

Request for Tender RFT 24-044

Concrete Masonry Exterior Upgrades at Pilgrim Wood PS

Closing Date: March 18, 2024

Closing Time: 2:00 p.m.

Sealed RFTs will be received **via email to chatelaina@hdsb.ca** on or before 2:00 p.m., Eastern Daylight Time

Late or Facsimile Bids will not be considered

February 26, 2024

Amanda Chatelain, CPPO, CPPB Supervisor – Purchasing

Communications Notice

To obtain documents online please visit: https://hdsb.bidsandtenders.ca

If you subscribe to bids & tenders you can login to your account to download the document(s) without the preview watermark. You may also opt to purchase a one-time download for this opportunity. Documents are not provided in any other manner.

All proponents shall be registered as a Plan Taker for this opportunity, which will enable the proponent to download the Request for Proposal (RFP) without the watermark preview, to receive addenda email notifications, and to download addenda.

Should the HDSB receive a proposal that is subsequently found to be from a bidder that is not registered with bids & tenders and the bidder did not obtain the proposal document from https://hdsb.bidsandtenders.ca the HDSB reserves the right to remove the proposal from further consideration.

To ensure receipt of the latest information and updates via email regarding this opportunity, the onus is on the proponent to register as a Plan Taker for this opportunity at https://hdsb.bidsandtenders.ca.

The following documents form part of all HDSB competitive proposal documents:

HDSB Procurement Administrative Procedure:

https://www.hdsb.ca/our-board/Policy/Procurement.pdf

HDSB Asbestos Management in Facilities Administrative Procedure:

https://www.hdsb.ca/our-board/Policy/AsbestosManagementInFacilities.pdf

HDSB Vendor Performance Management Administrative Procedure:

https://www.hdsb.ca/our-board/Policy/VendorPerformanceManagement.pdf

Broader Public Sector Procurement Directive

https://www.doingbusiness.mgs.gov.on.ca/mbs/psb/psb.nsf/Attachments/001-BPS_Procurement Directive/\$FILE/BPS Procurement Directive.pdf

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Part A – Outline and Instructions

1. Introduction and Board Profile

The Halton District School Board is composed of approximately 104 school locations (90 elementary and 16 secondary schools). These locations service approximately 67,000 regular day school students (Junior Kindergarten to Grade 12). The HDSB employs approximately 10,860 employees. Please visit http://www.hdsb.ca for additional information.

2. General Terms of the RFT

The Halton District School Board, hereinafter referred to as HDSB, is seeking qualified Contractors to provide all the necessary labor, materials and equipment to complete Concrete Masonry Exterior Upgrades at Pilgrim Wood Public School located at 1551 Pilgrims Way, Oakville, ON L6M 2W7.

Work is to begin July 1, 2024 and shall be completed by August 31, 2024. Specific details of the RFT are to be found in the attached scope of work, drawings and photographs.

3. Bid Security and Bonding Requirements

Any bid submission equal to or greater than \$500,000 inclusive of tax, must be submitted with a Bid Bond in the value of ten percent (10%) of the Total Cost and a Surety Consent in favour of the Halton District School Board. The Surety Consent shall cover a Performance Bond and a Labour & Materials Payment bond, each in the amount of fifty percent (50%) of the contract price as a guarantee that the Bidder shall execute the contract upon award. The Bid Security so submitted shall be irrevocable and valid for 90 from the closing date set for the submission of tender.

In order to be considered for award of a contract equal to or over \$500,000 inclusive of tax, the Bidder shall submit as part of their Submission, a Surety Consent, completed by a Bonding Company. Any others will not be accepted.

Upon receipt of written notice from the Halton District School Board that it has been awarded the Contract, the successful Bidder shall provide, within five (5) working days of such notice, an original Performance Bond and a Labour and Material Payment Bond, each for the amount of fifty per cent (50%) of the total lump sum price, to guarantee the performance of all obligations of the Contract.

4. RFT Closing Information

The HDSB is currently unable to accept submissions via the Bids and Tenders platform. Bidders must submit their Submission <u>via email</u> on or before 2:00 p.m., Eastern Daylight Time on **March 18, 2024** (the "Closing Time") to the following address:

chatelaina@hdsb.ca
Attention: Amanda Chatelain

Submissions will be deemed to be officially received by the time stamp issued by the HDSB's email server. Submissions received after the official closing time will be declared non-compliant and shall not be considered during the selection process. Electronic submission shall be no larger than 25MB. Proponents are responsible for confirming that their submission has been successfully received.

5. Accuracy of Information/Liability for Errors or Omissions

While the HDSB has used considerable efforts to ensure an accurate representation of information in this document, the information contained in it is supplied solely as a guideline for Bidders. Any data contained in this RFT or provided by way of Addenda are estimates only and are for the sole purpose of indicating to the Bidder the general size of what is being requested hereunder. The information is not guaranteed or warranted to be accurate by the HDSB, nor is it necessarily comprehensive or exhaustive. Nothing in this document is intended to relieve Bidders from forming their own opinions and conclusions with respect to the matters addressed in this RFT. It is the Bidder's responsibility to avail itself of all the necessary information to prepare a Submission in response to this RFT.

6. Communication After RFT Issuance

All Communications regarding any aspect of this RFT <u>must be submitted via Bids and Tenders</u>. Bidders that fail to comply with the requirement to direct all communications to the RFT Authority via Bids and Tenders may be disqualified from this RFT process.

Without limiting the generality of this provision, Bidders shall not communicate with or attempt to communicate with the following as it relates to this RFT:

- any employee or agent of the HDSB, other than the RFT Purchasing contact;
- any member of the HDSB governing body including, without limitation, the director, officers, trustees, superintendents, and any advisors thereto;

Bidders shall promptly examine this RFT and all Appendices, including the Form of Tender, and:

- shall report any errors, omissions or ambiguities; and
- may direct questions or seek additional information on or before the Deadline for Questions to the RFT Purchasing contact.

It is the responsibility of the Bidder to seek clarification, by submitting questions to the RFT Authority via Bids and Tenders, on any matter it considers to be unclear. The HDSB shall not be responsible for any misunderstanding on the part of the Bidder concerning this RFT or its process.

In the event a Bidder has any reason to believe that an error, omission or ambiguity exists, the Bidder must notify the RFT Authority via Bids and Tenders prior to submitting a Proposal.

If appropriate, the RFT Authority will then clarify the matter for the benefit of all Bidders by publication on the same public platform, its website or by notice to Bidders who have requested a copy of this RFT in the same manner as set out in section 6 below.

In answering a Bidder's questions, the HDSB will set out the question, without identifying the Bidder that submitted the question, and the HDSB may in its sole discretion:

- edit the question for clarity;
- answer similar questions from various Bidders only once.

Where an answer results in any change to the RFT, such answer will be formally evidenced through the issue of a separate addendum for this purpose.

7. Addenda

If the HDSB for any reason, determines that it is necessary to provide additional information relating to this RFT, such information will be communicated to all Bidders by addendum in the same manner the RFT was communicated. Each Addendum shall form an integral part of this RFT. This RFT may only be amended in accordance with this section.

All questions related to this Tender must be submitted in writing via bids and tenders prior to 2 p.m. on February 28, 2024. Any addendum will be posted no later than March 1, 2024.

Any amendment or supplement to this RFT made in any other manner will not be binding on the HDSB. All Addenda shall become an integral part of this RFT and shall be incorporated into any content. Each Bidder shall be responsible for verifying before depositing its Proposal that it has received all Addenda that have been issued.

8. Planned Schedule of Events – Project Schedule

Event Date	
Release of RFT	February 26, 2024
Site Meeting	March 4, 2024
Question Deadline	March 6, 2024
Issuance of Final Addendum	March 8, 2024
RFT Closing	March 18, 2024
Timeline for Completion of Work	July 1, 2024 - August 31, 2024

9. Bidder's Costs

Bidders shall bear all costs and expenses incurred relating to any aspect of its participation in this RFT process, including all costs and expenses relating to the Bidder's participation in:

- the preparation, presentation and receipt of its Submission;
- the Bidders attendance at any meeting in relation to the RFT process, including any presentation or interview;
- the conduct of any due diligence on its part, including any information-gathering activity;
- the preparation of the Bidder's own questions prior to the Deadline for Questions;
 and
- any discussion and/or finalization, if any, in respect of the Form of Agreement.

10. Bidding Format

Unless otherwise specified in these RFT documents or the final contract entered into between the HDSB and the successful Bidder, responses shall be for a stipulated sum without escalator clauses or other qualifications (when applicable). Bidders submitting a bid with escalator clauses or other qualifications that are not in accordance with the terms and conditions of this RFT may have their bid rejected.

All information entered on this RFT document must be typewritten or entered in ink. No pencil entries will be accepted.

Erasure(s), overwriting or strike-out(s) must be initialed in ink by the person signing this Submission.

Respondents will use the following format for their submission:

- Form of Tender (<u>complete</u> form must be included with your submission, including bonds and any other information as may be required herein)
- Appendix A Signed Declaration Sheet (must be included with your submission)
- Bid Security and Bonding Requirements as required

11. Pricing

Please do not add tax to base (unit) price. (when applicable). Early payment discounts may be considered part of the Submission. Credit Card payment acceptance may be considered part of the Submission.

12. Subcontractors

The General Contractor must select a subcontractor from the HDSB pre-qualified list of sub-contractors attached in Appendix B.

The Contractor agrees to preserve and protect the rights of the parties under the contract with respect to work performed under subcontract, and shall:

- enter into contracts or written agreements with their subcontractors to require them to perform their work in accordance with and subject to the terms and conditions of the contract. Further, the Contractor shall be fully responsible to the Owner for acts and omissions of their subcontractors and of any persons directly or indirectly employed by them as for acts and omissions of persons directly employed by them.
- therefore, agree that they will incorporate the terms and conditions of the Contract Documents into all Subcontractor Agreements they enter into with their subcontractors.

The HDSB reserves the right, at its discretion to waive the requirement to utilized the mandatory list of pre-qualified sub-trades at any time during the tendering process based on market conditions.

13. Site Meeting

There will be a Non-Mandatory Site Meeting on March 4, 2024 at the main office of Pilgrim Wood Public School located at 1551 Pilgrims Way, Oakville, ON L6M 2W7.

The Non-Mandatory Site Meeting will start at 4:00 p.m.. Bidders shall follow Public Health and HDSB Covid-19 protocols while on site.

Part B - Standard Terms and Conditions

14. Scope

Unless otherwise expressly stated these Standard Terms and Conditions form a part of this document and apply in like force to contracts for the purchase of commodities as stated in this document. All Bidders will be bound by the terms and conditions set forth, except as specifically qualified in Special Terms and Conditions issued in connection with this document or any Addenda issued relating to this document.

15. Definitions

As used herein as well as in all RFSQ, RFQ, RFP, RFI, Tender or contract documents issued by the Halton District School Board, the following definitions will apply.

Addenda/Addendum	an addition/change made to this document, subsequent to its printing or publication.	
Applicable Law and Applicable Laws	means any common law requirement and all applicable and enforceable statutes, regulations, directives, policies, administrative interpretations, orders, by-laws, rules, guidelines, approvals and other legal requirements of any government and/or regulatory authority in effect from time to time.	
Bid/Submission/Proposal	an offer from a Bidder in response to a Proposal/Tender which is subject to acceptance or rejection.	
Proponent	a legal entity, being a company, partnership or individual who submits a Bid, Proposal, or Submission in response to a formal request for Bid, Proposal, or Submission.	
Board/HDSB	means the Halton District School Board.	
Contract	means the agreement, in writing, governing the performance of the Work and/or the purchase and sale of commodities and includes, without limitation, the document (including standard terms and conditions), Bidder Submission and the written document accepting the Bidder Submission (including any notice of acceptance or award).	

Document	means the document describing the Goods and/or Services to be purchased and the terms upon which the Goods and/or Services are to be purchased and includes, without limitation, those documents referenced on the index of the document and such Addenda as may be issued by the HDSB.	
Goods or Services	product and/or any and all labour, vehicles or equipment used by a Bidder in fulfilling a Contract.	
нѕт	means Harmonized Sales Tax.	
Intellectual Property	means any trademark, copyright, moral right, patent, industrial design, trade name, domain name, trade secret, know how, integrated circuit topography or other intellectual property, industrial property or proprietary right owned by, licensed to, or used by any third person.	
Mandatory Requirement	a minimum requirement — where the words "mandatory", "must", "required", "shall" and/or "will" are referenced in this document and such requirement is identified as a Mandatory Requirement. Failure to comply will deem the submission non-compliant and the bid/submission will be disqualified.	
Proposal/RFP	a sealed written offer to supply Goods and/or Services of any value, acceptance of which may be subject to negotiation.	
Quotation/RFQ	a written offer to supply Goods and/or Services with a value that is less than \$100,000.	
Response	the package submitted by a Bidder in response to an RFP or RFT.	
Specifications	those stated requirements for the Goods and/or Services set out in the document.	
Subcontractor	a person, firm or corporation having a direct contract with the contractor to perform a part or parts of the Work, or to supply Goods worked to a special design according to the contract documents, but does not include one who merely supplies Goods not so worked.	
Tender/RFT	a sealed written offer to supply Goods and/or Services with a value that is greater than \$100,000.	

Bidder Submission	means the document as completed by the Bidder for the purpose of offering to sell to the HDSB the services and/or goods specified in the document, and includes but is not limited to Quotations, Tenders and Proposals.
Work	means the Work to be undertaken by the Bidder pursuant to the provisions of the Contract.

16. Reserved Rights of the HDSB

The HDSB reserves the right to:

- (a) make public the names of any or all Bidders;
- request written clarification or the submission of supplementary written information in relation to the clarification request from any Bidder and incorporate a Bidder's response to that request for clarification into the Bidder's Submission;
- (c) assess a Bidder's Submission on the basis of:
 - (i) a financial analysis determining the actual cost of the Submission when considering factors including quality, service, price and transition costs arising from the replacement of existing goods, services, practices, methodologies and infrastructure (howsoever originally established);
 - (ii) information provided by references;
 - (iii) the Bidder's past performance on previous contracts awarded by the HDSB;
 - (iv) the information provided by a Bidder pursuant to the HDSB exercising its clarification rights under this RFT process; or
 - (v) other relevant information that arises during this RFT process;
- (d) waive formalities and accept Submissions that substantially comply with the requirements of this RFT;
- (e) verify with any Bidder or with a third party any information set out in a Submission:
- (f) check references other than those provided by any Bidder;
- (g) disqualify any Bidder whose Submission contains misrepresentations or any other inaccurate or misleading information;

- (h) disqualify any Bidder or the Submission of any Bidder who has engaged in conduct prohibited by this RFT;
- (i) disqualify a Bidder for any conduct, situation or circumstance that constitutes a Conflict of Interest, as solely determined by the HDSB and at any time.
- (j) make changes, including substantial changes, to this RFT, provided that those changes are issued by way of addenda in the manner set out in this RFT;
- (k) select any Bidder other than the Bidder whose bid reflects the lowest cost to the HDSB:
- (I) review all Bidders utilizing the HDSB Vendor Performance Management Administrative Procedure, which can include suspension of Bidders who fail to meet the HDSB's expectations or who are involved in litigation or threatened litigation against HDSB. The HDSB Vendor Performance Management Administrative Procedure is found at the attached link

(www.hdsb.ca/our-board/Policy/VendorPerformanceManagement.pdf)

- (m) award to one or more bidders according to their requirements;
- (n) cancel this RFT process at any time and for any or no reason;
- (o) cancel this RFT process at any stage and issue a new RFT for the same or similar deliverables;
- (p) accept any Submission in whole or in part; or
- (q) award to multiple bidders if circumstances are warranted;
- (r) reject any or all Submissions;
- (s) to limit the number of pre-qualified Bidders eligible to submit proposals for any future projects. HDSB shall not be obligated to provide all pre-qualified Bidders with the same opportunity to bid on all future projects within each stated category. By participating in this RFT, Bidders acknowledge that there is no guarantee that a Bidder will receive any assignments, work or projects and that there is no expectation that any specified number of projects will be made available during the pre-qualification term:

and these reserved rights are in addition to any other express rights or any other rights that may be implied in the circumstances.

In addition, the HDSB reserves the right at any time during normal business hours, and as often as the HDSB may deem necessary, to examine, the successful Bidder's

records with respect to the successful Bidder's services under the Bidder's purchase order and/or Submission and any Contract. The successful Bidder shall permit the HDSB to audit, examine, and make copies, excerpts or transcripts from such records, and to make audits of data relating to matters covered by a Submission, any purchase order and/or any Contract. The successful Bidder shall maintain and retain all records and other documents related to a Submission, any purchase order, and/or any Contract for a period of seven (7) years from the date of final payment, except in cases where unresolved audit questions require a longer period of time for resolution, as determined by the HDSB.

17. Litigation with the HDSB

The HDSB may, in its absolute discretion, reject a Submission submitted by a Bidder prior to or after a Submission opening, if the Bidder:

- (a) is or has in the past 10 years been a party to litigation with the HDSB; or
- (b) directly or indirectly, including by common ownership or control or otherwise, is related to a party currently in litigation with the HDSB or a party that has in the past 10 years been in litigation with the HDSB; or
- (c) intends to use a subcontractor in respect of a specific project who is, or has in the past 10 years been a party to litigation with the HDSB, or who is related to a party currently in litigation with the HDSB or a party that has in the past 10 years been in litigation with the HDSB.

For the purposes hereof, the phrase "litigation with the HDSB" includes cases in which the Bidder or prospective Bidder or any of the parties named above, has advised the HDSB in writing of their intention to commence litigation, or have commenced or have advised the HDSB of their intention to commence an arbitral proceeding against the HDSB (excepting only construction lien demands, notices or proceedings or arbitrations under O. Reg 444/98 of the Education Act).

In determining whether or not to exercise its discretion as set out herein, the HDSB will consider whether the litigation (past or current) is likely to affect a Bidder's ability to work with the HDSB, its consultants and representatives, and whether the HDSB's experience with the Bidder, the related party or subcontractor, as the case may be, in the matter giving rise to the litigation, indicates that the HDSB is likely to incur increased staff and legal costs in the administration of the Contract if it is awarded to the Bidder.

18. Accessibility for Ontarians with Disabilities (AODA)

The HDSB is committed to accessibility and preventing and removing barriers for persons with disabilities. Where practicable, the HDSB will incorporate accessibility features and criteria when procuring or acquiring goods, services and facilities, in which case, a Bidder must be capable of recommending and delivering same in an inclusive

and accessible manner, consistent with the Ontario Human Rights Code ("OHRC"), the Ontarians with Disabilities Act, 2005 ("AODA") and its Regulations, in order to achieve accessibility for Ontarians with disabilities. If the HDSB determines that it is impractical to do so an explanation will be provided upon request.

In accordance with Ontario Regulation 429-07 made under the AODA, the HDSB has established policies, practices and procedures governing the provisions of its services to persons with disabilities, which may be found at:

https://www.hdsb.ca/our-board/Pages/Accessibility.aspx

19. Ability to Negotiate/Contract Negotiations

The HDSB reserves the right to enter into negotiations with any Bidder as it sees fit, or with another Bidder concurrently. The HDSB will not incur liability to any Bidder as a result of these negotiations.

The HDSB may, prior to and after Contract award, negotiate changes to the specifications, the type of materials or any conditions with the successful or preferred Bidder or one or more of the Bidders without having any duty or obligation to advise any other Bidder or to allow them to vary their bid prices as a result of such changes, and the HDSB shall have no liability to any other Bidder as a result of such negotiations or modifications.

20. Agree to Abide by the Established Process

It is vital to the HDSB that the process leading to the recommendation of a bidder(s) and the conclusion of an agreement for the provision of these services be, and be seen to be, open and fair and that each of the respondents is treated equally.

No respondent can be seen to be deriving, intentionally or otherwise, an advantage or information, which is not equally available to all other respondents. Nor is it acceptable that any advantage or information be sought or obtained from any unauthorized staff or representative of the HDSB, or any benefit derived from any special or personal relationships or contacts.

All communications, including requests for information, between respondents to this RFT and the HDSB should be between only the representative(s) of the HDSB who has been authorized and designated for that particular purpose. Bidders must not rely on information from any other source.

21. Assignment

Unless otherwise stated in this document, it is mutually agreed and understood that the successful Bidder will not assign, transfer, convey, sublet or otherwise dispose of the Contract (in whole or in part) or the right, title or interest therein, or the Bidder's power to

execute such contract to any other person, firm, company or corporation without the previous written consent of the HDSB. Any act in derogation of the foregoing shall be null and void. For the purposes hereof, the transfer or issuance of shares by a Bidder of more than fifty (50%) percent of the voting securities of a Bidder to any third party other than to an affiliate (as such term is defined in the Business Corporations Act (Ontario)) or the shareholder or shareholders of the Bidder as of the Closing Date, whether or not such transfer or issuance of voting securities takes place in one or more transactions, shall, for the purposes of this Agreement, be deemed to be an assignment of the Contract requiring the consent of the HDSB, unless such transfer or issuance of shares is made pursuant to an initial public offering of common shares under the Securities Act (Ontario).

22. Award

The final award will be based on (but not limited to) the best value for money and quality service delivery from a Bidder who complies with the provisions of this Submission solicitation, including specifications, contractual terms and conditions, who can reasonably be expected to provide satisfactory performance on the proposed Contract based on reputation, references, performance on previous contracts, and sufficiency of financial and other resources, and provides a solution that is a fit with the HDSB's requirements. The lowest price or bid shall not be the sole, determinative factor.

23. Breaking a Tie

In the event of a tie score, the HDSB will resolve same based on the earlier date/time stamp of when the bid was received by HDSB in accordance with this RFT.

24. Change Orders

A change order results when unforeseen conditions are identified from the original scope of work (Contract or Purchase Order) and is inextricably tied to the original scope.

The following steps should occur prior to issuance of a change order that does not originate from HDSB senior management:

- appropriate HDSB approval must be acquired prior to modifying any Contract or Purchase Order
- appropriate written HDSB approval must be obtained prior to commencing the work.

All requests or recommendations for Change Orders shall include the impact to both price and schedule for the work to be performed. HDSB shall have the right to retain consultants or experts to help identify the need or to verify the impact of the change order on the project.

No change in the work shall proceed without the written approval of the Owner. Any change shall be initiated by Owners "WORK ORDERS" which shall bear the change cost and the Contractor's and Owner's representative's signatures as an instruction to proceed. All changes shall be restricted to five percent (5%) overhead and five percent (5%) profit applied to the labour and material cost.

25. Conflict of Interest

For the purposes hereof, "Conflict of Interest" includes:

- (a) in relation to the Submission process, the Bidder has an unfair advantage or engaged in conduct, directly or indirectly, that may give the Bidder an unfair advantage, including:
 - (i) having or having access to information in the preparation of the Submission that is confidential to the HDSB and not available to other Bidders;
 - (ii) communicating with any person with a view to influencing preferred treatment in the Submission process; or
 - (iii) engaging in conduct that compromises or could be seen to compromise the integrity of the open and competitive process and render that process non-competitive and unfair; or
- (b) in relation to the performance of the Work, services or contractual obligations, the Bidder's other commitments, relationships or financial interests:
 - could or could be perceived to exercise an improper influence over the objective, unbiased and impartial exercise of the Bidder's independent judgments; or
 - (ii) could or could be perceived to compromise or impair or be incompatible with the effective performance of the Bidder's work, services or contractual obligations.

The Bidder shall:

- (a) avoid any Conflict of Interest in the Submission process and in the performance of its contractual obligations;
- (b) disclose to the HDSB without delay any actual or potential Conflict of Interest that arises during the Submission process or during the performance of its contractual obligations; and

(c) comply with any requirements prescribed by the HDSB to resolve any Conflict of Interest.

In addition to all other contractual rights or rights available at law or in equity, the HDSB may immediately disqualify a Submission or terminate the Contract upon giving notice to the Bidder where:

- i. the Bidder fails to disclose an actual or potential Conflict of Interest;
- ii. the Bidder fails to comply with any requirements prescribed by the HDSB to resolve a Conflict of Interest; or
- iii. the Bidder's Conflict of Interest cannot be resolved.

This paragraph shall survive any termination or expiry of the Contract.

26. HDSB Confidential Information

For the purposes hereof, "HDSB Confidential Information" means all information of the HDSB that is of a confidential nature, including all confidential information in the custody or control of the HDSB, regardless of whether it is identified as confidential or not, and whether recorded or not, and however fixed, stored, expressed or embodied, which comes into the knowledge, possession or control of the Bidder in connection with the Contract. For greater certainty, HDSB Confidential Information shall:

(a) include:

- (i) all new information derived at any time from any such information whether created by the HDSB, the Bidder or any third party;
- (ii) all information (including Personal Information) that the HDSB is obliged or has the discretion not to disclose under provincial or federal legislation or otherwise at law; but
- (b) not include information that:
 - (i) is or becomes generally available to the public without fault or breach on the part of the Bidder of any duty of confidentiality owed by the Bidder to the HDSB or to any third party;
 - the Bidder can demonstrate to have been rightfully obtained by Bidder without any obligation of confidence, from a third party who had the right to transfer or disclose it to the Bidder free of any obligation of confidence;

- (iii) the Bidder can demonstrate to have been rightfully known to or in the possession of the Bidder at the time of disclosure, free of any obligation of confidence when disclosed; or
- (iv) is independently developed by the Bidder;

but the exclusions in this subparagraph shall in no way limit the meaning of Personal Information or the obligations attaching thereto under the Contract or at law.

During and following the term of the Contract, the Bidder shall:

- (a) keep all HDSB Confidential Information confidential and secure;
- (b) limit the disclosure of HDSB Confidential Information to only those of its directors, officer, employees, agents, partners, affiliates, volunteers or subcontractors who have a need to know it for the purpose of carrying out its obligations under the Contract and who have been specifically authorized to have such disclosure;
- (c) not directly or indirectly disclose, destroy, exploit or use any HDSB Confidential Information (except for the purpose of carrying out its obligations under the Contract or except if required by order of a court or tribunal), without first obtaining:
 - (i) the written consent of the HDSB; and
 - (ii) in respect of any HDSB Confidential Information about any third party, the written consent of such third party;
- (d) provide HDSB Confidential Information to the HDSB on demand; and
- (e) return all HDSB Confidential Information to the HDSB before the end of the Term, with no copy or portion kept by the Bidder.

27. Criminal Background Checks

The Bidder acknowledges that the HDSB must be in compliance with Regulation 521/01 of the Education Act (Ontario) - Collection of Personal Information with respect to criminal background checks and offence declarations. The Bidder covenants and agrees to assist the HDSB in complying with same by providing the HDSB, or such other entity as the HDSB may designate, with a criminal background check covering offences under the Criminal Code, the Narcotics Control Act, and any other offences which would be revealed by a search of the automated Criminal Records Retrieval System maintained by the RCMP or, in instances where the Bidder will have access to or is responsible for minors or vulnerable persons, a Vulnerable Persons Clearance certificate in addition to the above ("Criminal Background Check"), together with an Offence Declaration in HDSB approved form, for every individual or employee of the

Bidder who may come into direct contact with students on a regular basis at a school site of the HDSB, or who may have access to student information.

For the purposes of this document, the HDSB shall determine in its sole and unfettered discretion whether an individual or employee of the Bidder may come into direct contact with students on a regular basis or may have access to student information. The Bidder agrees to indemnify and save harmless the HDSB from all claims, liabilities, expenses, and penalties to which it may be subjected on account of the Bidder's failure to provide a Criminal Background Check and an Offence Declaration, as aforesaid. This indemnity shall survive the expiration or sooner termination of the Contract. In addition, and notwithstanding anything else herein contained, if the Bidder fails to provide a Criminal Background Check and an Offence Declaration for an individual or employee of the Bidder who may come into direct contact with students on a regular basis at a school site of the HDSB or who may have access to student information, then the HDSB shall have the right to forthwith terminate the Contract without prejudice to any other rights which it may have in the Contract, in law or in equity.

28. Debrief

The HDSB, at the written request of a Bidder will conduct a debriefing. Bidders must submit their request within sixty (60) days of Contract award notification. The HDSB will only identify any weaknesses or strengths in the Bidder's submission. No information regarding other Bidders' submissions will be disclosed. The intent of the debriefing information session is to assist a Bidder in presenting a better Submission in subsequent procurement opportunities. Any debriefing provided is not for the purpose of providing any opportunity to challenge the procurement process.

29. Dispute Resolution

In the event that a Bidder wishes to review the decision of the HDSB in respect of any material aspect of the RFT process, and subject to having attended a debriefing, the Bidder shall submit a protest in writing to the RFT Authority within ten (10) days from such a debriefing.

Any request that is not received in a timely manner will not be considered, and the Bidder will be notified in writing.

A protest in writing shall include the following:

- (a) a specific identification of the provision and/or procurement procedure that is alleged to have been breached;
- (b) a specific description of each act alleged to have breached the procurement process;
- (c) a precise statement of the relevant facts;

- (d) an identification of the issues to be resolved; and
- (e) the Bidder's requested remedy.

For the purpose of a protest, the HDSB will review and address any protest in a timely and appropriate manner. HDSB's decision in this regard is final.

30. Environmental Statement

The HDSB, when practically and financially feasible, will consider the acquisition of goods and services that will reduce the environmental footprint of the HDSB.

31. Force Majeure

Delays in or failure of performance by either party under the Contract shall not constitute default thereunder or give rise to any claim for damages if caused by occurrences beyond the control of the party affected, including but not limited to, decrees of Governments, acts of God, fires, floods, riots, wars, rebellion, sabotage, and atomic or nuclear incidents. Lack of finances, strikes, lockouts or other concerted acts by workers shall not be deemed to be a cause beyond a party's control.

In the event that performance of the Contract in the reasonable opinion of either party is made impossible by an occurrence beyond the control of the party affected, then either party shall notify the other in writing. The HDSB shall either terminate the Contract forthwith and without any further payments being made, or authorize the Bidder to continue the performance of the Contract with such adjustments as may be required by the occurrence in question and agreed upon by both parties. In the event that the parties cannot agree upon the aforementioned adjustment, it is agreed by the parties that the Contract shall be terminated.

32. Guarantees and Warranties

All Work shall be done in a good and workmanship like manner. All materials, goods and services must meet the applicable specifications, either by the HDSB, its consultant on the project or the manufacturer. The Bidder warrants and guarantees that all materials, Goods; Services and workmanship will be free from defects and fit for the purpose intended by the HDSB. All Goods delivered by the Bidder must be new, in good working order and of the latest model possessing all accessories standard to the manufacturer's stock model. The Goods and/or Services must be covered by written guarantees and warranties acceptable to the HDSB.

33. Health & Safety / WHMIS

Bidders and/or contractors must comply with the Occupational Health and Safety Act and its regulations. All Bidder's contractors and subcontractors and their respective employees will have received health and safety training appropriate to their trade, and will be able to provide proof thereof to the HDSB upon request. Contractors shall be

held responsible for any subcontractors where such are permissible by the HDSB. The HDSB may request and suppliers/contractors/subcontractors will provide evidence of such training at any time.

Suppliers/contractors/sub-contractors shall comply with the HDSB policies, programs and procedures at all times while on site. All suppliers/contractors/sub-contractors are required to sign in upon arrival/exit at a HDSB location prior to beginning and at completion of Work.

Suppliers and/or contractors/sub-contractors shall be held responsible for all fines and/or contraventions of legislation which have been incurred by the HDSB.

As per Ontario regulation 278/05 section 10 (5) the HDSB will provide contractors/sub-contractors performing work in HDSB buildings access to the site-specific asbestos inventory. Site specific asbestos inventories are available at each HDSB site. Contractors/sub-contractors shall review the site-specific asbestos inventory in relation to the scope of work they are undertaking, prior to the commencement of work. The requirements of the HDSB's Asbestos Management Administrative Procedure are to be adhered to at all times. A copy of the HDSB's Asbestos Management Administrative Procedure can be found at:

http://www.hdsb.ca/our-board/Policy/AsbestosManagementInFacilities.pdf.

All Work is subject to prior approval by the appropriate HDSB department.

Contractors shall examine carefully the HDSB's Asbestos Register for the Work site, in addition to examining existing conditions for suspected Asbestos Containing Materials (ACM), on which completion of Work is dependent.

Upon discovery of unforeseen suspected ACM affecting completion of the Work, the Contractor shall cease any operations that may disturb said materials and notify the Owner immediately.

The Contractor shall arrange for removal of ACM affecting completion of Work through a HDSB-approved ACM abatement contractor, and arrange for coordination of testing through HDSB Facility Services, if required.

Contractors shall be responsible for any sub-contractors in their employ with respect to the aforementioned requirements.

34. Indemnification and Liability

The Bidder hereby agrees to indemnify and hold harmless the HDSB, its directors, officers, trustees, employees and agents from and against all liability, loss, costs, damages and expenses (including legal, expert and consultant fees), causes of actions, actions, claims, demands, lawsuits or other proceedings, by whomever made, sustained, incurred, brought or prosecuted if:

- (a) resulting from the Bidder's failure to observe and conform to the standards established by law or by any other association which has established standards recognized by the Province of Ontario;
- (b) relating to labour and equipment furnished for the Work; and
- (c) involving inventions, copyrights, trademarks or patents, and rights thereto, used in doing the Work and in the subsequent use and operation of the Work or any part thereof upon completion.

35. Insurance and Liability

The successful bidder must indemnify the HDSB from any and all manner of damage or injury, risk, claims, demands, actions, penalties, causes of action, damages and any and all costs arising out of, or incurred by reason of provision of goods and/or services by the bidder. The cost of such insurance will be the responsibility of the Bidder.

The successful bidder(s) will obtain and provide current proof of insurance upon the award, that the successful Bidder will be covered by:

at least Two Million Canadian Dollars (C\$2,000,000.00) of comprehensive commercial general liability insurance for bodily injury, property damage, operations liability, contractual liability and tenant's legal liability, including umbrella liability insurance covering liability arising from premises, operations, independent contractors, products-completed operations, personal injury and liability assumed under the Contract;

at least One Million Canadian Dollars (C\$1,000,000.00) of business automobile liability insurance and, if necessary, umbrella liability insurance for owned, hired and non-owned vehicles covering bodily injury and property damage: and with an insurer licensed to carry on business in the Province of Ontario.

In the case of multi-year contracts, a copy of a valid certificate must be provided to the Halton District School HDSB annually thereafter, at least thirty (30) days prior to the anniversary date of the contract commencement date. At commencement of the Contract and throughout the Contract duration, certification shall be submitted on a Certificate of Insurance form with the above-mentioned coverage, thereby protecting the Halton District School Board against claims for property damage and bodily injuries, including accidental death, caused by the successful Bidder(s) or its employees and/or Subcontractors during the performance of its obligations under the Contract.

The Halton District School Board must be named as additional insured, and the policy must contain a cross liability clause, and thirty (30) day prior notice clause of any cancellation, non-renewal or product change in coverage, terms or conditions.

As a condition precedent to contract award, Certificates of all such insurance policies shall be filed with the HDSB by the successful Bidder and shall be subject to the HDSB's approval as to the adequacy of protection.

All the above-mentioned insurance shall be maintained until the HDSB certifies that the work is complete.

36. Invoicing/Payment/EFT

To ensure that payment is not deferred, the following information shall be on all invoices:

- Bidder's Name or Business Number, Address, Telephone Number and HST registration number
- Invoice Date
- Invoice Number
- Purchase Order Number, Name of Requester, Shipment Destination
- Name of Halton District School Board staff that issued this order
- Complete Good/Service Description (including hourly rates, service/delivery dates, service location)
- Attach Copy of Service Report/Work Order Completed
- Terms of payment
- Total of HST where applicable
- Total Amount Payable

The HDSB's method of payment is by Electronic Funds Transfer (EFT). If the Bidder is a new vendor or current vendor who has not previously utilized the EFT payment service or has banking information which has changed, then an "Application of Vendor Direct Deposit" form is required to be completed, which is available through the Purchasing contact for this document. This form along with a voided cheque or letter from the Bidder's bank should be sent to:

Halton District School Board Attention: Accounts Payable Department J.W. Singleton Centre, PO Box 5005 Stn LCD 1, Burlington ON L7R 3Z2 or

electronically to: apeft@hdsb.ca before any invoices are submitted to the HDSB for payment. Payment terms are Net 28. Early payment discounts may be considered.

37. Irrevocability

The Submission will be open for acceptance by the HDSB and irrevocable by the Bidder for a period of ninety (90) calendar days from the Closing Date.

38. Municipal Freedom of Information and Protection of Privacy Act ("MFIPPA")

- (a) The Bidder acknowledges and agrees that the HDSB is subject to MFIPPA. The Bidder further expressly acknowledges and agrees that, upon the acceptance of a successful Submission and conclusion of this process (including execution and delivery of the Contract between the HDSB and the successful Bidder), subject to subsection (b) below, the Submission shall not be considered confidential for the purposes of Section 10 of MFIPPA and, in the event of an access request or at the discretion of HDSB, shall be subject to release in its entirety without redaction.
- (b) Notwithstanding paragraph (a) above, the Bidder and the HDSB acknowledge and agree that the information listed below is considered to be supplied by the Bidder to the HDSB in confidence:
 - 1. For Services: Hourly rates/fees and information from which such rates/fees could be reasonably deduced.
 - 2. For Goods: Unit costs and information from which such unit costs could be reasonably deduced.
- (c) Notwithstanding the foregoing, the Bidder acknowledges and agrees that, because the HDSB is subject to MFIPPA, all or part of any Submission, including information supplied in confidence, may be subject to release in response to an access request submitted pursuant to MFIPPA. In the event that the HDSB receives a request for access to all or part of a Submission supplied in confidence, the HDSB shall deliver the relevant notice to the Bidder, who shall bare all costs, legal or otherwise, with respect to any objection the Bidder may have in respect of the release of any or all parts of the Submission pursuant to MFIPPA.

39. No Guarantee of Work or Exclusivity of Contract

The HDSB makes no guarantee of the value or quality of goods or services or volume of work to be assigned to the successful Bidder. Any Contract executed with a successful Bidder may not be an exclusive Contract for the provision of the requested Goods or Services. Quantity where specified more or less, are estimates of previous consumption and are furnished without liability to the HDSB.

40. Non-Performance/Termination of Contract

If the Bidder delivers substandard, unapproved or defective items, which are rejected by the HDSB, the Bidder agrees to replace these items at the Bidder's expense with items of a quality deemed acceptable to the HDSB within a 48-hour period of the mutual satisfactory agreement being reached. If the Bidder fails to replace the items within this

48-hour period, the parties agree that the HDSB may purchase substitutes for the rejected items in the open market at no additional cost or liability to the HDSB.

Where at any time the quality of the Goods or Service supplied by the successful Bidder is not of a satisfactory standard, the HDSB may issue a verbal warning outlining the deficiency in supply or other aspects of performance and requiring the successful Bidder to correct those deficiencies within such period of time as stated. If the deficiency is not corrected within the time specified, or having been corrected, there is a further instance of deficient performance, the HDSB may issue a written notice to the successful Bidder, identifying the deficiency in performance and setting a final date or time period for its correction, and advising that if corrective steps are not taken by that date or within that time, the HDSB may terminate the Contract and take corrective action itself.

Until the HDSB is satisfied that the unsatisfactory performance has been corrected, the HDSB may hold back from any payment an amount sufficient to rectify the unsatisfactory performance until its requirements have been met.

The HDSB reserves the right, in its absolute discretion, to terminate a Contract immediately without penalty, costs or damages of any kind whatsoever, where the Bidder has violated any laws or performed any of the following acts while performing work with the HDSB and further reserves the right to take that failure into account with respect to the award of any future contract.

- a) over-billing or duplicate billing;
- b) splitting of invoices;
- c) charging for items not supplied;
- d) charging for items not approved prior to invoicing;
- e) charging for items of one grade, while supplying items of an inferior grade;
- f) Misrepresentation as to the quality or origin of goods, their functionality or suitability for a purpose, or their performance characteristics;
- g) not responding to the HDSB or, failure to complete contract.

41. Ownership

The Submission, along with all correspondence, documentation and information provided to the HDSB by any Bidder in connection with or arising out of the Submission, once received by the HDSB, shall become the property of the HDSB and may be appended to any Contract and/or purchase order with the successful Bidder.

42. Permits, Licenses and Approvals

Bidders shall obtain all permits, licences and approvals required in connection with the supply of the Goods and/or Services. The costs of obtaining such permits, licences and approvals shall be the responsibility of, and shall be paid for by the Bidder.

Where a Bidder is required by any Applicable Law to hold or obtain any such licence, permit, or approval to carry on an activity contemplated in its Submission or in the Contract, neither the acceptance of the Submission nor the execution of the Contract by the HDSB shall be considered an approval by the HDSB for the Bidder to carry on such activity without the requite licence, permit, consent or authorization.

Without in any way limiting the generality of the foregoing, any electrical Goods being proposed for consideration pursuant to this RFT must be authorized or approved in accordance with the Electrical Safety Code or by a certification organization accredited with the Standards Council of Canada Act (Canada), and shall bear the certification organization's mark identifying the Goods certified for use in Canada. Certification shall be to the standard that is appropriate for the intended use of the electrical Goods at any of the HDSB's schools or facilities.

43. Co-operative Purchasing Provisions

This document is being issued by the HDSB to meet the HDSB's requirements. The successful Bidder acknowledges that the Provincial Government encourages cooperative procurement initiatives by School HDSBs. Bidders shall indicate on the Form of Quotation if they are willing to extend pricing and submission terms to other District School Boards in the province of Ontario where the scope of work is deemed similar or the same and where both parties are in agreement, in which case they shall be deemed to have granted consent to the HDSB to share the Submission with such HDSBs, subject to such HDSBs agreeing to receive the Submission in confidence on the understanding that the Submission contains financial, commercial, technical and other sensitive information of the Bidder. The Bidder will not be penalized if it does not agree to this provision. The HDSB will not incur any financial responsibility in connection with any purchase by another School Board. Each School Board shall accept sole responsibility for its own contract management such as placing orders and making payments to the successful Bidder.

44. Proof of WSIB Coverage

If the Bidder is subject to the Workplace Safety and Insurance Act ("WSIA") or the Workplace Safety and Insurance Amendment Act, 2008 ("WSIAA"), the Bidder shall submit a valid clearance certificate of Workplace Safety and Insurance Board ("WSIB") coverage to the HDSB before commencing the performance of any work or services. In addition, the Bidder shall, from time to time during the term of the Contract and at the request of the HDSB, provide additional WSIB clearance certificates. The Bidder covenants and agrees to pay when due, and to ensure that each of its subcontractors pays when due, all amounts required to be paid by it or its subcontractors, from time to

time during the term of the Contract, under the WSIA and/or the WSIAA, failing which the HDSB shall have the right, in addition to and not in substitution for any other right it may have pursuant to the Contract or otherwise at law or in equity, to pay to the WSIB any amount due pursuant to the WSIA or the WSIAA unpaid by the Bidder or its subcontractors and to deduct such amount from any amount due and owing from time to time to the Bidder pursuant to the Contract together with all costs incurred by the HDSB in connection therewith.

45. Right to Withdraw

Submissions may be withdrawn prior to the Closing Time. Following Closing, no Submission may be withdrawn. Any Bidder who attempts to do so may have a negative Performance Evaluation placed on record with the HDSB in accordance with the Vendor Performance Management Administrative Procedure

(www.hdsb.ca/our-board/Policy/VendorPerformanceManagement.pdf)

46. Smoking on HDSB Property

Smoking of any substance and in any manner is prohibited in all HDSB buildings and on all HDSB property. This includes, without limitation, tobacco, cannabis in any form and vaping.

47. Vehicle Operation on HDSB Property

The successful Bidder shall use due care and caution when motorized vehicles are in operation on school property while students are expected to enter or exit the school building and/or are visible outside the school building on school property or adjacent property, particularly during recess, lunch period and preceding and following the end of the school day. Vehicles operated in parking lot and driveway areas shall not be driven at a speed in excess of 8-kilometers/per hour.

Further, on school property drivers must turn off vehicles and remove the keys during any stop. At no time are vehicles to be left running while unattended. It is recommended that the vehicle be locked when left unsupervised. The HDSB will not be responsible for any theft of, or any theft from, vehicles operated by the successful Bidder.

Asphalt play areas around the exterior of the school building are not constructed to handle heavy vehicles. Bidders will be held responsible for any damage to HDSB property including but not limited to asphalt or natural surfaces as a result of using them for access of heavy vehicles. Making good of natural surfaces or asphalt areas that are damaged in the course of the work shall be to the original (new) condition irrespective of their condition prior to commencement of the work, or the condition of the adjacent unaffected areas. Vehicles are only permitted to access, stand or be parked in areas designated by administrative staff of HDSB, which for the purposes of this provision does not include principals of schools.

48. Bidder Conduct

When on HDSB property, the Bidder and its employees must:

- have proper identification (name badge, uniform with logo, photo I.D. etc.).
- be dressed appropriately (the following are not appropriate: clothing that fails to contain the anatomy when the person is carrying out normal duties; clothing with printed slogans, advertising or designs that are obscene or could have a double meaning).
- use appropriate language.
- refrain from wearing scented products or fragrances such as perfume, cologne, after shave, shampoos (as required).
- work with dignity, courtesy and respect for self and others.
- not make noise or move in corridors during morning announcements, and playing of the national anthem.
- observe procedures during fire evacuation and lockdowns, whether they are actual or test (drills).
- park in spots designated by the Principal.

The Bidder must observe all HDSB policies and procedures including but not limited to: Smoke-Free Environment; Sexual, Racial and Ethno Cultural Harassment, etc.

The Bidder will ensure that the education program is not interrupted and that the health and safety of the students and staff is not compromised.

No person who is impaired by alcohol or drugs will enter and/or remain on HDSB property.

The Bidder agrees that its employees and subcontractors will observe and comply with all standards, procedures, policies, rules and regulations of the HDSB, including but not limited to privacy, use of facilities, equipment, building security and computer technology.



FORM OF TENDER

Project: Concrete Masonry Exterior	opgrades - Pilgrilli wood PS
Project Reference #: RFT 24-044	

From (Bidder):	
Compa	ny Name
Street Address	
City, Province and postal code	
Phone Number	Email Address
To (Owner): Halton District School Board 2050 Guelph Line Burlington, Ontario L7P 5A8	
We, the undersigned, having examined the Troject, including Addenda, hereby offer to p Tender Documents, for the Stipulated Price of:	
A - Base Bid Amount (Exclusive of HST)	\$
B - Cash Allowance - Inspection, Testing, and Unforeseen	\$ 15,000.00
C - Contingency Allowance	\$ 20,000.00
Total Base Bid Amount (A + B + C) (Excluding HST)	\$
Proposed Subcontractor	
Roofing	

Form of Tender Continued RFT 24-044 Concrete Masonry Exterior Upgrades - Pilgrim Wood PS Page 2 of 2

We, the undersigned, declare that:

- a. We agree to perform the Work within the required completion time specified in the Tender Documents.
- b. We have arrived at the Tender without collusion with any competitor,
- c. This Tender is open to acceptance by the Owner for a period of 90 days from the date of Tender Closing,
- d. All Form of Tender supplements called for by the Tender Documents from an integral part of this Tender.

Signature:					
Ü	LEGAL NAME OF BIDDER			DATE	
AUTHORIZED	O SIGNATURE OF BIDDER	&	TITLE	PRINTED NAME	
I have the au	ithority to bind the Bidder				



APPENDIX A - DECLARATION SIGNATURE SHEET

- 1. I/WE DECLARE that this Submission is made without collusion, knowledge, and comparison of figures or arrangement with any other company, firm or person submitting a Submission for the same work.
- I/WE DECLARE that to our knowledge no member of Halton District School Board is, will be
 or has become financially interested, directly or indirectly, in any aspect of the Contract other
 than in the appropriate discharge of his/her obligations as an employee/officer of Halton
 District School Board.
- 3. I/WE HAVE READ, Understood and agree to abide by the Agreement to Abide by the Established Process.
- 4. I/WE HAVE CAREFULLY examined the RFT documents, and have a clear and comprehensive knowledge of what is being requested hereunder. By submitting the Submission, the Bidder agrees and consents to the administrative procedures of the Board, as well as the procedures, terms, conditions and provisions of the RFT, including the Form of Tender.
- 5. I/WE have carefully examined all of the Proposal Documents, and that we have thoroughly reviewed all proposal documentation and addenda number _____to____, and hereby accept and agree to same as forming part and parcel of the proposed Contract.

6. I/WE ARE AUTHORIZED BY and have the authority to bind the Bidder.	
DATE:	
NAME:	
Please Print	
SIGNATURE:	
TITLE:	
COMPANY NAME:	
ADDRESS:	
PHONE NUMBER:	_
E-MAIL ADDRESS:	
E-MAIL to Send PO:	

APPENDIX B

HDSB LIST OF APPROVED SUBCONTRACTORS

ROOFING

Vendor Name Contact Name		Email Address	Telephone Number
Atlantic Roofers Ontario Ltd.	Tony Pocobene	tpocobene@on.aibn.com	905-573-6202
Atlas-Apex Roofing	John McDowell	inquiries@atlas-apex.com	416 421 6244
Bothwell Accurate	Lenny Baptista	LBaptista@bothwell-accurate.com	905-673-0615
Crawford Roofing Corporation	Nelson Rites	nelson.rites@crawfordr∞fing.ca	416.787.0649
Dean-Chandler Roofin Limited	Ken Goodale	kengoodale@deanchandler.ca	416.751.7840
ED Roofing Limited	Kyle MacLean	k.maclean@edroofing.com	905-2733190
		dianne@eileenroofing.com	416-762-1819
Flynn Canada Ltd. Joseph Raposo		Joseph.Raposo@flynncompanies.com	905-643-9515
GRRC Roofing George Roque		george@grrc.ca	905-393-7989
King Koating Roofing Inc.	Kevin Lawrie	sales@kingkoating.com	905-669-1771
Maxim Rooting JOSD Macedo I		estimating@maximroofing.ca jmacedo@maximroofing.ca	416-452-5218
Nedlaw Roofing Adam Duke		adam@nedlawroofing.com	519-648-2218
Nortex Roofing Ltd. Sandra Furtado		sandra@notexroofing.com	416-236-6090
Semple Gooder Roofin Corporation	Mark Baxter	rcapretta@semplegooder.com	416-743-5370
Solar Roofing & Sheet Metal Ltd.	Sonia Gaio-Francisco	sonia@solarroofing.ca solarroofing@bellnet.ca	(416) 658 6045
T.Hamilton & Sons Roofing Inc.	Irina Valodzina	ivalodzina@thrtoronto.com	416-755-5522
Top-Line Roofing & Sheet Metal	Jason Bras	jason.bras@top-lineroofing.com a.kumar@top-lineroofing.com	905.602.0760
Trio Roofing Systems Inc.	Paulo Vieira	paulo@trioroofing.ca	905.456.1688
Triumph R∞fing Marco Peneda		info@triumphinc.ca	416 534 8877

SCOPE OF WORK

Provide all necessary labour, material and equipment required to remove and dispose existing exterior wall components and provide new Concrete Masonry exterior upgrades as specified herein.

Contractor shall refer to Hossack & Architects Specifications and drawings including all mechanical, electrical and structural for Pilgrim Wood Public School - Addition 1 - Exterior Wall Renovations to be inclusive as part of this tender..

Contractor shall refer to Arcadis Canada Inc, Designated Substance & hazardous Materials (DSHM) report and Abatement Specifications to be inclusive as part of this tender.

Contractor shall carry HDSB, pre-qualified roofing contractor for all related roofing and sheet metal work.

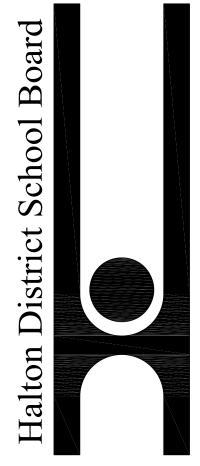
Contractor shall complete work from July 1, 2024 to August 31, 2024.



RENOVATION TO PILGRIM WOOD PUBLIC SCHOOL

ARCHITECTURAL DRAWINGS

- A01 PROPOSED PARTIAL ROOF PLAN & DETAILS
- A02 DEMOLITION AND PROPOSED ELEVATIONS
 A03 PROPOSED WALL SECTION AND DETAILS
- A04 SPECIFICATION
- A05 EXISTING PHOTOS (REFERENCE ONLY/ OF 2013 BUILD)



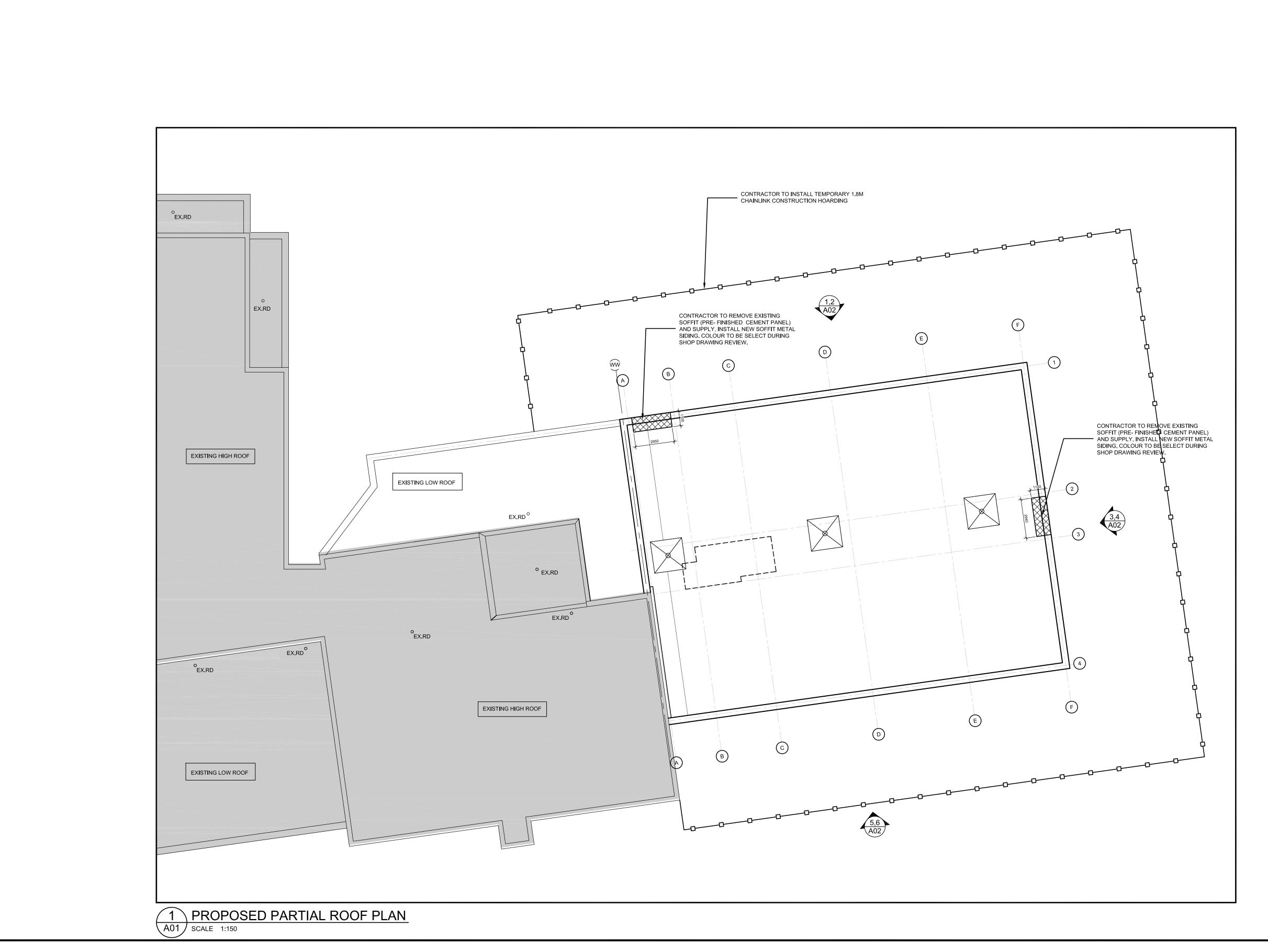
RENOVATION TO PILGRIM WOOD PUBLIC SCHOOL

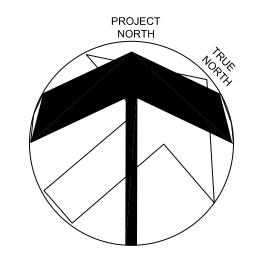
1551 PILGRIMS WAY, OAKVILLE ON. L6M 2W7 FEBRUARY 2024

KEY LOCATION PLAN



23127







KEY SITE PLAN (NTS.)

AREA OF WORK

O REVISIONS DATE

1 ISSUED FOR TENDER FEB-9-24
IO ISSUED DATE
DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST

DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT; AND MUST REPORT ANY DISCREPANCIES TO THE CONSULTANTS BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE CONSULTANTS.

RENOVATION TO PILGRIM WOOD PUBLIC SCHOOL

1551 PILGRIMS WAY OAKVILLE, ON L6M 2W7

PCL BLK 47-2, SEC 20M436: FIRSTLY; BLK 47, PL 20M436, SECONDLY; BLK 86, PL 20M469; ST H426706; OAKVILLE

LEGAL DESCRIPTION

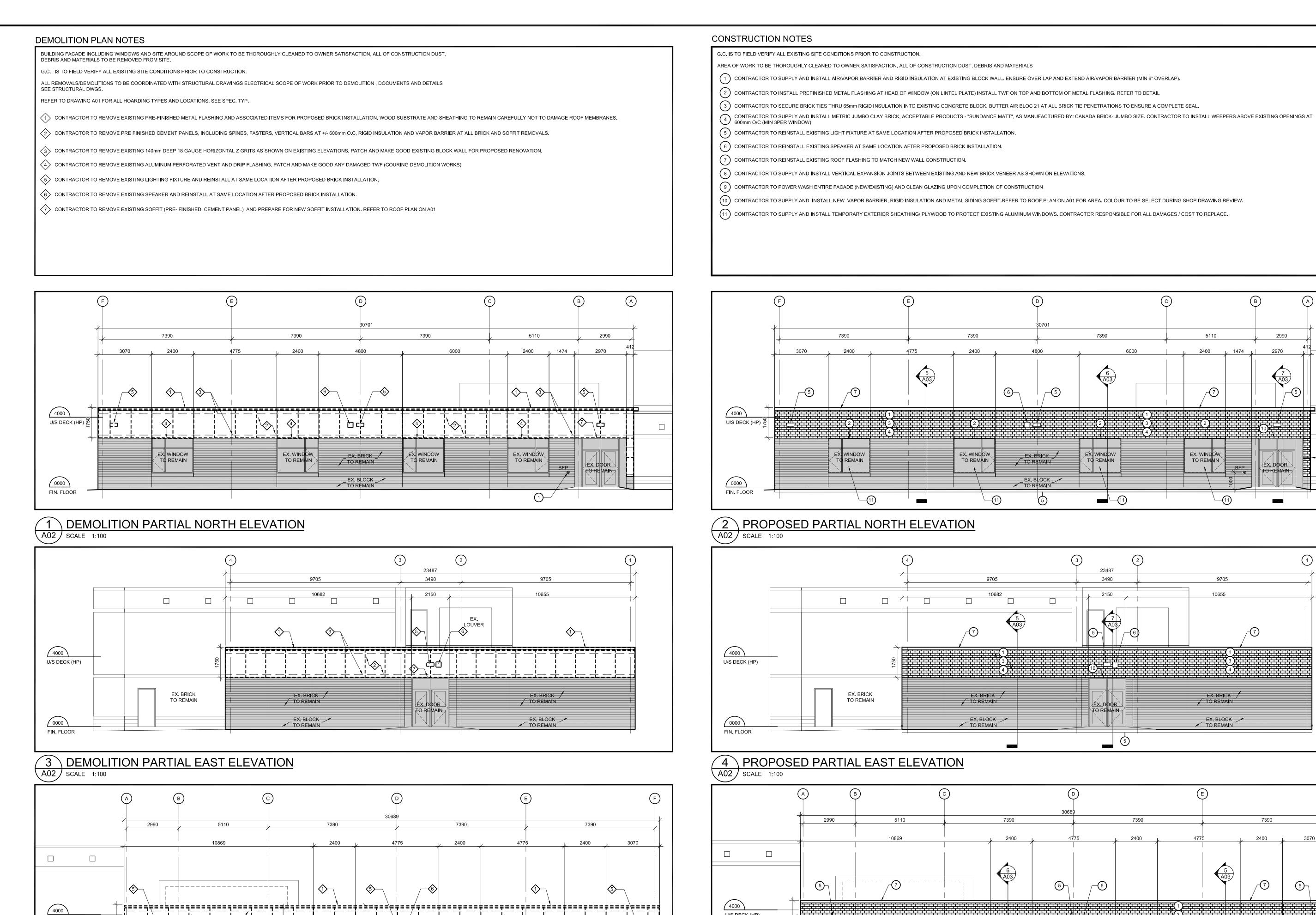
HALTON DISTRICT SCHOOL BOARD J.W.SINGLETON EDUCATION CENTRE 2050 GUELPH LINE BURLINGTON, ON., L7R 3Z2 TEL. (905) 335-3663 FAX (905) 335-9802

PROPOSED PARTIAL ROOF PLAN & DETAILS

> HOSSACK & ASSOCIATES ARCHITECTS



SCALE AS SHOWN	PROJECT
DATE FEB 2024	23127
DRAWN GY	DRAWING A
CHECKED ST/CT	AUI



¦ 65

EX. WINDOW TO REMAIN

EX. BRICK

EX. BLOCK

TO REMAIN

TO REMAIN

EX. WINDOW TO REMAIN

EX. WINDOW TO REMAIN

U/S DECK (HP)

TO REMAIN EXPANSION

A02 SCALE 1:100

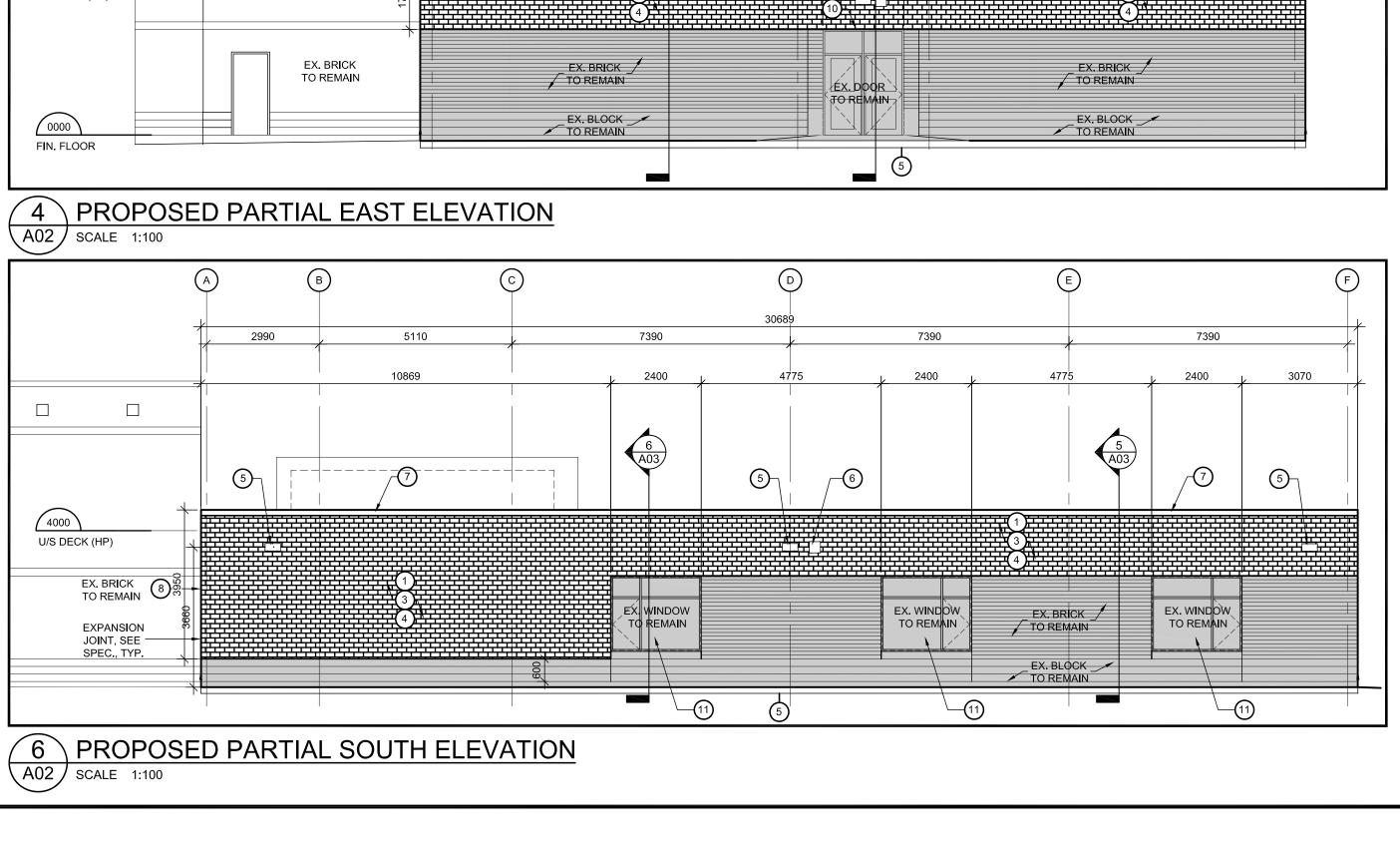
COMP. PANEL, 5

DEMOLITION PARTIAL SOUTH ELEVATION

COLOUR TYPE '2

JOINT, SEE

SPEC., TYP.



7390

3490

5110

9705

10655

KEY SITE PLAN (NTS.)

AREA OF WORK

REVISIONS

THE PROJECT; AND MUST REPORT ANY DISCREPANCIES

O THE CONSULTANTS BEFORE PROCEEDING WITH THE

ORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE

RENOVATION TO

PILGRIM WOOD PUBLIC SCHOOL

LEGAL DESCRIPTION

HALTON DISTRICT SCHOOL BOARD J.W.SINGLETON EDUCATION CENTRE

PCL BLK 47-2, SEC 20M436: FIRSTLY; BLK 47,

DEMOLITION AND

PROPOSED

ELEVATIONS

HOSSACK

& ASSOCIATES

ARCHITECTS

4-2150 DUNWIN DRIVE MISSISSAUGA, ONTARIO L5L 5M8

Tel (905) 607-8284 Fax (905) 607-8290

23127

A02

SCALE

DATE

FEB 2024

DRAWN GY

CHECKED ST/CT

AS SHOWN

PL 20M436, SECONDLY, BLK 86, PL 20M469;

ST H426706; OAKVILLE

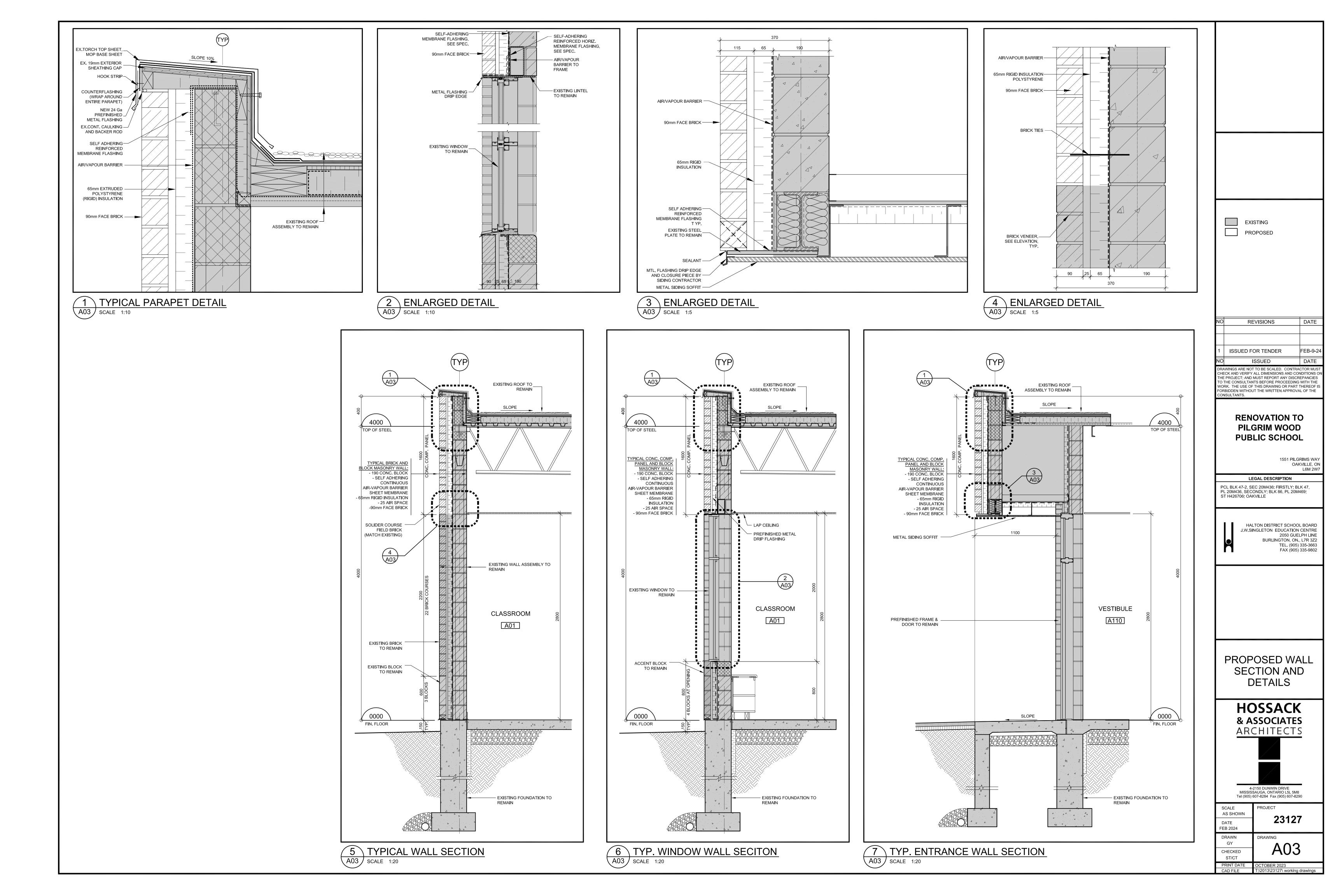
1551 PILGRIMS WAY OAKVILLE, ON

2050 GUELPH LINE BURLINGTON, ON., L7R 3Z2 TEL. (905) 335-3663

FAX (905) 335-9802

WORK. THE USE OF THIS DRAWING OR PART THEREOF I

ISSUED FOR TENDER



Section 01 00 50: Gen. Instructions &

Summary of Work -Construct the work under a single, lump sum stipulated The building will remain occupied for the duration of the

-The Owner will not entertain additional charges or claims for premium, overtime, or after-hours work. -For any periods of work during which the school is occupied the contractor vehicular access is specifically restricted

between the following hours: 8:00 to 9:00 a.m. and 3:00 p.m. -Work to the mechanical room addition and renovation may proceed during normal work hours subject to avoiding loa construction noise and fumes being restricted to after-hours

-No claims for additional charges or delays will be accepted if not reviewed and formally accepted in advance. -The Consultant has made every effort to document the existing building. Ascertaining the specific site and building onditions is the responsibility of the Contracto -Where the alterations interface with existing, execute all connections with existing work under this contract. Norkmanship and materials shall be in accordance wi requirements of latest issue of CSA specifications. OBC. NBC, Industrial Safety Act, Public Health Act, Ontario Fir Code, manufacturer's instructions and applicable municipal

-Examine work site, check and verify existing construction and conditions affecting work, notify architect of any screpancies before proceeding with work, commencemen of work shall be deemed acceptance of conditions The General Contractor to provide temporary barricade screens or barriers as shown on contract documents, as directed by the Consultant and/or authorized Board Representative, for the safety of persons, or for dividing the Work from portion or portions of the building or site that maybe required for use by the school, or others Properly protect and dust seal areas of the existing building -Prepare interference drawings AND SUBMIT AS SHOP

DRAWINGS IN ADVANCE OF PRODUCTION to properly co-ordinate the work. Coordinate these drawings with all -As part of the Tender, the General Contractor shall provide all necessary garbage bins through the duration of the piect. The General Contractor shall ensure that all areas of the Work clean and orderly, free from accumulation of dirt,

trash items. Remove such items for all areas of the Work on -Guarantee workmanship and material for 1 years after date of substantial completion -Contractor shall provide all warranties and closeout documents for review and approval by Hossack & Associates with respect to completeness and compliance to

the contract and forward the approved closeout documents to the Project Leader. Contractor shall also provide digital as-built drawings for all building systems and component affected by work, including all addenda, COs, SIs, and any on-site conditions that are substantially different from contract documents in a PDF format acceptable to the Owner. Hard copies shall be included as part of the closeou binders. Format shall be in Binder form and CD (3 sets) or

-This specification is intended to provide a general description of labour, material, plant and equipment materials, equipment, tools and incidentals, whether specified or not, necessary to produce a workmanlike an

-The General Contractor agrees to be the "constructor within the meaning of the Ontario Occupational Health & Safety Act and shall assume all the obligations and and procedures for all work and services performed by the connection with the Project.

-Protect property and work materials and existing -Keep work site free of debris during construction, clean finished work on completion, remove debris from site -Work site to be cleaned at the end of every construction day for use by the owner. rienced full-time superintendent to be on site during all work hours to coordinate all work.

Section 01 22 00: Meetings & Progress

consultation with the Consultant not later than the second week of construction, arrange for site meetings weekly or every 2 weeks as appropriate to the stage of constr for project coordination. Such meetings shall fall at the same time each week the meeting is scheduled. Responsible representatives of the Contractor's and Subcontractor's office and field forces and suppliers shall be

-Inform the Owner, Consultant, and those others whose attendance is obligatory, of the date of each meeting, in sufficient time to ensure their attendance. ovide physical space for meetings, prepare a chair and record the minutes of each meeting. Relevant information must be made available to all concerned, in order that problems to -be discussed may be expeditiousl resolved. Identify "action by: ____ Within three days after each meeting, distribute two copies of the minutes to each invited person. -Within 5 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative

-Include in the agenda the following: 1 Appointment of official representative of participants in .2 Scheduling of Work. Schedule to include a detailed

breakdown of mechanical and electrical works. .3 Interference with ongoing business. .5 Schedule of submission of shop drawings and samples .6 Requirements for temporary facilities, site sign, offices

storage sheds utilities. .7 Delivery schedule of specified equipment. 8 Site security. .9 Contemplated change notices, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative

10Record drawings .12 Take-over procedures, acceptance, warranties,

3Monthly progress claims, administrative procedures photographs, holdbacks. 14 Appointments of inspection and testing agencies or firms. .15Insurances, transcript of policies. .16 Schedule for progress meetings. PROJECT MEETINGS FOR PROGRESS OF WORK

schedule and/or decisions made at Preconstruction meeting. Subcontractors and suppliers and those whose attendance is obligatory, of the date of the meeting, in sufficient time to

ensure their attendance. -Include in the agenda the following: .1 Review, approval of minutes of previous meeting .2 Review of Work progress since previous meeting. 3 Field observations, problems, conflicts.

.4 Problems which impede construction schedule. .5 Review of off-site fabrication delivery schedules. 6 Corrective measures and procedures to regain projected .7 Revisions to construction schedule.

8 Progress during succeeding work period .9 Review submittal schedules: expedite as required. .10Maintenance of quality standards.

11Pending changes and substitutions. .12Review proposed changes for effect on construction schedule and on completion date. 13 Other business.

PROGRESS RECORDS -Maintain a permanent written record on the site of the progress of the work using standard OGCA form. This record shall be available to the Consultant at the site, and a copy

shall be furnished to same on request. The record shall .1 Daily weather conditions, including maximum and minimum temperatures

2 Dates of the commencement and completion of stage or portion of the work of each trade in each area of the project.

.3 Conditions encountered during excavation .4 Dates of erection and removal of formwork, in each area 5 Dates of pouring the concrete in each area of the project,

with quantity and Particulars of the concrete 6 Work force on project daily per trade and active hours. Authorities and testing companies. .8 Review records with Architect at the Architect's periodic site visit and fax to his/her office.

PROGRESS REPORTS -Submit to the Architect, Monthly Progress Reports consisting of a concise narrative and a marked up summary schedule showing physical percentage complete by item and in total. These progress calculations must agree with the Progress Payment

Section 01 22 00: Meetings & Progress

DIGITAL CONSTRUCTION SCHEDULES -At the outset of the project, General Contractor to provide and maintain a digital project schedule including Mileston Dates and listing all trades.

-Update and issue to Consultant in hard copy and electronic copy not less than monthly and at each Progress Draw. To be issued in format compatible with Microsoft Project -At 70% completion of Project, develop a detailed Completion Schedule outlining final coordination and sequences to completion.

DOCUMENTS REQUIRED AT START, DURING & CLOSE-OUT OF CONSTRUCTION -At Commencement of Contract Supply Performance Bond and Labour and Material Bond including Bonds required for Mechanical and Electrical sub-contractors to be conformed my Owner. .2 Supply Public Liability and Property Damage Insurance

Certificates, also Builder's Risk and Boiler Insurance as equired of the Contract. .3 Supply Certificates of good standing from WSIB for the neral Contractor and all Subcontractors. 4 Supply a complete Contract Sum Breakdown, of all subtrades or parts of work and general expense items for approval by all consultants, Include Mechanical and

Electrical Breakdowns for review and acceptance by

Consultants. Consultant will assist with division of Required for Pre-Construction meeting: Supply a ompetent detailed Construction Schedule, in electronic and printed form, that has been reviewed and approved by major subtrades. Identify critical milestone dates ("critical path"). Electronic Form shall be updated against baseline original schedule. .6 Supply a forecast Cash Flow Schedule, showing values of monthly progress to illustrate work volume to achieve

Substantial Completion and Total Performance dates. Supply Schedule of Shop Drawing Submissions .8 Apply for and post and supply a copy of Notice of .9 Supply a copy of Health & Safety policy as well as post at .10 Supply Shoring Designs for Demolition Areas of all load bearing areas if so required or requested by the Structural Engineer.(P.eng shops required)

1 Supply Method Statements for all areas involving demolition of load bearing walls, for all areas requeste by Architect or the Structural Engineer upply interference drawings for all areas requested I the Architect, Mechanical Engineer or Electrical Engineer

Maintain as-built record drawings in clean condition. 2 Organize regular Trade Coordination meetings and take minutes. Have minutes available for review on site by Organize separate, regular Owner and Consultant Job Meetings in accordance with this Section.

Maintain a copy of up to date records on site including, but not limited to Permit Sets, Contract Documents updated with all addenda, all Changes and Supplementary Instructions issued by Consultants. inspections by Authorities and their remarks, Inspection and Testing company reports and filed reviews -Monthly with Each Progress Payment Application 1 Supply Monthly Progress Reports and Construction

Schedule in accordance with Section 012200, Meetings 2 Updated Cash Flow Schedule. Updated Construction Schedule, showing baseline and actual progress. Adjust Allowances, as required

Current WSIB Form .6 Confirm that payments are being made to subcontractors and suppliers by submission of original copies of the current versions of Statutory Declarations with the second and subsequent Progress Payment Application. Include both Statutory Declarations Form CCDC-9A for the General Contractor and CCDC-9B from subcontra with each monthly Progress Payment Application. No payment will be made for unincorporated material on the site, unless Bill of Sale in proper format is provided.

-Prior to Substantial Completion and to achieve Substantial Refer also to Section 01 00 50 & 01 77 00 .2 Prior to Substantial Completion of the work the following

to be observed, executed and submitted: .3 DEFICIENCIES ARE LISTED: prior to Substantial Completion, the contractor shall prepare a room by room deficiency list in electronic format (template to be supplied by the Consultant), print and review on site with consultants at a site meeting and post on each room of area. This list will be acted upon by all trades and coordinated and updated weekly as a minimum by the General Contractor to ensure all deficiencies are addressed by the date required for Total Performance Confirm in writing to the Architect when and on what dates each deficiency has been completed in a

satisfactory manner. The Consultant's site review will be final approval. .4 Acceptable preliminary submissions of all Mechanical and Electrical Operations and Maintenance Manuals have

.5 Acceptable preliminary submissions (90% complete) of all Warranty and Shop Drawing Records have been reviewed by Consultants. 6 All final clean-up to have been executed Preliminary Balancing Reports.

deficiencies remain outstanding, the Owner's

and accept the affected work and/or material upon

other contractors to complete the work and deduct the

administrative costs. At all times the Contractor must

communicate with Consultant on his schedule of activities

and he must perform supervision and coordination of the

completion of all deficiencies, regardless of subtrade

costs from the Completion Security Account plus

notification by the Contractor, that all deficiencies

involving this Consultant have been made good.

011100, Close Out Submittals

.8 Failure to comply with these requirements shall have amounts withheld on Progress Payments and delay issuance of Certificate of Substantial Completion. 9 Note that Prior to the Release of Holdback, a similar Progress Claim is required, and must include current Statutory Declaration Forms CCDC-9A for the General Contractor and CCDC-9B from all major

digital copy in English, made up as follows: ubcontractors/suppliers, updated to refer to the Previous Certificate of Payment. binder for 215 x 280 mm size paper. Upon completion of work before the Final Certificate of

Payment is issued, the following to be observed, 2 DEFICIENCIES ARE COMPLETE. Confirm in writing to he Architect when and on what dates each deficiency has been completed in a satisfactory manner. The Consultant's site review will be final approval.

paper dividing sheets. Include following information, plus data specified .3 Organize a Final Inspection tour at which to be present the Owner's authorized representative; the Architectura Copy of hardware and paint schedules. Structural, Mechanical and Electrical Consultants, and their supervisory personnel, if any; the Contractor and his superintendent.
.4 Where the above procedure is impossible or where any

representative and the Consultant concerned, to inspect Guarantees, Warranties and bonds showing: 1 Name and address of project. Guarantee commencement date (date of Final Certificate of Completion). Duration of guarantee. Clear indication of what is being guaranteed and

.5 A complete release of all liens arising out of this Contract, other than his own. If a subcontractor or supplier refuses to furnish a release of such a lien, furnish a bond what remedial action will be taken under guarantee. satisfactory to the Owner to indemnify him against any 6 Certificates of good standing from the WSIB, for the General Contractor and all Subcontractors. .7 All reference records, as specified, under Section

.8 Copies of all Lists of Deficiencies with each Deficiency verified when complete by only this project's job uring fabrication and installation. Superintendent. The Final List of Deficiencies to be signed, completed by all concerned, if accepted .9 Statement of Completion from General Contractor. Section 02 41 15: Selective Demolition .10Final adjustment of all Allowances. .11 Certificates required by Provincial, Municipal and other The Work includes the removal, repair and reinstallation as authorities having jurisdiction. Including signed Building

.12Digital copy of Architectural, Mechanical and electrical cleaned or otherwise "made good" and 1 set of manual As-Built Drawings .13Final copies of all Maintenance manuals authorities having jurisdiction. quirement for Completion of Deficiencies. .1 The owner requires that following Substantial Completion operation of the facility. that the date for Total Completion including all deficiencies is respected. Should deficiencies remain beyond the required date for Total Completion, the owner and consultant may engage

> -It is the contractor's responsibility to provide, in advance of any demolition work requiring shoring, detailed Shoring design drawings bearing the seal of a Professional enginee registered in the Province of Ontario and also a Method ment describing the work sequence and timing/duration of each stage. Submit to the Consultants as shop drawings in advance of the work. Discuss and update as required and at all regular iob site meetings. -Recognize that shoring design may be required for both dead and live load conditions adjacent to occupied areas Shoring shall be designed to avoid interruptions in the use of the occupied areas. -Costs for shoring and design as required above shall be

included in the Tender price.

conditions must be reported to the Consultant immediately

Section 01 56 00: Temporary Barriers and

<u>nciosures</u> ISTALLATION AND REMOVAL Provide temporary controls in order to execute Work expeditiously, as shown on drawings or required complete works. Remove from site all such work after use. -DUST TIGHT SCREENS

work and the public.

schedule 5 days prior to installation.

work is complete.

areas of re-roofing.

improper protection.

Assess all interior work that may cause the migration of dust into areas other than the work area and/or HVAC systems and provide dust tight screens, insulated and fire rated temporary partitions as required to separate Install and obtain approval of the consultant and owne rep prior to demolition or other work. Similarly, ensure that dust does not contaminate existing furniture and equipment or materials stored in the school during the period of the work. If such

materials are unprotected, cover with dust protection before work begins or advise the owner to otherwise tect stored equipment, furniture, etc Localize areas of dust generating activities, and for protection of workers, equipment and finished areas of Maintain and relocate protection as required until such

TECTION OF BUILDING FINISHES Provide protection for finished and partially finished building finishes and equipment during performance of Provide necessary screens, covers, and hoardings Confirm with Consultant locations and installation Protect existing floors and finishes directly below al

Be responsible for damage incurred due to lack of or Section 01 77 00: Closeout Procedures empletion: submit written certificate that the work has been

completed and inspected for compliance with Contract Documents, list of corrected deficiencies and work is complete and ready for final inspection. When Owner and Consultant consider deficiencies and defects have been corrected, make application for Certificate of Substantial Performance -If Work is deemed incomplete by Owner and Consultant plete outstanding items and request re-inspection. Note that deficiency hold back will be applied to deficient items and held until such time as the deficiencies are rectified to the satisfaction of the Owner

Section 01 78 00: Closeout Submittals

-Submit one copy of completed project operation and naintenance volumes and as-built drawings in final form 15 days prior to substantial performance. For equipment put into use with Owner's permission during construction, submit Operating and Maintenance Manuals within 10 days after start-up. For items of Work delayed materially beyond date of Substantial Performance, provide updated submittal within 10 days after acceptance, listing date of acceptance as start -Prepare instructions and data using personnel experienced Copy will be returned after inspection with Consultant's

-Revise content of documents as required prior to final Submit 2 copies of revised volumes of data in final form within 10 days after final inspection. -For contract drawings (architectural, site services landscaping, structural, mechanical, and electrical), transfe neatly as-built notations onto second and third set and submit all three sets. Cost of only the transfer of these Completion of digital as-built to the Consultant is a nandatory requirement of Total Completion of the Contract -Pay costs of transportation.

Rinders: vinvl. hard covered, 3 'D' ring, loose leaf [219 > 279] mm with spine and face pockets. er: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject natter of contents. -Arrange content under Section numbers and sequence of -Provide tabbed fly leaf for each separate product and system, with typed description of product and major omponent parts of equipment. Drawings: provide with reinforced punched binder tab. Bind n with text; fold larger drawings to size of text pages.

ble of Contents: provide title of project -For each product or system: List names, addresses and telephone numbers subcontractors and suppliers, including local source of supplies and replacement parts. Product Data, mark each sheet to clearly

CONTENTS EACH VOLUME

identify specific products and component parts and data applicable to installation; delete inapplicable .3 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.

-Building Products, Applied Materials, and Finishes; include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products. Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance. -Additional Requirements: as specified in individual

MAINTENANCE MATERIALS -On completion of project, submit to Architect two (2) copies of Operations Data and Maintenance Manual and (1) one Enclose title sheet, labeled "Operation Data and

Maintenance Manual", project name, date and list of

Organize contents into applicable sections of work parallel project's specification break-down. Mark each section by abeled tabs protected with celluloid covers fastened to har

Maintenance instruction for finished surface and materials Description, operation and maintenance instructions for equipment and systems, including complete list of equipment and parts list. Indicate nameplate information uch as make, size, capacity, serial number.

Names, addresses and phone numbers of sub-contractor

Signature and seal of Contractor.

Additional material used in project listed under various Sections showing name of manufacturer and source of supply.

Neatly type lists and notes. Use clear drawings, diagrams

.4 Include one complete set of final shop drawings (bound separately) indicating corrections and changes made

equired to make good of all existing finishes or fitments Refer to drawings to coordinate items to be altered, re-built Dispose of demolished materials in accordance with -Ensure demolition work does not disrupt the ongoing -Make good all areas affected by demolition or renovation activities, whether specifically included in the contract -Any discrepancies between the drawings and the site

Section 04 05 12: Mortar

Use materials only as specified in CSA Standard A179 referenced from CSA A371 and CSA S304.1 as applicable in walls buried in earth, will cause no efflorescence. ncorporate only materials from same source in morta exposed to view. -Water: Verify that water used contains no salts to cause efflorescence. -Portland Cement: to CAN/CSA-A3001, Type GU, grey colour, unless indicated elsewhere. Masonry Cement: to CAN/CSA-A3002, Type S.

Hydrated Lime: to ASTM C207, Type S-Specia Mortar Aggregate: natural sand, to CSA A179, standard nasonry type; clean, dry, protected against dampness freezing and foreign matter. Nater: potable, clean and free of deleterious amounts of acids, alkalies or organic materials. Plasticizer: water reducing type, reducing porosity and absorption to increase bond strength. Water Repellent: mixture of calcium carbonate and hydrous nagnesium aluminum silicate powders Colour: liquid manufactured or natural oxide pigment, colour and loading as selected by Consultant Ensure that water and aggregates used are all from same source and will meet required strengths. Batch mortar ar grouts are acceptable provided source is approved prior to

-Mix mortars as specified in CSA A179. Use only dry aggregate. Test for bulking to determine accurate Mix mortar to consistency required for working. -For laying concrete and brick unit masonry, use mortar type "N" in non-structural applications.

.4 Mortar Types:

For brick: Mortar

manufacturer's full range.

with minimum of cutting.

Section 04 22 00: Concrete Unit Masonry -For Joint Reinforcement, Bond Ties, Anchors, and Accessories in Exterior Walls: To meet specified requirements of ASTM Specification A153, Class B

-Concrete Masonry Units: -To meet specified requirements of CAN3-A165 -Use bullnose block as indicated on Drawings Modular size units. -Light Weight Units: For use in walls above ground floor

-Hollow Units: H/15/C/M -Cover exposed tops of masonry walls when laying is not in progress and until protected by completed construction Cover with non-staining waterproof material to overhang top dges of wall by 200 mm minimum and secured to prever Protect all finished surfaces from mortar droppings -Lay masonry to meet specified requirements of CSA A370 and CSA A371, unless otherwise specified. Lay masonry to course as shown on Drawings and to

-Make joints of uniform thickness with vertical joints from course to course maintained plumb. -Form tooled concave joints wherever exposed to view, whether behind cabinets, fitments, and wall accessories, or not. When mortar has become "thumb-print" hard, tool joints and clean of burrs with trowel or burlap. Use a tool with a bearing surface of 550 mm minimum length on horizontal joints to avoid uneven depressions Do not use defective or broken units. Do not lay concrete units with markedly smooth face that will appear slick where

minimise cutting of units

exposed to view, whether painted or not. sonry Solid Wall Anchorage: -Bed anchors solidly in mortar joints. -Fill cores of hollow units solidly with mortar where anchors are embedded. Clean concrete masonry units with dry brushes and as otherwise recommended by the supplier to remove mortar

and stains. Do not use wire brushes for cleaning. -Protect adjacent materials, construction and finished surfaces from damage while cleaning. Ensure that all efflorescence and mortar deposits are

removed from surfaces to receive coating

Section 06 10 11: Rough Carpentry LUMBER MATERIAL Section 04 21 13: CONCRETE AND CLAY -Lumber: unless specified otherwise, softwood. S45

moisture content 19% or less in accordance with following

-Furring, blocking, nailing strips, grounds, rough bucks,

2 NLGA Standard Grading Rules for Canadian

Board sizes: "Standard" or better grade.

.4 Post and timbers sizes: "Standard" or better

-Douglas fir plywood (DFP); to CSA O121, standard

construction, good one side with waterproof adhesive.

-Nails, spikes, staples, screws, bolts anchors lag screws,

of all carpentry components: to CSA B111. Use galvanized

special fastening devices and supports required for erection

-Galvanizing: to CAN/CSA_G164, use galvanized fasteners

for exterior work and interior highly humid areas.

-Frame materials with tight joints rigidly held in place.

Place materials defined as hazardous or toxic in designated

-Do not proceed with joint sealant installation when joint

-Do not proceed with installation of joint sealants until

ontaminants capable of interfereing with adhesion are

Submit a warranty that sealant joint will not leak, crack

crumble, melt, shrink, run, lose adhesion or stain adjacent

-Joint filler: for interior aluminum to masonry, aluminum to

CAN/CGSB 19.13-M87. Acceptable materials: Spectrum 2

Examine joint sizes and conditions to establish correct depth

to width realtionship for installation of back up materials and

Prepare surface according to manufacturer's directions.

Install joint filler to achieve correct joint depth and shape

Tools exposed surfaces to give slightly concave shape.

Mask adjacent surfaces pripr to priming and cualking

wood, and aluminum to metal joints: high performance,

single compenets low odour sealant conforming to

Colour of sealant to be selected by Consultant

compatible with joint forming materials and sealant

nmended by sealant manufacture

with approximately 30% compression

Apply sealant in continuous beads

Dimension sizes: "Standard" light framing or

Douglas fir Graded 122-C, construction or No. 2

Pine, pressure treated in accordance with CSA

CAN/CSA O141

cants, curbs, fascia backing and sleepers:

better grade.

ACCESSORIES

PREPARATION

Code and Can3-086M-1983.

slivers or roughness of any kind.

oosened by the work of other trades.

FURRING AND BLOCKING

2.1 MANUFACTURED UNITS

Metric Jumbo

2 Clay Brick Masonry Units NOTE: Existing brick is CSR size. For any demolition areas SALVAGE and clean existing brick for poatching in exosting walls as Acceptable products: Only the following

.2 New addition clay brick to be Metric Jumbo products will be accepted as a match to the "Sundance Matt", as manufactured by: Hanson Brick, Burlington, Ontario: tel. (800) 263-6229Metric Jumbo size, order at the outset of the project. All units: Clay Brick, Grade "SW", passing

est Methods specified in CAN3-A82.2. Size:

.4 All brick to be manufactured from single continuous run to ensure minimum colour and .9 Thru-wall Flashing and Air/Vapour Barrier Sheet Membrane Treatment: Self-adhering SBS modified bitumen membrane reinforced with non-wover ibrous glass. Acceptable materials: Blueskin TV by Henry Bakor Inc., Mississauga or sheet ir/vapour barrier membrane as specified as in Section 07 26 00 - Sheet Vapour Retarders.

.10 Bolts and Anchors: To CAN3-A370. .11 Natural Mortar: Generally: Use materials only as specified in CSA A179. Ensure that weather and iggregate used in mortar, other than in walls buried in earth, will not cause efflorescence. Bonding Agent: Acrylic latex type by Sternson Limited, W.R. Meadows or Thoro Building Products. Use for all mortar except brick. Mixes: Mix mortars as specified in CSA A179 using the Proportion Specification. Add bonding agent in

accordance with manufacturer's instructions. -Supply and install furring and blocking, required Align and plumb faces of furring and blocking to tolerance of For masonry walls in contact with earth and bedding for bearing plates and ROUGH BUCKS AND NAILERS lintels: Mortar Type "S". -Install wood bucks and nailers, as indicated, including wood s and linings around frames for doors and windows For load-bearing walls: Mortar Type "S" -Except where indicated, otherwise, use material at least 38 nm thick secured with 9 mm bolts located within 300 mm Type "N" (1:1:6) premixed "Betomix 1-1-6" Type "S" portland from ends of members and uniformly spaced at 1200 mm ent hydrated lime as supplied by Daubois Inc., Jiffy Mortar Systems. Mix on site with sand and water. -Countersink bolts where necessary to provide clearance for

substrates are wet.

surfaces for two (2) years.

.4 For all other masonry walls, use regular other work. Type "N" mortar. Section <u>07 92 10: Joint sealing</u> 5 Grout: To CSA A179 Table 3. with the CEPA, TDGS, Regional and Municipal regulations .12 Mortar Dropping Control Device: "Mortar Install frames plumb and square in their excact location and USA (Telephone: 1-800-664-6638). -Unused joint sealant materials must not be disposed of into Weepholes: 90 mm x 90 mm x 10 mm purpose made sewer system, into streams, lakes, onto ground or in other PVC, designed to drain cavities and with mesh to prevent locations where it will pose a health or environmnetal hazard. insects from entering. Colour to be chosen by Architect from

Part 3 Execution MANUFACTURER'S INSTRUCTIONS 1 Compliance: comply with manufacturer's written

data, including product technical bulletins, product

alogue installation instructions, product carton installation instructions, and data sheets. WORKMANSHI 3.2 Build masonry plumb, level, and true to line, with ioints in proper alignment. Layout coursing and bond to achieve correct coursing

TOLERANCES 1 Clause 5.3 of CAN/CSA-A371 applies except as ollows: Walls to receive thinset ceramic tile: plumb within 1:600. EXPOSED MASONRY

eights, and continuity of bond above and below openings

Remove chipped, cracked, and otherwise damaged units in exposed masonry and replace with undamaged units. .1 Except where indicated otherwise on drawings of a second control of the con details or as below, make concave joints, allow oints to set just enough to remove excess wa then tool with round jointer to provide smooth joints are to receive plaster, tile, insulation, or othe

coating, strike flush. WEEPHOLES Provide 10 x 90 x 90 mm PVC weepers at regula intervals at both top and bottom of walls as indicated on Drawings. Ensure weepers are clear

and not blocked by mortar or mortar droppings. JOINING OF WORK Where necessary to temporarily stop horizontal runs of masonry, and in building corner, Step-back masonry diagonally to lowest course previously course before heights of stepped masonry reach

laid. Do not "tooth" new masonry. Fill in adjacent CUTTING 3.8 1 Cut out neatly for electrical switches, outlet boxes.

and other recessed or built-in objects. 2 Make cuts straight, clean, and free from uneven edges. Use masonry saw where necessary 3,9 BUILDING-IN

.1 Build in items required to be built into masonry by Prevent displacement of built-in items during. construction. Check for plumbness, alignment, and correctness of position, as work progres

Brace door jambs to maintain plumbness. Fill door frame with concrete 3.10 WETTING OF BRICKS

.1 Except during winter, wet clay brick having an initial rate of absorption exceeding 1g/min/100mm2; wet o uniform degree of saturation, to 24 hours before laying, and do not lay until surface is dry. Similarly, wet tops of walls built of bricks qualifying for wetting, when recommencing work on such walls.

3.11 SUPPORT OF LOADS .1 Except where drawing requirements are more stringent, comply with Clause 6.3 of CSA S304.1. .2 Where concrete fill is used in lieu of solid units, use

ninimum 25 MPa concrete to Section 03 30 00

.3 Install building paper below voids to be filled with concrete; keep paper 25 mm back from faces of units. 3.12 PROVISION FOR MOVEMENT .1 Leave 5 mm space below shelf angles .2 Leave 6 mm space and do not use wedges betwee tops of non-load bearing walls and partitions and structural

3.13 STEEL LINTELS .1 Install steel lintels above windows, doors and all nechanical and electrical as shown on structura drawings. Centre over opening width. Bridge openings less than 450 mm wide with 6 mm thick mild steel plate lintels, bearing minimum 100 mm

on each side of opening and set on dry pack grout. Width of plate to be equal to the wall thickness less 25 mm 3.14 CONTROL AND EXPANSION JOINTS .1 Except as noted following, control joints required at maximum of 6000 mm o.c. in continuous walls having no openings, intersections or columr locations. Refer to elevations for locations on exterior walls and advise Consultant of variance prior to executing the work. Control joints are not

shown for clarity on the drawings for interior walls.

fin doubt, request assistance from the Consultant

.2 At doorway locations, unless indicated otherwise on elevation drawings, use one side of doorway beyond linte Use building paper to prevent that end of lintel to bond to match existing .3 Use standard block with concrete filled end core to form key. Line one side of core with building paper before filling core to prevent bonding. Complete vertical separation full height and thickness of wall are required. 4 Stop masonry reinforcing at each side of the joints. Caulking specified in Section 07 92 10 - Joint Sealers At expansion joints in brick and veneer, install Rapid to allow for horizontal expansion to match existing

.1 Refer to Section 01 11 00 - Summary of Work

3.15 INSPECTION & TESTING

Section 07 21 13: BOARD INSULATION

INSULATION .1 Extruded polystyrene (XPS): to CAN/ULC_S701.

.1 RSI 2.175/R12.5. Thickness: 65 mm or as indicated on drawings Edges: ship-lapped. .4 For use at typical cavity wall construction and at iscellaneous detail locations calling for rigid insulation

.5 Acceptable Material: "Styrofoam Cavity-Mate" as 6 Acceptable Material: "Celfort 300" as manufactured by Celfortec Inc. (Owen Corning). .7 or approved equal.

2.2 ADHESIVE .1 Adhesive (for polystyrene): to CGSB 71 GP 24 1 Bakor Air Bloc 21 Compatible with respective rigid insulation, air/vapour manufacturers of those products. Use Bakor 230-21 rigid

ulation adhesive for rigid insulation in contact with

-Supply and install all other carpentry shown on drawings or Blueskin air vapour barrier. as required for completion of work. Co-operate with other trades in installing items supplied by other sections, cut Part 3 Execution openings in woodwork when so required and make good MANUFACTURER'S INSTRUCTIONS .1 Compliance: comply with manufacturer's writter Do all wood framing in accordance with the Ontario Building data, including product technical bulletins, product atalogue installation instructions, product carto -Machine dressed work shall be slow fed using sharp cutters installation instructions, and data sheets. and finished members shall be free from drag, feathers,

WORKMANSHI

.1 Install insulation after building substrate materials Design construction methods for expansion and contraction -Erect work plumb, level, square and to required lines. Install insulation to maintain continuity of thermal protection to building elements and spaces. materials are rigidly and securely attached and will not be .3 Fit insulation tight around electrical boxes, plumbin and heating pipes and ducts, around exterior doors and windows and other protrusions. .4 Keep insulation minimum 75 mm from heat emitting devices such as recessed light fixtures, and minimum 50 mm from sidewalls of CAN4 S604 type A chimneys and CAN/CGA_B149.1 and CAN/CGA_B149.2 [type B] [and] [L

Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free n chipped or broken edges. Use largest possible dimensions to reduce number of joints. .6 Offset both vertical and horizontal joints in multiple layer applications. .7 Do not enclose insulation until it has been inspected and approved by Consultant.

EXAMINATION Examine substrates and immediately inform Prior to commencement of work ensure: .1 Substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and

RIGID PERIMETER FOUNDATION INSULATION Apply adhesive to polystyrene in accordance with manufacturer's recommendations. Apply adhesive to insulation board by spot method with daubs 40 mm diameter x 25 mm high at 200 mm o.c. .3 Interior application: extend boards vertically below bottom of finish floor slab as indicated on drawings, installed on inside face of perimeter foundation walls. .4 Exterior application: extend boards below finish grade

as indicated on drawings. Install on exterior face of perimeter

to polystyrene in accordance with

manufacturer's recommendations

.4 Install plastic LOC-Wedges at masonry

air/vapour barrier on wall surfaces.

to ensure a complete seal

.3 Butter Air Bloc 21 at all brick tie penetrations

veneer ties to ensure securement to structural

wythe or back up wall and in full contact with

Under slab application: extend boards as indicated on drawings. Lay boards on level compacted fill. .4 Ensure all preparatory work is complete prior to RIGID CAVITY WALL INSULATION applying liquid applied air/vapour barrier membrane INSTALLATION

3.4 Through-Wall Flashing Membrane .1 System Comprised of: .1 Apply through-wall flashing and dampproo .1 Specified thickness of rigid ship-lapped coursing membrane in accordance with CSA A371 Masonry Construction for Buildings; insulation on Henry-Bakor Blueskin SA along the base of masonry veneer walls, over air/vapour barrier. windows, doors and other wall openings .2 Henry-Bakor Airbloc 21 adhesive to be applied required to be protected. to all sides of insulation and continuous layer Applications shall form a continuous flashing nembrane and shall extend up a minimum air/vapour barrier. Butter all sides and back to ensure full air barrier integrity. Apply adhesive

and shed water.

of 200 mm (8") up the back-up wall and as Drawings install pre-finished metal drip sandwiched between two (2) layers of membrane. At the end of each day's work seal the top edge of the membrane where it meets the substrate using liquid air seal

mastic. Trowel-apply a feathered edge to seal termination

.4 Ensure through-wall flashing membrane extends fully to the exterior face of the exterior masonry veneer. A locations where flashing terminates or intersects wall openings including door frames, "end dam" flashing to protect openings and redirect water out. Trim off excess as directed by the Consultant. .5 Align and position the leading edge of self-adhering through-wall flashing membrane with the front horizont edge of the foundation walls, self angles and other substrates to be protected, partially remove protective film and roll membrane over surface and up vertically .6 Press firmly into place. Ensure mum 50 mm (2") overlap at all end and side laps. Promptly roll all laps and membrane to affect the seal. .7 Ensure all preparatory work is complete prior to

applying self-adhering through-wall flashing membrane

.8 Ensure through-wall flashing membrane extends fully to the exterior face of the exterior masonry veneer. Trim off excess as directed by the Consultant. 3.5 Air/Vapour Barrier Membrane 1 Apply self-adhering membrane complete and continuous to prepared and primed substrate in an overlapping shingle fashion and in accordance with Manufacturer's recommendations and written instructions. Stagger all vertical joints.

.2 Align and position self-adhering membrane, remove protective film and press firmly into place. minimum 50 mm (2") overlap at all end and side laps. Promptly roll all laps and membrane with a counter top roller to affect the seal. .3 At the end of each day's work seal the top edge of the embrane where it meets the substrate using liquid air seal mastic. Trowel-apply a feathered edge to seal termination and shed water.

.4 Tie-in to window frames, aluminium screens, hollow metal doorframes, spandrel panels, roofing system and at the interface of dissimilar materials as indicated in Drawings. .5 Ensure all projections, including wall ties, are properly sealed with a caulk application of liquid air seal masti 6 Mechanically fasten membrane through securemen bars to all window, door, louvers and curtain wall sections as recommended by membrane Manufacturer where proper adhesion and bonding cannot be maintained .7 Membrane applied to the underside of substrate surfaces shall receive special attention on application to ensure maximum surface area adhesion is obtained.

.1 Co-ordinate with Cavity Wall Insulation Section 07 21 13 for insulating materials. .2 Upon the completion of the air/vapour barrier mastic and insulation adhesive in a serpentine pattern over completed air/vapour barrie membrane system. .3 Immediately embed insulation into the adhesive and press firmly into place to ensure full contact. Apply additional

.4 Fully butter all joints of insulation panels with adhesive

3.6 Installation of Insulation

.1 Notify Architect when sections of Work are complete so as to allow for review prior to 3.8 Protection of Finished Work .1 Membranes are not designed for permanent

exposure. Product designed to withstan

reasonable job site exposure, however good

practice calls for covering as soon as possibl

during installation, except at expansion joints.

.2 Damp substrates must not be inhibited from drying out. Do not expose the backside of th substrate to moisture or rain. .3 Cap and protect exposed back-up walls against wet weather conditions during and after application of membrane. Drying time varies depending on temperature and relative humidity. At a temperature of 20oC (70oF) and 50% RH, protect air/vapour barrier work against wet weather conditions for a minimum of 24 hours

.4 Membranes are not designed for permanent exposure

Good practice calls for covering as soon as possible.

Section 07 46 13: PREFORMED METAL

PRODUCTS 2.1 Materials

Section 07 26 00: SELF ADHERED

membrane 450 mm (18") wide: one of the

following; use the same product for entire

self-adhering membrane by Manufacturer of

1 Blueskin SA by Bakor

3 <u>Through-Wall</u> <u>Flashing</u>:

air/vapour barrier membrane

Primer for Self-Adhesive Membrane: as recommended

Adhesives, Mastics, Joint Backing: as recommended

Seal around masonry ties and other penetrations with

Adhesive: compatible with sheet barrier and substrate

Termination Sealants: as recommended by membrane

1 Verify that surfaces and conditions are ready

.2 All surfaces must be sound, dry, clean and

New concrete should be cured for a minimum of 14

ays and must be dry before air/vapour barrier membranes

4 Where curing compounds are used they must be clear

3.2 Primer for Transition and Through-Wall Flashing

.1 Apply primer at rate recommended b

.2 Apply primer to all areas to receive transition

sheet and/or through-wall flashing membrane,

as indicated on Drawings by roller or spray

and allow minimum 30 minute open time.

Primed surfaces not covered by self-adhering

through-wall flashing membrane during the

membrane, remove protective film and press

minimum 50 mm (2") overlap at all end and

hollow metal doorframes, spandrel panels,

roofing system and at the interface of

dissimilar materials as indicated in Drawings.

Promptly roll all laps and membrane with a counter top

2 Tie-in to window frames, aluminium screens

transition membrane or self-adhering

same working day must be re-primed

.1 Align and position self-adhering transition

resin based without oil, wax or pigments.

to accept the Work of this Section. Notify

Architect in writing of any discrepancies

Commencement of the Work or any parts

thereof shall mean acceptance of the

free of oil, grease, dirt, excess mortar or other

contaminants. Fill spalled areas in substrate to

provide an even plane. Strike masonry joints

Perm-A-Barrier by W.R. Grace

.3 Sopraseal STICK-1100 by Soprema

.5 Exo Air 110 by Tremco

PART 3 - EXECUTION

Sealtight Airshield by W.R. Meadows

liquid adhesive/mastic by membrane Manufacturer

.9 <u>Joint Sealant</u>: as specified in Section 07 92 10.

prepared substrate.

1 Prepainted Steel: Galvanized sheet steel minimun 0.76 mm (22 ga) thickness, complying with ASTM 1 Air/vapour barrier membrane components and Prepainted in 8000 Series. Colour to be single accessories must be obtained as a colour selected from manufacturer's full range to coordinate with matching existing building. Colou Manufacturer to ensure total system to later selection by architect. compatibility and integrity. Subgirts, Clips, Spacers: minimum 1.2 mm thick <u>Air/vapour</u> <u>Barriei</u> <u>Membrane</u>: Self-adhesive, modified bitumer formed galvanized steel, ASTM 4456 Grade A, zinc coating

.3 Wall Siding: not applicable. Profile for Mechanical Roof Screen to be VicWest Steel "CL 3035" or equal by Flynn Canada. 5 For copings and flashings, provide prefinished metal 24 gauge thickness, colours as specified in Section 076200-Sheet Metal Flashing and Trim. 6 Screws: to CSA B35.3-1962, head color same as exterior sheet, dished to CSA B35.3-1962. 7 Powder actuated fasteners: galvanized, peened ballistic point, plastic cap of same color as exterior sheet 8 Sealants in accordance with Section 079210, Joint

Sealers, colour selected by Consultant. Allow for one (1) colour from manufacturers full range to match adjace 9 Gaskets: soft pliable arctic grade vinyl, extruded .10 Touch-up paint: as recommended by panel manufacturer and Baycoat, compatible with prefinished

.11 Isolation coating: alkali resistant bituminous paint or epoxy resin solution. 12 Insulation: As noted on Drawings and in Section 07 21 3 - Board Insulation, Insulation and Sheet Air/Vapour 2.2 COMPONENTS Exterior sheet: factory preformed coated metal, to

Cladding profiles: corrugated siding shall be 7/8" deep

x 34 2/3" on centre (installed vertically). 3 Exterior corners: of same profile, material and finish as adjacent siding material, shop cut and brake formed to joint, pop rivet connections with painted head to match .4 Exposed joint ends of siding sheet shop cut clean and square, backed with tight fitting filler lapping back if joint exposed components color matched to siding.

profiles and thicknesses as indicated

5 Accessories cap flashings drip flashings internal corner flashings, copings and closures for head, jamb, eaves, soffits sill and corners, of same material and finish as exterior siding, brake formed to shape. Exposed cut edges of metal profiles will not be accepted. 6 Sub-girts: zinc coated to ASTM A525-78a, G90 coating designation, profile as indicated to accept exteri .14 Wedges: Rolled plumber sheet lead. sheet with structural attachment to building frame.

.1 Nails: CSA B111, Screws: ANSI B18.6.4. Part 3 Execution MANUFACTURER'S INSTRUCTIONS .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

2.3 FASTENERS

INSTALLATION .1 Install cladding in accordance with CGSB 93.5, and manufacturer's written instructions Install sub-girts to masonry walls prior to the installation of the Urethane foam insulation 3 Install exterior finish siding to internal sub-girts with concealed fasteners. .4 Provide notched and formed closures, sealed to arrest

firect weather penetration at vertical profiles for exterior siding. Ensure continuity of "pressure equalization" of rain screen principle. .5 Provide alignment bars, brackets, clips, inserts, shims as required to securely and permanently fasten wall system to building structure. .6 Supply and install flashing at connection between roof and preformed metal siding.

Section 07 62 13: SHEET METAL FOR BUILT-UP ROOFING

Sheet Metal Materials .1 Compatibility between materials is essential compatible when incorporated in a completed .2 All galvanized steel to conform to ASTM A653M-04a Grade 230 with G90 zinc coating. Eavestroughs: As specified and/or shown on the rd profile or custom-fabricate fron material to the Details. Material: 454 gm (16 oz.) copper, 26

gauge galvanized steel; 24 gauge galvanized steel wit Stelco Series 8000 baked enamel finish; or, 24 gauge prefinished aluminum. Use standard 6100 mm (20'-0") lengths. Size as specified by Mechanical Engineer. All fixtures, nails and furrow materia to match eavestroughs. Colour to be approved by the

Downspouts: As specified and/or shown on the Drawings, to match eavestrough material. Size as specified by Mechanical Engineer. Colour to be approved by the Water-Conductors: As specified and/or shown on the Drawings, fabricate from 454 gm (16 oz.) copper or 18 gauge galvanized steel to match eavestrough material.

Square profile, size as specified by Mechanical Engineer Prepare and paint galvanized steel with one coat of metal prep and two coats of paint to match colour of Metal Flashings: As specified and/or shown on the Drawings, fabricate from 454 gm (16 oz.) copper, or 24 gauge galvanized steel with Stelco Series 8000 baked namel finish. Size as shown on the Drawings. Colour to be approved by the Architect.

Gravel Stops, Drip Flashings and Custom-Fab Flashing Boxes: As specified and/or shown on the Drawings, fabricate from 454 cm /45 cm / ate from 454 gm (16 oz.) copper, 26 gauge galvanized steel, or 24 gauge galvanized steel with Stelco Series 8000 aked enamel finish. Colour to match flashings. Chimney Sleeves (Custom-Fabricated): As specified oz.) copper or 18 gauge galvanized steel. All seams to be continuously soldered. Size to suit flue diameter. Prepare and paint galvanized steel with one coat of asphalt paint prior to flashing in roofing.

Scuppers and Through-Wall Overflow Scuppers ustom-Fabricated): As specified and/or shown on the Drawings, fabricate from 454 gm (16 oz.) copper or 26 gauge stainless steel. All seams to be continuously Cleats and Hook Strips: As shown on the Drawings 567 gm (20 oz.) copper, or 22 gauge galvanized or

prefinished steel to match metal flashing material. Copper: 454 gm (16 oz.) as specified and/or shown Stainless Steel: 26-gauge, Type 304. Solder: Block solder 50% tin, 50% lead to ASTM

.15 <u>Touch-Up Paint</u>: Colour to match materials as .16 <u>Isolation Coating</u>: Alkali resistant bitumen paint.

.2 All tapping and driving screws to meet ASTM All wood screws to meet ASTM B18.6.1 - 1981 All galvanizing to meet ASTM A153/A153M-05 and .5 All fasteners, size and spacing to meet the most ringent requirements of this Section, the Drawings, the

Ontario Building Code or Factory Mutual requirements. .6 Obtain approval when using hammer drills since drilling hours may be restricted. Hook Strip Fasteners: Annular threaded nails long minimum 32 mm (1.25"). Nail head to be minimum 5 mm (0.18"). Alternatively use 4 mm (0.19") steel by 10 mm (0.375"). All fasteners to be corrosion Nails and Screws: Use galvanized, copper, aluminum

stainless steel nails or screws dependent upon which is

minimum 32 mm (1.25"). No. 8 screws of sufficient length to

most compatible with materials and preservatives being

utilized. Nails of sufficient length to penetrate the ba

1 All nails and spikes to meet CSA B111-1974

minimum 19 mm (0.75") at 600 mm (2'-0") o.c. .9 <u>Exposed Fasteners:</u> Where specified or shown, use No. 10 cadmium plated, pre-finished hex head screws with neoprene and steel washers by Atlas Bolt or approved equa Colour of screw head to match colour of flashing. Provide touch-up paint as required to coat all exposed surfaces o screws damaged during the driving process. Alternatively use screws with colour match nylon caps where shown or approved by the Consultant. stainless steel drive nail, or "Roofing Spike" with "Perma-Seal" coating, or "Tapper" with "Perma-Seal" coating, all galvanized steel. by Powers Fasteners. Minimum 6.4 mm (0.25") anchor diameter. All of sufficient length to ensure a minimum

Generally, provide fastener length 2.5 times the thickness of materials being secured. 2.3 Accessories .1 <u>Modified Bitumen Primer</u> For built-up roofing, use "910-01" by Bakor. For modified roofing, as recommended by the membrane Manufacturer. To CGSB 37-GP-9Ma-83.

embedment of 38 mm (1.5"), as per Manufacturers

recommendations, unless otherwise specified or shown

Underlay: No. 15 perforated asphalt felt to CSA <u>Self-Adhering Membrane:</u> Bakor Blueskin PE 200HT or Soprema Elastobond Shield HT. .4 <u>One Component Rubberized Mastic:</u> Polybitume by Henry or approved equal to CAN/CGSB 37.5M. .5 <u>Two Component Modified Sealant</u>: Bituthane Liquid flashing cement by IKO Industries or approved equal. .6 <u>Box Filler</u>: One part pourable sealer by Chemlink Inc. and M1 Structural Sealant Primer. .7 <u>Sealants:</u> Unless otherwise shown, to Section 07901. Use colour to match adjacent materials as close as possible

and selected from Manufacturer's standard colour chart

.8 <u>Isolation Coating</u>: Bakor 910-01 primer or equal to CGSB 37-GP-9Ma-83. PART 3 - EXECUTION

where exposed to view.

3.1 Fabrication .1 Fabricate all Work in accordance with applicable Drawings and Details and as 2 Fabricate all Work maximum 2400 mm (8'-0") lengths, unless otherwise shown on the Drawings, by brake forming, bench cutting, drilling and shaping

Match existing profiles where metal flashing is

.3 Where the girth of counterflashings exceeds 600 mm (24"), reduce lengths of sheets to maximum 1200 mm (4'-0") long. 4 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance .5 Apply isolation coating to metal surfaces that are to be embedded in concrete or mortar .6 Double-back exposed metal edges at least 13 mm (0.5"). Raw edges are not permitted. Mitre and

.7 Supply all accessories required for installation of sheet

metal work of this Section. Fabricate accessories of same

material of that to which they will be used.

3.2 Installation 1 Install sheet metal flashings at copings, walls expansion joints, roof openings and other components required to protect the membran flashings as shown on the Drawings or 2 Install continuous concealed hook strips at all exterior faces. Install continuous interior hoo strips if they are shown on the Drawings Hook strips are to be installed on vertica surfaces only unless otherwise shown on

fasteners in "V" pattern with maximum spacing of 225 mm (9"). .4 Sheet metal work must be installed to cover the entire area it protects, and must be watertight under all service and weather conditions. Install in a uniform manner, true to line, free of dents, warping and distortion. .5 Back-paint sheet metal that comes into contact with another kind of metal, masonry or concrete with modified bitumen primer at the rate of 0.15 L/m2 (1/3 gal/100 ft2) to CGSR 37-GP-15M-84.

permanently hold flashing in place. Install hook & cleat strip

.3 Install cleats between lock joints as required to

approval of the Consultant. When exposed fasteners are shown, use specified fasteners and space evenly in an approved manner. 7 Use concrete drive fasteners where metal flashings are installed over concrete or masonry. .8 Install underlay under sheet metal installed directly over wood or masonry surfaces

.6 Install sheet metal with concealed fasteners at lock

joints. Exposed fastening will only be permitted with the

Section 07 62 13: SHEET METAL FOR

.9 <u>Self-Adhering Membrane:</u> .1 Install 1-ply of self-adhering high temperature membrane to the Details under sheet metal on horizontal or vertical surfaces that are not otherwise covered by membrane flashings. 2 Ensure all surfaces to be covered with self-adhering membrane are complete, free of moisture and contaminants, and are above 5C (40F). Below 5C (40F), heat materials to be covered. Store all materials in heated storage if outside temperature is below 5C (40F) and remove only as much

3 Prime all surfaces to be covered with self-adhering membrane. Carry out thumb test to ensure that primer is Remove paper backing and install membrane true to line to completely cover the area intended to be protected to points shown on the Drawings. 5 Roll or work material into place by hand to ensure a positive bond. .6 Membrane to be installed without air blisters and wrinkles. Rework, repair or replace all poorly installed membrane. Do not stretch material that would result in pull back and deformity of the membrane at intersections. 7 Lap all side laps 75 mm (3") and end

material as can be used before it cools.

150 mm (6"). Secure all membrane on vertical surface at points of termination at 150 mm (6") o.c. with approved 8 Turn up membrane 150 mm (6") at edge where orizontal meet vertical planes. 9 Seal all points of termination at horizontal planes and vertical surfaces with modified sealant or liquid membrane as shown on the Drawings. Tool sealant to a consistent smooth 10 It is recommended that all self-adhering membrane be nstalled by a team of two workers. Avoid working in windy conditions or weather that produces an inferior result.

10 Join sheet metal by "S" lock seams, to permit thermal movement. Seal all fasteners and completely fill all joints with low modulus caulking as flashing is being installed. Clean off all excessive visible material subsequent to installation. 11 Space metal joints evenly where exposed. When

flashing is being installed in more than one piece, offset joints in adjacent flashings by approximately 50%. 12 Form inside and outside corners of flashings by means of raised seams. Lock seams and caulk all overlap to ensure water tightness. Do not use pop rivets. .13 Slope all flashings to interior of roof area to maintain minimum 2:12 slope. Do not form open joints or pockets that fail to drain water .14 Caulk all open sheet metal joints with polyurethane

.15 Provide new wall reglets minimum 10 mm (0.375") wide and 25 mm (1") deer .16 Clean reglets and adjacent surfaces free of contaminants and dust .17 Wedge flashings into reglet joints with lead wedges at 225 mm (9") o.c. Keep back from face of reglet joint 6 mm (0.25"). Fill joints with polyethylene rod and caulk. 18 Complete all caulking work in accordance with Section

.19 Water-Conductors:

.1 Install water-conductors as specified and/or at locations shown on the Drawings .2 All pipes shall be installed true to line and every 1200 mm (4'-0"), at a minimum of three locations, using heavy 2-hole galvanized clamps. Fix clamps to surfaces using No. 10 x 38 mm (1.5") long hex head screws. Provide lead anchors when fixing to masonry surface. When constructed from sheet metal, overlap end oints minimum 75 mm (3") and make watertight. Wher

constructed from cast iron pipe, use MJ couplings. Overlap

Fit into existing drainage system to original design

ntent if applicable. Alternatively, install a 45 elbow and

terminate 450 mm (18") above the finished roof level or

<u>Section 09 22 16 Non-Structural Metal</u>

joints to provide positive drainage over joints.

-Non_load bearing channel stud framing: to ASTM C645, roll formed from 0.59mm thickness hot dipped galvanized steel sheet, for screw attachment of gypsum lath and metal lath. Knock_out service holes at 150 mm centre Floor and ceiling tracks: to ASTM C645, in widths to suit stud sizes, 30 mm legs for floor track, 50 mm for ceiling

Metal channel stiffener: 38 mm size, 2 mm thick cold rolled Metal Accessories: As recommended by manufacturer for complete and secure installation ERECTION -Align partition tracks at floor and ceiling and secure at 600 mm on centre maximum. -Place studs vertically at 400 mm on centre and not more than 50 mm from abutting walls, and at each side of penings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions. -Frect metal studding to tolerance of 1:1000 -Attach studs to bottom track using screws.

-Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings -Install steel frames and anchor frames securely to studs using minimum of three (3) anchors per jamb for jambs up to 2100 mm high and a minimum of four (4) anchors per jambs or jambs over 2100 mm high. -Provide two (2) studs at each side of openings wider than stud centre specified. Install, cut to length, piece of runner horizontally over door frames and at top and bottom of rough opening in glazed Install steel stud or furring channel between studs for -Extend all partitions to underside of deck above for sound and fire separation. Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs. CEILING FURRING -Install runners level to tolerance of 3 mm over 3.5 m. Provide runners at interruptions of continuity and change in

-Frame with furring channels, perimeter of openings to

-Furr for bulkheads within or at termination or ceilings

Box-in beads, columns, pipes, and around exposed

-If required, install Metal Stud System and Furring in

accordance with appropriate ULC Design and with

supplement to the National Building Code of Canada

Install furring channels at 400 mm o.c. maximum.

etc. As shown on plans

-Install steel furring, as indicated

FIRE RATED ASSEMBLIES

WALL FURRING

sides with channels.

accommodate access panels, light fixtures, diffusers, grilles,

-Frame opening and around built-in equipment on four (4)

SPECIFICATIONS

HOSSACK

23127

4-2150 DUNWIN DRIVE

ISSISSAUGA, ONTARIO L5L 5N

Tel (905) 607-8284 Fax (905) 607-8290

REVISIONS DATE ISSUED FOR TENDER FEB-9-2

WINGS ARE NOT TO BE SCALED. CONTRACTOR MUS

THE PROJECT: AND MUST REPORT ANY DISCREPANCIES

WORK. THE USE OF THIS DRAWING OR PART THEREOF

ORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE

THE CONSULTANTS BEFORE PROCEEDING WITH THE

DATE

ISSUED

NSULTANTS

RENOVATION TO PILGRIM WOOD PUBLIC SCHOOL

> 1551 PILGRIMS WAY OAKVILLE, ON L6M 2W LEGAL DESCRIPTION

PL 20M436, SECONDLY, BLK 86, PL 20M469, ST H426706; OAKVILLE

PCL BLK 47-2, SEC 20M436: FIRSTLY; BLK 47,

HALTON DISTRICT SCHOOL BOARD J W SINGLETON EDUCATION CENTRE 2050 GUELPH LINE BURLINGTON, ON., L7R 3Z2 TEL. (905) 335-3663 FAX (905) 335-9802

ARCHITECTS

PROJECT SCALE AS SHOWN DATE FEB 2024 DRAWN CHECKED ST/CT



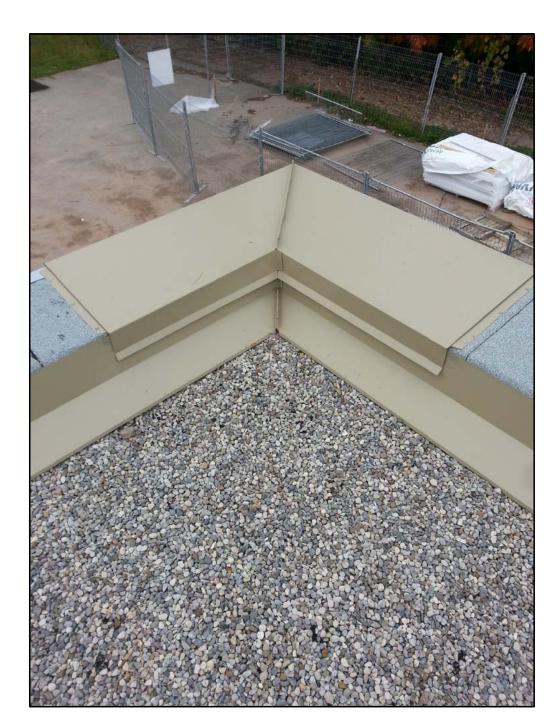
BUILDING ELEVATION - DURING CONSTRUCTION FROM 2013



BUILDING ELEVATION - DURING CONSTRUCTION FROM 2013



BUILDING ELEVATION - DURING CONSTRUCTION FROM 2013



ROOF PARAPET - DURING CONSTRUCTION FROM 2013



SOFFIT - DURING CONSTRUCTION FROM 2013



BUILDING ELEVATION - DURING CONSTRUCTION FROM 2013

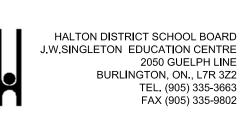
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RENOVATION TO PILGRIM WOOD PUBLIC SCHOOL

1551 PILGRIMS WAY OAKVILLE, ON L6M 2W7

LEGAL DESCRIPTION

PCL BLK 47-2, SEC 20M436: FIRSTLY; BLK 47, PL 20M436, SECONDLY; BLK 86, PL 20M469; ST H426706; OAKVILLE



EXISTING PHOTOS (REFERENCE ONLY/ OF 2013 BUILD)





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Halton District School Board

PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

PILGRIM WOOD PUBLIC SCHOOL

1551 PILGRIMSWAY, OAKVILLE, ONTARIO

Feb 2, 2024

30210474

v. Jarawala

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Pre-Renovation Designated Substances and Hazardous Materials Survey

Pilgrim Wood Public School 1551 Pilgrims Way, Oakville, Ontario

Prepared for:

Halton District School Board J.W. Singleton Education Center 2050 Guelph Line Burlington, ON L7P 5A8

Attention: Mr. Terry DeMedeiros

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Date:

Feb 2, 2024

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- A Floor Plans
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1 INTRODUCTION

Arcadis Canada Inc. (Arcadis) was retained by the Halton District School Board (HDSB) to conduct a prerenovation designated substances and hazardous materials survey in designated study areas of Pilgrim Wood Public School located at 1551 Pilgrims Way, Oakville, Ontario.

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

The building is a two-storey masonry structure, originally built in 1990 with an addition constructed in 2013.

It is our understanding that renovations are to take place in designated areas of the building. The designated study areas were limited to areas affected by the proposed renovation project and are based on information provided by the HDSB. The survey included primarily inspecting materials in the designated study areas that are anticipated to be affected by the renovation project and for future reference, test block filler primer paint and mortar associated with concrete block walls and brick mortar for asbestos content in both construction eras outside the designated study areas. The designated study areas were limited to building materials on the exterior envelope of the building where the proposed renovation work is to take place.

The designated study areas and eras of construction are shown on the floor plans provided in Appendix A.

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

1.1 Scope of Work

The scope of work for our investigation included:

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

Mr. Viraj Daruwala of Arcadis visited the site on January 18, 2024 to conduct the designated substances and hazardous materials survey at Pilgrim Wood Public School.

2 REGULATORY DISCUSSION AND METHODOLOGY

Ontario Occupational Health and Safety Act (OHSA)

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

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

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

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

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

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

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

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

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

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

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

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

2.1 Asbestos

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

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

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

2.2 Lead

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

The Surface Coating Materials Regulations (SOR/2016-193) made pursuant to the Canada Consumer Product Safety Act states that a surface coating material must not contain more than 90 mg/kg total lead. Health Canada defines a lead-containing surface coating as a paint or similar material that dries to a solid film that contains over 90 mg/kg dry weight of lead.

Information from the United States Occupational Health and Safety Administration (OSHA) suggests that the improper removal of lead paint containing 600 mg/kg lead results in airborne lead concentrations that exceed half of the permissible exposure limit. Lead concentrations as low as 90 mg/kg may present a risk to pregnant women and children⁽¹⁾.

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

Due to the constraints and difficulty of obtaining adequate volumes of paint from metal substrate materials, all paint on metal substrates is assumed to contain lead and paint applications were not sampled except in cases where paint on metal substrate materials was observed to be in poor condition. Paint applications and associated metal substrate materials must be either sent for recycling at an approved facility or disposed at a licensed hazardous waste disposal facility.

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

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⁽¹⁾ Lead-Containing Paints and Coatings: Preventing Exposure in the Construction Industry. WorkSafe BC, 2011.

2.3 Mercury

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

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

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

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

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

2.4 Silica

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

The Ministry of Labour *Guideline, Silica on Construction Projects*, dated April 2011, provides guidance in controlling exposure to silica dust during construction activities. In the guideline, silica-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type

3 (high risk) based on presumed airborne concentrations of respirable crystalline silica in the form of cristobalite, tridymite, quartz and tripoli as shown in Appendix C, Table C-3.

2.5 Vinyl Chloride

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

2.6 Acrylonitrile

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

2.7 Other Designated Substances

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

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

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

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

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

2.8 Polychlorinated Biphenyls (PCBs)

The management of equipment classified as waste and containing Polychlorinated Biphenyls (PCBs) at concentrations of 50 parts per million (mg/kg) or greater is regulated by Ontario Regulation 362, *Waste Management – PCBs*. Under this regulation, PCB waste is defined as any waste material containing PCBs

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

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

PCBs were also commonly added to industrial paints from the 1940s to the late 1970s. PCBs were added directly to the paint mixture to act as a fungicide, to increase durability and flexibility, to improve resistance to fires and to increase moisture resistance. The use of PCBs in new products was banned in Canada in the 1970s. PCB amended paints were used in speciality industrial/institutional applications prior to the 1970s including government buildings and equipment such as industrial plants, radar sites, ships as well as non-government rail cars, ships, grain bins, automobiles and appliances.

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

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

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

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

2.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

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

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

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

2.10 Mould

Moulds are forms of fungi that are found everywhere both indoors and outdoors all year round. Outdoors, moulds live in the soil, on plants and on dead and decaying matter. More than 1000 different kinds of indoor moulds have been found in buildings. Moulds spread and reproduce by making spores, which are all small and light-weight, able to travel through air, capable of resisting dry, adverse environmental conditions, and

hence capable of surviving a long time. Moulds need moisture and nutrients to grow and their growth is stimulated by warm, damp and humid conditions.

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

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

3 RESULTS AND DISCUSSION

3.1 Asbestos

Arcadis reviewed a report prepared by Arcadis for the HDSB titled "*Pre-Renovation Designated Substances* and *Hazardous Materials Survey*, *Pilgrim Wood Public School*, *1551 Pilgrims Way*, *Oakville*, *Ontario*" dated June 9, 2020. Information and bulk sampling results taken from the above-referenced report was utilized by Arcadis during the site investigations and in the preparation of this report.

During the course of our site investigation representative bulk samples of material were collected by Arcadis staff. The samples were forwarded to EMSL Canada Inc, for asbestos analyses. Results of bulk sample analysis for asbestos content are provided in Table 3.1. Table 3.1 also include sample results obtained from the above-referenced of materials tested outside of the designated study areas and are provided for references purposes only. The designated study areas are shown on the floor plans provided in Appendix A. Laboratory reports are provided in Appendix B.

Table 3.1 Summary of Results of Analyses of Bulk Samples for Asbestos Content

Sample No.	Sample Location	Sample description	Asbestos Content
1-A	118	Exterior brick mortar (1990 era)	None Detected
1-B	119	Exterior brick mortar (1990 era)	None Detected
1-C	120	Exterior brick mortar (1990 era)	None Detected
2-A	115	Exterior brick mortar (2013 era)	None Detected
2-B	116	Exterior brick mortar (2013 era)	None Detected
2-C	117	Exterior brick mortar (2013 era)	None Detected
3-A	115	Block filler paint (2013 era)	None Detected
3-B	116	Block filler paint (2013 era)	None Detected
3-C	112	Block filler paint (2013 era)	None Detected
4-A	115	Concrete block mortar (2013 era)	None Detected
4-B	116	Concrete block mortar (2013 era)	None Detected
4-C	112	Concrete block mortar (2013 era)	None Detected
5-A	108	Concrete block mortar (1990 era)	None Detected
5-B	121	Concrete block mortar (1990 era)	None Detected
5-C	118	Concrete block mortar (1990 era)	None Detected
6-A	108	Block filler paint (1990 era)	None Detected
6-B	121	Block filler paint (1990 era)	None Detected
6-C	118	Block filler paint (1990 era)	None Detected
7-A	117	White caulking around exterior window frame	None Detected (TEM)
7-B	117	White caulking around exterior window frame	None Detected
7-C	117	White caulking around exterior window frame	None Detected
8-A	124	Grey cement board – Exterior (exterior wall board)	None Detected
8-B	124	Grey cement board – Exterior (exterior wall board)	None Detected
8-C	124	Grey cement board – Exterior (exterior wall board)	None Detected
9-A	124	Beige cement board – Exterior (exterior wall board)	None Detected

Sample No.	Sample Location	Sample description	Asbestos Content
9-B	124	Beige cement board – Exterior (exterior wall board)	None Detected
9-C	124	Beige cement board – Exterior (exterior wall board)	None Detected
1A	Roof section 301	4 ply asphalt built up roofing membrane	None Detected (1)
1B	Roof section 104	4 ply asphalt built up roofing membrane	None Detected (1)
1C	Roof section 101	4 ply asphalt built up roofing membrane	None Detected (TEM) (1)
2A	Roof section 103	2 ply modified bitumen membrane	None Detected (1)
2B	Roof section 103	2 ply modified bitumen membrane	None Detected (1)
2C	Roof section 303	2 ply modified bitumen membrane	None Detected (TEM) (1)

NOTES:

(1) Sample results taken from a report prepared by Arcadis for the Halton District School Board entitled "Pre-Renovation Designated Substances and Hazardous Materials Survey, Pilgrim Wood Public School, 1551 Pilgrims Way, Oakville, Ontario" dated June 9, 2020.

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

Determination of the locations of asbestos-containing material was made based on the review of existing information, results of bulk sample analysis, visual observations and physical characteristics of the applications as well as our knowledge of the uses of asbestos in building materials.

Based on existing information, visual observations and results of laboratory analyses of samples collected by Arcadis Canada Inc., accessible asbestos-containing materials are not present in the designated study areas and, block filler primer paint and mortar associated with concrete block wall in both constructions eras do <u>not</u> contain asbestos and mortar in exterior brick in both construction eras does <u>not</u> contain asbestos.

Asbestos may also be present in materials which were not sampled during the course of the asbestos survey carried out by Arcadis, including, but not limited to, areas outside the designated study areas, roofing materials, fire doors, gaskets in piping, internal components of boilers, components of electrical equipment (e.g. electric wiring insulation, non-metallic sheathed cable, electrical panel partitions, arc chutes, high-grade electrical paper, etc.), concrete, and asphaltic pavement. Confirmatory testing of any such materials could be undertaken as the need arises (i.e., at the time of renovations, modifications or demolition) or the materials can be assumed to contain asbestos based on findings in adjacent areas.

If any materials which may contain asbestos and which were not tested during the course of the designated substances and hazardous materials survey are discovered during any construction activities, the work

shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.

3.2 Lead

During the course of our site investigation, paint was observed on the window frames in the designated study areas. The paint was observed to be in good condition.

All paint applications on metal building materials are assumed to contain lead. All removed painted metal building materials must be either sent for recycling at an approved facility or disposed at a licensed hazardous waste disposal facility.

Lead may also be present in lead pipe, mortar, in the solder on the seals of bell joints of any cast iron drainpipe and in the solder on the sweated-on joints between copper pipe and fittings.

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

In addition, the *EACO Lead Abatement Guidelines*, 2014 — *Edition 1,* Environmental Abatement Council of Ontario, also provides guidance and recommended work practices.

3.3 Mercury

During the course of our site investigation, fluorescent lights were observed in interior locations in the school outside the designated study areas and should not be affected by the proposed renovation work. Mercury should be assumed to be present as a gas in all fluorescent light tubes and in all paint applications, albeit at low levels. The fluorescent light tubes should be recycled for mercury, if the lights are removed.

Proper procedures for removing mercury-containing equipment (thermostats, for example, and any other mercury-containing equipment found to be present at the time of renovations or demolition) typically involve:

- removal of the mercury-containing equipment in a manner designed to prevent breakage;
- removal of the equipment over or in a containment device sufficient to collect and contain any mercury released in case of breakage;
- ensuring that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken equipment and that any mercury resulting from spills or leaks is immediately transferred to an appropriate container;
- ensuring that the area in which equipment is removed is well ventilated;

- ensuring that employees removing equipment are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
- storing removed switches in closed, non-leaking containers that are in good condition; and
- packing removed switches in the container with packing materials adequate to prevent breakage during storage, handling and transportation.

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

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

The measures and procedures outlined in the MOL *Guideline, Lead on Construction Projects* for control of potential exposure to lead in paint during construction activities will also serve to control potential exposure to any mercury in paint.

3.4 Silica

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

Silica can also be assumed to be present in any gravel ballast on roofs and will also be found in asphalt roofing materials if rock or stone are present in the asphalt.

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

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

3.5 Vinyl Chloride

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

3.6 Acrylonitrile

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

3.7 Other Designated Substances

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

3.8 Polychlorinated Biphenyls (PCBs)

Fluorescent lights were observed in interior locations in the school outside the designated study areas and should not be affected by the proposed renovation work. Light ballasts, such as those associated with the type of fluorescent lights (T8s) observed, are usually an electronic-type which do not contain PCBs, however, this would be confirmed by an electrician at the time of dismantling of the lights.

3.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

No equipment potentially containing ODS was observed in the designated study areas during the course of the site investigation.

3.10 Mould

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

4 LIMITATIONS AND SERVICE CONSTRAINTS

The opinions, conclusions and recommendations presented in this report are limited to the information obtained during the performance of the specific scope of service identified in the report. To the extent that Arcadis relied upon any information prepared by other parties not under direct contract to Arcadis, no representation as to the accuracy or completeness of such information is made. This report is an instrument of professional service and the services described in the report were performed in accordance with generally accepted standards and level of skill and care ordinarily exercised by members of the profession working under similar conditions including comparable budgetary and schedule constraints. No warranty, guarantee or certification express or implied, is intended or given with respect to Arcadis' services, opinions, conclusions or recommendations.

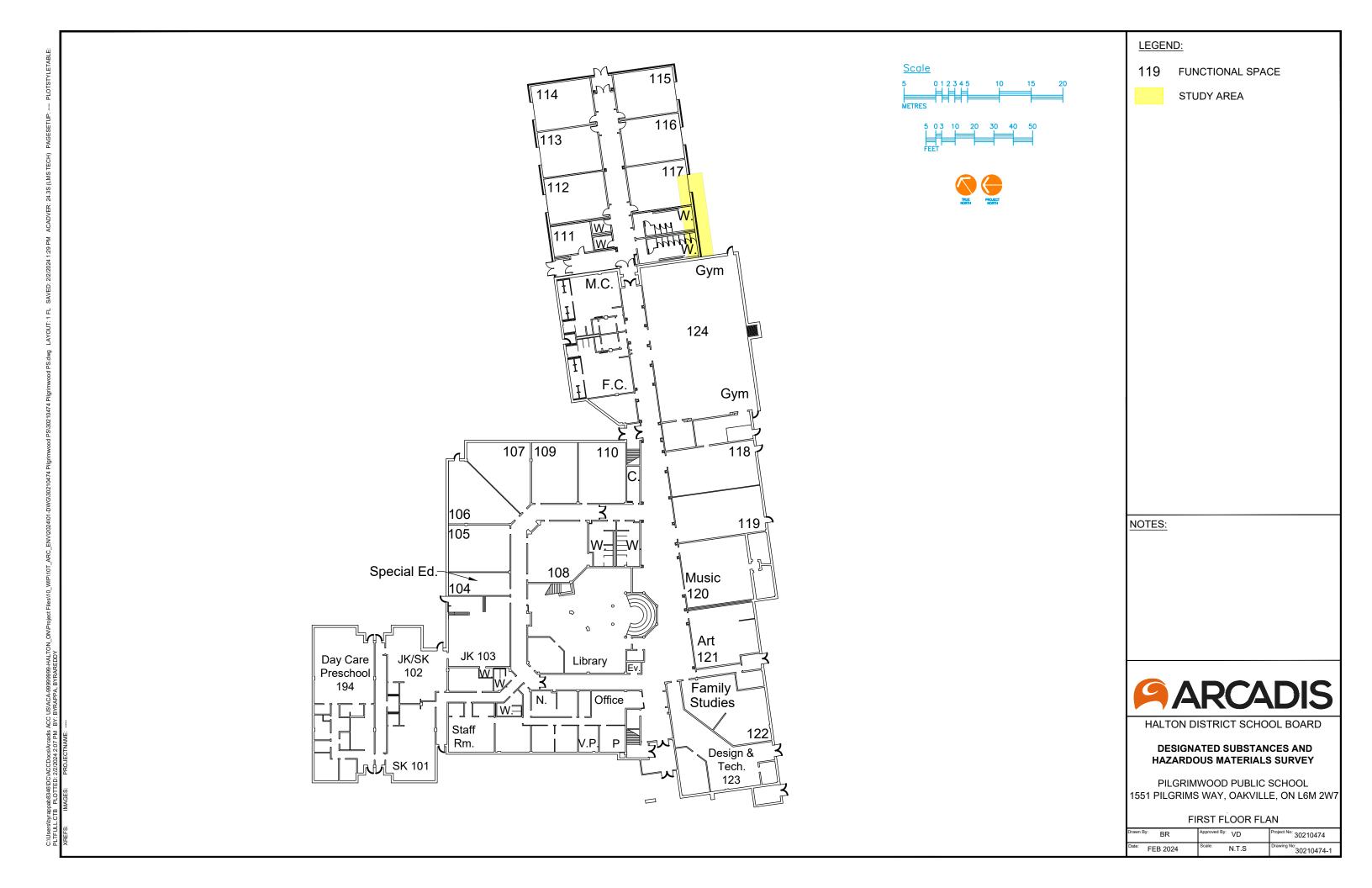
Arcadis' observations, the results of any testing and Arcadis' opinions, conclusions and recommendations apply solely to conditions existing at the specific times when and specific locations where Arcadis' investigative work was performed. Arcadis affirms that data gathered and presented in this report was collected in an appropriate manner in accordance with generally accepted methods and practices. Arcadis cannot be responsible for decisions made by our client solely on the basis of economic factors. Observation and testing activities such as those conducted by Arcadis are inherently limited and do not represent a conclusive or complete characterization. Arcadis analyzed only the substances, conditions and locations described in the report at the time indicated. Conditions in other parts of the project site, building or area may vary from conditions at the specific locations where observations were made and where testing was performed by Arcadis. Additionally, other building material hazards which were not identified by Arcadis, may also be present un-accessed areas and in walls, ceilings, cavities, and floors.

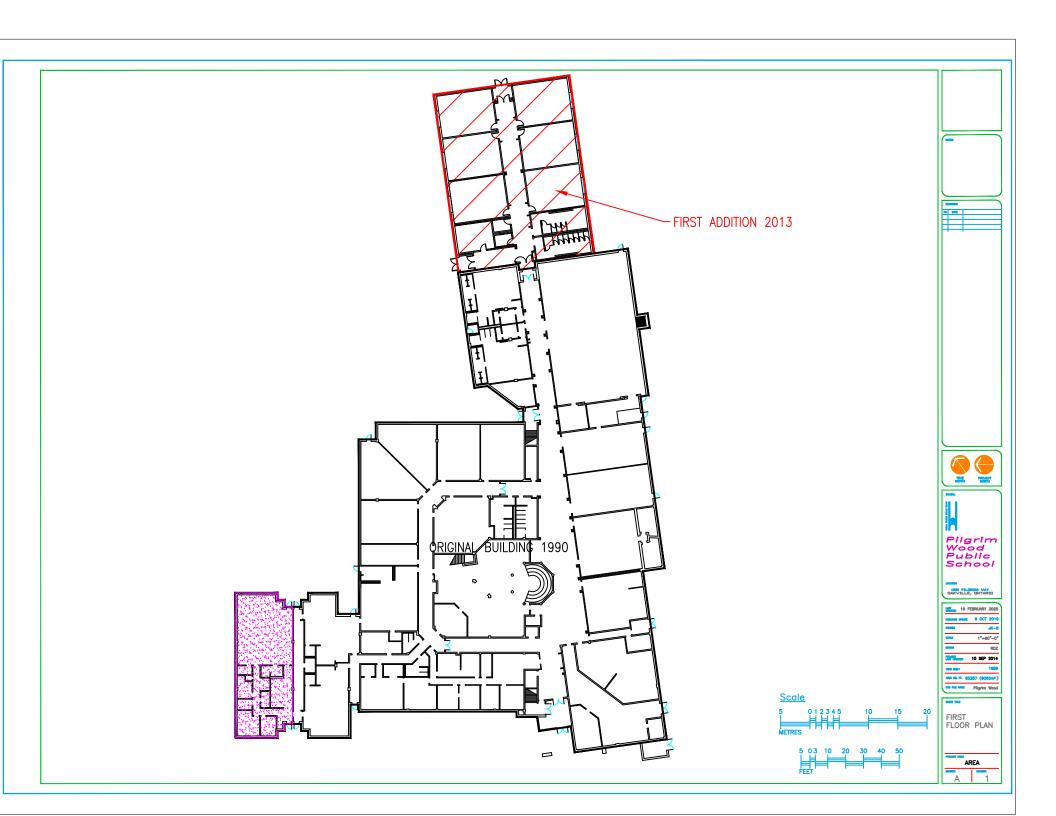
This report is expressly for the sole and exclusive use of the Client for whom this report was originally prepared and for the particular purpose outlined in the report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk. This report must be presented in its entirety.

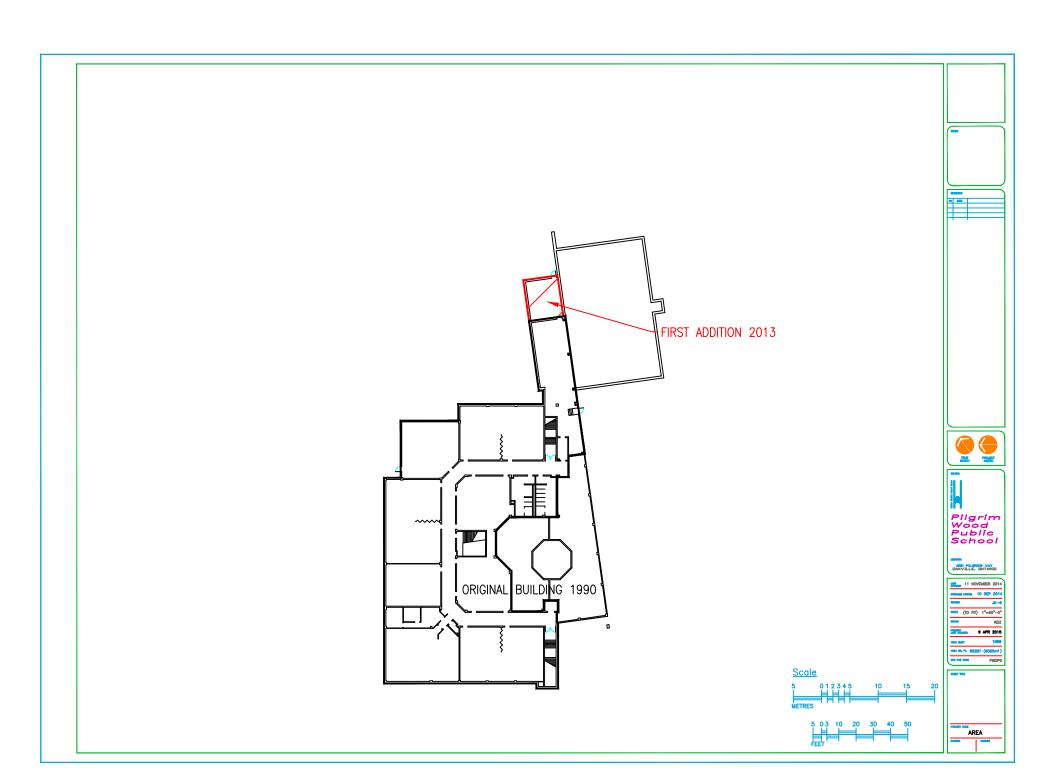
This report is not intended to be used as a scope of work or technical specification for remediation of designated substances or hazardous materials.

APPENDIX A

Floor Plans







APPENDIX B

Laboratory Reports



Proj:

PLM

PLM

EMSL Canada Inc.

20 Amber Street Unit #16 Markham, ON L3R 5P4 Phone/Fax: (289) 271-4362 / (289) 799-3563 http://www.EMSL.com / markhamlab@EMSL.com

EMSL Canada Order 662400007 55DCSL97 Customer ID: 30210474

Customer PO: Project ID:

Attn: Viraj Daruwala

> ARCADIS Canada Inc. 121 Granton Drive

Unit 12

Richmond Hill, ON L4B 3N4 PilgrimWood PS - 30210474

Phone: Fax:

(905) 882-5984 (905) 882-8962

Collected:

Received:

1/23/2024

Analyzed: 1/30/2024

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Non-Asbestos

Non-Asbestos

Client Sample ID:

662400007-0001

662400007-0002

662400007-0003

Sample Description: 118/Exterior brick mortar (1990 era)

Analyzed	

TEST Date

Fibrous Non-Fibrous **Asbestos** Comment 0.0% 100.0% None Detected

Lab Sample ID:

Lab Sample ID:

Comment

Lab Sample ID:

Comment

Comment

Client Sample ID: 1-B Sample Description:

119/Exterior brick mortar (1990 era)

1/25/2024

Analyzed

Non-Asbestos

Color

Gray

Date Color **Fibrous** Non-Fibrous 1/25/2024 100.0% Gray 0.0%

Asbestos None Detected

Client Sample ID: 1-C

Sample Description:

Client Sample ID:

TEST

120/Exterior brick mortar (1990 era)

Analyzed **TEST** Date Color

Fibrous Non-Fibrous Asbestos PLM 1/25/2024 0.0% 100.0% None Detected Gray

> Lab Sample ID: 662400007-0004

Sample Description:

2-A

115/Exterior brick mortar (2013 era)

Analyzed Non-Asbestos

TEST Non-Fibrous Comment Date Color Fibrous Asbestos 1/25/2024 PLM Gray 0.0% 100.0% None Detected

Lab Sample ID: 662400007-0005 Client Sample ID: 2-B

Sample Description: 116/Exterior brick mortar (2013 era)

Analyzed Non-Asbestos **TEST** Date Color **Fibrous** Non-Fibrous Asbestos

PLM 1/25/2024 Gray 0.0% 100.0% None Detected

Lab Sample ID: 662400007-0006 Client Sample ID: 2-C

Sample Description: 117/Exterior brick mortar (2013 era)

Analyzed Non-Asbestos

Fibrous Non-Fibrous TEST Date Color Asbestos Comment PLM 1/25/2024 Gray 0.0% 100.0% None Detected

662400007-0007 Lab Sample ID: Client Sample ID:

Sample Description: 115/Block filler paint (2013 era)

Analyzed Non-Asbestos **TEST** Date Color **Fibrous** Non-Fibrous Asbestos Comment PLM 1/25/2024 White 0.0% 100.0% None Detected



Client Sample ID:

Client Sample ID:

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EMSL Canada Order 662400007 55DCSL97 Customer ID: 30210474 Customer PO:

Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Lab Sample ID: 662400007-0008 Client Sample ID:

Sample Description: 116/Block filler paint (2013 era)

Analyzed Non-Asbestos **TEST** Date Color Fibrous Non-Fibrous Asbestos Comment PLM 1/25/2024 White 0.0% 100.0% None Detected Client Sample ID: 3-C Lab Sample ID: 662400007-0009

Sample Description: 112/Block filler paint (2013 era)

Analyzed Non-Asbestos TEST Date **Fibrous** Non-Fibrous Comment Color Asbestos PLM 1/25/2024 White 0.0% 100.0% None Detected

Client Sample ID: 4-A Lab Sample ID: 662400007-0010

Sample Description: 115/Concrete block mortar (2013 era)

Analyzed Non-Asbestos **TEST** Date Color **Fibrous** Non-Fibrous Asbestos Comment PLM 1/25/2024 Grav 0.0% 100.0% None Detected Lab Sample ID: 662400007-0011 4-B

Sample Description: 116/Concrete block mortar (2013 era)

Analyzed Non-Asbestos **TEST** Date Color Fibrous Non-Fibrous Asbestos Comment PLM 1/25/2024 0.0% 100.0% None Detected Gray Lab Sample ID: 662400007-0012

Sample Description: 112/Concrete block mortar (2013 era)

Analyzed Non-Asbestos **TEST Fibrous** Non-Fibrous **Asbestos** Comment Date Color PLM 1/25/2024 Grav 0.0% 100.0% None Detected

662400007-0013 Lab Sample ID: Client Sample ID: 5-A

Sample Description: 108/Concrete block mortar (1990 era)

Non-Asbestos Analyzed TEST Fibrous Non-Fibrous Comment Date Asbestos Color PLM 1/25/2024 0.0% 100.0% None Detected Gray 662400007-0014 5-B Lab Sample ID:

Client Sample ID:

Sample Description: 121/Concrete block mortar (1990 era)

Analyzed Non-Asbestos Comment **TEST** Date Color **Fibrous** Non-Fibrous **Asbestos** PLM 1/25/2024 0.0% 100.0% None Detected Gray Lab Sample ID: 662400007-0015 5-C Client Sample ID:

Sample Description: 118/Concrete block mortar (1990 era)

Analyzed Non-Asbestos **TEST** Date Color Fibrous Non-Fibrous Asbestos Comment PLM 1/25/2024 Gray 0.0% 100.0% None Detected



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Lab Sample ID:

662400007-0018

Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

662400007-0016 Lab Sample ID: Client Sample ID:

Sample Description: 108/Block filler paint (1990 era)

Analyzed Non-Asbestos **TEST** Date Color Fibrous Non-Fibrous Asbestos Comment PLM 1/25/2024 White 0.0% 100.0% None Detected Client Sample ID: 6-B-Block Fill Lab Sample ID: 662400007-0017

Sample Description: 121/Block filler paint (1990 era)

Analyzed Non-Asbestos TEST Date Non-Fibrous Comment Color **Fibrous** Asbestos PLM 1/25/2024 Gray/White 0.0% 100.0% None Detected

Client Sample ID: 6-B-Mortar Lab Sample ID: 662400007-0017A

Sample Description: 121/Block filler paint (1990 era)

Analyzed Non-Asbestos **TEST** Date Color **Fibrous** Non-Fibrous Asbestos Comment PLM 1/25/2024 Grav 0.0% 100.0% None Detected

Sample Description: 118/Block filler paint (1990 era)

6-C

Client Sample ID:

Client Sample ID:

Client Sample ID:

Client Sample ID:

Analyzed Non-Asbestos **TEST** Date Color Fibrous Non-Fibrous Asbestos Comment PLM 1/25/2024 Gray/White 0.0% 100.0% None Detected Lab Sample ID: 662400007-0019

Sample Description: 117/White caulking around exterior window frame - Caulk

Analyzed Non-Asbestos **TEST** Date **Fibrous** Non-Fibrous **Asbestos** Comment Color PLM Grav. Reduction 1/25/2024 0.0% 100% None Detected Gray None Detected TEM Grav. Reduction 1/30/2024 Gray 0.0% 100.0%

Lab Sample ID: 662400007-0020 Client Sample ID:

Sample Description: 117/White caulking around exterior window frame

Analyzed Non-Asbestos TEST Date Color Fibrous Non-Fibrous Asbestos Comment PLM 1/30/2024 0.0% 100.0% None Detected Sample split from Sample 7A Gray 7-C Lab Sample ID: 662400007-0021

Sample Description: 117/White caulking around exterior window frame

Analyzed Non-Asbestos TEST Date Color Fibrous Non-Fibrous Asbestos Comment PLM 1/30/2024 0.0% 100.0% Gray None Detected 8-A Lab Sample ID: 662400007-0022

Sample Description: 124/Grey cement board - Exterior

Analyzed Non-Asbestos **TEST** Fibrous Non-Fibrous Comment Date Color Asbestos PLM 1/25/2024 20.0% 80.0% None Detected Gray



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Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

 Client Sample ID:
 8-B
 Lab Sample ID:
 662400007-0023

Sample Description: 124/Grey cement board - Exterior

		Analyzed		Non	-Asbestos				
TEST		Date	Color	Fibrous	Non-Fibrous	Asbestos	Comment		
PLM		1/25/2024	Gray	20.0%	80.0%	None Detected			
Client Sample ID:	8-C						Lab Sample ID:	662400007-0024	

Sample Description: 124/Grey cement board - Exterior

		Analyzed		Non	-Asbestos			
TEST		Date	Color	Fibrous	Non-Fibrous	Asbestos	Comment	
PLM		1/25/2024	Gray	10.0%	90.0%	None Detected		
Client Sample ID:	9-A						Lab Sample ID:	662400007-0025

Sample Description: 124/Beige cement board - Exterior

		Analyzed		Non-	Asbestos			
TEST		Date	Color	Fibrous	Non-Fibrous	Asbestos	Comment	
PLM		1/25/2024	Gray	15.0%	85.0%	None Detected		
Client Sample ID:	9-B						Lab Sample ID:	662400007-0026

Sample Description: 124/Beige cement board - Exterior

	Analyzed		Non	-Asbestos			
TEST	Date	Color	Fibrous	Non-Fibrous	Asbestos	Comment	
PLM	1/25/2024	Gray	15.0%	85.0%	None Detected		
Client Sample ID:	9-C					Lab Sample ID:	662400007-0027
Commis Description							

Sample Description: 124/Beige cement board - Exterior

	Analyzed	Non-Asbestos				
TEST	Date	Color	Fibrous Non-Fibro	is Asbestos	Comment	
PLM	1/25/2024	Gray	15.0% 85.0%	None Detected		



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EMSL Canada Order 662400007 Customer ID: 55DCSL97 Customer PO: 30210474

Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Analyst(s):

Javed Ishmail PLM (8)

Khue Nguyen TEM Grav. Reduction (1)

Kira Ramphal PLM (1)
Marzan Regaspi PLM (17)
Michelle Bautista PLM (1)

PLM Grav. Reduction (1)

Reviewed and approved by:

Stephanie Achaiya, Laboratory Manager or Other Approved Signatory

3. Advairsa

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This is a summary report; official reports are available on LabConnect or upon request and relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Canada Inc. Markham, ON NVLAP Lab Code 600317-0

Initial report from: 01/30/202415:55:16

APPENDIX C Summary of Asbestos, Lead and Silica Work Classifications

TABLE C-1

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

TYPE 1 OPERATIONS

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

TYPE 2 OPERATIONS

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

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

TYPE 3 OPERATIONS

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

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TABLE C-2

SUMMARY OF CLASSIFICATION OF LEAD-CONTAINING CONSTRUCTION TASKS

MOL GUIDELINE - LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

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

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

TYPE 1 OPERATIONS

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

TYPE 2 OPERATIONS

Type 2a Operations

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

Type 2b Operations

spray application of lead-containing coatings.

TABLE C-2 (Continued) SUMMARY OF CLASSIFICATION OF LEAD-CONTAINING CONSTRUCTION TASKS

MOL GUIDELINE - LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

TYPE 3 OPERATIONS

Type 3a Operations

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

Type 3b Operations

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

arcadis.com Appendix C – Page 4 of 6

TABLE C-3

SUMMARY OF CLASSIFICATION OF SILICA-CONTAINING CONSTRUCTION TASKS MOL Guideline, Silica on Construction Projects, April 2011

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

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

TYPE 1 OPERATIONS

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

TYPE 2 OPERATIONS

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

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

TYPE 3 OPERATIONS

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

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