONDITIONS

- .1 Promptly notify Consultant in writing if discovered surface or subsurface conditions at Place of Work differ materially from those indicated in Contract Documents.
- .2 Advise the Consultant of a reasonable assumption of probable conditions when determined.
- .3 After prompt investigation, should Consultant determine that conditions do differ materially, instructions will be issued for changes in Work.

1.8. EXAMINATION

- .1 The Contractor is expected to be totally familiar with site conditions and shall assume full responsibility for the cost involved in repairing any damage to the building, site and services, city property, adjacent buildings, etc., during general construction, regardless of the extent of the damage.
- .2 Inspect existing conditions, including elements or adjacent Work subject to irregularities, damage, movement, including Work during cutting and patching.
- .3 The Contractor shall provide all equipment necessary to make a full and detailed site evaluation. This shall include but not be limited to ladders, flashlights and hand tools.
- .4 The Contractor expressly agrees that conditions above existing suspended acoustic ceilings, but below fixed structure, unless obscured by an additional ceiling above, shall be considered exposed conditions for the purposes of making findings under the provisions of the Contract. There shall be no claims for extra costs for extra Work in these areas.
- .5 After uncovering, inspect conditions affecting performance of the Work.
- .6 Beginning of cutting or patching means acceptance of existing conditions.

1.9. PREPARATION

- .1 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of the project from damage.
- .2 Provide protection from elements for areas which may be exposed by uncovering work; maintain excavations free of water.

1.10. EXISTING SERVICES

- .1 Before commencing work, establish location and extent of service lines in the area of Work and notify the Consultant of findings.
- .2 Remove abandoned service lines running through existing and new structures. Cap or seal lines at cut-off points as directed by the Consultant.

1.11. LOCATION OF EQUIPMENT AND FIXTURES

- .1 Inform Consultant of conflicting installations, install as directed.
- .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 approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Consultant.

1.12. SURVEY RECORD

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

SECTION 01 73 30 – EXECUTION AND CUTTING AND PATCHING

1.0 GENERAL

1.1. RELATED SECTIONS

- .4 Section 01 32 00 Construction Progress Documentation: Submittals and scheduling.
- .5 Section 01 61 00 Product Requirements.
- .6 Section 01 70 00 Examination and Preparation
- .7 Individual Product Specification Sections:
 - .1 Cutting and patching incidental to work of the section.
 - .2 Advance notification to other sections of openings required in Work of those sections.

1.2. SUBMITTALS

- .8 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of any element of Project.
 - .2 Integrity of weather exposed or moisture resistant element.
 - .3 Efficiency, maintenance, or safety of any operational element.
 - .4 Visual qualities of sight exposed elements.
 - .5 Work of Owner or separate contractor.
- .9 Include in request:
 - .1 Identification of Project.
 - .2 Location and description of affected Work.
 - .3 Necessity for cutting or alteration.
 - .4 Description of proposed Work and Products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on work of Owner or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

1.3. TOLERANCES

- .10 Monitor fabrication and installation tolerance control of Products to produce acceptable Work.
- .11 Do not permit tolerances to accumulate beyond effective or practical limits.
- .12 Comply with manufacturers' tolerances. In case of conflict between manufacturers' tolerances and Contract Documents, request clarification from the Consultant before proceeding.

.13 Adjust Products to appropriate dimensions; position and confirm tolerance acceptability, before permanently securing Products in place.

2.0 PRODUCTS

2.1. MATERIALS

- .1 Primary Products: Those required for original installation.
- .2 Product Substitution: For any proposed change in materials, submit a request for substitution described in Section 01 33 00.

3.0 EXECUTION

3.1. EXAMINATION

- .1 Examine existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering existing Work, assess conditions affecting performance of work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.

3.2. PREPARATION

- .1 Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of the Project from damage.
- .2 Provide protection from elements for areas which may be exposed by uncovering work.
- .3 Maintain excavations free of water.

3.3. CUTTING

- .1 Execute cutting and fitting as needed to complete the Work. Prior to any cutting and or coring of concrete floors the contractor shall confirm the area is free of services or rebar. Notify the Consultant of any interferences.
- .2 Uncover work to install improperly sequenced work.
- .3 Remove and replace defective or non-conforming work.
- .4 Remove samples of installed work for testing for Hazardous materials.
- .5 Provide openings in the Work for penetration of mechanical and electrical work.
- .6 Employ experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- .7 Cut rigid materials using a masonry saw or core drill. Pneumatic tools are not allowed without prior approval.

- .8 Do all cutting, patching, and making good, to leave a finished condition and to make the several parts of the work come together properly. Coordinate work to keep cutting and patching to a minimum.
- .9 Make cuts with clean, true, smooth edges. Fit unit to tolerance established by test standard practice for applicable work. Make patches invisible in the final assembly.
- .10 Cutting shall be done in a manner to keep patching to minimum. Obtain Consultant's approval of method to be used to conceal new mechanical and electrical services before beginning cutting. Chasing of concrete surfaces is not permitted.
- .11 Cutting or coring of any structural concrete is to be reviewed and approved by the Consultant.
- .12 Do not endanger any work by cutting, digging or otherwise altering, and do not cut nor alter any load bearing element without written authorization by Consultant. Provide bracing, shoring and temporary supports as required to keep construction safely supported at all times
- .13 Any cost caused by omission or ill-timed work shall be borne by the party responsible thereof.
- .14 Regardless of which Section of work is responsible for any portion of cutting and patching, in each case tradesmen qualified in work being cut and patched shall be employed to ensure it is correctly done.

3.4. PATCHING

- .1 Execute patching to complement adjacent Work.
- .2 Fit Products together to integrate with other Work.
- .3 Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- .4 Employ original installer to perform patching for weather exposed and moisture resistant elements, and sight-exposed surfaces.
- .5 Restore work with new Products in accordance with requirements of Contract Documents.
- .6 Fit work with adequate support to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .7 At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with firestop material.
- .8 Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to the nearest intersection or natural break. For an assembly, refinish the entire unit.
- .9 Complete and tightly fit all construction to pipes, ducts and conduits which pass through construction to completely prevent the passage of air.

.10 Patching and making good shall be done by trade specialists in material to be treated, and shall be made undetectable in finished work when viewed from a distance of 1.5m under normal lighting.

01 74 00 – Cleaning and Waste Management

1.0 GENERAL

1.1. RELATED SECTIONS

- .1 Common Work by All Trades
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.
- .3 Conduct cleaning and disposal operations to comply with local ordinances and environmental protection legislation.
- .4 Store volatile wastes in covered metal containers, and remove them from premises at the end of each working day.
- .5 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

2.0 PRODUCTS

2.1. CLEANING PRODUCTS

.1 Cleaning Agents and Materials: Low VOC content wherever possible. The Consultant and the Board shall be notified prior to use of any exception.

3.0 EXECUTION

3.1. CLEANING DURING CONSTRUCTION

- .1 Maintain the Work in tidy condition, free from accumulation of waste products and debris, other than that caused by the Owner or other Contractors.
- .2 Remove waste material and debris from the work areas and deposit in a waste container at the end of each working day.
- .3 Vacuum clean interior areas prior to the start of finishing work. Maintain areas free of dust and other contaminants during finishing operations.
- .4 Individual Subcontractors are responsible for the daily clean-up and removal of debris related to, or generated by, their own work. The overall responsibility for project cleanliness rests with the Contractor.
- .5 The Contractor shall be responsible for snow removal within the construction area.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Wherever possible recycle materials

- .8 Containers:
 - .1 Provide adequate number and sizes of on-site garbage and recycling containers within designated work site as required for collection of waste materials and debris on a daily basis.
 - .2 Provide additional waste containers when the extent of work warrants.
 - .3 Provide and use clearly marked, separate bins for recycling.
- .9 Dispose of waste materials and debris at registered waste disposal and recycling facility.
- .10 Remove oily rags, waste and other hazardous substances from premises at close of each day, or more often when required.
- .11 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

3.2. WASTE MANAGEMENT

- .1 Audit, separate and dispose of construction waste generated by new construction or by demolition of existing structures in whole or in part, in accordance with Ontario Regulations 102/94 and 103/94 made under the Environmental Protection Act.
- .2 Containers:
 - .1 Provide adequate number and sizes of on-site garbage and recycling containers within designated work site as required for collection of waste materials and debris on a daily basis.
 - .2 Provide additional waste containers when the extent of work warrants.
 - .3 Provide and use clearly marked, separate bins for recycling.
- .3 Fires, and burning of rubbish or waste on site is strictly prohibited.
- .4 Burying of rubbish or waste materials on site is strictly prohibited.
- .5 Disposal of waste or volatile materials such as mineral spirits, oil, gasoline or paint thinner into ground, waterways, or sewer systems is prohibited.
- .6 Empty waste containers on a regular basis to prevent contamination of site and adjacent properties by wind-blown dust or debris

3.3. PREPARATION FOR FINAL CLEANING

- .1 Prior to final cleaning the General Contractor shall:
 - .1 remove all surplus products, tools, construction machinery and equipment not required for the performance of remaining work, and thereafter remove any remaining materials, equipment, waste and debris,
 - .2 replace all filters installed on any equipment in operation in the area of work,

.3 remove all paint spots or overspray from all affected surfaces, and

3.4. FINAL CLEANING PRIOR TO ACCEPTANCE: INTERIOR

- .1 Prior to applying for Substantial Performance of the Work, or, prior to Owner occupancy of the building or portion of the building affected by the Work, whichever comes first, conduct full and complete final cleaning operations for the areas to be occupied.
- .2 Final cleaning operations shall be performed by an <u>experienced professional</u> <u>cleaning company</u>, possessing equipment and personnel sufficient to perform full building cleaning operations. Contractors "broom cleaning" is not acceptable as a "Final Clean". The cleaning contractor shall:
 - .1 clean interiors of all millwork and surfaces of any furniture and equipment present,
 - .2 use only cleaning materials recommended by the manufacturer of the surface to be cleaned,
 - .3 remove all stains, spots, scuff marks, dirt, dust, remaining labels, adhesives or other surface imperfections,
 - .4 clean and polish all glass and mirrors and remove remaining manufacturer's and safety "X" labels,
 - .5 clean and polish all finished metal surfaces such as enamelled or stainless steel, chrome, aluminum, brass, and bronze,
 - .6 clean and polish all vitreous surfaces such as plumbing fixtures, ceramic tile, porcelain enamel, or other such materials,
 - .7 clean all ceramic tile surfaces in accordance with the manufacturer's instructions,
 - .8 vacuum, clean and dust behind grilles, louvres and screens,
 - .9 steam clean all unprotected carpets immediately prior occupancy by Owner, and
 - .10 clean all equipment and fixtures to a sanitary condition.
- .3 For any areas to be occupied after the owner's initial occupancy, provide full cleaning operations as outlined above prior to turning over to owner,
- .4 The Board's supplies and equipment must not be used for any cleaning operations including, but not limited to: garbage cans, mops, brooms, rags, ladders, chemicals etc.

3.5. FINAL CLEANING PRIOR TO ACCEPTANCE: EXTERIOR

- .1 For areas affected by construction final exterior cleaning operations shall be performed by the General Contractor or competent Subontractor. Contractor's "broom cleaning" only is not acceptable.
- .2 Final exterior cleaning shall include:
 - .1 broom clean and wash exterior walkways, steps, and surfaces; rake clean other surfaces of grounds,
 - .2 remove dirt and other disfiguration from exterior surfaces,
 - .3 sweep and wash clean paved areas,
 - .4 replace filters of mechanical equipment for all equipment that was in use during construction,
 - .5 clean all roofs, gutters, downspouts, areaways, drywells, and drainage systems,
 - .6 remove debris and surplus materials from crawl areas and other accessible concealed spaces.
 - .7 remove overspray

01 78 10 – Closeout Submittals and Requirements

1.0 GENERAL

1.1. RELATED SECTIONS

.1 Section 01 78 10 – WRDSB Warranty Card, Appendix 00 41 13A

1.2. TAKE-OVER PROCEDURES

.1 Take over procedures will be in strict accordance with the requirements as set out in this Section.

1.3. SUBSTANTIAL PERFORMANCE

- .1 Prior to requesting a Substantial Performance deficiency inspection submit 2 hard copies, 1 digital copy of the Operating and Maintenance Manuals for Consultants approval.
- .2 Application for Substantial Performance must include.
 - .1 One (1) electronic copy of inspection and acceptance certificates required from regulatory agencies, including but not limited to.
 - .1 Certificates of Approval of the Work by the local Building Department.
 - .2 Electrical Inspection Certificate of Inspection.
 - .3 Fire Alarm Verification Certificate.
- .3 Advise Consultant in writing, when the project has been substantially completed. If Consultant agrees this stage has been reached, the Consultant shall prepare a complete list of deficiencies and submit copies of this list to Contractor and the Board.

1.4. COMMENCEMENT OF LIEN PERIODS

.1 The date of publication of the Certificate of Substantial Performance of the Work, provided to the contractor by the Consultant, shall be the date for commencement of the lien period.

1.5. TOTAL PERFORMANCE

- .1 Prior to requesting a final inspection submit written certificate that the following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents and is ready for final inspection
 - .2 Defects have been corrected and deficiencies have been completed.

- .3 Equipment and systems have been tested and are fully operational. Submit two copies of the balancing reports
- .4 Certificates required by the contractor have been submitted.
- .5 Operation of systems have been demonstrated to Owner's personnel.
- .6 Submit Record drawings.
- .7 Submit maintenance materials.
- .8 Provide certified site survey
- .2 When items noted above are completed, request final inspection of Work by consultant, and building inspector. If Work is deemed incomplete by Consultant, complete outstanding items and request re-inspection.

1.6. PAYMENT OF SUBSTANTIAL PERFORMANCE HOLDBACK

- .1 Prior to the release of lien holdback provide one copy of the following by the Contractor and each subcontractor:
 - .1 Statutory Declaration or Declaration of Last supply
 - .2 Workplace Safety and Insurance Board "Certificate of Clearance".
- .2 The Contractor shall submit an application for payment of the holdback amount.
- .3 After the receipt of an application for payment which will include a Statutory Declaration and WSIB Clearance from the, the Consultant will issue a certificate for payment of the holdback amount.

1.7. FINAL PAYMENT

- .1 When the Contractor considers final deficiencies and defects have been corrected and it appears requirements of Contract have been completed, make application for final payment.
- .2 When the Consultant finds the Contractor's application for final payment valid, the Consultant will issue a final certificate of payment
- .3 The Board reserves the right to charge the Contractor for school access card(s) that have not been returned.
- .4 The cost to reprogram or replace the card(s) access system is estimated at \$50.00 (fifty dollars) for each card issued, \$30.00 (thirty dollars) for each keybox key, plus \$35.00 (thirty five dollars) administration fee.

1.8. CLOSEOUT SUBMITTALS

- .1 Prepare instructions and data using personnel experienced in maintenance and operation of described products and submit them to the Consultant for review.
- .2 Copy will be returned to the contractor with the Consultant's comments.

- .3 Revise content of documents as required prior to final submission.
- .4 Two (2) weeks prior to Substantial Performance of the Work, submit to the Consultant, the final copies of operating and maintenance manuals.
- .5 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
- .6 If requested, furnish evidence as to type, source and quality of products provided.
- .7 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- .8 Pay costs of transportation.

1.9. OPERATION AND MAINTENANCE MANUAL FORMAT

- .1 Provide two copies of operating and maintenance data, prepared on 215 X 280mm sheets in printed or typewritten form, contained in 3-ring binders with soft vinyl covers for materials and equipment which require special maintenance or operating procedures.
- .2 When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder at the front of each volume.
- .3 Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .4 Arrange content by the divisions of the specifications under Section numbers and sequence of Table of Contents.
- .5 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .6 Include the following in each manual:
 - .1 Complete list of subcontractors and suppliers, their addresses and telephone numbers. Provide 24 hour emergency telephone numbers for such subcontractors as Plumbing, Electrical, Sprinklers, Fire System, Heating, etc.
 - .2 Specified warranties for contractor, each subcontractor and supplier.
 - .3 WRDSB Project Asset and Warranty Card, Appendix 00 41 13A
 - .4 Copy of finish hardware list, complete with all amendments and revisions and lock manufacturer's descriptive and service literature.
 - .5 Schedule of paints and coatings. Include sufficient explanation to fully identify each surface with the applicable paint or coating used. Enclose a copy of the colour schedule.
 - .6 Maintenance instructions for finished surfaces.
 - .7 Brochures, cuts of equipment and fixtures.

- .8 Operating and maintenance instructions for equipment.
- .9 Submit copies of letters from manufacturers of equipment and systems indicating their technical representatives have inspected and tested systems and are satisfied with methods of installation, connection and operations. These letters shall state names of persons present at testing, methods used and list of functions performed.
- .10 Submit one complete set of reviewed shop drawings of architectural, structural, mechanical and electrical items, folded to 215 x 280mm size, contained in heavy duty manila envelopes, numbered and labelled. Follow specification format with no more than one Section per envelope, hard copy and PDF.
- .11 Relevant certificates issued by authorities having jurisdiction
- .12 Computer disc or flash drive with all the above documentation in PDF format

1.10. RECORDING ACTUAL SITE CONDITIONS

- .1 Record information on a set of black line opaque drawings, and within the Project Manual.
- .2 Annotate with coloured felt tip marking pens, maintaining separate colours for each major system, for recording changed information.
- .3 Record information concurrently with construction progress. Do not conceal Work of the Project until required information is accurately recorded.
- .4 Contract drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
- .5 Specifications: legibly mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.

.6 Other Documents: Maintain warranties, test reports and samples required by individual specifications sections.

1.11. RECORD (AS-BUILT) DOCUMENTS AND SAMPLES

- .1 Store AS-BUILT documents and samples in the field office apart from documents used for construction. Provide files, racks, and secure storage.
- .2 Label AS-BUILT documents and file in accordance with section number listings in List of Contents of the Project Manual. Label each document AS-BUILT DOCUMENTS in neat, large, printed letters.
- .3 Maintain AS-BUILT documents in clean, dry and legible condition. Do not use as-built documents for construction purposes.
- .4 Keep as-built documents and samples available for inspection by the Consultant.

1.12. RECORD DRAWINGS

- .1 Prior to Substantial Performance of the Work, update the marked up information from the AS-BUILT documents to a master set of drawing.
- .2 Submit one set of completed AS-BUILT documents to the Consultant for review.
- .3 Documents will be returned to the contractor with the Consultant's comments.
- .4 Revise content of documents as required prior to final submission.
- .5 After the review is completed resubmit to the Consultant for Consultant to produce electronic record drawings for the owner to use.

1.13. SPARE PARTS

- .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in the Maintenance Manual.
- .4 Obtain receipt for delivered products and submit prior to final payment.

1.14. REPLACEMENT (MAINTENANCE) MATERIALS

- .1 Deliver to site, unload and store where directed, replacement (maintenance) materials as required elsewhere in these Specifications. Obtain a signed receipt from the Owner's Representative for delivered materials and include a copy of receipt in Operation and Maintenance manuals.
- .2 Package materials so they are protected from damage and loss of essential properties.
- .3 Label packaged materials for proper identification of contents.

1.15. SPECIAL TOOLS

- .1 Provide special tools, in quantities specified in the individual specification section.
- .2 Provide items with tags identifying their associated function and equipment.
- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual

1.16. FINAL SITE SURVEY

.1 Submit final site survey certificate in accordance with Section 01 70 00, certifying that elevations and locations of completed Work are in conformance Contract Documents.

1.17. WARRANTIES AND BONDS

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Except for items put into use with Owner's permission, leave the date of beginning of time of warranty until the Date of Substantial Performance is determined. The date of Substantial Performance of the Work shall be the date for commencement of the warranty period.
- .4 Verify that documents are in proper form, contain full information, and are notarized.
- .5 Co-execute submittals when required.
- .6 Retain warranties and bonds until time specified for submittals.

01 78 40 – Maintenance Requirements

1.0 GENERAL

1.1. SECTION INCLUDES

- .1 Equipment and systems.
- .2 Materials and finishes.
- .3 Spare parts
- .4 Maintenance manuals.
- .5 Special tools.
- .6 Storage, handling and protection.
- .7 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.2. RELATED SECTIONS

- .1 Section 01 45 00 Quality Control.
- .2 Section 01 78 40 Maintenance Requirements.
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3. EQUIPMENT AND SYSTEMS

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.

- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide coordination Drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide a list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .14 Include test and balancing reports as specified in Section 01 45 00.
- .15 Additional requirements: As specified in individual specification sections.

2.0 PRODUCTS

2.1. MATERIALS AND FINISH

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Building Envelope: include copies of drawings of building envelope components, illustrating the interface with similar or dissimilar items to provide an effective air, vapour and thermal barrier between indoor and outdoor environments. Include an outline of requirements for regular inspections and for regular maintenance to ensure that on-going performance of the building envelope will meet the initial building envelope criteria.
- .5 Additional Requirements: as specified in individual specifications sections.

2.2. SPARE PARTS

- .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in the Maintenance Manual.
- .4 Obtain receipt for delivered products and submit prior to final payment.

2.3. MAINTENANCE MATERIALS

- .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in the Maintenance Manual.
- .4 Obtain receipt for delivered products and submit prior to final payment.

2.4. SPECIAL TOOLS

- .1 Provide special tools, in quantities specified in the individual specification section.
- .2 Provide items with tags identifying their associated function and equipment.
- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in the Maintenance Manual.

3.0 EXECUTION

3.1. DELIVERY TO SITE

- .1 Deliver to place of work and store.
- .2 General Contractor to receive and acknowledge delivery from contractors and subcontractors of all parts and materials assembled for maintenance requirements. Provide a summary inventory list to the Consultant and/or the Board after all materials are gathered and verification of location. Signatures of receipt will not be accepted from anyone except the General Contractor's representative.

3.2. STORAGE, HANDLING AND PROTECTION

- .1 Consult with the Board to determine location for storage.
- .2 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .3 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .4 Store components subject to damage from weather in weatherproof enclosures.
- .5 Store paints and freezable materials in a heated and ventilated room.
- .6 Remove and replace damaged products at own expense and to the satisfaction of the Consultant.

01 79 00 – Demonstration and Training

1.0 GENERAL

1.1. SECTION INCLUDES

- .1 Procedures for demonstration and instruction of Products, equipment and systems to Owner's personnel.
- .2 Seminars and demonstrations.

1.2. RELATED SECTIONS

.1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3. DESCRIPTION

- .1 At Substantial Performance, at a time acceptable to Owner and Consultant, but not before operations and maintenance manual have been reviewed and accepted by the consultant; contractor shall give a complete demonstration in the presence of consultant; Sub-consultants, Owner and Owner's personnel of operation and maintenance of systems and equipment once they are 100% complete.
- .2 Owner will provide a list of personnel to receive instructions and will coordinate their attendance at agreed-upon times.

1.4. COMPONENT DEMONSTRATION

- .1 Manufacturer to provide authorized representative to demonstrate operation of equipment and systems.
- .2 Instruct Owner's personnel, and provide written report that demonstration and instructions have been completed.

1.5. SUBMITTALS

- .1 Submit schedule of time and date for demonstration of each item of equipment and each system one (1) week prior to designated dates, for Consultant's approval.
- .2 Submit reports within forty eight (48) after completion of demonstration, that demonstration and instructions have been satisfactorily completed.
- .3 Give time and date of each demonstration, with a list of persons present.

1.6. CONDITIONS FOR DEMONSTRATIONS

- .1 Equipment has been inspected and put into operation in accordance with manufacturer's instructions and contract requirements.
- .2 Testing, adjusting, and balancing have been performed in accordance with manufacturer's instructions and contract requirements, and equipment and systems are fully operational.
- .3 Provide information packages as required for use in demonstrations and instructions.

2.0 PRODUCTS

2.1. NOT USED

.1 Not used.

3.0 EXECUTION

3.1. PREPARATION

- .1 Verify that suitable conditions for demonstration and instructions are available.
- .2 Verify that designated personnel are present.
- .3 Prepare agendas and outlines.
- .4 Establish seminar organization.
- .5 Explain component design and operational philosophy and strategy.
- .6 Develop equipment presentations.
- .7 Present system demonstrations.
- .8 Accept and respond to seminar and demonstration questions with appropriate answers.

3.2. PREPARATION OF AGENDAS AND OUTLINES

- .1 Prepare agendas and outlines including the following:
 - .1 Equipment and systems to be included in seminar presentations.
 - .2 Name of companies and representatives presenting at seminars.
 - .3 Outline of each seminar's content.
 - .4 Time and date allocated to each system and item of equipment.
 - .5 Provide a separate agenda for each system.

3.3. SEMINAR ORGANIZATION

.1 Coordinate content and presentations for seminars.

- .2 Coordinate individual presentations and ensure representatives scheduled to present at seminars are in attendance.
- .3 Arrange for presentation leaders familiar with the design, operation, maintenance and troubleshooting of the equipment and systems. Where a single person is not familiar with all aspects of the equipment or system, arrange for specialists familiar with each aspect.
- .4 Coordinate proposed dates for seminars with Owner and select mutually agreeable dates.

3.4. EXPLANATION OF DESIGN STRATEGY

- .1 Explain design philosophy of each system. Include following information:
 - .1 An overview of how the system is intended to operate.
 - .2 Description of design parameters, constraints and operational requirements.
 - .3 Description of system operation strategies.
 - .4 Information to help in identifying and troubleshooting system problems.

3.5. DEMONSTRATION AND INSTRUCTIONS

- .1 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, and maintenance of each item of equipment.
- .2 Instruct personnel in all phases of operation and maintenance using operation and maintenance manuals as the basis of instruction.
- .3 Instruct personnel on control and maintenance of sensory equipment and operational equipment associated with maintaining energy efficiency and longevity of service.
- .4 Review contents of manual in detail to explain all aspects of operation and maintenance.
- .5 Prepare and insert additional data in operations and maintenance manuals when the need for additional data becomes apparent during instructions.

END OF SECTION

01 82 19 – FIRE RATING AND ASSEMBLIES

PART 1 – GENERAL

1.1 GENERAL

- .1 Test methods used to determine fire hazard classification and fire endurance rating shall be as required by Ontario Building Code.
- .2 Upon request, furnish the Consultant with evidence of compliance to fire protection requirements as noted in documents or specified codes, etc.
- .3 Materials and components used to construct fire rated assemblies and materials requiring fire hazard classification shall be listed and labelled, or otherwise approved, by fire rating authority. Labelled materials and their packaging shall bear fire rating authorities label showing product classification.
- .4 Construct fire rated assemblies in accordance with applicable fire test report information issued by fire rating authority. Deviation from fire test report will not be allowed.
- .5 Construct fire rated assemblies as continuous, uninterrupted elements except for permitted openings.
- .6 Materials which have a fire hazard classification shall be applied or installed in accordance with fire rating authority's printed instructions.
- .7 Provide firestopping as specified in Section 07 84 00.
 - .1 Firestopping shall be a tested system consisting of non-combustible materials, smoke sealant, and means of support, used to fill gaps between fire-rated separations or between fire separations and other assemblies, and used around items that penetrate a fire separation.
 - .2 Fill and patch voids and gaps around openings and penetrations in and at perimeter of assemblies so as to maintain continuity and to produce a fire resistant, smoke tight seal, acceptable to jurisdictional authorities.
- .8 Provide fire blocks to compartmentalize concealed spaces as required by the OBC.
 - .1 Fire block means a material, component or system that restricts the spread of fire within a concealed space or from a concealed space to an adjacent space.
 - .2 Fire blocks are also referred to as fire stops in the OBC.
- .9 The Contractor shall ensure that all fire safety features called for in the Contract Documents are supplied and installed to meet fire safety standards established by those authorities having jurisdiction. The Contractor shall ensure that the work of Subcontractors is properly coordinated to achieve the intent of this Specification.
- .10 Nothing contained in the Drawings or Specifications shall be construed as to be in conflict with any law, by-law, or regulations of municipal, provincial, or other authorities having jurisdiction. Work shall be performed in conformity with all such laws, by-laws, and regulations.

END OF SECTION

PART 1 – GENERAL

1.1 RELATED WORK

.1	Temporary Utilities	Section 01 51 00
.2	Execution	Section 01 73 30

1.2 **REFERENCES**

- .1 Conform to all laws, By-Laws and regulations of the authorities having jurisdiction and, in particular, the Ontario Occupational Health and Safety Act; The Environmental Protection Act; The Ontario Building Code, The Ontario Fire Code; The National Building Code; and the National Fire Code.
- .2 CSA S350-M or most current, code of practice for safety in demolition of structures.
- .3 Ontario regulations under the Environmental Protection Act:
 - .1 O.Reg. 102/94 Waste Audits and Waste Reduction Work Plans
 - .2 O.Reg. 103/94 Industrial, Commercial and Institutional Source Separation Programs
 - .3 O.Reg. 347/90 General Waste Management; refer to "Definitions"
- .4 Ontario regulations under the Occupational Health and Safety Act:
 - .1 O.Reg. 213/91 Construction Projects
 - .2 All regulations regarding "Designated Substances"
 - .3 O.Reg. 860/90 Workplace Hazardous Materials Information System (WHMIS)
- .5 Conform to "Guidelines for Maintaining Fire Safety During Construction in Existing Buildings", provided by the Office of the Ontario Fire Marshal.

1.3 EXAMINATION OF EXISTING SITE AND STRUCTURE

- .1 Examine the existing site and building before tendering to be familiar with the detailed extent of demolition, dismantling, relocation and reassembly required.
- .2 An inventory of hazardous asbestos materials has been conducted for the existing building; copies of which are included in Project Manual Section 01 35 43A, which contains the supplementary information. Contractor to coordinate removal of asbestos and other hazardous materials, as part of the Contract. All abatement identified on the drawings and in the specifications and specifically in the Asbestos Audit Specification Section 01 35 43A and in Specification Section 01 35 43 are to be carried in the Contractor's base bid price. If unknown hazardous materials, which are not described in the Contract documents, are discovered in the building, this additional abatement is carried in the project cash allowance.

DIVISION 02 – EXISTING CONDITIONS

02 40 00 - DEMOLITION

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

- .3 Examine the drawings and include all costs associated with phasing of the work, including after-hours work and remobilization costs.
- .4 No allowance will be made for failure to obtain complete information prior to close of tenders.

1.4 SUMMARY OF WORK

- .1 Carry out all alteration and demolition work required to accommodate new work indicated on drawings. Make good any damage caused by alterations required.
- .2 Remove HVAC equipment, electrical fixtures and all other items so noted on drawings as required for the renovation, unless otherwise noted.
- .3 Unless noted otherwise, building materials resulting from demolition under this contract shall become the property of the Contractor, and shall be removed by the Contractor.
- .4 Supply and install temporary dust proof partitions at junctions with work area, as required to separate the work from the remainder of the building. Dust proof partitions shall be erected outside of building operating hours and shall remain in place until the work is fully commissioned and accepted by the Owner.

1.5 SCHEDULE OF WORK

- .1 Safety and required exiting from the existing building must be maintained at all times, particularly during operating hours and scheduled events. Work must be suspended if the Owner advises that noise and/or dust is interfering with the building operation.
- .2 Work which will generate excessive noise, vibration or dust must be undertaken outside of the school's hours of operation. The Contractor is to become familiar with school hours as posted on the school website.
- .3 Dust proof partitions must be installed prior to any work being undertaken.

1.6 **PROTECTION**

- .1 Protect adjacent properties against damage which might occur from falling debris or other cause. Make good damage to adjacent public or private properties resulting from Work of this Contract.
- .2 Protect existing building from damage and contamination during demolition activities. All openings must be made weatherproof. Provide temporary barriers, dust control measures, security controls, supports, and such additional protection as may be required by specific demolition work.
- .3 Dust proof partitions: Supply and install temporary dust proof membranes at junctions with work area, at all adjoining doorways and corridor walls between the existing building spaces and the construction areas. Dust proof membranes shall be minimum thickness of 10 MIL polyethene sheet. Sheets are to be overlapped a minimum of 300mm and taped at

02 40 00 - DEMOLITION

complete perimeter of openings and provided at a height from top of finished floor to underside of ceiling and or exposed roof deck. At doorways and pathways through corridors, where access is required, provide double layer of membranes with zippers to accommodate access.

- .4 Prevent movement, settlement, and damage to existing building to remain, including services, paving, landscaped areas to remain, and adjacent structures. Provide temporary supports, including shoring and bracing, as required. All shoring must be designed by a professional engineer licensed in the Province of Ontario.
- .5 Employ licensed rodent and vermin exterminators to destroy all discovered vermin and rodents.
- .6 Remove contaminated and dangerous material from the site and dispose of safely and legally. Meet all M.O.E. requirements.
- .7 Take precautions to guard against movement or settlement of adjacent land, existing building, and remaining services and utilities. Provide and place bracing or other means of support.
- .8 Take precaution against contamination of air and adjacent properties.

1.7 MAINTAINING FIRE SAFETY IN EXISTING BUILDING

- .1 Maintain all required exiting for safe operations within the existing building. Where an exit is closed off due to construction activities, provide alternate exit acceptable to both the Consultant and to Authorities Having Jurisdiction. Any temporary exits must be clearly identified with appropriate signage.
- .2 Maintain access roadways for fire department vehicles, acceptable to the fire department. Access must be approved prior to commencement of construction activities.
- .3 Store all combustible materials in accordance with the Fire Code and the Occupational Health and Safety Act. Do not store combustible materials within the existing building or against the building. All combustibles shall be stored in a manner which minimizes risks to building and occupants.
- .4 Maintain dust proof partitions and protection at openings, as specified above, with fire separation ratings as required by Authorities Having Jurisdiction.
- .5 Maintain fire alarm system in operating condition in existing building. Notify the fire department and Owner of any temporary shutdowns of service and provide alternative measures during such periods of time.
- .6 Coordinate with Owner and Authorities Having Jurisdiction for all changes to fire emergency procedures as may be required during construction.

DIVISION 02 – EXISTING CONDITIONS

02 40 00 - DEMOLITION

1.8 SERVICES

.1 Seal and cap mechanical and electrical services in order to facilitate removals indicated on drawings. Mark location and type of service of all capped services at the site. Submit record drawing showing locations and dimensions of all capped services.

PART 2 – PRODUCTS

2.1 Not Used

PART 3 – EXECUTION

3.1 GENERAL

- .1 Relocated loose furniture, fixtures, fittings and equipment remaining in the work area, as directed by the Owner and in order to complete the work.
- .2 Protect all items indicated to be removed and later reinstalled. These items shall be removed prior to demolition work wherever possible. It will be the responsibility of the Contractor to repair or replace any such items damaged by careless handling.
- .3 Refer also to demolition and alteration notes on drawings.

3.2 DEMOLITION

- .1 Remove and carefully lower wood or steel framing as applicable.
- .2 Remove interior acoustic and gypsum board finished ceilings and bulkheads, as indicated on drawings, and as required to accommodate new construction.
- .3 Provide continuous fire batt and fire sealant at all discovered floor, wall and partition penetrations.
- .4 Remove glass, metals and combustible materials from walls being demolished.
- .5 Remove all items not indicated or noted to remain or be re-used.
- .6 Remove mechanical and electrical equipment and piping indicated to abandoned. Refer to mechanical and electrical demolition drawings.
- .7 Any items noted to be re-used or re-located are to be removed carefully, cleaned, packaged appropriately, and handed over to Contractor.
- .8 Upon discovery of mold or moldy materials remove and dispose of these separately.
- .9 If any additional materials suspected to contain asbestos and other designated substances are encountered (and that are not described in the Asbestos Audit Reports) do not disturb these materials. Inform the Consultant of the location and extent of

suspect material. Do not resume work in this area until it has been cleared by an Abatement Consultant.

- .10 At the end of each day's work, leave work in a safe condition so that no part of the remaining structure is in danger of collapse.
- .11 Do not burn any refuse or debris at the site.
- .12 Complete scanning and x-rays of any and all walls, partitions and floors, as required to complete the work and carry all required procedures as part of the base bid price.

3.3 REMOVAL OF CEILINGS

- .1 Remove existing ceilings and bulkheads in areas where new ceilings and bulkheads are indicated, and as shown on drawings.
- .2 Ceilings to be demolished shall be removed complete with all finishes, framing, suspension system, trim, fasteners, and accessories.
- .3 Where ceilings are to be removed to accommodate work, and later reinstalled, carefully disassemble ceilings to the extent required. Clean all components, wrap for protection, clearly label package contents, and store in a safe location until they are to be reinstalled.
- .4 Where ceilings are to remain after adjacent walls or bulkheads are demolished, remove ceiling components as required to complete demolition work. Coordinate with forces doing new ceiling work, to confirm what components are to be retained for reuse. Cut ceiling tiles may not be used; new full or appropriately cut tiles will be required.
- .5 Where ceiling mounted equipment is indicated to be removed and reused, or where it must be temporarily removed to accommodate the Work, it is to be carefully removed, cleaned, wrapped, labelled as to contents, and stored in a safe location, ready for reinstallation.

3.4 MECHANICAL AND ELECTRICAL WORK

- .1 Mechanical and Electrical services must be temporarily capped or terminated to permit renovation in existing areas to proceed.
- .2 Refer to mechanical and electrical drawings for the extent of removals, relocations, and alterations required.
- .3 Ceiling mounted mechanical and electrical equipment which is to be removed and reused is to be carefully removed and stored as specified above.
- .4 Cutting of holes up to 100mm in size in the existing structure and surfaces required by the mechanical and electrical trades shall be by those Subcontractors. Cutting and patching of openings greater than 100mm in size shall be by the Contractor in coordination with those trades. PATCHING OF ALL HOLES IN EXPOSED FINISHED SURFACES SHALL BE BY THE CONTRACTOR. Mechanical and Electrical trades shall do their own coring of existing slabs as required.

02 40 00 - DEMOLITION

3.5 COMPLETION OF WORK

- .1 Remove all surplus materials, equipment and rubbish from the site.
- .2 Leave site in condition to meet approval of the Consultant.
- .3 On completion of Demolition work, thoroughly clean all existing surfaces to remain, including ceiling space. No debris or dirt shall remain to be enclosed by new construction.

END OF SECTION

07 81 00 – CEMENTITIOUS FIREPROOFING

PART 1 - GENERAL

1.1 SECTION INCLUDED

.1 Spray applied cementitious fireproofing at structural steel beams.

1.2 RELATED SECTIONS

- .1 Division 01- General Requirements.
- .2 Fire Stopping and Smoke Seals Section 07 84 00
- .3 Gypsum Board

Section 09 29 00

1.3 REFERENCES

- .1 ASTM-EI19-98, Standard Test Methods for Fire Tests of Building Construction and Materials.
- .2 ASTM-E605-93, Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Materials (SFRM) Applied to Structural Members.
- .3 ASTM-E736-92, Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members.
- .4 ASTM-E759-92, Standard Test Method for Effect of Deflection on Sprayed Fire Resistive Material Applied to Structural Members.
- .5 ASTM-E760-92 (1996) el, Standard Test Method for Effect of Impact on Bonding of Sprayed Fire Resistive Material Applied to Structural Members.
- .6 ASTM-E761-92, Standard Test Method for Compressive Strength of Sprayed Fire Resistive Material Applied to Structural Members.
- .7 ASTM-E859-93, Standard Test Method for Air Erosion of Sprayed Fire Resistive Materials (SFRMs) Applied to Structural Members.
- .8 ASTM-E937-93, Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members.
- .9 CAN/ULC-S101-M89, Standard Methods of Fire Endurance Tests of Building Construction and Materials.
- .10 CAN/ULC-S102-M88, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
- .11 CAN4-SI14-M80 (1985), Standard Method of Test for Determination of Non-Combustibility in Building Materials.
- .12 ULC, List of Equipment and Materials, Fire Resistance, latest on-line edition.
- .13 WH, Intertek ETL Semke, Directory of Listed Building Products, latest on-line edition.

1.4 SUBMITTALS

- .1 Submit under provisions of Section 01 33 00 Submittals.
- .2 Product Data: Provide data on Product characteristics and their use.
- .3 Samples: Submit two 150mm by 150mm samples of each type of spray applied cementitious fireproofing.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION GRAND RIVER COLLEGIATE INSTITUTE 07 81 50 - CEMENTITIOUS FIREPROOFING

ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

- Adhere spray applied cementitious fireproofing sample to 12mm thick plywood. .1
- Label samples and show finish. .2
- .3 Samples to show colour and texture. Note: colour is to be blue to identify newly applied cementitious fireproofing.

1.5 **TEST REPORTS AND CERTIFICATES**

- .1 Manufacturer's Test Reports: Submit copies of fire test reports of spray applied cementitious fireproofing application to substrate materials similar to those for this Project. Include reports from ULC, or Warnock Hersey independent testing agencies substantiating conformance of each Product to CAN/ULC-SIOI and CAN/ULC-S102 and performance requirements specified in the Materials article below.
- .2 Quality Control Certificates: Submit certificate documenting experience of applicator.
- .3 Contract Closeout Certificates: Submit under provisions of Section 01780 - Closeout Submittals.
 - Submit Applicator's certificate certifying that material application has been .1 completed and meets the specified fire resistance ratings, thickness and application requirements.
 - .2 Submit Manufacturer's certification certifying that materials meet or exceed the specified requirements.

1.6 MANUFACTURER'S INSTRUCTIONS

- .1 Follow the manufacturer's installation instructions under provisions of Section 01600 -Product Requirements.
- .2 Indicate special procedures requiring additional Instruction.
- .3 Indicate environmental conditions required for installation of fireproofing materials.

1.7 MAINTENANCE DATA

- .1 Submit maintenance data under provisions of Section 01 78 00 - Closeout Submittals.
- .2 Provide maintenance data for spray applied cementitious fireproofing.
- .3 Include instructions for patching and repair of material, recommended cleaning methods and cleaning materials, and instructions for power washing the spray applied cementitious fireproofing.

QUALITY ASSURANCE 1.8

.1 Perform work to conform with the certification laboratory Design numbers and fire resistance ratings specified on the Drawings and as required to provide indicated fire resistance.

1.9 QUALIFICATIONS

.1 Applicator: Company specializing in performing the work of this section with a minimum of five years documented experience and approved by the manufacturer.

1.10 PRE-INSTALLATION CONFERENCE

- .1 Convene one week prior to the commencement of the work of this section under provisions of Division 01 General Requirements.
- .2 Request attendance of Contractor, the Consultant, the fireproofing Subcontractor, the inspection and testing company and other parties directly affecting work of this section.
- .3 Review substrates for acceptability, conditions of installation, installation procedures thicknesses, inspection procedures and coordination with related work.

1.11 ENVIRONMENTAL REQUIREMENTS

- .1 Install fireproofing materials only in a ventilated environment. Maintain ventilated environment for 24 hours after application.
- .2 Maintain air temperature and structural base temperature at insulation area at not less than 5 C for 24 hours before, during and after installation.

1.12 SEQUENCING AND SCHEDULING

.1 Coordinate with the work of other sections to permit installation of ceiling hanger tabs, mechanical component hangers, electrical components and metal furring prior to fireproofing application operations in each area of the building.

1.13 WARRANTY

- .1 Provide a warranty in accordance with the General Conditions, but for a period of three years.
- .2 Warranty: Include coverage of repair or replacement of installed fireproofing which fails to remain free from cracking, dusting, flaking, spalling or exhibits loss of adhesions or cohesion.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS AND PRODUCTS

- .1 A/D Fire Protection Systems Inc. Southwest Fireproofing Type 5GP.
- .2 Grace Construction Products, W.R. Grace & Co. of Canada: Type MK-6.

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

07 81 50 - CEMENTITIOUS FIREPROOFING

2.2 MATERIALS

- .1 Cementitious Spray Applied Fireproofing: Factory blend of gypsum, light weight aggregate and other proprietary ingredients, blended for uniform texture, tested under provisions of ASTM-E 119, CAN4-S114, CAN/ULC-S101 and meeting the following performance characteristics:
 - .1 Fire hazard Classification for flame/smoke: To CAN/ULC-S102, Flame spread rating: 5, Smoke Development Classification: 0.
 - .2 Density: to ASTM-E605, 240 kg/m3
 - .3 Compressive Strength: To ASTM-E761, 10% maximum deformation when subjected to compressive force of 57.5 kPa.
 - .4 Bond Strength: To ASTM-E736, minimum bond strength: To resist 9.6 kPa.
 - .5 Corrosion Resistance: To ASTM-E937, shall not promote corrosion of steel.
 - .6 Finish: To match approved sample.
 - .7 Resistance to Mould: Material formulated at time of manufacturing with mould inhibitor.
- .2 Primer/Adhesive: Type recommended by fireproofing manufacturer as required for application to specific substrates.
- .3 Sealer: Recommended by spray applied cementitious fireproofing manufacturer, as required for specific conditions.
- .4 Water: Potable and free of minerals which are detrimental to fireproofing mixes.

PART 3 – EXECUTION

3.1 EXAMINATION

- .1 Verify that surfaces and conditions are ready to accept the work of this section.
- .2 Verify that all surfaces to receive spray applied fireproofing are unpainted and are free of oil, loose mill scale, dirt, loose rust, and other foreign substances which may impair proper adhesion of the fireproofing to the substrate.
- .3 Ensure that Items required to penetrate fireproofing are placed before application of fireproofing commences.
- .4 Ensure that ducts, piping, equipment or other items which would interfere with application of fireproofing are not positioned until fireproofing work is completed.
- .5 Ensure concrete is placed on floor decking and that roofing and roof mounted equipment is installed on roof decking prior to fireproofing application.
- .6 Beginning of application shall mean acceptance of existing surfaces.

3.2 **PREPARATION**

.1 Prepare work area to receive application of fireproofing; close off and seal ductwork.

GRAND RIVER COLLEGIATE INSTITUTEDIVISION 07 - THERMAL AND MOISTURE PROTECTIONASBESTOS REMOVAL FOR FAMILY07 81 00 - CEMENTITIOUS FIREPROOFINGSTUDIES RENOVATION 24-7692-RFT07 81 00 - CEMENTITIOUS FIREPROOFING

- .2 Protect adjacent surfaces and equipment from overspray, fall-out and dusting. Provide masking, drop cloths, or other satisfactory coverings.
- .3 Prepare and clean substrate surface to receive fireproofing in accordance with manufacturer's written instructions.
- .4 Fill voids and cracks in substrate and remove projections.
- .5 Provide level and smooth surface where fireproofing is exposed to view as finish material.
- .6 Post cautionary "Slippery When Wet" signs in areas in contact with wet fireproofing. Erect barriers to prevent entry by non-fireproofing workers into areas exposed to wet fireproofing.

3.3 APPLICATION

- .1 Prior to application of the spray-applied fireproofing, apply a bonding agent, approved by the fireproofing manufacturer, to all concrete substrates to receive fireproofing.
- .2 Apply primer or binder coating where required on other surfaces in accordance with manufacturer's instructions.
- .3 Mix and apply fireproofing in accordance with manufacturer's instructions.
- .4 Apply fireproofing in sufficient thickness to achieve rating and to provide a monolithic blanket of uniform density and texture, as specified in certification laboratory design number indicated on the Drawings and the details.
- .5 Apply fireproofing directly to open web steel joists and structural steel without use of expanded lath.
- .6 Trowel smooth surfaces visible in finished work.
- .7 Apply sealer or curing compound to surface of spray applied cementitious fireproofing in accordance with manufacturer's instructions and where recommended by manufacturer.
- .8 Cut, patch and repair damaged material. Repair areas cut out as the result of testing.
- .9 Coordinate the interface of fireproofing with fire protection systems and fireproofing provided by other sections. Coordinate the order of work to ensure that the complete system provides the required fire rating.

3.4 FIELD QUALITY CONTROL

- .1 Field inspection and testing will be performed by an independent inspection agency selected by the Consultant under provisions of Section 01450 Quality Control.
- .2 Cost of testing will be paid from the cash allowance specified in Section 01 10 00 General Instructions.

DIVISION 07 – THERMAL AND MOISTURE PROTECTION 07 81 50 – CEMENTITIOUS FIREPROOFING GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

- .3 Inspections and tests will be made on the installed fireproofing after application and curing for integrity of fire protection and prior to concealment of the work of this section.
- .4 Reinspection of the installed fireproofing for integrity of fire protection will be performed after installation of subsequent work of other sections, and prior to concealment.
- .5 Correct unacceptable work and provide further inspection to verify compliance with requirements.
- .6 Patch damage to fireproofing caused by testing or by other trades before fireproofing is concealed, or if exposed, before final inspection.

3.5 CLEANING

- .1 Clean work under provisions of Section 01 74 00 Cleaning, and in accordance with the manufacturer's written instructions.
- .2 Remove excess material, overspray and debris.

3.6 **PROTECTION**

- .1 Protect finished installation under provisions of Section 01 56 00 Temporary Controls.
- .2 Do not permit adjacent work to damage work of this section.

3.7 SCHEDULE

.1 Fireproofing for the building structure shall be according to the certification laboratory Design No. required to restore the fire resistance of the original construction damaged due to construction activities.

END OF SECTION

PART 1 – GENERAL

1.1 SECTION INCLUDED

- .1 Firestopping of Penetrations in Rated Assemblies.
- .2 Fire Resistive Joint Systems.
- .3 Perimeter Fire Containment Systems.
- .4 Firestopping of Penetrations in Fire Blocking Compartments.
- .5 Smoke Seals
- .6 It is the intent of this section of the specifications to establish a single, competent source to be responsible for providing all labour, materials, products, equipment and services, to supply and install firestopping and smoke seals for the area of work, including at the following locations:
 - .1 Openings in fire rated walls, floors and roofs both empty and those containing penetrations.
 - .2 Gaps between fire rated floor slabs and exterior curtain walls.
 - .3 Gaps between fire rated walls and exterior curtain walls.
 - .4 Gaps located within expansion joints.
 - .5 Openings at each floor level in fire rated shafts or stairwells.
 - .6 Gaps between the tops of fire rated walls and underside of fire rated floor or roof assemblies.
 - .7 Penetrations through construction enclosing compartmentalized concealed areas (fire blocks), involving both empty openings and openings containing penetrating items.
 - .8 Penetrations through smoke barriers.
- .7 Note: It is not the intention of this section to delete firestopping work fully specified in the mechanical and electrical specifications. Coordinate with all mechanical and electrical sections to ensure the complete firestopping of the area of work. All firestopping not specifically called for in the mechanical and electrical specifications is to be included under this section.

1.2 RELATED WORK

- .1 Fire blocking of concealed spaces:
 - .1 Fire separation of concealed spaces shall be provided under applicable specification sections, and as indicated on drawings.
- .2 Non-Rated Openings through Floors and Walls:
 - .1 Non-rated openings through floors and walls shall be sealed under applicable architectural, mechanical, and electrical specification sections.

- .3 Metal sleeves for fire rated openings through floors and walls shall be provided under applicable mechanical and electrical specification sections.
- .4 Firestopping and smoke seals within mechanical (i.e. inside ducts, dampers) and electrical assemblies shall be sealed under applicable mechanical and electrical specifications sections and only in accordance with the equipment or device manufacturers' installation instructions.

1.3 RELATED SECTIONS

.1	Sealants	Section 07 92 00
.2	Gypsum Board	Section 09 29 00
.3	Mechanical work requiring firestopping	Division 20, 22
.4	Electrical work requiring firestopping	Division 26, 27, 28

1.4 REFERENCE STANDARDS/DOCUMENTS

.1 American Society for Testing and Materials (ASTM):

.1	ASTM E814	Test Method of Fire tests of Through Penetration Firestops
.2	ASTM E 2174	Standard Practice for On-Site Inspection of Installed Fire Stops
.3	ASTM E 2393	Standard Practice for On-Site Inspection of Installed Fire Stop Joint System.
.4	ASTM E 2307	Standard Test Method for Determining the Fire Endurance of Perimeter Fire Barrier Systems Using the Intermediate-Scale, Multi Story Test Apparatus (ISMA)
.5	ASTM C 920	Standard Specification for Elastomeric Joint Sealants systems

		.2 Underwriters Laboratories, Inc. (UL):
.1	UL	Fire Resistance Directory
.2	UL 263	Fire Tests of Building Construction and Materials
.3	ANSI/UL 1479	Fire Tests Of Through-Penetration Firestops
.4	ANSI/UL 2079:	Standard for Tests for Fire Resistance of Building Joint Systems

		.3 Underwriters Laboratories of Canada (ULC):
.1	ULC	List of Equipment and Materials, Firestop Systems and
		Components
.2	CAN/ULC-S101	Standard Methods of Fire Endurance Tests of Building
		Construction and Materials
.3	CAN/ULC-S115	Standard Method of Fire Tests of Firestop Systems

- .4 Intertek: WH Mark Product Directory
- .5 Factory Mutual Approval Guide

1.5 PERFORMANCE REQUIREMENTS

- .1 Provide firestopping systems of sufficient thickness, width and density to provide and maintain a fire resistance rating, as indicated on drawings and in accordance with ULC, cUL or WH design numbers.
- .2 Provide a seal completely filling all annular spaces to prevent the passage of flame, smoke and gases through the opening in the fire separation in which it is installed.
- .3 Provide materials which are compatible with all materials used in the system including materials used in or on penetrating items as well as all construction materials used in conjunction or contiguous with the system.
- .4 Accessories:
 - .1 Provide components for each firestopping system that are needed to install fill materials.
 - .2 Use only components specified by the firestopping manufacturer and approved by the qualified testing and inspecting agency for the designated fire resistance rated systems.
 - .3 Accessories include but are not limited to the following items:
 - .1 Permanent forming/damming/backing materials temporary forming materials
 - .2 substrate primers
 - .3 collars
 - .4 steel sleeves
- .5 Provide products that upon curing, do not re-emulsify, dissolve, leach, and breakdown or otherwise deteriorate over time from exposure to atmospheric moisture, sweating pipes, ponding water or other forms of moisture characteristic during and after construction.
- .6 Provide firestop sealants sufficiently flexible to accommodate motion such as pipe vibration, water hammer, thermal expansion and other normal building movement without damage to the seal.
- .7 Pipe insulation shall not be removed, cut away or otherwise interrupted through wall or floor openings. Provide products appropriately tested for the thickness and type of insulation utilized.
- .8 Openings within walls and floors designed to accommodate voice, data and video cabling shall be provided with re-enterable products specifically designed for retrofit.
- .9 Penetrations through fire-resistance rated floor-ceiling assemblies contained within chase wall assemblies shall be protected with products tested by being fully exposed to the fire outside of the chase wall.
- .10 Provide fire-resistive joint sealants sufficiently flexible to accommodate movement such as thermal expansion and other normal building movement without damage to the seal.

- .11 Provide fire-resistive joint sealants designed to accommodate a specific range of movement and tested for this purpose in accordance with a cyclic movement test criteria as outlined in Standard ANSI/ UL 2079.
- .12 Provide through penetration firestop systems and fire-resistive joint systems subjected to an air leakage test conducted in accordance with Standards, ANSI/UL1479 and ANSI/ UL2079, respectively, with published L-Ratings for ambient and elevated temperatures as evidence of the ability of the through penetration firestop system or fire-resistive joint system to restrict the movement of smoke. Provide fire-resistive joint systems subjected to an air leakage test conducted in accordance with Standard, ANSI/UL2079 with published L-Ratings for ambient and elevated temperatures as evidence of the ability of the fire-resistive joint system to restrict the movement of smoke.

1.6 SUBMITTALS

- .1 Manufacturer's Data:
 - .1 Submit manufacturer's specifications, installation instructions and product data for each material required, in accordance with Section 01 33 23.
 - .2 Include ULC, cUL, or WH tested systems or designs, to show compliance with the Contract Documents.
- .2 Shop Drawings: Submit shop drawings showing typical installation details, including reinforcement, anchorage, fastenings and method of installation for each type of firestopping condition.
- .3 Samples: If requested, submit samples of each type of firestopping systems, smoke seals and accessories. Indicate location where material/system shall be utilized.
- .4 Qualifications: Submit certificate indicating qualifications of installer.

1.7 QUALITY ASSURANCE

- .1 Manufacturer: Manufacturer shall be one of the approved manufacturers listed below.
- .2 Applicator: Company having a minimum of three (3) years' experience in the installation of materials specified herein, on projects comparable to this project, who is certified, licensed or otherwise qualified by the firestopping manufacturer as having been provided the necessary training to install firestop products in accordance with the specified requirements. Installer shall be certified by ULC, or other approved agency.

1.8 REGULATORY REQUIREMENTS

- .1 Conform to the Ontario Building Code for fire resistance ratings.
- .2 Provide materials, accessories and application procedures which have been listed by ULC, cUL, or tested by a nationally recognized independent testing agency in accordance with ASTM E814, ANSI/UL 1479, CAN4-S115 or ANSI/UL 2079 to achieve the required fire protection rating(s).

1.9 ENVIRONMENTAL REQUIREMENTS

- .1 Do not proceed with the installation of firestopping materials when temperatures or weather conditions exceed the manufacturer's recommended limitations for installation.
- .2 Ventilate solvent based and moisture-cure firestopping per firestopping manufacturer's instructions by natural means or, where this is inadequate, by forced air circulation.

1.10 DELIVERY, STORAGE AND HANDLING

- .1 Deliver materials to Site in manufacturer's sealed, undamaged containers, with labels intact. Labels shall identify product and manufacturer, date of manufacture; lot number; shelf life, qualified testing and inspection agency's classification marking, and mixing instructions for multi-component materials.
- .2 Handle and store materials in accordance with manufacturer's instructions.

1.11 PROJECT/SITE CONDITIONS

- .1 Comply with manufacturer's recommended requirements for temperature, relative humidity and substrate moisture content during application and curing of materials.
- .2 Maintain minimum temperature before, during, and for minimum 3 days after installation of materials.
- .3 Do not install firestopping products when substrates are wet due to rain, frost, condensation, or other causes.

1.12 SEQUENCING AND SCHEDULING

- .1 Coordinate construction of openings and penetrating items to ensure that throughpenetration firestop systems are installed according to specified requirements.
- .2 Coordinate sizing of sleeves, openings, core-drilled holes or cut openings to accommodate through-penetration firestop systems.
- .3 Do not install firestopping system until Work within opening has been completed. Coordinate with other applicable Sections.
- .4 Schedule installation of safing materials in linear opening at curtain wall prior to construction that limits access to safing slot.
- .5 Schedule work of other trades so that firestopping applications can be inspected prior to being covered by subsequent construction.

PART 2 – PRODUCTS

2.1 APPROVED MANUFACTURERS

.1 Provide firestopping silicone sealants, water-based sealants, intumescent sealant, mortars, or firestop devices from one of the following manufacturers:

- .1 A/D Fire Protection Systems Inc.
- .2 Tremco Fire Protection Systems Group
- .3 Hilti (Canada) Corporation
- .4 Nuco Inc., Self-Seal Firestops

2.2 MATERIALS

- .1 Firestop systems:
 - .1 Provide a complete system of asbestos-free firestop systems capable of maintaining an effective barrier against flame, smoke and gases in compliance with requirements of CAN4-S115, ASTM E814, ANSI/UL 1479, or ANSI/UL 2079, and listed by ULC, cUL, or Warnock Hersey, and approved by jurisdictional authorities and the Consultant.
 - .2 Comply with applicable Building Code requirements for locations and ratings.
- .2 Materials specified below are as manufactured by A/D Fire Protection Systems Inc. Equivalent products manufactured by one of the approved manufacturers listed above are acceptable.
- .3 Silicone Sealants:
 - .1 Primerless, single component silicone sealant, curing to durable, flexible, silicone rubber; to ASTM C 920, Type S, Grade NS, class 25; A/D Fire barrier Silicone Sealant or equivalent.
 - .2 For use in: openings with penetrating items subject to high movement; multiple penetration systems; for combustible pipes up to 2-in. diameter; in control joints; in curtain wall joints; expansion joints; floor/wall joints; wall/wall joints; head of wall joints; and as a sealant for smoke barrier construction.
- .4 Pourable Sealant:
 - .1 Single component, water based, elastomeric sealants, forming durable, flexible, watertight bonds; A/D Firebarrier Seal (pourable) and Seal NS (non-slumping) or equivalent.
 - .2 Use non-slumping type for vertical applications.
 - .3 Water based firestop sealants for use with: control joints; head of wall joints; floor/wall joints; wall/wall joints; multiple penetration systems; plumbing; mechanical; electrical; and where sprayed sealant application is required or desired.
- .5 Intumescent Caulk:
 - .1 Single component, water based, elastomeric sealant for use in interior building locations; A/D Firebarrier Intumescent Caulk or equivalent.
 - .2 For general use as a firestop sealant with: insulated pipes; pipes; electrical cables and conduit; ducts.
- .6 Mortar:
 - .1 Non-combustible, fibre reinforced, foamed cement mortar; A/D Fire barrier Mortar or equivalent.
 - .2 For use in: large openings; static non-moving penetrations such as cable trays; for multiple penetration systems; electrical and communication bundles; conduits; non-combustible sleeves; and insulated pipes.
- .7 Collars:

- .1 Steel collars with intumescent silicone strip, in diameters to suit pipe sizes; A/D Firebarrier Collar or equivalent.
- .2 For use in openings with single combustible pipe penetrations greater than 50mm diameter; confirm maximum pipe diameter (for applicable tested assemblies) with manufacturer.
- .8 Pillows:
 - .1 Self-supporting, sealed polyethylene bags containing intumescent materials and non-combustible insulation; A/D Firebarrier Pillows or equivalent.
 - .2 For use in openings with: cable tray; multiple cable penetrations; where retrofitting of penetrating items is anticipated; and as a temporary firestop system.
- .9 Mineral Wool:
 - .1 Non-combustible, semi-rigid, preformed mineral wool strips and sheets; A/D Firebarrier Mineral Wool or equivalent.
 - .2 For use in tested firestop systems, as fire barrier and forming material.
- .10 Additional Materials:
 - .1 All materials shall be by the manufacturer's listed above and shall be components of tested assemblies, acceptable to local authorities having jurisdiction, for the fire rating required.
- .11 Fire Stopping:
 - .1 Asbestos-free materials and systems capable of maintaining an effective barrier against flame and heat in compliance with requirements of CAN4-S115 and not to exceed opening sizes for which they are intended.
 - .2 Acceptable Products:
 - .1 A/D Fire Protection Systems Inc.: A/D Firebarrier Mineral Wool Fire Stopping Insulation.
 - .2 Roxul Inc.: RXL Safe Fire Stop Batt.
- .12 Smoke Seals: fire resistant material capable of maintaining an effective barrier against smoke and gases.
 - .1 Fire Rated Sealant Type 1 (for joints in vertical surfaces): non-sagging, fire rated silicone listed for use in fire separations:
 - .3 Hilti (Canada) Corporation: CP 601S Elastomeric Firestop Sealant.
 - .4 3M Canada Inc.: Firebarrier 2000.
 - .5 Tremco Construction Products: TREMstop Fyre-Sil.
 - .2 Fire Rated Sealant Type 2 (for head of wall applications): sprayable single component, water-based, acrylic fire stop sealant.
 - .6 Hilti (Canada) Corporation: CP672 Firestop Joint Spray.
 - .7 3M Canada Inc.: 3M FireDam Spray.
 - .8 Tremco Construction Products: TREMstop Acrylic SP.
 - .3 Fire Rated Sealant Type 3 (for joints in horizontal surfaces): self-leveling, fire rated silicone, listed for use in fire separations.
 - .1 Hilti (Canada) Corporation: CP604 Self-leveling Firestop Sealant.
 - .2 3M Canada Inc.: Firebarrier 2003.
 - .3 Tremco Construction Products: TREMstop Fyre-Sil Self Leveling

2.3 ACCESSORIES

- .1 Damming and backup materials, supports and anchoring devices: Non-combustible, to manufacturer's recommendations and in accordance with the tested system being installed, and as acceptable to local authorities having jurisdiction.
- .2 Primers: As required by firestopping manufacturer and compatible with selected system and contiguous materials.
- .3 Water: Potable.
- .4 Tape: Pressure sensitive masking tape as recommended by the firestopping manufacturer.
- .5 Fasteners: Provide suitable fasteners, for applicable substrates, for all collars and other field fastened firestopping components.

PART 3 – EXECUTION

3.1 EXAMINATION

- .1 Examine substrates, openings, voids, adjoining construction and conditions under which the Work is to be installed. Confirm compatibility of surfaces scheduled to receive firestopping.
- .2 Verify that penetrating elements are securely fixed and properly located with the proper space allowance between penetrations and surfaces of openings.
- .3 Do not proceed with Work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- .1 Surfaces to receive firestopping shall be free of dirt, dust, grease, oil, rust, loose materials, form release agents, frost, moisture or any other matter which would impair the bond of firestopping material to the substrate of penetrating item(s).
- .2 Prime substrates in accordance with manufacturer's written instructions or recommendations. Confine primers to areas of bond; do not allow spillage or migration onto exposed surfaces.
- .3 Do not apply firestopping and smoke seals to surfaces previously painted or treated with sealers, curing compounds, water repellent or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.
- .4 Ensure that anchoring devices, back-up materials, clips, sleeves, supports and other related materials used in the actual fire tests are provided.
- .5 Mask where necessary to prevent firestopping materials from contacting adjoining surfaces that will remain exposed upon completion of Work. Remove tape as soon as it is possible to do so without disturbing firestopping seal with substrates.

.6 Installation is not to proceed until submittals have been reviewed and returned by the Consultant.

3.3 INSTALLATION

- .1 Manufacturer's Instruction:
 - .1 Comply with ULC, cUL, or Warnock Hersey listings and manufacturer's instructions for the type of material and condition of opening in each case.
 - .2 Consult with the manufacturer's technical representative to determine proper procedure for conditions not fully covered by printed instructions.
 - .3 Record in writing any oral instructions received, with copy to manufacturer.
- .2 Firestopping for vertical applications: Non-sag caulk or spray grade sealants, Mortar, Collars or Pillows.
- .3 Firestopping for horizontal applications: Non-sag caulk or self-levelling or spray grade sealants, Mortar, Collars or Pillows.
- .4 Firestopping for overhead applications: Non-sag caulk or spray grade sealants or Mortar.
- .5 Install firestopping with sufficient pressure to properly fill and seal openings to ensure an effective smoke seal. Tool or trowel exposed surfaces. Remove excess firestopping material promptly as the Work progresses and upon completion.
- .6 Damming: Provide leak-proof dams as required to seal openings and contain liquid sealants, putty or mortar until cured. Install damming in accordance with manufacturer's instructions.
- .7 Damming Boards: Install forming/damming materials and other accessories of type required to support fill materials during their application and in the position needed to produce the shapes and depths required to achieve fire ratings of through-penetration firestop systems.
 - .1 Combustible Type: For temporary dams only. Remove after firestopping material has cured.
 - .2 Non-Combustible Type: For temporary or permanent dams. Provide noncombustible type wherever damming material cannot be removed after applying firestopping materials.
- .8 Void Filler: Use materials recommended by the firestopping manufacturer to seal gaps created by non-combustible type damming boards and to seal around cables, conduits, pipes and where void filler material becomes part of the fire rated assembly.
- .9 Sealant:
 - .1 Install damming material or mineral wool as required.
 - .2 Apply sealant so air voids are not present and sealant is in full contact with penetrating items. Tool sealant to ensure substrate contact.

- .3 Remove excess sealant in accordance with manufacturer's recommendations.
- .10 Mortar:
 - .1 Install damming material as required.
 - .2 Mix mortar in strict accordance with manufacturer's instructions.
 - .3 Pump, trowel or hand pack mortar through openings to minimum thickness as recommended by manufacturer and as listed by ULC, or cUL, to achieve required fire rating.
- .11 Firestopping Mineral Wool:
 - .1 Install firestopping by compressing material to the minimum required by ULC, cUL, or WH listing.
 - .2 Apply firestopping in sufficient thickness, depth and density so as to achieve the required fire resistance rating.
 - .3 Use impaling clips to support and secure firestopping where required by tested system.
- .12 Where joint application is exposed to the elements, fire-resistive joint sealant must be approved by manufacturer for use in exterior applications.

3.4 FIELD QUALITY CONTROL

- .1 Notify Consultant when completed installations are ready for inspection prior to concealing or enclosing an area containing firestopping materials.
- .2 Arrange for inspections by the Owners independent inspection and testing company, appointed and paid for by Owner.
- .3 Following field inspections, provide all repair as required to ensure compliance with the Contract Documents.
- .4 Keep areas of work accessible until inspection by authorities having jurisdiction

3.5 SCHEDULE

- .1 Fire stop for full depth or thickness of the assembly or component being fire stopped.
- .2 Apply smoke seal material to both sides of vertical assemblies required to have smoke seals. This applies to all fire separations, whether rated or unrated.
- .3 Fire Stop and Smoke Seal At:
 - .1 Penetrations through vertical fire separations of masonry, concrete, or gypsum board construction.
 - .2 Edge of floor slabs at curtain wall and precast concrete panels.
 - .3 Top of fire separations of masonry construction at underside of fluted steel deck assemblies:
 - .1 Option No. 1: cUL Design No. HW-D-0098.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: Hilti Type 2 fire rated sealant.
 - .2 Option No. 2: ULC Design No. HW23.

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

DIVISION 07 – THERMAL AND MOISTURE PROTECTION 07 84 00 – FIRESTOPPING AND SMOKE SEAL

- .1 Fire stopping: all specified fire stopping Products.
- .2 Smoke seal: 3M Type 2 fire rated sealant.
- .3 Option No. 3: cUL Design No. HW-D-0092.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: Tremco Type 2 fire rated sealant.
- .4 Top of fire separations of gypsum board construction at underside of fluted steel deck assemblies:
 - .1 Option No. 1: cUL Design No. HW-D-0042.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: Hilti Type 2 fire rated sealant.
 - .2 Option No. 2: ULC Design No. HW21.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: 3M Type 2 fire rated sealant.
 - .3 Option No. 3: ULC Design No. HW71.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: Tremco Type 2 fire rated sealant.
- .5 Intersection of fire separations of masonry or gypsum board construction.
- .6 Control joints in fire separations of masonry construction.
 - .1 Option No. 1: ULC Design No. JF83.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: Hilti Type 1 fire rated sealant.
 - .2 Option No. 2: ULC Design No. JF 13
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: 3M Type 1 fire rated sealant.
 - .3 Option No. 3: ULC Design No. JF 18
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: Tremco Type 1 fire rated sealant.
- .7 Control joints in fire separations of gypsum board construction: ULC Design No. JF 70.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: 3M Type 1 fire rated sealant.
- .8 Joints in horizontal fire separation assemblies concrete floor slabs:
 - .1 Option No. 1: ULC Design No. JF82.

.1

- .1 Fire stopping: all specified fire stopping Products.
- .2 Smoke seal: Hilti Type 3 fire rated sealant.
- .2 Option No. 2: ULC Design No. JF13.
 - Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: 3M Type 3 fire rated sealant.
- .3 Option No. 3: ULC Design No. JF18.
 - .1 Fire stopping: all specified fire stopping Products.
 - .2 Smoke seal: Tremco Type 3 fire rated sealant.
- .9 Penetrations through fire-resistance rated floor slabs, ceilings and roofs, and horizontal fire separations.
- .10 Openings and sleeves installed for future use through fire separations.
- .11 Mechanical assemblies penetrating fire separations: Refer to Division 23 Heating, Ventilating, and Air Conditioning (HVAC).
- .12 Electrical assemblies penetrating fire separations: Refer to Division 26 Electrical.

3.6 CLEANING AND PROTECTION

.1 Clean all surfaces adjacent to sealed openings to be free of excess firestopping materials and soiling as work progresses.

- .2 Upon completion of this work, remove all materials, equipment and debris from the site. Leave work area and adjacent surfaces in a condition acceptable to the Consultant.
- .3 Leave installed work with sufficient protection to enable it to remain untouched until project turnover.

END OF SECTION

Section 04 05 00

Section 07 84 00

Section 09 22 00

PART 1 - GENERAL

1.1 SECTION INCLUDES

- .1 Sealants and caulking for interior wall openings and joints.
- .2 Sealants and caulking for floor joints.

1.2 RELATED WORK

.1	General Requirements	Division 01
		Biviolofi e l

- .2 Masonry Procedures
- .3 Firestopping and Smoke Seal
- .4 Non-Structural Metal Framing

1.3 REFERENCES

 .6 CAN/CGSB-19.24-M90 Multi-Component, Chemical Curing Sealing Compoun .7 CAN/ULC-S711.1-05 Standard for Thermal Insulation – Bead-Applied One Component polyurethane Air Sealant Foam, Part 1. .8 CAN/ULC-S711.1-05 Standard for Thermal Insulation – Bead-Applied Two 	.1	CGSB-19-GP-5M-84	Sealing Compound, One Component, Acrylic Base, Solvent Curing.
.4CAN/CGSB-19.21-M87Compound5CAN/CGSB-19.22-M89Sealing and Bedding Compound, Acoustical6CAN/CGSB-19.22-M89Mildew Resistant Sealing Compound for Tubs and Tile.6CAN/CGSB-19.24-M90Multi-Component, Chemical Curing Sealing Compound.7CAN/ULC-S711.1-05Standard for Thermal Insulation – Bead-Applied One Component polyurethane Air Sealant Foam, Part 18CAN/ULC-S711.1-05Standard for Thermal Insulation – Bead-Applied Two	.2	CAN/CGSB-19.13-M87	
.5CAN/CGSB-19.22-M89Mildew Resistant Sealing Compound for Tubs and Tile.6CAN/CGSB-19.24-M90Multi-Component, Chemical Curing Sealing Compound.7CAN/ULC-S711.1-05Standard for Thermal Insulation – Bead-Applied One Component polyurethane Air Sealant Foam, Part 18CAN/ULC-S711.1-05Standard for Thermal Insulation – Bead-Applied Two	.3	CAN/CGSB-19.17-M90	
 .6 CAN/CGSB-19.24-M90 Multi-Component, Chemical Curing Sealing Compoun .7 CAN/ULC-S711.1-05 Standard for Thermal Insulation – Bead-Applied One Component polyurethane Air Sealant Foam, Part 1. .8 CAN/ULC-S711.1-05 Standard for Thermal Insulation – Bead-Applied Two 	.4	CAN/CGSB-19.21-M87	Sealing and Bedding Compound, Acoustical.
.7CAN/ULC-S711.1-05Standard for Thermal Insulation – Bead-Applied One Component polyurethane Air Sealant Foam, Part 18CAN/ULC-S711.1-05Standard for Thermal Insulation – Bead-Applied Two	.5	CAN/CGSB-19.22-M89	Mildew Resistant Sealing Compound for Tubs and Tiles.
.8 CAN/ULC-S711.1-05 Component polyurethane Air Sealant Foam, Part 1. Standard for Thermal Insulation – Bead-Applied Two	.6	CAN/CGSB-19.24-M90	Multi-Component, Chemical Curing Sealing Compound.
	.7	CAN/ULC-S711.1-05	
	.8	CAN/ULC-S711.1-05	Standard for Thermal Insulation – Bead-Applied Two Component Polyurethane Air Sealant Foam, Part 1 : M.

1.4 APPROVED MANUFACTURERS

- .1 The products of the following manufacturers are approved for use subject to meeting the specifications for the particular type of sealants listed below. However, this is not an approval to substitute another type of sealant for those specified unless the material manufacturer requests change in his product in writing to the Consultant.
 - .1 Canadian General Electric Company Ltd.
 - .2 Dow Corning Canada Inc.
 - .3 Tremco
- .2 Material manufacturers must be willing to review Shop Drawings and drawing details, visit the site to review sealant installation and provide written reports to the Consultant.

1.5 INSTALLER QUALIFICATIONS

- .1 Sealants and caulking shall be installed by a specialized Subcontractor, having skilled mechanics thoroughly trained and competent in all aspects of caulking work, with minimum 5 years experience.
- .2 Sealants shall be appropriate for the application and materials to be caulked.

1.6 SUBMITTALS

- .1 Submit samples of each sealant, in conformance with Section 01 33 00 Shop Drawings, Product Data and Samples.
- .2 Provide colour cards for Consultants selection.
- .3 Submit written adhesion and compatibility approval from the sealant manufacturer for all materials to be sealed.

1.7 DELIVERY, STORAGE, AND HANDLING

.1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels intact. Protect from freezing, moisture, water and contact with ground or floor.

1.8 ENVIRONMENTAL AND SAFETY REQUIREMENTS

- .1 Comply with requirements of Workplace Hazard Materials Information System (WHIMIS) regarding use, handling, storage, and disposal of hazardous materials, and regarding labelling and provision of material safety data sheets acceptable to the authority having jurisdiction.
- .2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.
- .3 Ventilate area of work as required and as may be directed by the Consultant by use of approved portable supply and exhaust fans.

1.9 WARRANTY

- .1 Extend Contractor's warranty to five (5) years, in writing. Warranty shall commence on the date of Substantial Performance.
- .2 Defective work shall include, but not be restricted to, joint leakage, cracking, crumbling, melting, running, loss of adhesion, loss of cohesion, or staining of adjacent surfaces.

.3 Provide manufacturer's project-specific twenty (20) year non-staining warranty and ten (10) year weather seal warranty for "Type A" sealant listed below.

PART 2 – PRODUCTS

2.1 MATERIALS

- .1 Sealant Type A: For exterior locations. Non-Staining, primer less, silicone weatherproofing sealant:
 - .1 SilPruf SCS9000 NB, manufactured by Canadian General Electric Company Limited, Dow Corning 756 SMS, manufactured by Dow Corning Canada Inc., or
 - .2 Spectrem 3. manufactured by Tremco Ltd., and
 - .3 conforming to the product properties published.
- .2 Sealant Type B: For interior locations. Non-staining, primer less, silicone hybrid sealant:
 - .1 SCS7000, manufactured by Canadian General Electric Company Limited.
 - .2 Dow Corning 756 SMS, manufactured by Dow Corning Canada Inc., or
 - .3 Spectrem 3, manufactured by Tremco Ltd., and
- .3 Sealant Type C: For interior locations where conditions of high humidity exist such as washrooms, showers, Mildew resistant, one component silicone conforming to CGSB 19-GP.22M and ASTM C920:
 - .1 CGE SCS1700 Sanitary Sealant,
 - .2 Dow Corning 786, or
 - .3 Tremco Tremsil 200 White
- .4 Sealant Type D: For interior locations. Paintable, non-staining, primer less, silicone hybrid sealant:
 - .1 SCS7000, manufactured by Canadian General Electric Company Limited.
- .5 Sealant Type E:
 - .1 Multi-component, epoxidized polyurethane sealant conforming to CAN/CGSB-19.24, Type 2, Class B, SWRI Certified.
 - .2 Dymeric 240, manufactured by Tremco Ltd.
 - .3 Contractors Weatherproofing Sealant (CWS) Contractors Concrete Sealant by Dow Corning.
- .6 Colours of sealants and caulking when exposed in the finished work to later selection by the Consultant. Allow different colours for different situations and materials. Allow for custom colours for exterior sealants.
- .7 Primers for sealing: As manufactured or recommended by the manufacturer of the sealing materials for the specific applications.
- .8 Joint backing material:
 - .1 circular foam strips, of approved manufacture, compatible with sealant and 50% greater width than joint width;

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

- .2 Vertical Surfaces: extruded polyolefin foam, Sof Rod by Tremco Ltd.
- .3 Horizontal Surfaces: closed cell polyethylene foam, Standard Backer Rod by Tremco.
- .9 Bond Breaker: pressure sensitive plastic tape backing material, which will not bond to sealant; 3M #226 or #481, or Valley Industries #40.
- .10 Acoustical Sealant.
 - .1 To CAN/CGSB-19.21.
 - .2 Acceptable Product: Tremco Commercial Sealants & Waterproofing, Tremco Acoustical Sealant.
- .11 Air Barrier Foam Sealant One Part.
 - .1 One part polyurethane insulating foam sealant, to CAN/ULC-S710.1.
 - .2 Acceptable Products:
 - .1 Adfast Inc.: ADFOAM 1885-2
 - .2 Dow Chemical Canada ULC: GREAT STUFF PRO Gaps & Cracks Insulating Foam Sealant.
 - .3 Zerodraft Products Inc.: Zerodraft Foam Sealant.
- .12 Air Barrier Foam Sealant Two Part.
 - .1 Two part polyurethane insulating foam sealant, to CAN/ULC-S711.1.
 - .2 Acceptable Products:
 - .1 Dow Chemical Canada ULC: FROTH-PAK Foam Sealant.
 - .2 Zerodraft Products Inc.: Zerodraft Insulating Air Sealant.
- .13 Preformed Compressible and Non-Compressible Back-up Materials.
 - .1 Polyethylene, Urethane, Neoprene or Vinyl Foam.
 - .1 Extruded closed cell foam backer rod.
 - .2 Size: oversize 30 to 50%.
 - .2 Neoprene or Butyl Rubber: Round solid rod, Shore A hardness 70.
 - .3 High Density Foam: Extruded closed cell polyvinyl chloride (PVC), extruded polyethylene, closed cell, Shore A hardness 20, tensile strength 140 to 200kPa, extruded polyolefin foam, 32kg/m; density, or neoprene foam backer, size as recommended by manufacturer.
 - .4 Bond Breaker Tape: Polyethylene bond breaker tape which will not bond to sealant.
- .14 Cleaning material for surfaces to receive sealant to be as recommended by the manufacturer of the sealant.

PART 3 – EXECUTION

3.1 LOCATIONS

- .1 Seal all exterior junctions and joints wherever required to close gap and wherever sealant is essential to maintain the continuity of air barrier, water barrier, or non-rated smoke separation of wall with Sealant Type A. Areas to be caulked include:
 - .1 Concrete to metal, masonry, concrete and precast concrete.
 - .2 Masonry to metal, concrete, precast concrete, and masonry.
 - .3 Metal to metal, masonry, concrete, and precast concrete.

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

DIVISION 07 – THERMAL AND MOISTURE PROTECTION 07 92 00 – SEALANTS

- .4 Around pipes and conduit through foundation walls.
- .5 Between hollow metal frames and screens and adjacent materials.
- .6 Between metal panels and adjacent materials.
- .7 Between window and louvre frames and sills and adjacent materials.
- .8 At all control and expansion joints.
- .2 Seal all interior junctions and joints wherever required to close gap and wherever sealant is essential to maintain the continuity of air barrier, water barrier, or non-rated smoke separation of wall with Sealant Type B. Areas to be caulked include:
 - .1 Concrete to metal, masonry, concrete and precast concrete.
 - .2 Masonry to metal, concrete, precast concrete, and masonry.
 - .3 Metal to metal, masonry, concrete, and precast concrete.
 - .4 Around pipes and conduit through walls.
 - .5 Between hollow metal frames and screens and adjacent materials.
 - .6 Between window and louvre frames and sills and adjacent materials.
 - .7 At all joints between millwork and masonry, to provide neat junction.
 - .8 At junction between all counters and/or splashbacks and adjacent substrate with neat 3mm bead.
 - .9 At all control and expansion joints.
- .3 Seal with Sealant Type C at the following locations:
 - .1 Around access panels in ceramic tile faced walls with a neat 3mm bead.
 - .2 Around perimeter of piping penetration at tile work.
 - .3 At junctions between all counter tops and/or splashbacks and adjacent substrate in washrooms, with neat 3mm bead.
 - .4 At junctions of lavatories, toilets, and other plumbing fixtures and adjacent substrate.
- .4 Seal with Sealant Type D at all interior non-moving joints to be painted.
- .5 Seal at all other vertical and horizontal joint locations with Sealant Type E.
- .6 Refer to Section 07 84 00, Firestopping and Smoke Seal, for location of fire stopping and fire-resistant caulking.
- .7 Refer to Section 09 29 00, Gypsum Board, for acoustic sealant work.

3.2 SUPERVISION

- .1 Unless specified otherwise herein comply with the recommendations and directions of the manufacturer whose materials are being used on the work.
- .2 Arrange for the sealant manufacturer's technical representatives to visit the site prior to the commencement of the sealing to meet with the Contractor and the Consultant.
- .3 Sealant manufacturer to visit site periodically and to provide written reports to Consultant ensuring sealant is in accordance with good trade practice, the manufacturer's recommendations and the intent of this Specification.

3.3 **PROTECTION**

.1 Protect installed work of other trades from staining or contamination.

3.4 PREPARATION

- .1 Install sealants only when surfaces and ambient temperatures are suitable for the material used, as per manufacturer's recommendations.
- .2 Clean all joints and spaces to be sealed.
- .3 Ensure that surfaces are structurally sound, free from grease, chalk or other contaminants which may adversely affect the adhesion of the sealing materials. Use dry oil free clean compressed air stream if necessary to clean out the joint.
- .4 Clean surfaces with a solvent or cleaner recommended by the manufacturer of the sealant materials.
- .5 Remove chalk lines completely. Do not place clear sealant over coloured chalk lines.
- .6 Test materials for indications of staining or poor adhesion before any sealing is commenced.
- .7 Submit colour chart to Consultant and obtain his written instructions for colours and locations of colours.

3.5 PRIMING

- .1 If recommended by the manufacturer of the sealing materials, prime joints to prevent staining, or to assist the bond, or to stabilize porous surfaces.
- .2 Apply primer with a brush which will permit the priming of all joint surfaces.

3.6 BACKUP MATERIAL

- .1 Apply bond breaker tape where required to manufacturer's instructions.
- .2 Install joint back-up to achieve correct joint depth and shape, with approximately 30% compression.

3.7 MIXING

.1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.8 MASKING

.1 Where necessary to prevent contamination of adjacent surfaces, mask the areas adjacent to the joints with masking tape.

3.9 INSTALLATION

- .1 Install joint backing materials at all locations as detailed or where required by sealant manufacturer's printed directions.
- .2 Install a bond breaker tape or packing over asphalt impregnated fibre board as recommended by sealant manufacturer.
- .3 Ensure that the correct sealant depth is maintained.
- .4 Finished joints shall be free of wrinkles, sags, air pockets, ridges and embedded impurities.
- .5 Tool all sealant surfaces to produce a smooth surface.
- .6 Remove droppings and excess sealant as work progresses and before material sets.
- .7 Sealing materials shall be gun grade or tool grade consistency to suit the joint conditions.
- .8 Commence sealing only after all adjacent surfaces have been painted under Painting Section.

3.10 CLEANING

.1 Clean adjacent surfaces immediately and leave work neat and clean. Remove excess sealant and droppings using recommended cleaners as work progresses. Remove masking after joint tooling.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- 1. Rough Carpentry
- 2. Gypsum Board
- 3. Acoustic Ceilings

Section 06 10 00 Section 09 29 00 Section 09 51 00

1.2 REFERENCES

1.	CSA S136	North American Specification for the Design of Cold-Formed Steel Structural Members
2.	CAN/ULC-S101	Standard Methods of Fire Endurance Tests of Building Construction and Materials
3.	AISI	North American Standard for Cold-Formed Steel Framing – Product Data
4.	ASTM International	
	.1 A653/A653M	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
	.2 A641/A641M	Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
	.3 A792/A792M	Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy- Coated by the Hot-Dip Process
	.4 A1003	Standard Specification for Steel Sheet, Carbon, Metallic- and
	.5 C645	Nonmetallic coated for Cold-Formed Framing Members Standard Specification for Nonstructural Steel Framing Members
	.5 C645 .6 C754	Standard Specification for Installation of Steel Framing Members to
	.0 0734	Receive Screw-Attached Gypsum Panel Products
	.7 C840	Standard Specification for Application and Finishing of Gypsum Board
	.8 C841	Standard Specification for Installation of Interior Lathing and Furring
	.9 C844	Standard Specification for Application of Gypsum Base to Receive
		Gypsum Veneer Plaster
	.10 C1002	Standard Specification for Steel-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster bases to Wood Studs or Steel Studs
	.11 ASTM E90	Standard Test Method for Laboratory Measurement of Airborne Sound
		Transmission Loss of Building Partitions and Elements
	.12 ASTM E413	Classification for Rating Sound Insulation
	.13 E488	Standard Test Methods for Strength of Anchors in Concrete and
		Masonry Elements
	.14 E1190	Standard Test Methods for Strength of Power-Actuated Fasteners Installed in Structural Members

.5 Canadian Sheet Steel Building Institute (CSSBI:

DIVISION 09 – FINISHES

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

09 22 00 - NON-STRUCTURAL METAL FRAMING

.1 Lightweight Steel Framing Technical Bulletin Volume 7, Number 1, Maximum Height Tables for Interior Non-Loadbearing Partitions.

1.3 QUALITY ASSURANCE

- .1 Fire-Test-Response Characteristics:
 - .1 For fire-resistance-rated assemblies that incorporate non-loadbearing interior steel framing, provide materials and construction identical to those tested in assembly indicated according to CAN/ULS-S101.
 - .2 STC-Rated Assemblies:
 - .1 For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E90 and classified according to ASTM E413.

1.4 DELIVERY AND STORAGE

- .1 Handle and store materials carefully to prevent damage.
- .2 Obtain approval of proposed locations for stockpiling material. Provide any necessary temporary covers, skids and the like.
- .3 Do not install damaged or deteriorated material but remove from Site.

1.5 RELATIONS WITH OTHER TRADES

- .1 Coordinate with other trades for the locations of items to be framed in and framed around.
- .2 Co-ordinate with mechanical and electrical Trades to ensure that all services are installed prior to application of wall board.
- .3 Coordinate with mechanical and electrical trades for locations of access panels. Install access doors and panels supplied by those trades.
- .4 Co-ordinate with forces installing insulation and vapour barrier in exterior soffits.

PART 2 – PRODUCTS

2.1 MATERIALS

- .1 Metal framing shall be as manufactured by Bailey Metal Products or approved alternate; to ASTM C645.
- .2 Metal Studs and Track: minimum 20 gauge, 0.912mm galvanized steel; depths as indicated on drawings, 41mm, 64mm, 92mm, 152mm.

09 22 00 - NON-STRUCTURAL METAL FRAMING

- .3 Metal Furring Channels: minimum 0.455 (18 mils) sheet galvanized steel channel and accessories as manufactured by Bailey Metal Products, or approved alternate; to ASTM C645.
- .4 Cold Rolled Furring Channel: 20mm, x 12.7mm zinc coated channel weighing minimum 0.446 kg per m.
- .5 Cold Rolled Carrying Channel: 38mm x 15mm zinc coated channel weighing min 0.707 kg per m.
- .6 Hanger wire: minimum 3.77mm (9ga) galvanized steel wire.
- .7 Tie Wire: minimum 1.5mm (16 ga) galvanized soft annealed steel.
- .8 CGC Brand Screws (or approved equal) of type recommended by the board manufacturer.
- .9 Thermal Break: Permanent adhesive faced rubberized cork, 3 mm thick by width of stud on channel to be used between masonry in exterior wall and metal furring channels.
- .10 Ceiling Anchors: Self drilling tie wire anchors, Phillips "Red Head" T-32 or approved equal.

PART 3 - EXECUTION

3.1 GENERALS

- .1 Provide plumb, straight, level, rigid, and secure installation. Failing to achieve this result shall be cause for rejection and reinstallation of this work.
- .2 Where walls run parallel and under steel joists, the joists shall be framed both sides and enclosed with gypsum board to provide sound barrier between rooms.

3.2 CEILING SUSPENSION

- .1 Do not regard grillage system indicated on drawings as exact or complete. The Specification for metal framing contained in CGC Gypsum Construction Handbook and ASTM C840 shall govern installation conditions not covered by this Specification. The more stringent specifications shall apply.
- .2 Hangers:
 - .1 Install hangers for suspended wallboard ceilings to support the grillage independent of walls, columns, pipes, ducts and the like. Erect plumb and securely anchor to the structure. Submit details of proposed method to the Consultant for approval. If so requested, test hangers to prove that anchorage is adequate to support the proposed loading. Erect hangers plumb and securely anchor to structural steel or support channels fastened to structural steel (DO NOT FASTEN TO STEEL DECK).

DIVISION 09 – FINISHES

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

09 22 00 - NON-STRUCTURAL METAL FRAMING

- .2 Space hangers at 1200mm maximum o.c. along the carrying channels and not more than 150mm from ends (or as required to conform with fire tested assemblies where applicable).
- .3 Carrying Channels:
 - .1 Space channels at 1200mm maximum o.c. (or as required to conform with fire tested assemblies where applicable).
 - .2 Run channels transversely to structural framing members.
 - .3 Where splices are necessary, lap members at least 200mm and wire each end with two laps; avoid clustering or lining up splices.
 - .4 Attach to hangers by bending hanger under runner and securely wire in place with a saddle tie.
 - .5 Provide 25mm clearance between channels and abutting walls and partitions.
- .4 Cross Furring
 - .1 Install drywall screw channels transversely across runner channels, joists or other supports.
 - .2 Space drywall screw channels at 600mm o.c. and not more than 150mm from perimeter walls. Provide 25mm clearance between channels and abutting walls and partitions. Use closer spacing if so noted on drawings.
 - .3 Secure drywall screw channels to each support with approved clip or attachment; splice joints by messing minimum 200mm and tying channels together with double strand 16 gauge tie wire.
 - .4 Level drywall screw channels to a maximum tolerance of 4mm over 3600mm.
 - .5 Drywall shall not be fixed directly to open web steel joists and the like. Provide cross furring as specified.
- .5 Openings
 - .1 Frame openings with suitable channels; check clearances with respective Trades. Provide support for edges of boards at all cut-outs and openings in ceilings.
 - .2 Provide all additional hangers and supports for fixtures as required.
 - .3 Provide additional hangers and framing for enclosure of radiant heating panels.
- .6 Bulkheads
 - .1 Fur out bulkheads in areas indicated and as required to conceal mechanical, electrical or other services in rooms where drywall finishes are scheduled, and elsewhere if called for on drawings.
 - .2 Use methods and materials as previously specified in this section.

3.3 CONSTRUCTION OF SUSPENDED AND FURRED CEILINGS

.1 Apply gypsum panels of maximum practical length with long dimension at right angles to drywall furring channels. Position end joints over furring channel web and staggered in adjacent rows.

- .2 Fasten panels to drywall furring channels with screws spaced a maximum of 300mm o.c. in field of panels and along abutting ends and edges.
- .3 Where noted on plans, provide bulkheads with steel framing and drywall finish.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

1.	Non-load bearing Steel Framing	Section 09 22 00
2.	Acoustic Ceilings	Section 09 51 00

1.2 **REFERENCES**

.1 ASTM International:

1	ASTM C1396	Standard Specification for Gypsum Board
1.	ASTIN C 1390	Standard Specification for Application and Finishing of Gypsum board
2	ASTM C840	Standard Specification for Application and Finishing of Gypsum board
۷.	A3110 C040	Standard Classification for Abuse-Resistant Nondecorated Interior
3	4 STM C1620	Standard Glassification for Abase-resistant rendecorated interior

- 3. ASTM C1629 Gypsum Panel Products and Fibre-Reinforced Cement Panels.
- .2 CAN/ULC-S101 Standard Methods of Fire Endurance Tests of Building Construction and Materials
- .3 Gypsum Association:
 - .1GA-214Recommended Levels of Gypsum Board Finish.2GA-216Application and Finishing of Gypsum Panel Products
- .4 The Gypsum Construction Handbook CGC Inc.

1.3 DELIVERY AND STORAGE

- .1 Handle and store materials carefully to prevent damage. Materials must be delivered to site in their original, unopened packages.
- .2 Obtain approval of proposed locations for stockpiling material. Materials must be stored in an enclosed shelter providing protection from exposure to the elements. Provide any necessary temporary covers, skids and the like.
- .3 Store all panels flat.
- .4 Do not install damaged or deteriorated material but remove from Site.
- .5 Materials as delivered shall bear manufacturer's name, brand name of material and where applicable, ULC designation.

1.4 ENVIRONMENTAL CONDITIONS

.1 Do not apply gypsum board or joint filler to surfaces that are damp or contain frost.

DIVISION 09 – FINISHES

09 29 00 – GYPSUM BOARD

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

- .2 During gypsum panel application and joint finishing, temperatures within work areas shall be within the range 12oC. to 25oC.
- .3 Provide adequate ventilation to carry off excess moisture

1.5 RELATIONS WITH OTHER TRADES

- .1 Co-ordinate with mechanical and electrical Trades to ensure that all services are installed prior to application of wall board.
- .2 Coordinate with mechanical and electrical trades for locations of access panels. Install access doors and panels supplied by those trades.
- .3 Co-ordinate with forces installing insulation and vapour barrier in exterior soffits.

PART 2 – PRODUCTS

2.1 MATERIALS

- .1 All materials to conform to ASTM C1396 unless specified otherwise. Except where noted otherwise, products listed herein are produced by Canadian Gypsum Company (CGC). Equivalent products from Georgia Pacific (GP) and Certainteed will be accepted, subject to acceptance of equivalency by the Consultant.
- .2 Fire-rated Gypsum panels:
 - .1 To ASTM C1629.
 - .2 Minimum thickness for fire-rated panels is 16mm.
 - .3 Abuse resistant, water resistant, mould resistant, Type X-Fire-rated.
 - .4 Acceptable 16mm fire-rated panels:
 - .1 CGC Sheetrock Mold Tough Abuse Resistant Firecode Core gypsum panels
 - .2 GP ToughRock Fireguard X Mold-Guard Abuse-Resistant gypsum board.
- .3 Metal Studs and Channels: minimum 20 gauge galvanized steel as manufactured by Bailey Metal Products or approved alternate; to ASTM C645.
- .4 Metal Furring Channels: minimum 0.455 (26ga) sheet galvanized steel channel and accessories as manufactured by Bailey Metal Products, or approved alternate; to ASTM C645.
- .5 Cold Rolled Furring Channel: 20mm, x 12.7mm zinc coated channel weighing minimum 0.446 kg per m.
- .6 Cold Rolled Carrying Channel: 38mm x 15mm zinc coated channel weighing min 0.707 kg per m.
- .7 Cold Rolled Carrying Channel: 28 ga. galvanized steel with perforated flanges; one piece per location.
- .8 Control Joint: CGC No. 093.

- .9 Hanger wire: minimum 3.77mm (9ga) galvanized steel wire.
- .10 Tie Wire: minimum 1.5mm (16 ga) galvanized soft annealed steel.
- .11 Screws: CGC Brand Screws (or approved equal) of type recommended by the board manufacturer.
- .12 Thermal Break: Permanent adhesive faced rubberized cork, 3 mm thick by width of stud on channel to be used between masonry in exterior wall and metal furring channels.
- .13 Joint Treatment Material:
 - .1 Joint compound, topping compound, laminating compound; to ASTM C474 and C475.
 - .2 Use material recommended by board and tape manufacturer for the proposed use.
 - .3 CGC Sheetrock or Durabond Setting-Type, for use with CGC fibreglass drywall tape.
- .14 Reinforcing Tape:
 - .1 Paper or fibreglass mesh tape, as recommended by the panel manufacturer for the panel type.
- .15 Finish materials
 - .1 Over surface of glass mat faced boards, use level 5 finisher such as CGC Tuff Hide.
- .16 Acoustic sealant: Quietseal Pro as manufactured by Quietrock, or equivaltent as manufactured by CGC, Tremco or Presstite Division of Interchemical Corporation for acoustic partitions.
- .17 Acoustic Insulation: AFB acoustic fire batt by Roxul or Thermafiber SAFB Sound Attenuation Fire Blankets (unfaced) from Owens Corning, to thickness shown on drawings, and as required to obtain required S.T.C. rating.
- .18 Ceiling Anchors: Self drilling tie wire anchors, Phillips "Red Head" T-32 or approved equal.
- .19 Access Panels: Refer to mechanical and electrical drawings and specifications for type and quantity of access panels required in partitions and ceilings.

PART 3 - EXECUTION

3.1 GENERAL

.1 Provide plumb, straight, level, rigid, and secure installation. Failing to achieve this result shall be cause for rejection and reinstallation of this work.

09 29 00 – GYPSUM BOARD

- .2 Conform to The Gypsum Construction Handbook, ASTM C840, and these specifications. The most stringent requirements shall apply.
- .3 Where walls run parallel and under steel joists, the joists shall be enclosed both sides with gypsum board to provide sound barrier between rooms. Fill with minimum 100 mm acoustic batt insulation.
- .4 Install access panels supplied by mechanical and electrical contractors. Rigidly secure panel frames to furring or framing systems.

3.2 CEILING SUSPENSION

- .1 Do not regard grillage system indicated on drawings as exact or complete. The Specification for metal framing contained in CGC Gypsum Construction Handbook and ASTM C840 shall govern installation conditions not covered by this Specification. The more stringent specifications shall apply.
- .2 Hangers
 - .1 Install hangers for suspended wallboard ceilings to support the grillage independent of walls, columns, pipes, ducts and the like. Erect plumb and securely anchor to the structure. Submit details of proposed method to the Consultant for approval. If so requested, test hangers to prove that anchorage is adequate to support the proposed loading. Erect hangers plumb and securely anchor to structural steel or support channels fastened to structural steel (DO NOT FASTEN TO STEEL DECK).
 - .2 Space hangers at 1200mm maximum o.c. along the carrying channels and not more than 150mm from ends (or as required to conform with fire tested assemblies where applicable.
- .3 Carrying Channels
 - .1 Space channels at 1200mm maximum o.c. (or as required to conform with fire tested assemblies where applicable).
 - .2 Run channels transversely to structural framing members.
 - .3 Where splices are necessary, lap members at least 200mm and wire each end with two laps; avoid clustering or lining up splices.
 - .4 Attach to hangers by bending hanger under runner and securely wire in place with a saddle tie.
 - .5 Provide 25mm clearance between channels and abutting walls and partitions.
- .4 Cross Furring
 - .1 Install drywall screw channels transversely across runner channels, joists or other supports.

- .1 Space drywall screw channels at 600mm o.c. and not more than 150mm from perimeter walls. Provide 25mm clearance between channels and abutting walls and partitions. Use closer spacing if so noted on drawings.
- .2 Secure drywall screw channels to each support with approved clip or attachment; splice joints by messing minimum 200mm and tying channels together with double strand 16 gauge tie wire.
- .3 Level drywall screw channels to a maximum tolerance of 4mm over 3600mm.
- .4 Drywall shall not be fixed directly to open web steel joists and the like. Provide cross furring as specified.
- .5 Opening
 - .1 Frame openings with suitable channels; check clearances with respective Trades. Provide support for edges of boards at all cut-outs and openings in ceilings.
 - .2 Provide all additional hangers and supports for fixtures as required.
 - .3 Provide additional hangers and framing for enclosure of radiant heating panels.
- .6 Bulkheads
 - .1 Furr out bulkheads in areas indicated and as required to conceal mechanical, electrical or other services in rooms where drywall finishes are scheduled, and elsewhere if called for on drawings.
 - .2 Use methods and materials as previously specified in this section. Drywall panels at bulkheads shall be as specified for walls.

3.3 APPLICATION OF GYPSUM BOARD

- .1 Do not apply gypsum board until bucks, anchors, blocking, electrical and mechanical work are approved.
- .2 Apply all gypsum board parallel to framing. Position all ends over studs. Use maximum practical lengths to minimize end joints. Fit ends and edges closely, but not forced together.
- .3 Stagger joints on opposite sides of partition.
- .4 Apply single, double or triple layers of gypsum board to metal furring as indicated using screw fasteners.
- .5 Maximum screw spacing for single-ply gypsum board and face ply of 2-ply gypsum board to be 300mm o.c.

09 29 00 – GYPSUM BOARD

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

- .6 Maximum spacing of screws for base-ply of 2-ply gypsum board over steel framing to be 300mm o.c. along edges of the gypsum board and 600mm o.c. into stud or furring channel in the field of the gypsum board.
- .7 Use cement board as backer board wherever tile is to be installed to walls of shower partitions.

3.4 CONSTRUCTION OF SUSPENDED AND FURRED CEILINGS

- .1 Apply gypsum panels of maximum practical length with long dimension at right angles to drywall furring channels. Position end joints over furring channel web and staggered in adjacent rows.
- .2 Closely fit together, ends and edges but not forced together.
- .3 Fasten panels to drywall furring channels with screws spaced a maximum of 300mm o.c. in field of panels and along abutting ends and edges.
- .4 Provide control joints in ceilings as noted but maximum 7500 mm o.c. each way or at change in direction.
- .5 Provide framing and drywall finish in stairwells, where required to enclose underside of stairs and landings.
- .6 Where noted on plans, provide bulkheads with steel framing and drywall finish.

3.5 APPLICATION OF ACCESSORIES

- .1 Erect accessories straight, plumb or level, rigid and at proper plane. Use full length pieces where practical. Joints shall be made tight, accurately aligned and rigidly secured.
- .2 Reinforce all vertical and horizontal exterior corners with cornerbead fastened with screws 200mm oc on both flanges along entire length of bead.
- .3 Where assembly terminates against masonry or other dissimilar material, apply ledge trim over panel edge and fasten with screws or staples spaced 300 mm. oc.
- .4 Power drive screws at least 9mm. from edges or ends of panel to provide uniform dimple 0.8mm deep.
- .5 Where recessed reglets are noted on drawings, built into drywall assembly to provide edges flush with drywall.

3.6 TAPING AND FILLING

.1 Finish in accordance with GA-214, as follows:

- .1 Exposed gypsum board to Level 5 finish, suitable for finish painting with semiglass and gloss coatings. Use full skim coat of joint compound over entire surface to achieve smooth and uniform appearance.
- .2 Concealed gypsum board to minimum Level 1 finish. Where a fire-resistance rating is required, finishing level must conform to ULC rated assembly design.
- .2 Finish face panel joints and internal angles with joint system consisting of self-adhering cross-fibre fibreglass joint tape and joint compound installed according to manufacturer's directions and feathered out into panel faces. Note: If self-adhering joint tape is not used, taping compound will be required.
- .3 Be sure drywall surface is dry and clean.
- .4 Center and apply CGC Fiberglass Drywall Tape directly over joint, pressing firmly to ensure even adherence to surface. Eliminate wrinkles by pressing entire length of tape with drywall knife. Avoid overlapping tape at intersections. Cut tape with drywall knife.
- .5 Cover taped joint with a layer of setting-type joint compound, forcing compound through the tape with a drywall knife or trowel to completely fill and level the joint. Allow joint to dry, and sand lightly. Apply second coat of setting-type or drying-type joint compound, feathering approximately 50mm beyond first coat. Let dry and sand lightly as required.
- .6 To finish inside corners, bend tape with to form a "U" shape. Apply tape along one side only. Press tape into corner for approximately 30mm, then apply the other side. Work downward, alternating sides in this manner until tape is pressed firmly in place. Apply setting-type joint compound as specified above, first on one side for the length of the corner and then repeating the process on the second side.
- .7 Finish fastener heads, corner bead and trim as required with two to three coats of joint compound, feathered out onto panel faces and sanded to a smooth surface.
- .8 Provide skim coat over entire face of boards to ensure smooth surface for painting.
- .9 Fill screw head depressions to bring flush with adjacent surface of gypsum board so as to be invisible after painting is completed.
- .10 Sand dried taping compound lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
- .11 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for painting.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- .1Gypsum BoardSection 09 29 00.2Mechanical EquipmentDivision 20, 22
- .3 Electrical Equipment Division 26, 27, 28

1.2 CEILING SYSTEMS

- .1 This Specification includes the ceiling assembly systems listed below, noted in schedules and shown on reflected ceiling plans, including ceiling panels, suspension system and trim.
- .2 Ceiling systems shall be 610mm x 1220mm lay in exposed Tee system, non- rated.

1.3 REFERENCE STANDARDS

.1	ASTM C635	Specifications for Metal Suspension Systems for Acoustical Tile
		and Lay-in Panel Ceilings
.2	ASTM C636	Practice for Installation of Metal Ceiling Suspension Systems for
		Acoustical Tile and Lay-in Panels.
.3	CAN/CGSB 92.1	Sound Absorptive Prefabricated Acoustical Units

1.4 DESIGN

.1	N.R.C. Range:	Unless otherwise noted under description of ceiling system the
	-	N.R.C. Range shall be 60-65 (Table 1 of CAN/CGSB 92.1).
.2	Ceiling S.T.C.:	Unless otherwise noted under description of ceiling system the
	-	S.T.C. rating shall be 35 or better.
.3	Light	Unless otherwise noted under description of ceiling system,
	Reflectance:	panels shall have a light reflectance co-efficient designation of
		L.R.1 (0.75 minimum). Table 3 of CAN/CGSB 92.1 refers.

1.5 SHOP DRAWINGS

- .1 Reflected ceiling plans indicate proposed layout but this shall not relieve Contractor of responsibility for co-ordination of the work and provision of Shop Drawings where field conditions call for variation from proposed layout.
- .2 Submit shop drawings accurately locate lighting fixtures, ventilating grilles, sprinkler heads, exit lights and other ceiling fittings.
- .3 Conform to Section 01 33 23 Shop Drawings, Product Data and Samples.

3.6 SAMPLES

- .1 Upon award of the Contract submit duplicate 300mm by 300mm sample panels of each acoustical unit proposed for installation in the project. All panels subsequently used on the job shall match the approved sample.
- .2 Submit one representative model sample of each suspension system members for approval prior to commencement of installation.
- .3 Ceiling system sample shall show basic construction and assembly, treatment at walls, recessed fixtures, splicing, interlocking, finishes and acoustical unit installation.

3.7 DELIVERY AND STORAGE

- .1 Transport, handle and store material in manner to prevent warp, twist and damage to tile and board edges and surfaces in accordance with the manufacturer's recommendations.
- .2 Any warped and/or damaged boards, tile and trim shall be rejected and be replaced by new, straight, undamaged and acceptable materials at no cost to the Owner.
- .3 Store material in warm, dry place away from water and the elements. Protect against undue loading stresses and shock.
- .4 All packaged material shall be delivered in original manufacturers' wrappers and containers with labels and seals intact.

3.8 **PROTECTION**

.1 Exercise care in the execution of work under this Section to prevent damage to finished surfaces and adjacent work, and mechanical and electrical installations.

3.9 EXTRA PANELS

- .1 Provide 2 full boxes of acoustic panels of each type specified for use in maintenance work. Obtain receipt from the Consultant or Owner's representative on site.
- .2 Do not use panels supplied to Owner for maintenance work to make good any damaged or removed tile required by Contract.
- .3 Clearly label all boxes and delivery and store the boxes as directed by the Owner.

3.10 SPECIAL CLEANING

.1 Clean, repair or replace dirty, discoloured or defective units or exposed suspension members to Consultant's satisfaction.

3.11 ENVIRONMENT AND REGULATORY REQUIREMENTS

- .1 Commence installation after building enclosed and dust- generating activities completed.
- .2 Permit wet work to dry prior to commencement of installation.
- .3 Maintain uniform minimum temperature of 15 deg. C. and humidity of 20% to 40% prior to, during and after installation.
- .4 Comply with Ontario Hydro Electrical Inspection Bulletin No. 30-4-3 regarding support of luminaires in suspended ceilings. Submit to the Consultant a certificate confirming that the ceiling support grid provides support for lighting fixtures in accordance with Ontario Hydro requirements.
- .5 Deliver finish materials in unopened packaging provided by manufacturer.
- .6 Store materials in work area 48 hours prior to installation, in protected dry areas.

6.1 QUALITY ASSURANCE

- .1 Installer is to be experienced in performing work of this section and who has specialized in installation of work similar to that required for this project.
- .2 Installer is to have a minimum of five (5) years of experience in performing the work described.

6.2 WARRANTY

- .1 The Warranty stipulated in the General Conditions of the Contract shall be deemed to include the following definition in reference to Work specified in this Section. The following will be considered defects without being limited thereto:
 - .1 Failure of the suspended ceiling to remain water level.
 - .2 Lifting or sagging of tile and board between supports.
 - .3 Staining and discolouration of factory finishes.
 - .4 Development of corrosion of galvanized ferrous metal.
 - .5 Development of cracks, splits and other surface deterioration in acoustic panels.
 - .6 Failure of hanging wire anchorage.
- .2 The warranty period shall be two (2) years, commencing on the date of Substantial Performance of the Work.
- .3 Warranties shall be issued to the Owner within two (2) Working Days following the date of Substantial Performance of the Work.

PART 2 – PRODUCTS

2.1 MATERIALS

- .1 Acoustic Ceiling Panels (ACT-N and ACT):
 - .1 Typical non-fire rated ceilings, to CAN/CGSB-92.1
 - .2 Type: Mineral composition acoustical units, sag resistant.
 - .3 Pattern: Non-directional fissured.
 - .4 Edge type: Square Lay-in.
 - .5 Colour: White.
 - .6 Thickness: 16mm minimum.
 - .7 Size: 610mm x 1220mm. Refer to architectural reflected ceiling plans for location and layout.
 - .8 Shape: Flat
 - .9 Flame spread rating of 25 or less.
 - .10 Smoke developed class of 50 of less.
 - .11 Acceptable Products:
 - .1 Armstrong World Industries Canada Ltd., Cortega No.824.
- .2 Suspension:
 - .1 Acceptable Products, contingent on compatibility with specified ceiling tiles:
 - .1 Armstrong World Industries Canada Ltd.: Prelude ML Exposed Tee System. The Prelude XL suspension system can be supplied and installed in lieu of the Prelude ML suspension system, as long as the Prelude XL system is compatible with the Armstrong Cortega 823 acoustic ceiling panels.
 - .2 Equivalents as noted above under paragraph 1.11 by:
 - .1 CGC, Suspension system Donn "DX" 24mm wide faced T-bar.
 - .2 CertainTeed Ceilings: Classic Aluminum Capped Hook System.
 - .3 Chicago Metallic Corporation: Series 1200 Suspension System.
 - .2 Exposed interlocking tee grid system, formed out of cold rolled zinc-bond steel 0.54mm thick. Provide fire rated grid where fire ratings noted.
 - .3 Main Tees: 38mm x 25.4mm double web rectangular bulb top with capping plate in precoat baked-on white paint finish and incorporating holes for hangers and slots for connecting pieces, and capable of supporting 12.5 kg per 1200mm. for continuous spans and 6.5 kg per 1200mm span for single span without exceeding a deflection of 1/360 of the span.
 - .4 Standard Cross-Tees: 25.4 x 25.4mm double web, bulb top, capping plate in precoated white baked-on finish, capable of supporting 11.3 kg per 600mm span without exceeding a deflection of 1/360 of span, and with positive interlock with main tees.
 - .5 Structural Cross-Tees as main tees, but with crimped ends for lapping bottom flange of main tees and interlocking tack ends to engage slots in main tees.
 - .6 Accessories:
 - .1 Splice plate, clips, screws, etc. as required to complete the installation. All galvanized finish.
 - .7 Concealed flat spline: 0.71mm flat steel spline.
 - .8 Edge Trim:
 - .1 0.635mm zinc bonded, cold rolled steel mould.

GRAND RIVER COLLEGIATE INSTITUTE ASBESTOS REMOVAL FOR FAMILY STUDIES RENOVATION 24-7692-RFT

09 51 00 - ACOUSTIC CEILINGS

- .2 Trim shall be minimum 22mm x 22mm angles.
- .3 Provide 50mm wide shadowline trim at perimeter of corridor ceilings.
- .9 Finish to tees and edge trim: flame resistant white baked enamel satin finish to match panel finish, 2 coats on exposed surfaces, 1 coat elsewhere.
- .10 Carrying Channels: 38mm x 19mm cold rolled galv. weighing 1.042 kg per metre.
- .11 Tie Wire: 1.6mm galvanized soft annealed steel
- .12 Hangers: 2.6mm galvanized steel wire.
- .13 Screws: Corrosion resistant, self-tapping Philips truss head, of length and gauge to suit installation.
- .14 Ceiling Hanger Pins (for fixing to metal): capacitor discharge ceiling hanger pins, by Continental Studwelding Ltd., or approved equivalent, of type approved by Consultant.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

- .1 Employ mechanics skilled in this Trade and install work in strict accordance with the system manufacturer's printed directions to produce a first class, true finish, free from dropping, warpage, soiled or damaged tile.
- .2 Make provisions for thermal movement.
- .3 Install hanger inserts in a manner approved by Consultant.
- .4 Locate hangers directly over Main Tees and as close to intersections as possible. Secure hangers firmly to concrete inserts, steel joists and beams, bracing, etc. Do not install hangers to metal deck, provide separate grid off joists if required.
- .5 Erect ceiling grid plumb and square with accurately fitted locked-in joints in true alignment, secure and rigid and with provision for thermal movement. Water level ceiling to tolerance of 1mm in 1m and maximum deviation of 4mm. from mean level.
- .6 Frame around recesses fixtures, diffusers, grilles, and the like and provide heavier section hangers and supports as necessary to support same. Provide hanger within 150mm. of each fixture corner.
- .7 Consult with Electrical and Mechanical Trades for requirements and provide access to valves and switches.
- .8 Ensure that all hangers and carrying members are designed and spaced to support entire ceiling system including recessed lighting fixtures. Note, weight of fixtures is approximately 9-13.5 kg.
- .9 Install panels only after all mechanical and electrical equipment, conduits, piping, telephone distribution, etc. are in place.
- .10 Co-ordinate ceiling work to accommodate components of other sections, to be built into acoustical ceiling components, such as light fixtures, diffusers, speakers and sprinkler heads.

.11 Neatly cut acoustical units to fit tightly around all building elements that penetrate ceiling.

3.2 INSTALLATION OF LAY-IN SUSPENSION SYSTEM

- .1 Install suspension system in accordance with ASTM-C636 except where specified otherwise. Install suspension system to manufacturer's instructions and certification organization's tested design requirements where referenced.
- .2 Generally hangers shall be spaced at not more than 1200mm o.c. directly above main runner tees, <u>except at fixtures</u>, where they shall be 600mm o.c. or closer as required to adequately support fixtures. Locate hangers as close as possible to tee junctions. Locate first hanger within 300mm of perimeter wall.
- .3 Install main tee runners continuous at 1200mm o.c. with interlocking structural cross-tees each side of fixtures at right angles to main tees. Install standard cross-tees generally at 90 degrees to main tees and as required to achieve pattern shown on reflected ceiling plans. Secure joints by web of tees; snaplock into place forming rigid connections. Main tees shall be as long as possible with butt ends joined by means of splice plates locked into webs.
- .4 Frame up around light fixtures, grilles, diffusers, speakers, openings, etc. as required.
- .5 Secure edge moldings to walls, bulkheads and other vertical surfaces at perimeter edges of acoustic ceilings. Note special moldings required.
- .6 Securely fix hangers to tees by bending ends 90 degrees at the correct height and inserting through holes in top of main tees, then wiring around open side at least 3 turns twisting ends together. Flats shall be bolted to tees. Secure to concrete inserts in similar manner.
- .7 Do not erect ceiling suspension system until work above ceiling has been inspected by the Building Inspector.
- .8 Do not secure hangers to fluted steel floor or roof deck. Secure hangers to overhead structure using attachment methods as required for particular structure and acceptable to the Consultant. Where structural spacing exceeds ceiling hanger spacing, provide double carrying channels nested and placed perpendicular to and on top of bottom flange of steel beams or on top of the lower chords of the open web steel joists, and secured to each joist with three loops of 1.2mm galvanized soft steel wire.
- .9 Where obstructions interfere with the placement of ceiling hangers, provide double carrying channels nested and hung from the structure above on both sides of the obstruction.
- .10 Provide isolation hangers at all hangers where indicated as required for specific ceiling assemblies.
- .11 Install hangers on main tees spaced at maximum 1200mm centres and within 150mm from ends of main tees and tee splices.

- .12 Lay out with border units not less than 50% of standard unit width and according to reflected ceiling plans.
- .13 Ensure suspension system is coordinated with location of related components.
- .14 Install typical wall moulding to provide correct ceiling height.
- .15 Completed suspension system shall support super-imposed loads, such as lighting fixtures, diffusers, grilles, speakers and other ceiling mounted fixtures.
- .16 Support at light fixtures and diffusers with additional ceiling suspension hangers within 150mm of each corner and at maximum 600mm around perimeter of fixture. Install an additional hanger immediately above each fastener for ceiling mounted curtain tracks.
- .17 Interlock cross member to main runner to provide rigid assembly. Ensure all main tee splices and cross tee end clips are fully engaged.
- .18 Frame at openings for light fixtures, air diffusers, speakers and at changes in ceiling heights.
- .19 Finished ceiling system shall be square with adjoining walls and level within 6mm in 3000mm.

3.3 LAY-IN PANEL INSTALLATION

- .1 End panels shall not be less than half full size and installation in each area shall be symmetrical, with end tiles and abutting opposite vertical wall surface to be of the same width. Do all necessary cutting and fitting neatly and accurately to suit grid openings and accommodate fixtures, grilles, detectors, speakers and the like located on the ceiling panels.
- .2 Lay directionally patterned acoustic panels in one direction, parallel to the longest direction of the grid concerned.
- .3 Place panels between tees so that edges bear evenly on flanges.
- .4 Confirm with reflected ceiling plans.
- .5 Provide fire rated enclosures as required around light fixtures and mechanical equipment in fire rated ceilings, according to applicable ULC Design Criteria.
- .6 Where mechanical equipment is located above the ceiling, panels shall be suitably and inconspicuously marked by the use of small colour-coded stickers. Mechanical equipment to be located shall include valves, dampers, heat exchangers, heat pumps, VAV boxes, electrical disconnects, as applicable, and other such equipment not visible from below.

DIVISION 09 – FINISHES

3.4 CLEANING

- .1 Upon completion, clean acoustic tile of all finger marks and other defacements.
- .2 Remove all accumulated rubbish and excess materials from the site.
- .3 Clean acoustic tile and replace any damaged tiles immediately before occupation of building by Owner.

END OF SECTION

25-7692-RFT - Grand River Collegiate Institute Asbestos Removal for Family Studies Renovation

Opening Date: March 7, 2025 1:00 PM

Closing Date: March 24, 2025 2:00 PM

Schedule of Prices

* Denotes a "MANDATORY" field

Do not enter \$0.00 dollars unless you are providing the line item at zero dollars to the Board.

Bid Price Form

The amounts stipulated on the Bid Price Form(s) are intended to cover the cost of the complete Work as described in this Procurement and must remain fixed and firm for the term of the Contract unless otherwise specified in this Procurement.

All prices shall be in Canadian Funds, Free On Board (FOB) Destination, and Freight Prepaid (Board locations). and shall be exclusive of Harmonized Sales Tax (HST) but shall include all materials, labour, equipment, disbursements, expenses, insurance, bonding, customs charges, freight, shipping and handling costs, travel costs and all other charges of every kind attributable to the Work and Services provided.

Bid Price includes Cash Allowance

Line Item	Description	Unit of Measure	Quantity	Bid Price *	Total
	25-7692-RFT Grand River Collegiate Institute Asbestos Removal for Family Studies Renovation	Lump Sum	1		
	Subtotal:				

Summary Table

Bid Form	Amount
Bid Price Form	
HST (13%)	\$ 0.00
Total Contract Amount:	

Bidder Instructions

Answer all questions that are marked Mandatory. Reference information is provided below

Question #1 Reference

Bill S-211 - This enactment enacts the Fighting Against Forced Labour and Child Labour in Supply Chains Act, which imposes an obligation on certain government institutions and entities to ensure measures are taken to prevent and reduce the risk that forced labour or child labour is used by suppliers or in their supply chains. The Board principles align with Bill S-211.

Question #2 Reference

"Ontario Business" definition as per the BOBI Act:

- is a supplier, manufacturer or distribution of any business structure;
- conducts its activities on a permanent basis in Ontario; and
- has either
 - its headquarters or main office in Ontario, or
 - at least 250 full-time employees in Ontario at the time of the applicable procurement process.

Question #4 Reference

The Board will require General Contractors on the approved Roster List to have their IHSA - Certificate of Recognition (COR®) by January 2026. Although not mandatory for this bid opportunity, the Board requests bidders to respond to the question below YES or NO.

NOTE: By responding NO, you acknowledge the deadline requirement above.

Confirm your organization will comply with this Act. YES or NO. If no, please explain.	
Does your company qualify as an Ontario Business under the BOBI Act? YES or NO	
If you answered NO to Question #2 above, is your company a Canadian business? YES or NO	
Does your company have a current IHSA - Certificate of Recognition (COR $^{(\! R)}$)? - YES or NO	

Specifications

Bidder's Contact Information

A Site Supervisor and Project Manager, assigned to manage and supervise the Work, must be named in this form. Personnel will be subject to approval by the Board and cannot be changed without prior written approval from the Board.

A dedicated Site Supervisor is required full-time for this project. If your company is awarded more than one project/contract, a different Site Supervisor is required for each project. In the event of this situation, you have the option to name and include a resume for an alternative Site Supervisor at this time.

If providing an alternative Site Supervisor with your submission, it is understood, that the alternative Site Supervisor will only be reviewed if the first Site Supervisor has already been accepted and working on another WRDSB project.

Note: resumes are required to be uploaded in the document section. Optional for alternative Site Supervisor

Title	Name *	E-mail *	Cell Phone Number *	
Project Manager				*
Site Supervisor				*
Optional – Alternative Site Supervisor				

Documents

It is your responsibility to ensure the uploaded file(s) is/are not defective or corrupted and are able to be opened and viewed by the Owner. If the attached file(s) cannot be opened or viewed, your Bid Submission may be rejected.

Upload a resume for each person named in the Specification section.

- Project Manager Resume * (mandatory)
- Site Supervisor Resume * (mandatory)
- Optional Alternative Site Supervisor Resume (only if Site Supervisor #1 is assigned to another WRDSB project prior to this award) (optional)

BONDING UPLOAD SECTION

Refer to the Bonding Requirements Section of the Terms and Conditions.

Bonding is required if the project is equal to or greater than \$200,000.00. Note: The Bidding System has flagged these fields as mandatory. If your bid is less than \$200,000.00, please upload a pdf document stating: Not Applicable.

Bidders shall upload their electronically verifiable and enforceable (e-Bond) format for Bid Deposit Bond and Agreement to Bond separately in this section. If both Bonds are in the same pdf file, please upload it in both fields and indicate one is a "duplicate"

The date on the Bonds must be the Closing Date

Tender # and Project Title must be included on the Bonds

- Bid Deposit Bond * (mandatory)
- Agreement to Bond * (mandatory)

Addenda, Terms and Conditions

I/We have read and understand this Bid Solicitation document, and agree to perform the Work required in accordance with this Bid

Solicitation document, including all addenda, at the price(s) detailed in the Bid.

I/We confirm that:

1. The person named in this Bid is authorized to sign and electronically submit this Bid through the Bidding System.

2. I/We meet all mandatory requirements of the Bid Solicitation document.

3. The bid will remain open for a specified acceptance period after the Closing Time. The Board may, at any time within this period, accept the Bid whether or not any other Bid has previously been accepted.

4. All prices provided in the Bid will remain fixed and firm for the duration of the term of the agreement, unless specified otherwise.

5. All prices provided in my/our Bid are in Canadian funds and include all charges of every kind attributable to the Work. Harmonized Sales Tax will be extra and not shown, unless specified otherwise.

6. To the best of my/our knowledge and belief:

a) the information provided in the Bid is correct; and

b) the Bid is made without any comparison of figures or arrangement with any other individual, corporation or person submitting a Bid for the same Work and is in all respects fair and without collusion or fraud.

7. I/We comply with the all applicable Board policies, provincial, and federal laws, and are aware of the Board's "Principles of Business Conduct" and will comply.

8. I/We agree and understand that the recommendation to award the Work may be subject to the approval from the Board as well as availability of funds.

9. I/We agree to be bound by the terms and conditions of the Bid Solicitation document and submit this Bid on behalf of the Bidder.

I have the authority to bind the Bidder.

The Bidder/Proponent is to declare any actual, potential or perceived conflict of interest that could arise from submitting the Bid/Proposal.

Do you have a potential conflict of interest?

Yes No

The Bidder acknowledges and agrees that the addendum/addenda below form part of the Bid Solicitation Document.

Please check the box in the column "I have reviewed this addendum" below to acknowledge each of the addenda.

There have not been any addenda issued for this bid.