



Halifax
Regional Centre for Education

RFP #4234

Window & Cladding Replacement Dutch Settlement Elementary

RFP Closing Date: Thursday May 23, 2024
RFP Closing Time: 2:00 PM (ATL)
Submission Email: hrcetenders@hrce.ca

Ready-for-Takeover Date: Friday - August 30, 2024

HRCE Procurement Contact:
Nancy Rideout, Purchasing Manager
Tel: (902) 464-2000 Ext 2222
Email: nrideout@hrce.ca

Operations Contact:
Gary Manette, Project Manager
Cell: (902) 497-8542
Email: gmanette@hrce.ca

School Location:
Dutch Settlement Elementary
990 Nova Scotia #277
Dutch Settlement, NS B2S 2J5

Mandatory Site Meeting for Bidders:
Wednesday May 15, 2024, at 2:30 pm
Dutch Settlement Elementary
Please meet at School Entrance

RFP submissions are to be submitted by email to: hrcetenders@hrce.ca

RFP documents are available for download from the HRCE's Website:
<https://www.hrce.ca/about-hrce/financial-services/tenders/tender-listing>

In the light of COVID-19 and future pandemics, all vendors are required to follow the guidelines set in place by Nova Scotia Health Authority. Potential risks such as restricted accessibility to schools and buildings of the Halifax Regional Centre for Education (HRCE), inability to complete work on a timely manner due to social distancing, disabled supply chains which will result in delivery delays of raw materials and finished goods, labour shortages and additional storage costs should be clearly communicated with the HRCE Personnel on a timely manner to ensure an amicable solution can be agreed between the HRCE and the vendor/contractor. The HRCE will not be liable for any direct or indirect loss incurred due to a pandemic.

The Terms and Conditions of the RFP Package, including but not limited to the Contract Type and Supplementary Conditions have been modified.

It is the Proponent's Responsibility to review all sections of the RFP prior to submitting a Proposal/Bid.

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SPECIFICATIONS 180 pages

00 PROCUREMENT AND CONTRACTING REQUIREMENTS

- 00 01 10 List of Contents
- 00 11 10 List of Drawings
- 00 31 26 Existing Hazardous Material Information

- Hazardous Building Materials Assessment
- Appendix A – Asbestos Management Program

01 GENERAL REQUIREMENTS

- Outlined in “Halifax Regional Centre for Education” General Requirements

04 MASONRY

- 04 05 00 Masonry Procedures
- 04 10 00 Mortar and Grout for Masonry
- 04 16 00 Masonry Reinforcing and Tying
- 04 21 00 Unit Masonry

05 METALS

- 05 50 00 Metal Fabrication

06 WOOD, PLASTICS, AND COMPOSITES

- 06 10 00 Rough Carpentry
- 06 20 00 Finish Carpentry

07 THERMAL AND MOISTURE PROTECTION

- 07 19 00 Sheet, Vapor & Air Barrier
- 07 21 00 Building Insulation
- 07 40 10 Cedar Shingle Siding
- 07 41 00 Preformed Metal Siding
- 07 62 00 Sheet Metal Flashing and Trim
- 07 90 00 Sealants

08 OPENINGS

- 08 11 00 Steel Hollow Metal Doors
- 08 11 10 Pressed Steel Frames
- 08 11 16 Aluminum Doors & Frames
- 08 61 00 Vinyl Windows
- 08 71 00 Door Hardware
- 08 80 50 Glazing

09 FINISHES

- 09 90 00 Painting

DRAWING LIST9 pages

A000	COVER SHEET
A100	SITE
A101	FLOOR PLAN – MAIN LEVEL
A102	FLOOR PLAN – LOWER LEVEL
A200	EXTERIOR ELEVATIONS – EXISTING / DEMO
A201	EXTERIOR ELEVATIONS
A500	DETAILS
A501	DETAILS
A600	WINDOW AND DOOR SCHEDULES

END OF DOCUMENT1 Page

SECTION 00 00 15 - DESCRIPTION OF WORK & LIST OF DRAWINGS

1. General

- 1.1 The work of this contract includes the provision of all materials, labour and equipment necessary to complete the **Window & Cladding Replacement at Dutch Settlement Elementary**, to remove the existing Windows, cladding and materials in areas as noted on the drawings and specifications prepared by **SP Dumaresq Architect Ltd.** The **Scope of Work** pertaining to this project is as per the pricing indicated in section 00 41 13 – Section A.
- 1.2 It is the intent of the Halifax Regional Centre for Education (HRCE) to have all work completed, to the point of Ready-for-Takeover, prior to **August 30, 2024**. It is expected that a timely award of this contract will enable the Contractor to facilitate shop drawing review and ordering of materials to allow commencement of work immediately after contract execution.
- 1.3 The whole of the work shall agree in all particulars with the levels, measurements and details contained in the drawings accompanying this specification and with such other drawings or information as may from time to time be supplied by the HRCE or may be supplied by the Contractor and reviewed by the HRCE.
- 1.4 In relation to the hours of work: Work for the HRCE is to be completed during hours when the schools are unoccupied, unless otherwise authorized in writing by the Project Manager (Operations Contact person) or designate. Hours of work shall comply with the local ordinances and bylaws for each site. (Refer Section 00 41 13, Section 3.7)

2. Drawings

A000	COVER PAGE	PAGE 1 of 9
A100	SITE PLAN	PAGE 2 of 9
A101	FLOOR PLAN – MAIN LEVEL	PAGE 3 of 9
A102	FLOOR PLAN – LOWER LEVEL	PAGE 4 of 9
A200	EXTERIOR ELEVATIONS – EXISTING / DEMO	PAGE 5 of 9
A201	EXTERIOR ELEVATIONS	PAGE 6 of 9
A500	DETAILS	PAGE 7 of 9
A501	DETAILS	PAGE 8 of 9
A600	WINDOW AND DOOR SCHEDULES	PAGE 9 of 9

END OF SECTION

SECTION 00 05 00 - LIST OF CONSULTANTS

Owner: Halifax Regional Centre for Education
33 Spectacle Lake Drive
Dartmouth, NS B3B 1X7

Nancy Rideout, Purchasing Manager
Office: (902) 464-2000 ext 2222
nrideout@hrce.ca

Consultant: SP Dumaresq Architect Ltd.
6389 Coburg Rd.
Halifax, NS B3H 2A5

Jonathan Carmichael
Cell: (902) 719-4682
jon@spda.ca

END OF SECTION

SECTION 00 21 13 – INFORMATION FOR PROPONENTS

Invitation:

1. Proposal Call

- 1.1. The Halifax Regional Centre for Education (HRCE) will receive offers in the form of a two-file proposal from proponents which is signed and electronically received on or before the date and time specified on the cover sheet of this document. The email address to submit submissions and amendments is hrcetenders@hrce.ca. Both files should be submitted in Adobe (.pdf) format. If the electronic submission is larger than 20MB, proponents have the option of sharing files from google drive to hrcetenders@gnspe.ca. If you encounter difficulties kindly contact the HRCE Procurement team for further clarification.
- 1.2. Proposals received after the closing time will not be considered. The HRCE deems the submission date and time to be the email received date and time. Please ensure to allow sufficient time for your submission to be received by the HRCE before the 2pm close. Please consider that large files may require more time.
- 1.3. Proponents are to submit completed Request for Proposal (RFP) documents by email.

The technical submission electronic file should be named:

“Technical Submission_4234_Proponent Name”.

The second file (Price Submission) should be named:

“Price Submission_4234_Proponent Name”.

There must be no reference to the bid price within the technical submission.

Proponents can refer to item 11 in this section for more detailed submission instructions.

- 1.4. Proposals will be opened at the time indicated on the cover sheet of this document. Public openings are no longer held for any Tenders or RFPs relating to goods, services or construction for the HRCE. **The technical submission will be the only file opened during the RFP closing.** All proposal submissions are subject to evaluation after opening and before award of contract. The successful proponent and award amount will be posted on the Procurement Services website (<http://novascotia.ca/tenders/tenders/ns-tenders.aspx>) after award.

- 1.5. Amendments to the submitted offer will be permitted if received by email prior to bid closing and if endorsed by the same party or parties who signed and executed the offer.

If the amendment relates to the technical submission, the electronic file should be named
“Technical Submission Amendment_4234_Proponent Name”.

If the amendment relates to the price submission, the file should be named:

“Price Submission Amendment_4234_Proponent Name”.

The price amendment file submission should be the signed Price Amendment Form (Section 00 41 73) and shall not disclose either the original or revised total price.

- 1.6. Bid submissions **will not** be accepted by fax, mail, courier or hand delivery.

2. Intent

- 2.1. The intent of this Request for Proposals (RFP) is to obtain an offer to perform all work associated with ***RFP #4234, Window & Cladding Replacement at Dutch Settlement Elementary*** for a Stipulated Price Contract in accordance with the Contract Documents.
- 2.2. The HRCE will use the CCDC-2, 2020 for this work. A copy of the Standard Construction Contract CCDC 2 – 2020 is available upon request and will form part of the contract documents.
- 2.3. The HRCE Supplementary General Conditions for the CCDC-2, 2020, applicable to this work is available for review under Section 0073 00 of the RFP document.
- 2.4. Ready-for-Takeover (RFT) of the project is to be achieved on or before **August 30, 2024**, provided the contract is awarded within fifteen (15) business days after the RFP closing.
- 2.4.1. If the contract is not awarded within fifteen (15) business days of closing, the Ready-for-Takeover Date will be extended by one (1) business day, for every business day that passes, until the contract has been awarded.
- 2.4.2. Receipt of the award letter by the successful contractor does not constitute approval to begin work on site.
- 2.5. The HRCE does not guarantee the award of all areas, phases or any portion thereof.
- 2.6. The HRCE reserves the right to award individual areas or phases to one contractor or between multiple contractors.
- 2.7. The HRCE reserves the right to reduce the scope of work if the stipulated bid amount exceeds the budget for the relevant project.

3. Scope of work

- 3.1. Refer to Section 00 00 15 – Description of Work and List of Drawings and Section 01 11 00 Summary of Work.

4. Availability

- 4.1. RFP documents are available for download on the HRCE website:
<https://www.hrce.ca/about-hrce/financial-services/tenders/tender-listing>
- 4.2. RFP documents are made available only for the purpose of obtaining offers for this project. Their use does not confer a license or grant for other purposes.
- 4.3. The HRCE is not responsible for accuracy of documents obtained from any other source.

5. Examination

- 5.1. RFP documents are provided to the Construction Association of Nova Scotia (CANS).
- 5.2. Upon receipt of RFP documents, proponents are to verify that documents are complete.
- 5.3. Bidders are responsible to retrieve all RFP documents from the HRCE website and fully review the RFP requirements prior to the preparation of a bid submission.

6. Clarification and Addenda

- 6.1. Proponents must notify the Purchasing Manager, by email at nrideout@hrce.ca no less than **five (5)** working days before the RFP Closing regarding any questions, omissions, errors or ambiguities found in the documents. If HRCE considers that correction, explanation or interpretation is necessary, an addendum will be posted on the HRCE website.
- 6.2. Addenda will be issued no less than three (3) business days before the RFP closing date and will form part of the Contract Documents.
- 6.3. All RFP information must be confirmed by written addenda. The HRCE and its representatives shall not be bound by or be liable for any representation or information provided verbally. Information obtained by any other source is not official and will not bind the HRCE.
- 6.4. Proponents are to complete Price Submission Form (section 00 41 13) acknowledging each addendum that was issued.
- 6.5. Where the HRCE publishes an Addendum modifying the terms of the posting documents, or changing the Project or Contract Documents in any manner, the HRCE shall not be liable for any expense, cost, loss, or any form of damage or damages incurred or suffered; whether directly or indirectly, by any Supplier or any other person in connection with or in any way relating to or resulting from the publication of an Addendum, regardless of whether the publication occurs prior to or after a Supplier has submitted their bid submission.
- 6.6. All Addenda issued by HRCE shall become part of the Contract Documents, unless specifically excluded from the Contract Documents in writing. Addenda shall be allowed for in determining the total contract price.

7. Product/System Options

- 7.1.** Alternatives to specified products and systems will only be considered during the bidding period in the manner prescribed below.
- 7.1.1.** Where the RFP documents stipulate a particular product, alternatives may be considered by the Consultant up to five (5) working days before the RFP closing date and time. Bidders must forward their written requests by email to nrideout@hrce.ca. Requests will be forward to the appropriate person(s) for review.
- 7.2.** The submission must provide sufficient information to enable the Consultant to determine acceptability of such products. Request for an alternate product/system must be accompanied with:
- 7.2.1.** information about how the request affects other work in order to accommodate each alternate;
- 7.2.2.** the dollar amount of additions to or reductions from the Price Submission, including revisions to other work.
- 7.2.3.** A later claim by the bidder for an addition to the contract price because of changes in work necessitated by use of alternates shall not be considered.
- 7.3.** When a request to substitute a product is made and pursuant to consultation with the Consultant, HRCE may approve or disapprove the substitution. The bidder making the request will be notified of the HRCE's decision and if the alternate is approved, the HRCE will issue an addendum.
- 7.4.** Alternates must be submitted in the above manner; otherwise, they will not be accepted.

8. Mandatory Bidders' Site Meeting (Site Assessment)

- 8.1.** Bidders will be deemed to have familiarized themselves with the existing project site, working conditions and all other conditions which may affect performance of the Contract. No plea of ignorance of such conditions as a result of failure to make all necessary examinations will be accepted as a basis for any claims for extra compensation or an extension of time.
- 8.1.1.** A mandatory bidders' site meeting has been scheduled as per the information on the cover sheet of this document. All bidders are required to attend. Representatives of HRCE and the Consultant will be in attendance.
- 8.1.2.** Bidders must register their presence with the HRCE stating the name of the contractor they represent. Failure to attend and register will lead to non-acceptance of the proposal by HRCE. HRCE recommends that interested bidders ensure that their proposed subcontractors attend the mandatory site meeting.

9. Bidders Registration

- 9.1.** The successful contractor and sub-contractors must comply with the Nova Scotia Corporations Registration Act and/or Partnerships and Business Name Registration Act, or equivalent, before a contract is awarded.

10. Qualifications (Subcontractors/Other Tradespersons/Individuals)

- 10.1.** Bidders are fully responsible to the HRCE for the acts/omissions of subcontractors and of persons directly or indirectly employed or retained by them. Nothing contained in the contract documents shall create any contractual relation between any subcontractor and the HRCE. Subcontracting the contract shall not relieve the Bidder from any contractual obligations.
- 10.2.** Bidders must provide subcontractors with a copy of the RFP documents making subcontractors aware that the HRCE is not responsible for any payments to subcontractors, and that all actions, directions or claims are solely between the bidder and the subcontractor.
- 10.3.** The Contract, or any portion thereof, shall not be assigned nor sub-contracted without the prior written approval of HRCE, which approval may be withheld in the HRCE's sole discretion. When sub-contracting, successful bidder(s) must be prepared, if requested, to provide copies of billings from subcontractors.
- 10.4.** Successful bidder(s) shall only use additional subcontractors during the course of the contract with the prior written approval of the HRCE.
- 10.5.** The successful bidder(s) shall not re-assign the role of Project Manager to another individual other than the proposed Project Manager as indicated in the technical submission, without prior written approval from the HRCE.
- 10.6.** The successful bidder(s) shall at all times enforce strict discipline and good order among their employees and subcontractors and shall avoid any unfit person or any person not skilled in the work assigned to the employee.
- 10.7.** HRCE reserves the right to reject a proposed sub-contractor for a reasonable cause.
- 10.8.** Refer to GC 3.6 of CCDC-2020.

11. PROPOSAL SUBMISSION

11.1. RFP Proposal Package - A complete proposal package is comprised of the elements below:

11.2. Technical Submission and Price Submission - General

- 11.2.1.** Each proposal shall include a signed technical submission file and a signed price submission file, clearly labelled as previously instructed in Section 00 21 13, item 1.3.
- 11.2.2.** Both the Technical Submission files, and the separate Price Submission file, shall be submitted simultaneously.
- 11.2.3.** The Technical Submission file contents must not contain any reference to the bid price being offered for this project.
- 11.2.4.** The email subject line or body must identify the name of the proponent/company and the RFP name and number.
- 11.2.5.** Proponents shall be solely responsible for the delivery of their proposals in the manner and time prescribed.

11.3. Technical Submission Contents

11.3.1. Technical submissions shall be submitted in a legible format, not to exceed 20 pages. Submissions will be on the proponent’s letterhead and shall contain an authorized signature. Proposals shall be submitted in English, and shall be specifically prepared to meet the requirements of this project.

Total RFP Scoring:

Phase A – Technical Score	30 Points
Phase B – Pricing Score	70 Points
Phase C - Total RFP Score	100 Points

The technical submission response shall be organized into four sections:

Section I.	Project Experience and References
Section II.	Team Composition
Section III.	Management of Project Specific Risk
Section IV.	Schedule of Work

I. PROJECT EXPERIENCE AND REFERENCES.

The proponent is required to provide a detailed summary of their company's experience within the past sixty (60) months, by describing three (3) Window Replacement projects for an educational/commercial institution.

These projects should be within a 100 km radius of the Halifax Regional Municipality. These projects should be similar in nature, complexity and value to the requirements specified in this RFP (see Section 00 00 15).

If a proponent has completed projects for the HRCE, they are required to include the two most recent HRCE projects in this section (regardless of the date completed). It is the bidder's responsibility to source HRCE project information requested in this section.

Please note if the proponent fails to include relevant HRCE projects, this will negatively impact their technical score. **If a proponent has not completed prior work (at any time) for the HRCE, then they may select projects of their choosing within the other stipulated parameters.**

> For each of the three projects listed, the proponent is asked to provide:

- 1) the company name,
- 2) a brief description of the project,
- 3) the name of the project manager,
- 4) the dollar value of the project.
- 5) A reference contact name and title for this project, and
- 6) their email and phone number.

For HRCE projects, please provide the HRCE Project Manager's name; prior consent is not required.

Please ensure that non-HRCE references are aware they will be contacted, and that prior consent to be a reference was obtained.

RFP Scoring for this section:

SECTION I. PROJECT EXPERIENCE, BASED ON REFERENCE FEEDBACK		
Project 1	Project met budget and schedule.	2.00
	Good quality work and product.	1.00
	Well managed project and good communications.	2.00
Total Points Available for this Project		5.00
Project 2	Project met budget and schedule.	2.00
	Good quality work and product.	1.00
	Well managed project and good communications.	2.00
Total Points Available for this Project		5.00
Project 3	Project met budget and schedule.	2.00
	Good quality work and product.	1.00
	Well managed project and good communications.	2.00
Total Points Available for this Project		5.00
Total Points Available for Section I.		15.00

II. TEAM COMPOSITION.

The proponent is required to identify the key personnel who will be assigned to this project, these key personnel must remain with the project until completion. Please provide each employee’s name, title/role, and years of related experience.

Proponents are required to provide a detailed resume for the proposed Project Manager outlining professional qualifications and years of experience.

Please indicate the percentage of their time that will be committed to this project.

An ***example*** of a time commitment for this project could be:

Commitment	Key Personnel
100%	Foreman
50%	Site Supervisor
20%	Project Manager

RFP Scoring for this section is:

SECTION II. TEAM COMPOSITION	Score
Does the Project Manager have a minimum of 3 years of relevant experience?	2.00
Was a listing of key team members provided?	1.00
Was the percentage of commitment indicated and adequate?	2.00
Total Points Available for Section II.	5.00

III. MANAGEMENT OF PROJECT SPECIFIC RISK

Proponents shall identify a minimum of three (3) risks associated with this specific project. Risks that their company could be faced with related to the scope of work for this project. Proponents shall state the risk, risk mitigation strategy, responsible parties, and the impact to schedule or budget.

An example of a Project Specific Risk could be:

Risk Register Example			
Risk	Mitigation	Responsibility	Impact
Specified materials have long lead times.	1. Expedite delivery if available. 2. Source alternative equivalent materials that are readily available.	Contractor. Client and Consultant approval required.	Expedited delivery or alternative materials may increase cost and impact budget. Without mitigation the schedule will be impacted.

Standard safety risks covered by Safe Work Practices are not to be referenced here. The HRCE is looking for assurances that risks identified through the mandatory site meeting are identified and will be mitigated, and that potential delays or other risks are disclosed in the proposal.

RFP Scoring for this section is:

SECTION III. MANAGEMENT OF RISKS ASSOCIATED WITH THIS SPECIFIC PROJECT	Score
Did the proponent detail the 3 Project Specific Risks with mitigation strategies?	3.00
Are risk management responsibilities clearly identified and assigned?	1.00
Were appropriate risk impacts provided for the 3 stated risks?	1.00
Total Points Available for Section III.	5.00

IV. SCHEDULE OF WORK

Please provide a Gantt Chart that includes an appropriate amount of detail around the planning and scheduling needs for this project. The Gantt Chart should contain all the key activities and align with the work schedule. A successfully prepared Gantt Chart provides a clear visual representation of how the project and required tasks will be completed.

If the Ready for Takeover Date cannot be met, please communicate this to procurement as an RFI well before RFP close.

The HRCE expects to award this work within 15 days of close. Please ensure that the proposed schedule of work aligns with that timeframe.

RFP Scoring for this section is:

SECTION IV. SCHEDULE OF WORK	Score
Does the Gantt Chart include all required components? Is the schedule reasonable?	2.00
Does the schedule indicate project completion <i>before</i> the Ready for Takeover date? <i>If the Ready for Takeover date cannot be met, please submit a RFI prior to RFP close.</i>	3.00
Total Points Available for Section IV.	5.00

11.4. Price Submission Contents

11.4.1 The Price Submission is to be submitted on the forms provided by the HRCE (Section 00 41 13 – Price Submission Form). These forms are to be completed in full, with an authorized signature and corporate seal as applicable. The completed form shall be without interlineations, alterations or erasures.

Proponents are advised that the HRCE may request original documents be sent to the HRCE office for further review. Price submissions sent by fax, mail or hand delivered will not be accepted.

11.4.2 The pricing details are to be clearly indicated. The total contract price in both numbers (dollars and cents) and written words must be entered. Should there be a discrepancy between the two, the written words shall prevail.

11.4.1. The executed pricing offer is to be submitted on the forms **together with a scanned copy of the required bid security** by email.

11.4.2. Improperly completed information, and/or irregularities in the bid security, may be cause to declare the submission non-compliant.

The omission of bid security from the bid submission will result in the submission being deemed as non-compliant (Refer Section 14.1.10).

11.5. Proposal Evaluation

11.5.1. Evaluation Process – Compliant proposals will be evaluated, first during Phase A, and those meeting the minimum qualifying score under Phase A will then be evaluated in Phase B, with a final score determined in Phase C.

Phase A – Technical Score	30 Points
Phase B – Pricing Score	70 Points
Phase C - Total RFP Score	100 Points

11.5.2. Proposals that do not meet the minimum qualifying score for Phase A will not be given further consideration.

11.5.3. Proposals will be evaluated and scored by an evaluation team comprised of a minimum of three (3) representatives of the HRCE. The degree to which a proposal meets the proposal requirements will be determined at the sole discretion of the HRCE evaluation team.

11.5.4. Phase A – Technical Submission – The Technical Submission for compliant proposals will be evaluated using the evaluation criteria set out in the table below. Scores will be recorded for each criterion (rounded to two (2) decimal points) and a total qualifying score will be determined.

Refer 11.3.1	Phase A - Evaluation Criteria Technical Submission	Score
Section I.	Project Experience and References	15.00
Section II.	Team Composition	5.00
Section III.	Management of Project Specific Risks	5.00
Section IV.	Schedule of Work	5.00
Total Phase A - Potential total score - Technical Submission		30.00
Minimum score needed to pass technical		15.00

A minimum qualifying score of 15.00 points is required in Phase A for the proposal to be given further consideration.

All technical submissions that have met the minimum qualifying score will proceed to Phase B - Price Submission.

Technical submissions that score below the minimum qualifying score will not proceed further in the RFP evaluation process.

11.5.5. Phase B - Price Submission - Price Submission files for proponents whose Technical Submission have received fifteen (15.00) points or greater will be opened.

The Price Submission will have a weight of seventy (70.00) points.

Price submissions will be evaluated, and a Phase B score will be assigned to each proponent by using a proximity to lowest price method. In this method, proponents will be awarded points based on how close their total price submitted compares with the lowest cost of all total submissions.

Price Submissions will be Evaluated based on the Proponent’s Lump Sum Price.

For example:

Formula: Price Score = % value of score x (Low bid ÷ Your bid)

Example for calculation: Bid Pricing Received

Company P	Company Q	Company R	Company S	Company T
\$115,000	\$135,000	\$185,000	\$165,000	\$180,000

Calculation of Pricing Score for Company S:

Phase B Score = 70 points x (\$115,000 ÷ \$165,000) = 48.79 points

The Total Score (Phase C) will be calculated by adding together Phase A + Phase B scores.

11.5.6. The proponent who has the highest **TOTAL SCORE** (Phase C calculation), will be deemed to be the successful proponent, subject to other provisions herein, including Section 16.5.

Phase A – Technical Score	30 Points
Phase B – Pricing Score	70 Points
Phase C - Total RFP Score	100 Points

12. Conditions of the RFP Process

12.1. Proponents shall take full cognizance of content of all Contract Documents in preparation of their proposal. Section 00 41 13 – Price Submission Form, Subsection 5.0 references a complete list of Contract Documents.

13. Amendment or Withdrawal of Proposals

- 13.1.** Proposal packages may be **withdrawn** from the RFP process in writing by email notification sent to the submission email address, prior to date and time of closing.
- 13.2.** As previously stated in Section 00 21 13, item 1.6 - Amendments to the submitted offer will be permitted if received by email prior to the RFP closing time and if endorsed by the same party or parties who signed and executed the offer. If the amendment relates to the technical submission, it must be labeled "Technical Submission Amendment" along with the RFP number of the project and the company name. If the amendment relates to the price submission, it must be labeled "Price Submission Amendment" along with the RFP number of the project and the company name. The price amendment file must include the signed "Price Amendment Form" (Section 00 41 73).
- 13.3.** A single page Price Amendment Form is provided immediately following the Price Submission Forms (Section 00 41 73).
 - 13.3.1.1.** The Price Amendment Form provided is the standard master form for submission of any price amendments for this project.
 - 13.3.1.2.** The Price Amendment Form must be copied and completed, as directed, for any price amendments submitted.
- 13.4.** Price amendments shall not disclose either original or revised total price.

14. Proposal Ineligibility (Reason for Rejection)

- 14.1.** HRCE may reject a proposal which has been received prior to the closing time where:
 - 14.1.1.** The two file (electronic) system (Technical Submission and Price Submission) is not followed.
 - 14.1.2.** The price submission is not submitted on the required forms (Section 00 41 13) included herein.
 - 14.1.3.** The proposal is submitted by facsimile or regular mail or hand delivery.
 - 14.1.4.** There are omissions of information that the HRCE in its sole discretion deems to be significant.
 - 14.1.5.** The technical submission or price submission form is not signed as required.
 - 14.1.6.** The proposal has conditions attached which are not authorized by the invitation to bid.
 - 14.1.7.** The proposal fails to meet one or more standards specified in the invitation to bid.
 - 14.1.8.** All addenda have not been acknowledged.
 - 14.1.9.** Any other defect which, in the opinion of the HRCE brings the meaning of the proposal into question.

14.1.10. The required bid security is not provided within the Price Submission file.

14.1.11. Proponent failed to attend bidders' mandatory site meeting.

14.1.12. Proponent failed to list relevant HRCE project(s) in their Technical submission.

15. Communications Affecting Bids

15.1. Transmissions, including, but not limited to facsimile transmission:

15.1.1. The technical submission or price submission forms submitted by mail, fax or courier will not be accepted.

16. Right to Accept or Reject any Proposal

16.1. The HRCE reserves the right to reject any proposal in its sole and absolute discretion for any reason whatsoever and the HRCE will not necessarily accept the lowest bid.

16.2. The HRCE specifically reserves the right to reject all proposals if none are considered to be satisfactory in the HRCE's sole and absolute discretion and, in that event, at its option, to call for additional proposals.

16.3. Without limiting the generality of any other provision herein, the HRCE reserves the right to accept or reject any proposal in accordance with item #14 above (Proposal Ineligibility).

16.4. Notwithstanding the above, the HRCE shall be entitled, in its sole and absolute discretion, to waive any irregularity, informality or non-conformance with these instructions in any proposal received by the HRCE. The HRCE reserves the right to reject any or all proposals, or to accept any proposal, or portion thereof, deemed in its best interest.

16.5. In the event that more than one proponent achieves an identical final total score within two decimal places in Phase C, the HRCE will flip a coin to determine the successful contractor.

16.6. No term or condition shall be implied, based upon any industry or trade practice or custom or in a practice or policy of the HRCE or otherwise, which is inconsistent or conflicts with the provisions contained in these instructions.

17. Right to Cancel Competition/No Award

17.1. Issuing a RFP/RFT implies no obligation on HRCE to accept any submission, or a portion of any submission. The lowest or any RFP/RFT submission will not necessarily be accepted.

17.2. Without limiting the generality of the foregoing, an RFP/RFT may be cancelled in whole or in part by HRCE in its sole discretion, whether before or after the time for RFP/RFT submissions has closed, when:

17.2.1. The RFP/RFT submission price exceeds the funds allocated for the purchase;

17.2.2. There has been a material change in the procurement requirements after the RFP/RFT has been issued;

17.2.3. Information has been received by HRCE after issuance of the RFP/RFT that HRCE believes has materially altered the procurement or the need of HRCE for the procurement; or

17.2.4. There was insufficient competition in order to provide the level of service, quality of goods or pricing required.

17.3. If no compliant RFP/RFT submission is received in response to an RFP/RFT, the HRCE reserves the right to enter into negotiations with one or more suppliers in order to complete the procurement or to reject all Bids and re-issue the RFP/RFT on new or modified RFP/RFT Documents.

17.4. HRCE will be the sole judge of whether there is sufficient justification to cancel any RFP/RFT.

17.5. No action or liability will lie or reside against HRCE in its exercise of its rights under this section

18. Construction Contract Guidelines

18.1. The printed policies of the Nova Scotia Construction Guidelines dated May 18, 2006 (or latest revisions) are applicable to these RFP documents.

19. Submission and Security Forms – Signatures

19.1. All Price Submission forms, bid security forms and performance assurance forms **must** bear the Bidder's original signature and name HRCE as the insured.

20. Bid Security

20.1. Proponents must submit within the sealed Price Submission file, one of the following: bid security in the form of a certified cheque, Irrevocable Letter of Credit, or Bid Bond on CCDC Form 220, in the amount of ten percent (10%) of the Bid Price made payable to or naming HRCE (as obligee). This bid security **must** accompany the Price Submission as an electronic file. HRCE will request an original hard copy from the successful proponent as required.

20.2. Where bid bond is provided as bid security:

20.2.1. The bond must be provided on the standard CCDC Bid Bond Form (latest version) in the amount of not less than ten percent (10%) of the Bid Price.

20.2.2. The bond must be submitted by the general contractor bidder, signed and sealed by the principal (Contractor) and Surety and shall be with an established Surety Company satisfactory to and approved by the HRCE.

20.2.3. The cost of providing the Bid Bond must be included in the Bid Price.

20.2.4. A legible scanned copy of the bid bond or an electronic bid bond shall be submitted with the bid via email. If requested by the HRCE, the vendor will provide the original bid bond without delay.

20.3. Where a certified cheque or a bank draft is provided as bid security:

20.3.1. The certified cheque or bank draft must be endorsed in the name of HRCE, for a sum not less than ten percent (10%) of the amount of the Bid Price.

20.3.2. The cost of providing the certified cheque or bank draft must be included in the Bid Price.

20.4. Where the Irrevocable Standby Letter of Credit is used as bid security:

20.4.1. The letter must be endorsed in the name of HRCE, for a sum not less than ten percent (10%) of the Bid Price

20.4.2. The Irrevocable Standby Letter of Credit shall be issued by a certified financial institution subject to the Uniform Custom and Practices for Documentary Credit (1993 revision or latest revision), International Chamber of Commerce (Publication No. 500).

20.4.3. The cost of providing the letter must be included in the Bid Price.

20.4.4. **A legible scanned copy of the bid bond or an electronic bid bond can be submitted with the bid via email. If requested by the HRCE, the vendor is required to provide the original bid bond without delay.**

20.5. Return of Bid Security:

20.5.1. The bid security of the unsuccessful proposers will be returned to them after the contract has been signed, or previous to such time, at the discretion of HRCE.

20.5.2. If no contract is awarded, all bid security will be returned.

21. Contract Security (Performance Assurance) – Required for contracts valued over \$100,000

21.1. The performance assurance forms must bear the bidder's original signature and name HRCE as the insured.

21.2. The successful contractor shall maintain performance assurance in force for a period of not less than twelve (12) months after Ready-for-Takeover is achieved.

21.3. Performance Assurance must be endorsed as specified for bid security.

21.4. Should it become apparent that the final cost of the project will exceed the total amount payable by more than 20%, the bidder shall arrange to have their bonds reissued based on the projected final cost.

- 21.5.** Section 00 72 13 – General Conditions GC11.2 and Section 00 73 00 – Supplementary General Conditions for form of Contract Security. Proponents should reference the project documents for the amount of Contract Security and the alternate type of Contract Security if applicable.
- 21.6.** Performance Assurance must be submitted as one of the following:
- 21.6.1.** Where a Bid Bond was used as bid security:
- 21.6.1.1.** Within ten (10) days after notification of award of the Contract, the successful contractor must provide a Performance Bond and a Labour & Material Payment Bond, each in an amount equal to fifty percent (50%) of the amount of the Contract, naming HRCE.
- 21.6.1.2.** Performance Bond and Labour and Material Payment Bonds, submitted by the bidders, shall be provided at the expense of the bidder and shall be with an established Surety Company satisfactory to and approved by the HRCE.
- 21.6.2.** Where a certified cheque or bank draft is used as Contract Security:
- 21.6.2.1.** The certified cheque or bank draft submitted during the bid period will be cashed and the amount retained by the HRCE shall serve as Performance Assurance, including the payment of all obligations arising under the Contract.
- 21.6.2.2.** The value of the certified cheque or bank draft will be retained in lieu of the Performance Bond and Labour and Material Bonds, providing that, at Contract award, the successful contractor shall supplement their certified cheque or bank draft to maintain an amount of ten (10%) of the total amount payable (Contract Price plus HST) under the contract.
- 21.6.2.3.** The amount remaining will be returned without interest after a period of not less than twelve (12) months after Ready-for-Takeover is achieved.
- 21.6.2.4.** Where certified cheque or bank draft is used as Performance Assurance, the cost of providing the certified cheque or bank draft in the Contract price.
- 21.6.3.** Where an Irrevocable Standby Letter or Credit is used as Contract Security:
- 21.6.3.1.** The Irrevocable Standby Letter of Credit submitted during the bid period will be retained by the HRCE and shall serve as performance assurance, including the payment of all obligations arising under the contract. The Irrevocable Standby Letter of Credit shall be issued by a certified financial institution subject to the Uniform Customs and

Practices for Documentary Credit (1993 revision) International Chamber of Commerce (Publication No. 500).

- 21.6.3.2.** Where an Irrevocable Standby Letter of Credit is used as Performance Assurance, the cost of providing this letter should be included in the Contract Price. The contractor shall provide to the HRCE documentation throughout the duration of the contract that the Irrevocable Standby Letter of Credit remains in full effect at all times as specified.
- 21.6.3.3.** Upon expiry of the Irrevocable Standby Letter of Credit, a separate Irrevocable Standby Letter of Credit shall be provided for work requiring extended warranties for such amounts as are required by the contract.
- 21.6.3.4.** The Irrevocable Standby Letter of Credit is to be in effect for a period of not less than twelve (12) months after the Ready-for-Takeover is achieved.

22. Insurance

- 22.1.** Proponents shall refer to project documents for the amount of insurance, the duration of coverage and alternate type of insurance; if applicable.

Section 00 72 13 -General Conditions of Contract,
Section GC 11.1 – Insurance, and
Section 00 73 00 – Supplementary General Conditions for form of Insurance.

- 22.2.** The contractor shall carry such insurance as is required to protect the contractor, any sub-contractor, the HRCE, their agents and employees from all claims which may arise from the operations under this contract. The amounts of such insurance shall not be less than 22.3 below.
- 22.3.** The General Contractor shall secure and maintain, at its expense, during the term of the insurance:
 - 22.3.1.** Wrap-Up Liability insurance must insure the general contractor(s) and all sub-contractors on this project:
 - 22.3.1.1.** including but not limited to, products liability and completed operations, contractual liability, owners and contractors' liability, attached

machinery extension endorsement, and independent contractor, for a combined single limit of no less than \$5,000,000 (five million dollars) per occurrence.

- 22.3.1.2.** Wrap-Up Liability insurance is to include 24 months (2 years) of completed operations.
- 22.3.2.** Commercial Auto Liability insurance covering all owned, non-owned and hired vehicles for a minimum combined single coverage of \$2,000,000 (two million dollars) per occurrence.
- 22.3.3.** Builders Risk: All risks in the amount of the contract Stipulated Bid Price. Insurance requirements as stipulated in the CCDC 2-2020.
- 22.3.4.** Workers' Compensation to meet statutory requirements and/or Employers Liability, with limits of not less than \$2,000,000 (two million dollars).
- 22.3.5.** Contractors Pollution Liability Insurance limits of not less than \$2,000,000 (two million dollars) per occurrence
- 22.4.** Primary Insurance: The Contractor agrees that the insurance as required shall be primary and non-contributory.
- 22.5.** No Limitation: The Contractor is responsible for determining whether the minimum insurance coverage amounts contained in this RFP are adequate to protect its interests. These minimum coverage amounts do not constitute limitations upon Supplier's Liability.
- 22.6.** Endorsements – For the policies in item 22.3 above, there shall contain an endorsement naming the Halifax Regional Centre for Education and its affiliates as Additional Insured, and eliminating and removing any exclusion of liability for:

 - 22.6.1.** injury, including bodily injury and death to an employee of the insured or of the Halifax Regional Centre for Education, or
 - 22.6.2.** any obligation of the insured to indemnify, hold harmless, defend, or otherwise make contribution to the Halifax Regional Centre for Education because of damage arising out of injury, including bodily injury and death, to an employee of Halifax Regional Centre for Education.

- 22.7.** The Contractor shall provide a certificate of insurance evidencing the above prior to work being performed. The HRCE also requires a complete copy of the Builder's Risk and Wrap-Up Liability policies, in addition to the Certificate of Liability Insurance.
- 22.8.** Furthermore, HRCE must receive, in writing, at least thirty (30) days' notice of cancellation or modification of the above insurances. All insurance policies or certification documents shall specify coverage being applicable to this contract. The Contractor shall not do or omit to do or suffer anything to be done or omitted to be done which will in any way impair or invalidate such policy or policies of insurance.
- 22.9.** Insurance documents (certificate and policies) shall be provided to the Purchasing Department within the timeframe indicated on the award letter. These documents are required before a purchase order will be issued. Work is not authorized and shall not commence until receipt of the purchase order.

23. Proof of Competency of Proponent

- 23.1.** Any bidder may be required to furnish evidence satisfactory to the owner that he and his proposed sub-contractors have sufficient means and experience in the types of work called for to assure completion of the contract in a satisfactory manner.
- 23.1.1.** The successful contractor must be a member in good standing with CRCA, RCANS or NBRCA; and Nova Scotia Construction Safety Association or approved recognized association or program.

23.2. Proposal Signing

- 23.2.1.** The Technical Submission and the Price Submission form must be signed and under seal (as applicable) by a duly authorized signing officer(s) in their normal signatures.

23.3. Contract Time

- 23.3.1.** The bidder, in submitting an offer, agrees to achieve Ready-for-Takeover of the work by the date indicated in the contract documents.

24. Offer Acceptance / Rejection

24.1. Duration of offer

- 24.1.1.** Proposals shall remain open to acceptance and shall be irrevocable for a period of ninety (90) days after the RFP closing date.

24.2. Award/Selection/Acceptance of Offer

24.2.1. In the evaluation of a proposal, HRCE will consider, but not be limited to, the following criteria:

24.2.1.1. Compliance with proposal requirements

24.2.1.2. Proposal Evaluation Criteria as stated in Section 11.5

24.2.2. The Owner's evaluation of any and all proposals will be final

24.3. After acceptance by HRCE, the successful bidder shall be notified in writing of acceptance of the bid by way of an award letter.

25. Agreement

25.1. After acceptance, the HRCE and the successful proponent will enter into a CCDC-2, standard form of contract for the execution of the work.

25.2. A purchase order will be issued to the successful bidder once the contract has been signed and executed.

26. Post Award Submissions

26.1. Upon receipt of the award letter, the successful contractor will provide the following documents within five (05) business days:

26.1.1. A current Certificate of Recognition or Letter of Good Standing - The Contractor will supply a Certificate of Recognition issued jointly by the Workers' Compensation Board of Nova Scotia and an occupational health and safety organization approved by the Workers' Compensation Board of Nova Scotia (such as the Nova Scotia Construction Safety Association). These approved organizations are currently listed on the Workers' Compensation Board of Nova Scotia website (www.wcb.ns.ca). The contractor shall remain in good standing for the duration of the contract.

The Contractor shall supply the following:

26.1.1.1. Worker's Compensation Coverage – The Contractor shall supply a clearance letter from the Worker's Compensation Board of Nova Scotia, indicating the Contractor is assessed and in good standing;

26.1.1.2. Certificates of good standing with CRCA (Canadian Roofing Contractors Association) and RCANS (Roofing Contractors Association of Nova Scotia);

26.1.1.3. All required contract security and insurance documentation;

26.1.1.4. A completed Schedule of Values (see Section 01 37 00);

26.1.1.5. A completed Safety Plan; and,

26.1.1.6. A detailed listing of subcontractors to be used.

- 26.1.2.** In the event that any such certification during the term of the contract expires, the obligation remains with the Contractor to provide the updated required certificates.
- 26.1.2.1.** The Contractor and subcontractors (if applicable) shall remain in good standing for the duration of the contract.

27. Taxes

- 27.1.** The General Conditions of the Contract state that the Contractor is to pay all Harmonized Sales Tax (HST).
- 27.2.** The HRCE is not exempt from HST. As a result, the aggregate amount of the bid for contracts is subject to HST; however, **prices submitted shall not include HST.**
- 27.3.** The HST payable by the HRCE will be added as a separate item during the processing of progress payments and therefore **HST will not appear as a cost in the aggregate amount of the bid amount.**
- 27.4.** Proponents are advised that they may be eligible to claim an Input Tax Credit (ITC) for a portion of the HST paid in relation to the contract requirement of the Government of Canada.
- 27.5.** Proponents are to note that prices indicated on the Price Submission Form and the amendments to the Price Submission Form shall not include Provincial Sales Taxes, the Federal Goods and Services Tax or the Harmonized Sales Tax.
- 27.6.** Refer to CCDC-2 (Section 00 72 13) and Supplementary General Conditions (Section 00 73 00).

28. Proponent Debriefing

- 28.1.** HRCE will, if requested by a proponent within fifteen (15) days of notice of RFP award, arrange a debriefing for the purpose of informing the bidder why their proposal was not selected. At least two (2) HRCE staff shall attend the de-briefing.

The purpose of the de-briefing will be to discuss the proponent's scoring, answer questions and identify any weak areas in the proponent's submission in order for the proponent to improve future bid submissions. HRCE will not divulge details contained in any proponent's proposal with other proponents or overall ranking.

29. Purchase Orders

- 29.1.** The purchase order will be issued by the HRCE Purchasing Department once the CCDC-2 Contract Documents have been fully executed by all parties.

30. Invoices

- 30.1.** The purchase order number and HST number shall be noted on any/all invoices related to all work performed under this contract.

- 30.2.** Applications for progress payments should be submitted to HRCE's consultant and cc'd to operations-invoices@hrce.ca as well as HRCE's Project Manager (Operations Contact) identified on the RFP cover page.

END OF SECTION 00 21 13

SECTION 00 41 13 – PRICE SUBMISSION FORM

1. Salutation:

**To: HALIFAX REGIONAL CENTRE FOR EDUCATION
33 SPECTACLE LAKE DRIVE, DARTMOUTH, NS B3B 1X7
ATTN: NANCY RIDEOUT, PURCHASING MANAGER**

For: #4234 Window & Cladding Replacement – Dutch Settlement Elementary

Organization Name:	
Street Address:	
Email Address:	
Telephone:	
Authorized Signing Authority:	
Position Title:	

2. Proponent Declares:

- 2.1.** That this submission was made without collusion or fraud.
- 2.2.** That the proposed work was carefully examined.
- 2.3.** That the Proponent is familiar with local conditions.
- 2.4.** That Contract Documents and Addenda were carefully examined.
- 2.5.** That all the above were taken into consideration in preparation of this RFP.

3. Proponent Agrees:

- 3.1.** To provide all necessary equipment, tools, labour, incidentals and other means of construction to do all the work and furnish all the materials of the specified requirements which are necessary to complete the work in accordance with the Contract and agrees to accept, therefore, as payment in full the Lump Sum Price stated in Subsection 6 hereunder.

- 3.2. The have carefully examined the site of the work described herein; have become familiar with local conditions and the character and the extent of the work; have carefully examined every part of the proposed Contract and thoroughly understand its stipulations, requirements and provisions.
- 3.3. The have determined the quality and quantity of materials required; have investigated the location and determined the source of supply of the materials required; have investigated labour conditions; and have arranged for the continuous prosecution of the work herein described.
- 3.4. To be bound by the award of the Contract and if awarded the Contract on this bid price, to execute the required contract within ten (10) days after notice of award.
- 3.5. They have noted that the Harmonized Sales Tax is excluded from the "Contract Price".
- 3.6. The Contractor's employees shall always report to the main office of a school, indicate who they are, and state their purpose on site prior to starting any work in the school.
- 3.7. ***To the hours of work, defined as: Work for the HRCE is to be completed during hours when schools are unoccupied, unless otherwise authorized in writing by the Project Manager (Operations Contact person) or designate. Hours of work shall comply with local ordinances and bylaws for each site.***
 - 3.7.1. No work shall be conducted on weekends or statutory holidays without specific written approval from the Operations Manager or designate.
 - 3.7.2. In the event that work is requested by HRCE during hours when schools are occupied, the work will be limited to work that is not disruptive to the school. There shall be no mechanical removals, no drilling, screwing or torch work during occupied hours without prior written approval from HRCE.

4. Owner Agrees

- 4.1. To examine this proposal and in consideration, therefore, the proponent hereby agrees not to revoke this bid:
 - 4.1.1. until some other proponent has entered into the Contract with the HRCE for the performance of the work and the supply of the materials specified in the notice inviting proposals; or in the Information to Proponents, or
 - 4.1.2. until ninety (90) days after the time fixed in the Information to Proponents for receiving bids has expired, or
 - 4.1.3. Whichever first occurs; provided, however, that the Proponent may revoke this proposal at any time before the time fixed as indicated in the section 00 21 13, item 13.1.

5. Contract Documents include:

The HRCE will use the CCDC-2, 2020 for this work. A copy of the Standard Construction Contract CCDC 2 – 2020 is available upon request and will form part of the Contract Documents.

The HRCE Supplementary General Conditions for the CCDC-2, 2020 application to this Work is available for review under Section 0073 00 of the RFP document.

- 5.1.1. Cover Page
- 5.1.2. Table of Contents – Section 00 00 10
- 5.1.3. Description of Work & List of Drawings – Section 00 00 15
- 5.1.4. List of Consultants – Section 00 05 00
- 5.1.5. Information for Proponents – Section 00 21 13
- 5.1.6. Price Submission Form – Section 00 41 13
- 5.1.7. Price Amendment Form (if applicable) – Section 00 41 73
- 5.1.8. Agreement Between Owner and Contractor (CCDC 2) – Section 00 52 00
- 5.1.9. Definitions (CCDC 2) – Section 00 52 13
- 5.1.10. General Conditions of the Stipulated Contract Price (CCDC 2) – Section 00 72 13
- 5.1.11. Supplementary General Conditions – Section 00 73 00
- 5.1.12. Specifications of Work (all applicable sections)
- 5.1.13. Drawing(s) – as applicable
- 5.1.14. Addenda issued by HRCE
- 5.1.15. Post Bid Addenda issued by the HRCE, where applicable.
- 5.1.16. Executed Contract

6. Price Submission - Contract Price:

- 6.1. The undersigned Proponent, having carefully read and examined the aforementioned Contract Documents prepared by the Consultant, for the Halifax Regional Centre for Education, hereby accepts the same as part and parcel of the Contract herein referred to, and having carefully examined the locality and site of works and having full knowledge of the work required and of the materials to be furnished and used, does hereby propose and offer to enter into a contract to perform and complete, the whole of the said works and provide all necessary labour, plant, tools, materials and equipment and pay all applicable taxes, as set forth and in strict accordance with the Specifications, Drawings and other Contract Documents and to do all therein called for on the terms and conditions and under the provisions therein set forth for the following:

6.2 LUMP SUM PRICE

#4234 Window & Cladding Replacement – Dutch Settlement Elementary

Work Section 'A', As Noted In The Floor Plans

_____ /100 Dollars (\$_____)
(HST Excluded)

The scope of work pertaining to this project is identified as per the pricing.
Contract Price to be completed in written form on the lines provided above, with cents expressed as numerical fraction of a dollar. Contract price to be completed in numerical form on the line bounded by parenthesis above, with cents expressed as a decimal of a dollar.

Price Submissions will be Evaluated based on the Proponent's Lump Sum Price.

WHERE THERE IS A CONFLICT, WRITTEN WORD WILL GOVERN.

Award will be subject to Budget Availability.

The HRCE reserves the Right to:

Award to one or more contractors who bid.

Accept bids on any or all sections of this work.

Reduce the Scope of Work if the Bid amount Exceeds the Available Budget.

6.3 SEPARATE PRICE

N/A

6.4 INDIVIDUAL PRICE – EACH ELEVATION

N/A

7. Completion Date:

7.1. The proponent agrees to achieve Ready-for-Takeover on or before the following date:

7.1.1.1. **August 30, 2024**

7.1.1.2. The undersigned Proponent agrees, if awarded the Contract, to achieve the Ready-for-Takeover Date providing the contract is awarded within fifteen (15) business days of RFP closing time.

8. Addenda Acknowledgement

We have received and noted the following addenda:

Addendum #	Dated	# of Pages
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Signature * The undersigned Proponent declares that this bid is made without connection to any other person(s) submitting pricing for the same work and is in all respects fair and without collusion or fraud.

RFP #4234 Window & Cladding Replacement – Dutch Settlement Elementary

SIGNATURE:

SIGNED AND DELIVERED
in the presence of:

Witness

CONTRACTOR

Company name

Signature of Signing Officer

Name and Title (printed)

Date

9. Acknowledgement of Student Safety

The Halifax Regional Centre for Education (HRCE) is directly responsible for the safety of its students and staff. Should contractors be required to work in or on school property while children are present, it is a **mandatory HRCE requirement** that contractors assign the work to employees and/or sub-contractors who do not have a criminal record and who are not listed on the Child Abuse Registry. Failure to comply with this requirement may result in immediate contract termination.

The HRCE reserves the right to demand, at any time, during the full term of the project a Criminal Record Check and/or a Child Abuse Registry Check, on any personnel authorized by the Contractor to be on HRCE work/school sites.

By signing below, you are confirming that you understand and will abide by this mandatory HRCE requirement.

Witness

Company name

Signature of Signing Officer

Name and Title (printed)

Date

END OF SECTION 00 41 13

SECTION 00 41 73 - PRICE AMENDMENT FORM
#4234 Window & Cladding Replacement
Dutch Settlement Elementary

Note: to be completed and forwarded for each Price amendment prior to RFP closing time and date as detailed on the cover sheet of the RFP document and any applicable addenda.

Lump Sum Price Amendment – Section 00 41 13 Price Submission form, Article 6.1. Contract Price

Increase Price by		Decrease Price By	
Amount (excluding HST)	\$	Amount (excluding HST)	\$

It is the Proponent's responsibility to ensure the table above is legible.

Submitted by:

Company Name (please print as it appears on original RFP file)

Authorized Proponent's Name (please print as it appears on Price Submission Form)

Authorized Proponent's Signature

Date

END OF SECTION 00 41 73

SECTION 00 52 00 - AGREEMENT BETWEEN OWNER AND CONTRACTOR
CCDC 2 – 2020

(A copy of Section 00 52 00, Standard Construction Contract CCDC 2 – 2020 (5 pages) is available upon request, otherwise, will form part of the contract sets to the successful bidder)

END OF SECTION 00 52 00

SECTION 00 52 13 - DEFINITIONS
CCDC 2 - 2020

(A copy of section 00 52 13, Standard Construction Contract CCDC 2 – 2020 (2 pages) is available upon request, otherwise, will form part of the contract sets to the successful bidder)

END OF SECTION 00 52 13

SECTION 00 72 13 - GENERAL CONDITIONS
OF THE STIPULATED PRICE CONTRACT
CCDC 2 - 2020

(A copy of section 00 72 13, Standard Construction Contract CCDC 2 – 2020 (22 pages) is available upon request, otherwise, will form part of the contract sets to the successful bidder)

END OF SECTION 00 72 13

SECTION 00 73 00 - SUPPLEMENTARY GENERAL CONDITIONS CCDC2 – 2020

The Canadian Standard Construction Document for Stipulated Price Contract (CCDC 2, 2020 version), Definitions and General Conditions governing same, shall be used by the project. The following Supplementary General Conditions (the “**Supplementary Conditions**”) are intended to Supplement or Amend the General Conditions, and where conflicts occur, the Supplementary Conditions shall take precedence.

Where a General Condition or paragraph of the General Conditions of the Stipulated Price Contract is Deleted by these Supplementary Conditions, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, and the numbering of the Deleted item will be retained, unused.

2 ARTICLE A-5 PAYMENT

Change 5.2.1 to delete the letter “s” from the word “rates”.

Change 5.2.1(1) to read: "1% per annum above the prime rate."

Delete 5.2.1(2) in its entirety.

Delete 5.2.2. in its entirety.

DEFINITIONS

Add the following defined term to the Definitions:

Submittals

Submittals are documents or items required by the Contract Documents to be provided by the Contractor, such as:

1. Shop Drawings, samples, models, mock-ups to include details or characteristics, before the portion of the Work that they represent can be incorporated into the Work; and
2. As-built drawings and manuals to provide instructions to the operation and maintenance of the Work.

3 GC 1.1 CONTRACT DOCUMENTS

Add to the end of subparagraph 1.1.6.2:

1.1.6.2 Except where the Consultant shall be indemnified as a third party beneficiary as provided in subparagraphs 9.2.7.4, 9.5.3.4 and in 13.1.1.3.

Add subparagraph 1.1.4.1:

1.1.4.1 Notwithstanding GC 1.1.4, should one or more conflict exist between Contract Documents and any work is done without consulting the Consultant for correction, Additional information, or a finding, the Contractor shall assume full and sole responsibility for any Additional costs incurred related to the conflict(s).

4 GC 2.4 DEFECTIVE WORK

Add new subparagraphs 2.4.1.1 and 2.4.1.2:

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

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

5 PART 3 EXECUTION OF THE WORK

6 GC 3.1 CONTROL OF THE WORK

Add new paragraphs 3.1.3 and 3.1.4:

3.1.3 Prior to commencing individual procurement, fabrication, and construction activities, the Contractor shall verify, at the Place of the Work, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the Work and shall further carefully compare such field measurements and conditions with the requirements of the Contract Documents. Where dimensions are not included or contradictions exist, or exact locations are not apparent, the Contractor shall immediately notify the Consultant before proceeding with any part of the affected work.

3.1.4 The Contractor shall make all reasonable efforts to ensure that the Work is carried out in a continuous manner. The Contractor shall not knowingly permit Construction Equipment and/or Products to be stored at the Place of Work when they are not being used in connection with or implemented into the Work, except in accordance with paragraph 3.7.7.1.

7 GC 3.6 SUBCONTRACTORS AND SUPPLIERS

Add the following paragraph 3.6.7:

3.6.7 A copy of the agreement between Contractor and any subcontractor(s) shall be provided to the Owner and the Consultant, if so requested.

8 GC 3.7 LABOUR AND PRODUCTS

Add the following paragraph 3.7.4:

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

Add the following paragraph 3.7.5:

3.7.5 The Contractor shall confine Construction Equipment, Temporary Work, storage of Products, waste products and debris, and operations of employees and Subcontractors to limits indicated by laws, ordinances, permits, or the Contract Documents and shall not unreasonably encumber the Place of the Work.

Add the following paragraph 3.7.6:

3.7.6 The Contractor shall maintain the Work in a safe and tidy condition and free from accumulation of waste products and debris.

Add the following paragraphs 3.7.7.1 and 3.7.7.2:

3.7.7 .1 The Contractor shall not permit Products or Construction Equipment to be stored at the Place of Work unless:

(i) the Products and/or Construction Equipment are used within fourteen (14) days of their arrival at the Place of Work; or

(ii) the Owner provides written permission for Products and/or Construction Equipment to be stored at the Place of Work, in which case the Contractor shall comply with the written instructions provided by the Owner in that regard, and said permission may be withdrawn by the Owner upon five (5) business days' notice, in which case the Contractor will be solely responsible for any costs, losses, or damages the Contractor incurs in connection the withdrawal of said permission;

.2 Notwithstanding any other provision of the Contract Documents, and subject only to the provisions of any Payment Legislation, the Owner shall not be liable to pay any amount greater than 25% of the actual cost of any Products and/or costs associated with Construction Equipment that is/are stored at the Place of Work and not used within 14 days of their arrival at the Place of Work. The Owner shall only become liable to pay for the remainder of said Products and/or costs of said Construction Equipment after those Products and/or Construction Equipment are actually used at the Place of Work and is/are invoiced in accordance with the terms of the Contract Documents.

Add the following paragraphs 3.7.8.1., 3.7.8.2, 3.7.8.3, and 3.7.8.4:

3.7.8 The Contactor shall:

.1 furnish competent and adequate labour and staff, who shall be in attendance at the Place of Work at all times, as necessary, for the proper administration, co-ordination, supervision, and superintendence of the Work;

.2 organize the procurement of all Products and Construction Equipment so that labour and staff will be available at the requisite times to complete the Work in accordance with GC 3.4 Construction Schedule;

.3 keep an adequate force of skilled workers at the Place of Work, as necessary, to complete the Work in accordance with all requirements of the Contract Documents and in accordance with GC 3.4 Construction Schedule; and

.4 provide the Owner, Project Manager, and Consultant, with the names, work addresses, and telephone numbers of the appointed representative of the Contract and other responsible field persons who may be contacted during non-working hours.

9 GC 3.8 SHOP DRAWINGS AND OTHER SUBMITTALS

Add the words “AND OTHER SUBMITTALS” to the Title after SHOP DRAWINGS in GC 3.8.

Add “and Submittals” after each instance of the words “Shop Drawings” in paragraphs 3.8.1, 3.8.2, 3.8.3, 3.8.3.2, 3.8.5, 3.8.6, and 3.8.7.

Add the following paragraph 3.8.1.1:

3.8.1.1 Prior to the first application for payment, the Contractor and the Consultant shall jointly prepare a schedule of the dates for submission and return of Shop Drawings and any Submittals.

Add the following subparagraph 3.8.4.1:

3.8.4.1 The following paragraph shall apply to each Shop Drawing and Submittal reviewed in connection with the project. The Consultant’s review conducted pursuant to GC 3.8.3 shall not imply that the Consultant has approved the detailed design inherent in the Shop Drawings or Submittals, responsibility for which shall remain with the Contractor submitting same. The Contractor is responsible for information that pertains solely to fabrication processes or to techniques of construction and installation, and for coordination of the work of all sub trades.

Delete the following words in paragraph 3.8.7:

3.8.7 “with reasonable promptness so as to cause no delay in the performance of the Work” and replace those words with: “within ten (10) working days or such longer period as may be reasonably required”.

Add new GC 3.9 as follows:

10 GC 3.9 CONTRACTOR RESPONSIBILITY FOR WATER TIGHTNESS

GC 3.9 The Drawings and Specifications are not intended to depict each and every condition or detail of construction. As the knowledgeable party in the field, the contractor is in the best position to verify that all construction is completed in a manner which will provide a watertight structure.

The contractor has the sole responsibility for ensuring the watertight integrity of the structure.

Add new GC 3.10 as follows:

11 GC 3.10 PERFORMANCE BY CONTRACTOR

GC 3.10 In performing the Work and all its services and obligations under the Contract, the Contractor shall exercise a standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The Contractor acknowledges and agrees that throughout the Contract, the Contractor's obligations, duties and responsibilities shall be interpreted in accordance with this standard. The Contractor shall exercise the same standard of due care and diligence in respect of any products, personnel, or procedures which it may recommend to the Owner.

The Contractor further represents, covenants and warrants to the Owner that:

1. The personnel it assigns to the Project are appropriately experienced;
2. It has sufficient staff of qualified and competent personnel to replace its designated supervisor and project manager, subject to the Owner's approval, in the event of death, incapacity, removal or resignation.

12 GC 4.1 CASH ALLOWANCES

Delete paragraph 4.1.7 in its entirety and substitute:

4.1.7 At the commencement of the Work, the Contractor shall prepare for the review and acceptance of the Owner and the Consultant a schedule indicating the times, within the construction schedule referred to in GC 3.4, at which items called for under cash allowances and items that are specified to be purchased by the Owner and installed or hooked up by the Contractor are required to be at the Place of the Work to avoid delaying the progress of the Work.

Add new paragraph 4.1.8:

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

13 GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

Delete section GC 5.1 in its entirety.

14 GC 5.2 APPLICATION FOR PROGRESS PAYMENT

Add to paragraph 5.2.1, “, the Project Manager,” after the word “Owner”.

Add the following at the end of paragraph 5.2.2:

5.2.2 Such applications shall be accompanied by one or more of the following documents: a Statutory Declaration, Waiver of Lien, or receipt, stating that the holdback monies claimed have been paid to the particular party or parties so named or referred to therein. The form of the Statutory Declaration, Waiver of Lien, or receipt shall meet the approval of the Consultant.

Add the following paragraph 5.2.9:

5.2.9 The reference to payment for Products delivered to the Place of the Work in Article 5.2.8 shall not be construed as covering day-to-day financing of the Project. Products delivered to the Place of the Work shall be construed to mean major items of equipment or quantities of items that are essential for the expedient conduct of the Work.

Add the following paragraph 5.2.10:

5.2.10 The Contractor shall submit all applications for payment and invoices (with supporting documents as required by the Contract Documents) to the Owner via the following email address: operations-invoices@hrce.ca.

15 GC 5.3 PAYMENT

Supplement paragraph 5.3.1 by adding the following:

5.3.1 A holdback percentage of ten (10) percent (%) shall apply to progress payments. The sworn statement by the Contractor for release of holdback monies shall be in the form of a Statutory Declaration meeting the approval of the Consultant. Amounts as certified by the Consultant to rectify deficiency items, or incomplete portions of individual work items, may be retained by the Owner after Substantial Performance has been obtained, pending Total Performance of the work or other authorization for release by the Consultant.

Amend subparagraph 5.3.1.2 as follows:

5.3.1.2 Delete "28" and replace with "30."

16 GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

Add the following paragraph 5.4.7:

5.4.7. Before the Contractor submits his application for Substantial Performance of the Work, all Operations and Maintenance Manual materials shall be submitted in accordance with the Contract Documents. The Certificate of Substantial Performance will not be issued until this requirement is met.

Add the following subparagraph 5.4.8:

5.4.8 After the issuance of a certificate of Substantial Performance of the Work by the Consultant, the Contractor shall promptly submit to the Consultant and the Owner (i) a Certificate from a barrister stating that there are no Builders' Liens filed relating to the Work and (ii) a Clearance Letter from the Workers' Compensation Board.

17 GC 5.5 FINAL PAYMENT

Add the following subparagraphs 5.5.1.1, 5.5.1.2, 5.5.1.3, and 5.5.1.4:

5.5.1.1 The Contractor's application for final payment is considered to be valid only when all of the following have been performed:

1. Work has been completed and inspected for compliance with Contract Documents, and the Consultant is satisfied that all the requirements of the Contract have been fulfilled by the Contractor.
2. Defects have been corrected, deficiencies have been completed, and the Place of Work is (i) free of waste products and debris, and (ii) clean and suitable for use or occupancy by the Owner.
3. Equipment and systems have been tested, adjusted and balanced and are fully operational, and written reports as outlined in the Contract Documents have been provided to the Consultant.
4. Certificates required by Utility companies, manufacturer's representative and inspectors have been submitted.
5. Spare parts, maintenance materials, warranties and bonds have been provided.

5.5.1.2 If Work is deemed incomplete by the Consultant, the Contractor shall complete outstanding items and request re-inspection.

5.5.1.3 If, within sixty (60) days after the issuance by the Consultant of the Certificate of Substantial Performance, the Contractor has not corrected all the deficiencies, the Owner will retain sufficient money to cover the cost of completing said deficiencies, as determined by the Consultant, in

addition to holding monies retained in accordance with the Contract Documents and subject to the provisions of the Builders' Lien legislation of Nova Scotia.

5.5.1.4 Neither the final certificate nor the payment thereunder, nor any provision in the Contract Documents shall relieve the Contractor from responsibility for faulty material or workmanship which shall appear within a period of one (1) year from the date when Ready-For-Takeover has been attained and the Contractor shall promptly remedy any defects due thereto and pay for any damage to other Work resulting therefrom which shall appear within such period of one year. The Owner shall give notice of observed defects reasonably promptly. This article shall not be deemed to restrict any liability of the Contractor arising out of any law in force in the Province of Nova Scotia.

18 GC 6.2 CHANGE ORDER

Add the following paragraphs 6.2.3, 6.2.4, 6.2.5, 6.2.5, 6.2.6, 6.2.7, and 6.2.8:

- 6.2.3 All contemplated changes in the work shall be issued by the Consultant on a "Contemplated Change Order" form.
- 6.2.4 For lump sum pricing, the Contractor shall, upon receipt of the Contemplated Change Order, submit to the Consultant for approval within seven (7) days, a quotation for changes in the work. The Contractor acknowledges that failure to do so will result in foreseeable delay to the approval and payment of changes in the Work and foreseeable Additional costs to the Owner.
- 6.2.5 Quotation for changes shall be priced in sufficient detail (GC 6.6 applies).
- 6.2.6 Consultant shall, within five (5) working days, notify the Contractor whether estimates are accepted by Owner or further information is required. Acceptance of the Owner shall be indicated in writing, and a signed copy of the Contemplated Change Order form shall be returned to the Contractor.
- 6.2.7 The Contractor shall take reasonable measures to stop Work or minimize the Work in areas affected by or related to the contemplated change(s).
- 6.2.8 For each change in the Work, the Contract Price shall be increased by the net cost of that change in the Work, plus the following mark-ups for all overhead and profits:
- a. a 10% mark-up on the direct cost of the net change in the Work for change work performed by the Contractor's own forces; and
 - b. a 5% mark-up on the change work performed by Subcontractors.

Credits for reduced or Deleted portions of the Work shall be the actual cost of that Work, without Addition or subtraction of any amount by the Contractor for overhead and profit, and shall be included in the actual cost of the net change.

19 GC 6.3 CHANGE DIRECTIVE

Delete paragraph 6.3.6.3 of GC 6.3 and replace with:

6.3.6.3. The Contractor's percentage fee referred to in paragraphs 6.3.6.1 and 6.3.6.2 shall be calculated and determined applying the following percentage mark-ups for overhead and profit:

- a. a 10% mark-up on the direct cost of the net change in the Work for change work performed by the Contractor's own forces; and
- b. a 5% mark-up on the change work performed by Subcontractors.

Add to GC 6.3 the following paragraphs 6.3.14 and 6.3.15:

6.3.14 If unit prices are set out in the Contract or subsequently agreed upon, then the unit process alone shall govern in relation to determining the cost of any item for a Change Directive.

6.3.15 Payment of the cost of performing work attributable to a Change Directive shall be made only if and to the extent that the Contractor has taken all reasonable steps to mitigate and minimize the impact of the change and the resulting cost.

20 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

Add new paragraph 6.4.5:

6.4.5 The *Contractor* confirms that, prior to bidding the *Project*, it carefully investigated the Place of the Work and applied to that investigation the degree of care and skill described in paragraph 3.10, given the amount of time provided between the issue of the bid documents and the actual closing of bids, the degree of access provided to the Contractor prior to submission of bid, and the sufficiency and completeness of the information provided by the Owner. The Contractor is not entitled to compensation or to an extension of the Contract Time for anything which could reasonably have been ascertained by the Contractor by such careful investigation undertaken prior to the submission of the bid.

21 GC 6.5 DELAYS

Delete the period at the end of paragraph 6.5.1 and substitute the following words:

6.5.1 “, but excluding any consequential, indirect or special damages.”

Add new paragraph 6.5.6:

6.5.6 If the Contractor is delayed in the performance of the Work by any act or omission of the Contractor or anyone employed or engaged by the Contractor directly or indirectly, or by any cause within the Contractor's control, then the Contract Time shall be extended for such reasonable time as the Consultant may decide in consultation with the Contractor. The Owner shall be reimbursed by the

Contractor for all reasonable costs incurred by the Owner as the result of such delay, including all services required by the Owner from the Consultant as a result of such delay by the Contractor and, in particular, the cost of the Consultant's services during the period between the Ready-for-Takeover date stated in Article A-1 herein (subject to any adjustment in accordance with the Contract Documents) and any later, actual date Ready-for-Takeover is attained by the Contractor.

Add new paragraph 6.5.7:

6.5.7 The Consultant shall not, except by written notice to the Contractor, stop or delay any part of the Work pending decisions or proposed changes.

22 GC6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

Add the following to the end of paragraph 6.6.1, deleting the "." after the word "Consultant":

"in no case more than 10 Working Days from the event or series of events giving rise to the claim".

Amend paragraph 6.6.5 as follows:

6.6.5 Add the words "as noted in paragraph 6.6.3" after the words "of the claim" and add the words "and the consultant", at the end.

Add the following paragraph 6.6.7:

6.6.7 If the Contractor claims for an increase in the Contract Price pursuant to this GC 6.6, the amount of any such claim shall be limited to the amount determined in accordance with the methods of quantification set out in paragraphs 6.3.6, 6.3.7, and 6.3.14 of GC 6.3, and the Contractor shall promptly submit a detailed breakdown of all labour, materials, overhead, and profits claimed, including those of Subcontractors. Contemporaneous records are required to support a claim for an increase in the Contract Price, and the Owner retains the right to verify all submitted records through an independent audit. The Owner is not liable for costs not so substantiated. Any mark-up for overhead and profit on the claimed amount under this GC 6.6 shall be limited to the amounts provided for under GC 6.3.6.3, as Amended by these Supplementary Conditions.

23 GC 8.3 NEGOTIATION, MEDIATION, AND ARBITRATION

Add the following paragraphs 8.3.9, 8.3.10, 8.3.11, 8.3.12, 8.3.13, 8.3.14, and 8.3.15:

8.3.9 Within five (5) days of receiving a Notice in Writing requesting arbitration, the party receiving the notice shall give the Consultant a written notice containing:

- a. a copy of the Notice in Writing requesting arbitration;
- b. a copy of supplementary conditions 8.2.9 to 8.2.14 of this contract, and;

- c. a concise description of any claims or issues which the Contractor or the Owner, as the case may be, wishes to raise in relation to the Consultant arising out of the issues in dispute in the arbitration.

8.3.10 The Owner and the Contractor agree that the Consultant may elect, within ten (10) days of receipt of the notice under paragraph 8.3.9, to become a full party to the arbitration under paragraph 8.3.6 if the Consultant:

- a. has a vested or contingent financial interest in the outcome of the arbitration;
- b. gives the notice of its election to the Owner and the Contractor before the arbitrator is appointed;
- c. agrees to be a party to the arbitration within the meaning of the rules referred to in paragraph 8.3.6, and;
- d. agrees to be bound by the arbitral award made in the arbitration.

8.3.11 If an election is made under paragraph 8.3.10, the Consultant may participate in the appointment of the arbitrator and, notwithstanding the rules referred to in paragraph 8.3.6, the time period for reaching agreement on the appointment of the arbitrator shall begin to run from the date the respondent receives a copy of the notice of arbitration.

8.3.12 The arbitrator in the arbitration in which the Consultant has elected under paragraph 8.3.10 to become a full party may:

- a. on application of the Owner or the Contractor, determine whether the Consultant has satisfied the requirements of paragraph 8.3.10, and;
- b. make any procedural order considered necessary to facilitate the Addition of the Consultant as a party to the arbitration.

8.3.13 The provisions of paragraph 8.3.9 shall apply mutatis mutandis to written notice to be given by the Consultant to any sub-consultant.

8.3.14 In the event of notice of arbitration given by the Consultant to a sub-consultant, the sub-consultant is not entitled to any election with respect to the proceeding as outlined in 8.3.10, and is deemed to be bound by the arbitration proceeding.

8.3.15 An application for arbitration shall be accompanied by security in the amount of \$1,000 to apply to the cost of arbitration. Any claims of excess costs must be submitted in writing to the Consultant within two weeks of completion or alleged completion of the work. No claims shall be accepted after this date and, also, no claims shall be accepted for disputed work unless the Consultant has been notified as specified.

24 GC 9.1 PROTECTION OF WORK AND PROPERTY

Delete subparagraph 9.1.1.1 in its entirety and substitute the following new paragraph 9.1.1.1:

9.1.1.1 errors or omissions in the Contract Documents which the Contractor could not have discovered applying the standard of care described in paragraph 3.10.

Delete paragraph 9.1.2 in its entirety and substitute the following new paragraph 9.1.2:

9.1.2 Before commencing any Work, the Contractor shall determine the locations of all underground utilities and structures indicated in the Contract Documents, or that are discoverable by applying to an Inspection of the Place of the Work exercising the degree of care and skill described in paragraph 3.10.

25 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

Add in paragraph 9.2.6 after the word “responsible”, the following new words:

9.2.6 Or whether any toxic or hazardous substances or materials already at the Place of the Work (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the Contractor or anyone for whom the Contractor is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damage to the property of the Owner and others,

Add in subparagraph 9.2.7.4:

9.2.7.4 “and the Consultant” after “Contractor”:

Add in paragraph 9.2.8 after the word “responsible”, the following new words:

9.2.8 or that any toxic or hazardous substances or materials already at the Place of the Work (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the Contractor or anyone for whom the Contractor is responsible in a manner which does not comply with legal and regulatory requirement, or which threatens, human health and safety or the environment, or material damage to the property of the Owner or others,

26 GC 9.4 Construction Safety

Add to the end of paragraph 9.4.1:

The Contractor shall be responsible for and ensure the safety of not only the workers, Subcontractors, tradespeople, and Suppliers, and their equipment, but also of all other persons who enter the Place of Work whether during working hours or not, and for that purpose shall erect

such hoardings and signs and shall employ such safety measures as may be necessary to ensure the safety of such persons.

Delete paragraph 9.4.5 and replace with:

The Contractor shall be responsible for the cost to comply with any public health order(s) affecting the performance of the Work issued pursuant to the Health Protection act (Nova Scotia) or pursuant to any similar legislation, whether Federal or Provincial.

27 GC 9.5 MOULD

Add in subparagraph 9.5.3.4:

9.5.3.4 “and the Consultant” after “Contractor”

28 GC 10.1 TAXES AND DUTIES

Add the following paragraph 10.1.3:

10.1.3 The Contractor shall indicate on each application for payment as a separate amount, the appropriate Harmonized Sales Tax the Owner is legally obliged to pay. This amount will be paid to the Contractor in Addition to the amount certified for payment under the Contract. The Contractor’s HST registration number must appear on all invoices.

29 GC 10.2 LAWS, NOTICES, PERMITS AND FEES

Delete from the first line of paragraph 10.2.5 the word, “The” and substitute the words:

10.2.5 “Subject to paragraph 3.10, the”

30 GC 10.4 WORKERS' COMPENSATION

Add the following paragraphs 10.4.2, 10.4.3, 10.4.4, and 10.4.5:

10.4.2 The contractor is referred to regulations, as applicable, under the Worker's Compensation Act of Nova Scotia.

10.4.3 The Contractor’s registration with the Worker’s Compensation Board shall be continuous during the contract. Should registrations be scheduled to expire during the contract period, the Contractor shall submit a copy of its registration renewal one month prior to the expiration of the current certificate.

10.4.4 The Contractor shall furnish evidence of coverage under the Worker’s Compensation Act of Nova Scotia and a clearance Certificate providing proof of registration with the Worker’s Compensation Board prior to commencement of the Work. (A photocopy of the Contractors registration

certificate is acceptable proof). On-going proof of good standing with the Worker's Compensation Board during the term of the contract is required.

10.4.5 The Contractor shall also maintain a Certificate of Recognition (COR) from a safety audit company recognized by the Workers' Compensation Board, such as the Nova Scotia Construction Safety Association, for the duration of the Contract. The Contractor shall provide a copy of its COR to the Owner and Consultant prior to commencement of the Work and shall provide a copy of its COR to the Owner or Consultant upon request.

GC 11.1 INSURANCE

Delete sentences and replace with the following in subparagraph 11.1.1.1:

11.1.1.1 **Delete:** "General liability insurance shall be maintained from the commencement of the Work until one year from the date of Ready-for-Takeover. Liability coverage shall be provided for completed operations hazards from the date of Ready-for-Takeover on an ongoing basis for a period of 6 years following Ready-for-Takeover" **and replace with:** "General Liability Insurance or Wrap- Up Liability Insurance, (as detailed in the Information to Tenders section under "Insurance Requirements"), shall be maintained from the commencement of the Work until final completion and acceptance of the Work including the making good of faulty work or materials, except that coverage of completed operations liability shall in any event be maintained for twelve (12) months from date of Ready-for-Takeover".

Add the following subparagraphs 11.1.1.1.1, 11.1.1.1.2, and 11.1.1.2.1:

11.1.1.1.1 The general liability insurance to be maintained by the Contractor shall include Commercial General Liability Insurance covering Premises and Operations Liability, elevators, broad form property damage, broad form automobile, owners and contractors protective, blanket contractual, personal injury, completed operations liability contingent employers liability, cross liability clause, non-owned automobile liability, and a 30 day notice of cancellation clause.

11.1.1.1.2 All liability insurance policies shall be written in such terms as will fully protect the Contractor and The Halifax Regional Centre for Education as an Additional named insured.

11.1.1.2.1 Liability coverage of not less than ten million dollars (\$10,000,000) is required with regard to operations of owned and non-owned automobiles.

Delete subparagraph 11.1.1.4 in its entirety and insert the following subparagraphs:

11.1.1.4 Broad Form (All Risks) Builders Risk Coverage - Prior to the commencement of any Work the Contractor shall maintain and pay for Broad Form (All Risks) Builders Risk Coverage in the joint names of The HRCE and the Contractor totaling not less than one hundred percent (100%) of the total value of the Work to be done and materials delivered on the site

(contract value), so that any loss under such policies of insurance will be payable to The HRCE and the Contractor as their respective interests appear. The Builders Risk Insurance shall include all materials related to the Work while in transit or at other locations.

- 11.1.1.4.1 Should a loss be sustained under the Builders Risk Coverage, the Contractor shall act on behalf of The HRCE and Contractor for the purpose of adjusting the amount of such loss with the insurance companies. As soon as such adjustment has been satisfactorily completed, the Contractor shall proceed to repair the damage and complete the Work and shall be entitled to receive from The HRCE in Addition to any sum due under the Contract, the amount at which The HRCE interest has been appraised in the adjustment made with the insurance companies as referred to above, said amount to be paid to the Contractor as the Work of restoration proceeds. Any loss or damage which may occur shall not affect the rights and obligations of either party under the Contract except as aforesaid and except that the Contractor shall be entitled to a reasonable extension of time for the performance of the Work, as The HRCE may decide.
- 11.1.1.4.2 Upon Ready-for-Takeover being attained, the Contractor's obligation to maintain Builder Risk Insurance shall cease and The HRCE shall assume full responsibility for insuring the whole of the Work against loss or damage.
- 11.1.1.4.3 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the Work until the earliest of:
- 11.1.4.3.1 Ten (10) Calendar days after Ready-for-Takeover;
- 11.1.4.3.2 on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square meter in area, or parking purposes, or for the installation, testing and commissioning or equipment forming part of the *Work*; and
- 11.1.4.3.3 when left unattended for more than thirty (30) consecutive calendar days or when construction activity has ceased for more than thirty (30) consecutive calendar days.

Paragraph 11.1.2 is supplemented as follows:

- 11.1.2 In addition, within seven (7) working days after notification of award or in any event prior to payment of the first progress claim, the Contractor shall submit certified true copies of each insurance policy to the Owner's Contract Authority. Such copies shall be exclusive of information pertaining to premium or premium bases used by the insurer to determine the cost of the insurance. Prior to the commencement of any work, the Contractor shall file with the Owner a certified copy of each insurance policy and certificate required.

Delete 11.1.5 in its entirety and replace with the following:

11.1.5 Insurance contracts shall be procured from and the premiums paid to a resident agent of an insurance Company licensed to underwrite insurance in the Province of Nova Scotia.

Add the following paragraph 11.1.9:

11.1.9 All of the insurance policies shall contain a clause stating that no change in terms and conditions or cancellation may at any time be made without the full knowledge and consent of the Owner.

31 GC 11.2 CONTRACT SECURITY

Add the following paragraphs 11.2.1, 11.2.2, and subparagraph 11.2.2.1:

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

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

11.2.2.1 "Bonds shall be procured from a Nova Scotia resident agent of an insurance company licensed to do business in Nova Scotia and shall be maintained in good standing and held by the Owner until one (1) year after Ready-for-Takeover.

Add the following paragraph 11.2.3:

11.2.3 If a Certified Cheque is held as contract security it shall be in an amount equal to ten (10) percent (%) of the Contract Price. The Contract shall supplement the Certified Cheque as necessary to maintain the amount equal to ten (10) percent (%) of the total amount payable (Contract Price plus HST).

- .1 The Certified Cheque will be deposited at the chartered bank holding The HRCE deposits.
- .2 The HRCE will return the cheque amount to the Contractor upon satisfactory completion of the contract and duration as specified in the Tender documents.
- .3 Should Contractor default, total amount payable under the Certified Cheque will be the face value of the cheque plus all accrued interest.
- .4 Payment for completion of work, due to failure of performance of the Contractor, shall include all reasonable obligations under the Contract, including architectural and engineering costs arising because of the default of the Contractor.

- .5 Payment for labour and materials shall be limited to those who have a direct contract with the Contractor for the provision of labour and/or material (which includes equipment rental).

32 GC 12.3 WARRANTY

In paragraph 12.3.2, delete from the first line the word, "The" and substitute the words:

12.3.2 "Subject to paragraph 3.10, the..."

Add the following paragraph 12.3.7:

12.3.7 Warranty repairs or replacements which arise during warranty period which affect the operation of the system shall be attended to immediately upon notification from the Consultant.

33 GC 13.3 INDEMNIFICATION

Add the following paragraph 13.1.1.3:

13.1.1.3 The Contractor shall indemnify and hold harmless the Consultant, its agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceeding by third parties that arise out of, or are attributable to, the Contractor's performance of the Contract, provided such claims are attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, and caused by negligent acts or omissions of the Contractor or anyone for whose acts the Contractor may be liable, and made in writing within a period of six (6) years from t Ready-for-Takeover, or within such shorter such period as may be prescribed by any limitation statute or the province or territory of the Place of the Work.

END OF SECTION 00 73 00

SECTION 01 11 00 - HRCE SUMMARY OF WORK

1. Project Location & General Scope

- 1.1. Dutch Settlement Elementary, 990 Nova Scotia #277, Dutch Settlement, NS B2S 2J5
- 1.2. Scope: Refer to Section 00 00 15 for scope and schedule information.

2. Contract Documents

- 2.1. Work will be performed under CCDC-2 contract.

3. General Conditions

- 3.1. Halifax Regional Centre for Education and CCDC-2 form an integral part of this Project Manual, a copy of which is bound herein.

4. Project Manual

- 4.1. Sections of the Project Manual are numbered in conformance with the Master List of Section Titles and Numbers, CSC Document 004E, published jointly by Construction Specifications Canada and The Construction Specifications Institute (USA). Sections are arranged in their standard format.
- 4.2. Sections are written as units of the Work which have been assigned numbers in conformance with the CSC/CSI system. They are arranged in sequence for this Manual. Gaps in the order of numerical sequence do not indicate that a section has been inadvertently omitted from this Manual, but, rather that a Section is not required for completion of the Work.
- 4.3. Wherever the project location building name occurs in the Contract Documents it shall be taken to mean all work included in the Contract.
- 4.4. Wherever in the Contract Documents the words "approval", "approved", "direction", "directed", "selection", "selected", "request", "requested", "report", and similar words are used, such approvals, directions, selections, requests and reports shall be given by the HRCE unless specifically stated otherwise.
- 4.5. Wherever in the Contract Documents the word "provide" is used in any form, it shall mean that the Work concerned shall include both supply and installation of the products required for completion of that part of the Work.
- 4.6. Wherever in this Project Manual it is specified that Work is to proceed or to meet approval, direction, selection or request of jurisdictional authorities or others, such approval, direction, selection or request shall be in writing.

5. Errors & Omissions

- 5.1.** If errors or omissions are observed in the Contract Documents, immediately notify the HRCE Procurement Contact in writing of all such errors or omissions. In the event no such notice is given, the Contractor will be held responsible for the results of any such error or omission and the cost of rectifying the same.

6. Division 1

- 6.1.** The provisions of all Sections of **Division 1** shall apply to each Section of this Specification.

7. Wage Rates

- 7.1.** Pay all employees engaged on the Work a wage not less than the minimum wage per hour as set out by the Province of Nova Scotia. For overtime work beyond 48 hours in any one week, pay no employee at a rate of less than one and one-half times the minimum wage per hour noted above. Provide for these wage rates in tendered contract amount.

8. Work Performed Under Separate Contracts

- 8.1.** Work not to be included in the Contract, as noted "NIC" on the Drawings, shall be governed by Article 37, Separate Contracts, of General Conditions of Contract.
- 8.2.** Furniture installation will be carried out by others.
- 8.3.** Computer installation will be carried out by others.

9. Project Schedule

- 9.1. Refer to Section 00 00 15 Description of Work.**
- 9.2.** Existing services (mechanical & electrical) will need to be maintained through the renovations.
- 9.3.** During construction, all life safety systems as well as mechanical and electrical systems must be in active, usable condition to permit the school to operate or alternate methods used to ensure the safe operation of the school as directed by HRCE project representative.
- 9.4.** As construction progresses revise the schedule to compensate for any delays or unforeseen activities so as to maintain the contract completion date. Each schedule submission is to be complete with a statement indicating the changes made, the reason they were changed and confirmation that the project completion date will not change. The above schedule information is to be submitted monthly or more often if necessary.

10. Site Progress Records

- 10.1.** Maintain at site a permanent written record of progress of Work. Make the record available at all times with copies provided when requested. Include in record each day:
 - 10.1.1.** Commencement and completion dates of the Work of each trade in each area of Project.
 - 10.1.2.** Attendance of Contractor's and Subcontractor's Work forces at Project and a record of the work they perform.
 - 10.1.3.** Visits to site by representatives of the Owner, Engineer, jurisdictional authorities, Contractor, Subcontractors, and suppliers.
- 10.2.** Maintain a progress chart in approved format. Show on chart proposed Work schedule and progress of Work by Contractor and Subcontractor.

11. Examination

- 11.1.** Site:
 - 11.1.1.** Examine site, and ensure that site conditions have been examined, that all are fully informed on all particulars which affect Work thereon and at the place of construction, and in order that construction proceeds competently and expeditiously.
 - 11.1.2.** Ensure by examination that all physical features, and working restrictions and limitations which exist are known.
- 11.2.** Previously Completed Work:
 - 11.2.1.** Verify dimensions of existing Work in place before construction of Work to be incorporated with it.
 - 11.2.2.** Verify that previously executed Work and surfaces are satisfactory for construction, and that performance of subsequent Work will not be adversely affected.
 - 11.2.3.** Commencement of Work will constitute acceptance of site conditions and previously executed Work as satisfactory.
 - 11.2.4.** Report to Engineer defects in prior Work which will affect quality of subsequent Work, or construction schedule.
- 11.3.** Construction Measurements:
 - 11.3.1.** Before commencing installation of Work, verify that its layout is accurate in accordance with intent of Drawings, and that locations, elevations, and clearances to adjacent infrastructure are maintained.
 - 11.3.2.** If Work is installed in wrong location, rectify it before other Work concerned proceeds.

12. PROTECTION OF WORK, PROPERTY & PERSONS

- 12.1.** Include in Work necessary methods, materials, and construction to ensure that no damage or harm to Work, materials, property and persons results from the Work of this Contract. Temporary facilities relating to protection are specified in Section 01 52 00.
- 12.2.** Protect, and if damaged make good, adjacent private and public property.
- 12.3.** Keep surfaces, on which finish materials will be applied, free from grease, oil, and other contamination which would be detrimental in any way to the application of finish materials.
- 12.4.** Protect finished surfaces of completed Work from damage by restriction of access or by use of physical means suitable to the material and surface location. Establish with each Subcontractor the suitability of such protection in each case.
- 12.5.** Protect existing underground infrastructure, mechanical, electrical, telephone and similar services from damage. If necessary, relocate active services to ensure that they function continuously in safety and without risk of damage.
- 12.6.** Cap off and remove unused utility services encountered during Work after approval is given by the utilities concerned or jurisdictional authorities, whichever may apply. Relocation, removal, protection and capping of existing utility services shall be performed only by the applicable utility and of other services by licensed mechanics.
- 12.7.** To prevent soiling or damage to finish flooring where pedestrian traffic occurs after the flooring has been installed, install and maintain 6 mil. polyethylene membrane or reinforced kraft paper temporary protection, secured in place and with joints sealed by reinforced pressure sensitive tape.
- 12.8.** Install plywood panels of minimum ¼" thickness over completed finish flooring materials, on which further construction Work is performed by other trades or delivery of products is made, or both. Seal joints between panels with reinforced pressure sensitive tape.
- 12.9.** Prevent spread of dust beyond the construction zone by wetting, or by other approved means, as it accumulates.
- 12.10.** The outside work area shall be appropriately demarked and/or surrounded by rigid chain link panels or fencing (at the cost of the contractor) to prevent unauthorized entry to the work area. Any area of roof having work completed is to be covered below with this fencing approximately 10' from the edge of the building. It is to be maintained at all times throughout the project. All waste disposal bins are to be fenced in using the same type of fencing as indicated above during working hours. After working hours, all waste disposal bins shall be located a minimum of 25 feet from any structure. Any windows where the debris chute is located are to be covered. All entrances below the roof area are to have covered scaffolding erected to ensure a safe travel path to a distance of ten feet from edge of building. All workers shall contain their activity to the work site area. Access to the school shall only be allowed as

planned in coordination with HRCE Operations and the school administration.

- 12.11.** All security on site shall be coordinated through HRCE using an HRCE preferred vendor.
- 12.12.** The contractor is responsible for the cost of security for all project materials.
- 12.13.** If access to the project site is required inside the building, HRCE will provide security personnel at its own cost.
- 12.14.** The contractor shall keep the work site free from accumulated debris caused by the employees or work and shall remove all debris at the end of each work shift. Debris shall not be deposited in HRCE controlled garbage and/or recycling containers.
- 12.15.** All waste materials and debris created during demolition and/or construction shall be disposed of in a dumpster provided by the contractor, to be removed at the end of the construction project, using a methodology that is in compliance with the applicable HRM solid waste by laws. Otherwise, the material must be removed and disposed of off-site at the end of each working day. The waste materials may not be stored on site unless they are held in an approved project dumpster no closer than twenty five (25) feet from any structure.
- 12.16.** All temporary structures such as portable washroom facilities, materials storage trailer, work trailer, debris dumpster, vehicles, etc., shall be located a minimum of (25) twenty-five feet from the school building.
- 12.17.** Where applicable, a hot work permit will be required to be completed and approved by HRCE prior to commencement of work and all conditions of the permit must be maintained until completion of hot work. A copy of the hot work permit signed by the contractor representative shall be provided to HRCE upon completion of each hot work session. Contractor must assign a designated fire watch as noted on the permit document who shall remain on site for three hours after completion of each hot work session.
- 12.18.** A school washroom will be designated for use where appropriate. However, protection of the surfaces as indicated above must be maintained. It should also be noted that access to the building during summer months will be limited for security reasons. Contractor is responsible to provide temporary portable washroom facilities for general use of contractor staff.
- 12.19.** Access to Interior of School - All interior access is to be scheduled with the PM. This will allow for notice to the school admin., custodial and possible scheduling of a security guard for after hour access.
- 12.20.** Adhesives / Torch Work - All adhesive use and torch work must be completed after school hours. Contractor must assign a designated fire watch as indicated above in 12.17.

13. Cleaning

- 13.1.** Ensure that during and after construction the public streets and existing asphalt parking lot are cleaned as required.

14. Salvage

- 14.1.** Unless otherwise specified, salvaged material resulting from construction, and surplus materials and construction debris shall become property of Contractor, who must dispose of it away from Site.

15. Site Limitations

- 15.1.** Since the existing building will be occupied during the Work (in accordance with the Phasing Schedule) the Architect will designate the precise areas on the site which may be utilized for work and storage, and where personnel will be permitted to be present. Refer also to Drawings. Allow for hoarding to secure construction areas from occupied portions of the Building and Site.
- 15.2.** All access to the construction site is to be coordinated with the Project Manager for HRCE and communicated at the pre-construction meeting.
- 15.3.** Any Work carried out in the building is to be carried out during hours approved by the School Administration.
- 15.4.** Any disruption to services within the building must occur during hours approved by School Administration.
- 15.5.** Any Work which may have an adverse effect on the occupancy functions, must have prior approval of the School Administration and **may** require scheduling during off-hours.

16. Security Regulations

- 16.1.** Perform Work in conformance to the security regulations of the building as directed by the Project Manager for HRCE.

17. Project Identification

- 17.1.** No project sign is required on this Project.

18. Owner's Occupancy

- 18.1.** The Owner reserves the right to occupy and use portions of the Project, whether partially or entirely completed, or whether completed on schedule or not, provided such occupancy does not interfere with the Contractor's continuing Work.
- 18.2.** Partial occupancy or installation by the Owner of his equipment shall not imply acceptance of the Project in whole, or in part, nor shall it imply acknowledgement that terms of the Agreement are fulfilled.

END OF SECTION 01 11 00

SECTION 01 11 25 - PRICES

1. General

- 1.1. Prices included in the Contract shall be complete for the applicable Work, and shall include for each price:
 - 1.1.1. Expenditures for wages and for salaries of workmen, engineers, superintendents, draftsmen, foremen, timekeepers, accountants, expeditors, clerks, watchmen and such other personnel as may be approved, employed directly under the Contractor and while engaged on the applicable Work at the site and expenditures for travelling and HRCE allowances of such employees when required by location of the applicable Work or when covered by trade agreements and when approved; provided, however, that nothing shall be included for wages or salary of the Contractor if an individual, or of any member of the Contractor's firm if the Contractor is a firm or the salary of any officer of the Corporation if the Contractor is a corporation, unless otherwise agreed to in writing.
 - 1.1.2. Expenditures for material used in or required in connection with the construction of the applicable Work including material tests and required by the laws or ordinances of any authority having jurisdiction and not included under Subparagraph .9.
 - 1.1.3. Expenditures for preparation, inspection, delivery, installation and removal of materials, equipment, tools and supplies.
 - 1.1.4. Temporary facilities as required for the applicable Work.
 - 1.1.5. Travelling expenses properly incurred by the Contractor in connection with the inspection and supervision of the applicable Work or in connection with the inspection of materials prepared or in course of preparation for the applicable Work and in expediting their delivery.
 - 1.1.6. Rentals of all equipment whether rented from the Contractor or others, in accordance with approved rental agreements including any approved applicable insurance premiums thereon and expenditures for transportation to and from the site of such equipment, costs of loading and unloading, cost of installation, dismantling and removal thereof and repairs or replacements during its use on the applicable Work, exclusive of any repairs which may be necessary because of defects in the equipment when brought to the Work or appearing within thirty (30) days thereafter.
 - 1.1.7. The cost of all expendable materials, supplies, light, power, heat, water and tools (other than tools customarily provided by tradesmen) less the salvage value thereof at the completion of the applicable Work.
 - 1.1.8. Assessments under the Workmen's Compensation Act, the Unemployment Insurance Act, Canada Pension Act, statutes providing for government hospitalization, vacations

with pay or any similar statutes; or payments on account of usual vacations made by the Contractor to his employees engaged on the applicable Work at the site, to the extent to which such assessments or payments for vacations with pay relate to the Work covered by the specified price; and all sales taxes or other taxes where applicable.

- 1.1.9. The amounts of all Subcontracts related to the specified price.
- 1.1.10. Premiums on all insurance policies and bonds called for under this Contract as related to the specified price.
- 1.1.11. Royalties for the use of any patented invention on the applicable Work.
- 1.1.12. Fees for licenses and permits in connection with the applicable Work. No Building Permit is required for the project.
- 1.1.13. Duties and taxes imposed on the applicable Work.
- 1.1.14. Such other expenditures in connection with the applicable Work as may be approved.
- 1.1.15. Provided always that except with the consent of the Owner, the above items of cost shall be at rates comparable with those prevailing in the locality of the Work.

END OF SECTION 01 11 25

SECTION 01 11 41 - PROJECT COORDINATION

1. Requirements Included

- 1.1. Each Trade Contractor's responsibilities include the coordination of Work within his own Contract and with the Work of other Contracts.

2. Related Requirements

- 2.1. Project Meetings: Section 01 31 19
- 2.2. Submittals: Section 01 33 00

3. Description

- 3.1. Coordinate Work on which subsequent Work depends to facilitate mutual progress, and to prevent conflict between parts of the work.
- 3.2. Ensure that each Section makes known for the information of the Construction Manager and other Sections, the environmental and surface conditions required for the execution of its Work, and the sequence of others Work required installation of its Work.
- 3.3. Ensure that each Section, commencing Work, and that each Section is assisted in the execution of its preparatory Work by Sections depending upon its preparation.
- 3.4. Deliver materials supplied by one Section to be installed by another well before the installation begins.
- 3.5. Sections giving installation information in error, or too late to incorporate in the Work, shall be responsible for having Work done which was thereby additionally made necessary.
- 3.6. Coordinate warranty conditions of interconnected Work to ensure that full coverage is obtained.
- 3.7. Remove work installed in error which is unsatisfactory for subsequent Work.

4. Cutting And Patching

- 4.1. Include under Work of this Section all cutting and patching of asphalt required by the Work.
- 4.2. Finish new surfaces flush with existing surfaces.
- 4.3. Cut and patch as required making work fit.
- 4.4. Make cuts with clean, true, smooth edges.
- 4.5. Patching of existing or new asphalt shall be performed only by workmen with expertise in that particular trade and who normally perform that Trade.
- 4.6. Replace, and otherwise make good, damaged or defective Work. If required by the Construction Manager.

- 4.7. Do not endanger Work or property by cutting, digging, or similar activities. No Section shall cut or alter the Work of another Section unless approved by the Section which has installed it.
- 4.8. Cut and drill with true smooth edges and to minimum suitable tolerances.
- 4.9. If required, before cutting, drilling, or sleeving structural load bearing elements, obtain approval of location and methods.
- 4.10. Cutting, drilling and sleeving of Work shall be done only by the Section which has installed it. The Section requiring drilling and sleeving shall inform the Section performing the Work of the location and other requirements for drilling and sleeving. The Contractor shall directly supervise performance of cutting and patching.
- 4.11. Cutting and Patching for Holes Required by Mechanical & Electrical Work:
 - 4.11.1. Include under Work of Mechanical Divisions cutting or provision of holes up to 8" in diameter and related patching.
 - 4.11.2. Include under Work of this Section holes and other openings required by the work of Mechanical Divisions which are larger than 8" in diameter or least dimension, and chases, bulkheads, furring and required patching. This Section shall be responsible for determination of Work required for holes in excess of 8" diameter or least dimension.
 - 4.11.3. Include under the Work of Electrical Divisions all cutting or provision of holes and related patching for the Work of that Division.
- 4.12. Include under Work of this Section all other cutting and patching required by the Work except as described in Clause .11 above.
- 4.13. Patching or replacement of damaged Work shall be done by the Subcontractor under whose Work it was originally executed, and at the expense of the Subcontractor who caused the damage.
- 4.14. Make patches invisible in final assembly.

5. Quality Assurance

- 5.1. Requirements of Regulatory Agencies:
 - 5.1.1. Make known and coordinate the requirements of jurisdictional authorities, as made explicit by the Contract Documents, and by representatives of such authorities
- 5.2. Source Quality Control:
 - 5.2.1. Ensure that Work meets specified requirements
 - 5.2.2. Schedule, supervise and administer inspection and testing as specified in Section 01 45 00.
- 5.3. Job Records:
 - 5.3.1. Maintain job records and ensure that such records are maintained by subcontractors.

Submittals

- 5.4. Prepare a Project schedule in accordance with Section 01 33 00, and ensure that all subcontractors and suppliers are aware of the details of this schedule, and progressively of their general compliance with the schedule.
- 5.5. Become aware of the required submittals specified in each Section, and expedite submission of such submittals so as not to hinder the Project Schedule.
- 5.6. Review submittals and make comments as specified in Section 01 33 00.

6. Job Conditions

- 6.1. Ensure that Work proceeds under conditions meeting specified environment and job safety requirements
- 6.2. Ensure that protection of adjacent property and the Work is adequately provided and maintained to meet specified requirements.

7. Product Delivery, Storage And Handling

- 7.1. Site has limited spaces for storage, only delivery of materials agreed upon by the Construction Manager will be allowed. Comply with Construction Manager's allocations. Any requirement for modifications to the building in order to allow delivery and storage of the materials to complete this work is the responsibility of the contractor.
- 7.2. Schedule delivery of products & removal of material with Construction Manager.
- 7.3. Make available areas for storage of products and construction equipment to meet specified requirements, and to ensure a minimum of interference with progress of the Work and relocations.
- 7.4. Trade Contractor to provide flag persons, traffic signals, barricades and Flares/lights/lanterns as required to perform the Work and to protect the public.
- 7.5. Material and Waste - Deliveries and Removals - Must be coordinated to be completed 30 minutes after school dismissal where applicable.

END OF SECTION 01 11 41

SECTION 01 31 19 – PROJECT MEETINGS

1. Pre-Award Meeting

- 1.1. A Pre-award meeting will be held at which time the following will be addressed:
 - 1.1.1. Owner and HRCE's functions.
 - 1.1.2. The Consultant and the Consultant's functions.
 - 1.1.3. The General Contractor and the General Contractor's functions.
 - 1.1.4. Documentation requirements from the General Contractor.
 - 1.1.5. Obligees for Performance and Payment Bonds from Sub-contractors.
 - 1.1.6. Progress Claims.
 - 1.1.7. CO's & CCO's.
 - 1.1.8. Construction Schedule.
 - 1.1.9. Project Start-up.
 - 1.1.10. Job Meetings.
 - 1.1.11. Superintendent – General Contractor's Representative.
 - 1.1.12. Design / Administration authority.
 - 1.1.13. Owner's Representative.
 - 1.1.14. Special Consultants.
 - 1.1.15. Quality of Workmanship.
 - 1.1.16. Accountability.
 - 1.1.17. Harmonized Sales Tax.
 - 1.1.18. Contract Close-out Documentation.

2. Preconstruction Meeting

- 2.1. Within fifteen (15) days after award of Contract, arrange a meeting between the Consultant, Subcontractors, Project Superintendents, Inspection and Testing Company Representatives, and representatives of others whose coordination is required during construction.
- 2.2. Discuss at the meeting the means by which full cooperation and coordination of the participants during construction can be achieved.
- 2.3. Document the responsibilities and necessary activities of the participants during construction as discussed and distribute to each participant.
- 2.4. Establish procedures for maintenance and completion of Project record drawings specified in Section 01 77 00.
- 2.5. Review and establish methods of maintaining life safety and egress for the school occupants. Communicate these methods thoroughly with the School Principal.

3. Progress Meeting

- 3.1. Invite representatives of HRCE, to attend twice monthly site meetings called by the Contractor during the progress of the Work.

- 3.2. Inform HRCE of each meeting and of proposed agenda a minimum of five (5) days before meeting.
- 3.3. Submit proposed schedule of site meetings to Engineer and Owner.
- 3.4. Record, prepare and distribute minutes of each meeting to HRCE and to each other participant within 72 hours of meeting.
- 3.5. Ensure that all representatives who attend meetings have the authority to conduct business on behalf of firms they represent.
- 3.6. Details of Progress Meetings to be discussed at the project start-up meeting.

4. Suggested Agendum (Preconstruction Meeting)

- 4.1. Distribution and discussion of:
 - 4.1.1. List of major subcontractors and suppliers.
 - 4.1.2. Projected Construction Schedules.
- 4.2. Critical work sequencing.
- 4.3. Major equipment deliveries and priorities.
- 4.4. Project Coordination:
 - 4.4.1. Designation of responsible personnel.
- 4.5. Procedures and Processing of:
 - 4.5.1. Field decisions
 - 4.5.2. Proposal requests
 - 4.5.3. Submittals
 - 4.5.4. Change orders
 - 4.5.5. Applications for Payment.
- 4.6. Adequacy of distribution of Contract Documents.
- 4.7. Procedures for maintaining Record Documents.
- 4.8. Use of premises:
 - 4.8.1. Office, work and storage areas.
 - 4.8.2. Owner's requirements.
- 4.9. Construction facilities, controls and construction aids.
- 4.10. Safety/Tool Box Meetings.
- 4.11. Security procedures.
- 4.12. Housekeeping procedures.
- 4.13. Egress/life safety procedures

5. Suggested Agendum (Progress Meetings)

- 5.1. Review and approval of minutes of previous meeting.
- 5.2. Safety meeting minutes.
- 5.3. Review of work progress since previous meeting.
- 5.4. Field observations, problems, conflicts.
- 5.5. Problems which impede Construction Schedule.
- 5.6. Review of off-site fabrication, delivery Schedules.

- 5.7. Corrective measures and procedures to regain projected schedules.
 - 5.8. Revisions to Construction Schedules.
 - 5.9. Maintenance of quality standards.
 - 5.10. Pending changes and substitutions and effect on Construction Schedule.
 - 5.11. Other Business.
-
- 6. Attend, with representatives of HRCE weekly meetings with the School Administration to review construction activities and concerns of Building Occupants.
 - 7. Quarterly meetings with Contractor and the HRCE / User during Warranty Period including major sub-trade contractors.
 - 8. Dates for meetings will be set at time of completion.

END OF SECTION 01 31 19

SECTION 01 33 00 – SUBMITTAL PROCEDURES

1. General Requirements

- 1.1. Make submittals specified in this Section to Consultant unless otherwise specified, with additional submissions made, in manner that they direct, to other parties involved with construction of the Project as their interests are concerned. These parties are, but shall not be restricted to, consultants, jurisdictional authorities, and Subcontractors whose Work must be coordinated with Work related to Submittals.
- 1.2. Ensure that submissions are made to allow sufficient time for review without the construction schedule being delayed.

2. Document Submissions Required

- 2.1. At Commencement of Contract:
 - 2.1.1. Performance and Payment Bonds.
 - 2.1.2. Public Liability and Property Damage Insurance Certificates.
 - 2.1.3. List of Subcontractors by firm name.
 - 2.1.4. Construction Schedule and other required schedules and estimates.
 - 2.1.5. Site Specific Safety Plan/Safety Policy.
 - 2.1.6. Workers' Compensation Board status.
- 2.2. During Construction:
 - 2.2.1. Weekly progress reports.
 - 2.2.2. Job meeting reports and minutes.
 - 2.2.3. Updated construction schedules.
 - 2.2.4. Shop drawings as required.
 - 2.2.5. Inspection and test reports.
 - 2.2.6. Daily communication of Hot Work Permits as needed.
- 2.3. Submissions at completion of Work are specified in Section 01 77 00, Contract Closeout.

3. Administrative

- 3.1. Submit to Consultant submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time no claim for extension by reason of such default will be allowed.
- 3.2. Do not proceed with Work affected by submittal until review is complete.
- 3.3. Present shop drawings, product data, samples and in Imperial units.
- 3.4. Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been

checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.

- 3.5. Notify Consultant in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- 3.6. Verify field measurements and affirm that affected adjacent work is coordinated.
- 3.7. Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submittals.
- 3.8. Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant's review.
- 3.9. Keep one review copy of each submission on site.

4. Construction Schedules

- 4.1. Submit proposed construction schedule at beginning of Project, as specified in Project Documents.
- 4.2. As construction progresses, submit up-dated construction schedules as specified in Project documents.

5. Shop Drawings And Product Data

- 5.1. The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- 5.2. Submit drawings stamped and signed by professional consultant registered or licensed in Province of Nova Scotia of Canada.
- 5.3. Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- 5.4. Allow seven (7) days for Consultant's review of each submission. Do not proceed with work involving relevant products until completion of shop drawing review.
- 5.5. Adjustments made on shop drawings by Consultant are not intended to change Contract Price. If adjustments affect value of work, state such in writing to Consultant prior to proceeding with work.
- 5.6. Make changes in shop drawings as Consultant may require, consistent with Contract Documents. When resubmitting, notify Consultant in writing of revisions other than those requested.

Accompany submission with transmittal letter, in duplicate, containing:

- 5.6.1. Date
- 5.6.2. Project title and number
- 5.6.3. Contractor's name and address
- 5.6.4. Identification and quantity of each shop drawing, product data and sample.
- 5.6.5. Other pertinent data.
- 5.7. Submission to include:
 - 5.7.1. Date and revision dates.
 - 5.7.2. Project title and number.
 - 5.7.3. Name and address of:
 - 5.7.3.1. Subcontractor.
 - 5.7.3.2. Supplier.
 - 5.7.3.3. Manufacturer.
 - 5.7.4. Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - 5.7.5. Details of appropriate portions of Work as applicable:
 - 5.7.5.1. Fabrication.
 - 5.7.5.2. Layout, showing dimensions, including identified field dimensions, and clearances.
 - 5.7.5.3. Setting or erection details.
 - 5.7.5.4. Capacities.
 - 5.7.5.5. Performance characteristics.
 - 5.7.5.6. Standards.
 - 5.7.5.7. Relationship to adjacent work.
- 5.8. After Consultant's review, distribute copies.
- 5.9. Submit for review one electronic copy in PDF file format of shop drawings for each requirement requested in specification Sections and as Consultant may reasonably request.
- 5.10. Submit electronic copies of product data sheets for brochures for requirements requested in specification Sections and as requested by Consultant where shop drawings will not be prepared due to standardized manufacture of product.
- 5.11. Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Consultant.
 - 5.11.1. Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - 5.11.2. Testing must have been within three (3) years of date of contract award for project.

- 5.12. Documentation of testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- 5.13. Delete information not applicable to project.
- 5.14. Supplement standard information to provide details applicable to project.
 - 5.14.1. If upon review by Consultant, no errors or omissions are discovered or if only minor corrections are made, copies will be returned, and fabrication and installation of work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of work may proceed.
 - 5.14.2. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of work of sub-trades.

- 5.15. Shop Drawings are specified for submission under the following:
 - Section 03 20 00 Concrete Reinforcement
 - Section 05 12 23 Structural Steel
 - Section 05 31 00 Steel Deck
 - Section 05 50 00 Metal Fabrications
 - Section 06 10 11 Rough Carpentry
 - Section 06 40 00 Architectural Woodwork
 - Section 07 41 43 Aluminum Composite Panels
 - Section 07 46 13 Preformed Metal Siding
 - Section 07 55 00 Modified Bitumen Roofing System & Flashing
 - Section 07 84 00 Fire Stopping and Smoke Seals
 - Section 08 11 14 Steel Doors & Frames
 - Section 08 11 16 Aluminum Doors & Frames
 - Section 08 14 10 Wood Doors
 - Section 08 50 50 Aluminum Windows
 - Section 08 62 11 Vinyl Windows
 - Section 08 71 10 Door Hardware
 - Section 09 22 16 Non-Load Bearing Wall Framing
 - Section 09 30 13 Ceramic Tile
 - Section 10 11 13 Communication Boards
 - Section 10 11 23 Tackboards
 - Section 10 14 53 Traffic Signs
 - Section 10 28 10 Toilet & Bath Accessories
 - Section 10 50 00 Miscellaneous Specialties
 - Section 11 40 11 Food Services Catalogued & Custom Equipment
 - Section 12 21 13 Horizontal Blinds

Section 12 21 16 Roller Shades

Section 14 42 13 Wheelchair Platform Lift

All pre-manufactured Mechanical & Electrical items as noted in Mechanical & Electrical Divisions.

6. SAMPLES

- 6.1. Submit for review samples in duplicate as requested in respective specification Sections, as requested by the Consultant. Label samples with origin and intended use.
- 6.2. Deliver samples prepaid to Consultant's business address.
- 6.3. Notify Consultant in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- 6.4. Adjustments made on samples by Consultant are not intended to change.
- 6.5. Make changes in samples which Consultant may require, consistent with Contract Documents.
- 6.6. Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.
- 6.7. Samples are specified for submission under the following Sections:

Section 07 41 43 Aluminum Composite Panels

Section 07 46 13 Preformed Metal Siding

Section 08 14 10 Wood Doors

Section 08 50 50 Aluminum Windows

Section 09 30 13 Ceramic Tile

Section 09 51 13 Acoustical Ceiling Units

Section 09 65 19 Resilient Tile Flooring

Section 12 21 13 Horizontal Blinds

Section 12 21 16 Roller Shades

Refer to Mechanical & Electrical Divisions for sample requirements in those Trades.

7. Record Drawings

- 7.1. Record, as the Work progresses, changes and deviations in the location of Work concealed by the finished Work, and such other approved changes that occur during progress of Work, to ensure that an accurate record is provided for future maintenance and alterations.
- 7.2. White prints will be provided by the HRCE for use in preparing record drawings. Record changes in the Work on these prints in red ink.
- 7.3. Dimension location of concealed Work in reference to building walls, and elevation in reference to floor elevation. Indicate at which point dimension is taken to conceal Work. Dimension all terminations and offsets of runs of concealed work.
- 7.4. Record work constructed differently than shown on Contract Documents, changes in the work caused by site conditions, by Owner, Consultant, Contractor and Subcontractor originated

changes, and by site instructions, supplementary instructions, field orders, change orders, addenda, correspondence and directions of jurisdictional authorities.

- 7.5. Record location of mechanical and electrical services, piping, valves, conduits, pull boxes, junction boxes and similar work not clearly in view, and position of which is required for maintenance, alteration work and future additions. Do not conceal critical work until its location has been recorded.
- 7.6. Identify record drawings as a "Project Record Copy". Maintain in good condition, do not use for construction purposes and make available to Consultant at all times.
- 7.7. Submit record drawings at completion of Work. Final acceptance of the Work will be predicated on receipt and approval of record drawings.

8. Extra Stock

- 8.1. Supply extra stock at completion of Project as specified in other Sections of the Project Manual.
- 8.2. Deliver extra stock as directed by the Architect to location he designates.
- 8.3. Extra stock is specified to be supplied in the following Sections:

Section 09 30 13 Ceramic Tile

Section 09 51 13 Acoustical Ceiling Units

Section 09 65 19 Resilient Tile Flooring

Section 09 91 23 Painting

Refer to Mechanical & Electrical Divisions for Extra Stock requirements in those Trades.

9. Maintenance Manual & Operating Instructions

- 9.1. Submit three (3) copies of Maintenance Manual with application for completion certificate.
- 9.2. Include in Maintenance Manual one (1) copy of each final approved shop drawing issued for Project on which have been recorded changes made during fabrication and installation caused by unforeseen conditions.
- 9.3. Submit extended guarantees together in one (1) report binder.
- 9.4. The Manuals shall:
 - 9.4.1. Consist of a hard-cover, black, vinyl-covered, loose-leaf, letter-size binder.
 - 9.4.2. Have a title sheet, or sheets preceding data on which shall be recorded Project name, Project number, date, list of contents, and Contractor's and Subcontractors' names.
 - 9.4.3. Be organized into applicable Sections of Work with each Section separated by hard paper dividers with plastic covered tabs marked by Section.
 - 9.4.4. Contain only typed or printed information and notes, and neatly drafted drawings.
 - 9.4.5. Contain maintenance and operating instructions on all building, and mechanical and electrical equipment.
 - 9.4.6. Contain maintenance instructions as specified in various Sections.

- 9.4.7. Contain brochures and parts lists on all equipment.
- 9.4.8. Contain sources of supply for all proprietary products used in the Work.
- 9.4.9. Contain lists of supply sources for maintenance of all equipment in Project of which more detailed information is not included above.
- 9.4.10. Contain finished hardware schedule.
- 9.4.11. Contain charts, diagrams and reports specified in Mechanical & Electrical Divisions.

10. Extended Warranties

- 10.1. Submit the extended warranties listed in this Article and as specified in each applicable Section of this Project Manual.
- 10.2. Extended warranties shall commence on termination of the standard one-year warranty granted in this Contract.
- 10.3. Submit each extended warranty on a standard Form of Warranty, a sample of which is included in this Section.
- 10.4. Secure each extended Warranty by a Maintenance Bond in an amount indicated.
- 10.5. Submit extended warranties for:

Section 06 40 00 Architectural Woodwork – extended 4 years

Section 07 41 43 Aluminum Composite Panels – extended 10 years (panel finish)

Section 07 55 00 Modified Bitumen Roofing System & Flashing:

- 2 year CRCA materials and workmanship against leaks and blow off
- 10 year material warranty the membrane will perform as a roofing material
- 1 year CRCA warranty against defects of materials and workmanship for the sheet metal work.

Section 07 92 10 Joint Sealants – extended 5 years

Section 08 11 16 Aluminum Doors & Frames – extended 4 years

Section 08 14 10 Wood Doors – extended 4 years

Section 08 50 50 Aluminum Windows – extended 4 years

Section 08 62 11 Vinyl Windows – extended 5 years

Section 08 71 10 Door Hardware – various, refer to that Section

Section 09 30 13 Ceramic Tile – extended 4 years

Section 09 51 13 Acoustical Ceiling Units – extended 4 years

Section 09 65 19 Resilient Tile Flooring – extended 4 years

Section 10 11 13 Communication Boards – extended 24 years

Section 10 11 23 Tackboards – extended 9 years

Section 12 21 13 Horizontal Blinds – extended 5 years

Section 12 21 16 Rollers Shades – extended 5 years

Section 14 42 13 Platform Lift – extended 5 years

Refer to Mechanical & Electrical Divisions for extended Warranty requirements in those trades.

11. Inspection Laboratory Reports

- 11.1.** Submit copies of inspection and test reports obtained by the Contractor and Subcontractors for their Work or for Jurisdictional Authorities, if requested by Consultant.
- 11.2.** Submit reports in accordance with requirements specified in Section 01 41 00.

12. Documentation On Suppliers & Manufacturers

- 12.1.** Provide information under headings identifying the following: Associated Technical Section, Manufacturer, Supplier, Contact Name, and Phone Numbers.

SAMPLE FORM OF WARRANTY FOLLOWS THIS PAGE

Sample Form for Warranty

Date

Client

Project

.....

Warranty
(title of work)

We hereby undertake to warrant all materials supplied and installed under our Contracts and include the providing of necessary materials and labour to cover the result of faulty materials or workmanship. Upon written notification from Client or the Architect that the above work is defective any repair or replacement work required shall be to the Architect's satisfaction at no cost to the Client. This Warranty shall not apply to defects caused by the work of others, maltreatment of materials, negligence or Acts of God. This Warranty shall remain in effect for the total period from the acceptance of the Work to (...date...), irrespective of the date of completion or the beneficial use by the Owner.

Signature

Authorized Signing Officer

Name of Firm

Address

END OF SECTION 01 33 00

SECTION 01 35 13 – APPENDIX A - SPECIAL PROJECT PROCEDURES

1. Introduction

- 1.1. School construction, renovation and maintenance projects are scheduled every year as a normal and necessary course of business by operations departments in each Nova Scotia Centre for Education. Building modifications, repairs and additions/demolitions to buildings may impact the school environment without appropriate controls. With increased controls based primarily on the CSA standards implementation, proper scheduling and clear communication on adequate controls can be put into place to eliminate/minimize the impact to all occupants.
- 1.2. Projects of this nature may generate varying levels of dusts, noises and odors. It is possible, unknown/unforeseeable environmental contaminants, such as spills, mold, fumes, lead or asbestos exposure maybe identified.
- 1.3. To successfully complete work within the school environment, it is necessary to plan and implement appropriate containment and control strategies. This document is developed to provide a minimum standard for contaminant controls for various types of projects in schools. These standards are in addition to and should complement all legislated protocols for working with regulated materials such as asbestos, lead paints, PCB's etc.
- 1.4. Executing a successful project will depend primarily on clear, concise communication. This may involve a number of parties (Project Manager, Operations staff, School Administration and Health & Safety staff and Joint Occupational Health & Safety Committee).

2. Communication Plan

- 2.1. The most critical element of any project management plan is effective communication between all stakeholders. Communication between the Operations project manager/supervisor, the contractor and school administrators before the start of a project is very important. This meeting is meant to explain the scope, schedule and risk assessment for the project. The meeting will also help establish clear expectations when managing planned and unplanned exposure risks associated with contaminant controls.
- 2.2. The communication plan shall include:
 - 2.2.1. A description of potential contaminants, which may include but is not limited to:
 - 2.2.1.1. Particulates (dirt, concrete/silica, steel, fiberglass, wood dust, ash, cellulose, etc.)
 - 2.2.1.2. Moisture: external water infiltration, internal system leaks (domestic water, sanitary, storm, sprinkler)
 - 2.2.1.3. Noise from equipment/tool operation,
 - 2.2.1.4. Fumes/odors from equipment exhaust, boiler exhaust, septic waste, chemical/adhesives, etc.

- 3.1.7.** Access to the controlled work site is only permitted by authorized personnel. The project supervisor or designate shall determine appropriate personal protective equipment (PPE) and necessary worker orientation.

4. Particulate Control

- 4.1.** Exposure to minimal levels of dust is a normal condition in most outdoor and indoor environments and is typically controlled inside a building through building ventilation, filtration and routine housekeeping measures. However, as noted, construction projects generally create elevated dust levels in work areas, whether inside or outside of a building.
- 4.2.** Operational Services Managers must ensure maintenance staff and contracted service providers implement dust control measures appropriate for the type and scope of work being performed. This will include assessing the type and amount of dust being created as well as the location of the work being conducted.
- 4.2.1.** Interior Construction Projects:
- 4.2.2.** Construction projects may be described as projects that may include window replacement, wall creation/demolition, etc.
- 4.3.** As a minimum for these types of construction projects, all interior entry points into a construction zone must be effectively sealed. The barrier must prevent contaminants from the work area to be distributed to other areas of the school. Appropriate signage must be posted to indicate only authorized persons are permitted access.
- 4.4.** Entrance design could range from a two flap plastic tarp door to a fully constructed sealed entry door with negative hepa-filtered ventilation on the construction side of the barrier.
- 4.5.** Exterior Construction Projects:
- 4.5.1.** Exterior work shall be performed so as not to affect the safety of building occupants. It will also provide controls to avoid impact to adjacent properties. Depending up on the results identified in the risk assessment, at a minimum consideration must be given to prevent dust from entering into the school environment. This may be controlled through isolation, dampening application, closing building AHU and window/door openings.

5. Noise Control

- 5.1.** Hearing plays an essential role in communication, speech and language development and learning within a school environment. During construction the contractor is responsible for ensuring acceptable noise levels will be adhered to for the HRCE staff and students within the building. Noise related to a project may prove to be very distracting for staff and students. To minimize distractions and interruptions in student learning the following are important to consider:
- 5.1.1.** Contractors are responsible to ensure appropriate noise control measures are taken
- 5.1.2.** "No work" periods may need to be incorporated into construction schedules

- 5.1.3. Work causing a noise disruption may need to take place during unoccupied times and/or during pre-determined acceptable times of the day (i.e. before and after class times)
- 5.1.4. It may be necessary for the School Administrator to make a request to the HRCE Project Manager or the Contractor to exclude undertaking certain noisy activities during particular periods and/or activities.

6. Moisture Control

- 6.1. Moisture levels are to be controlled during construction and maintenance activities. Moisture levels above normal may impact the air in the room and/or building and may also penetrate building materials giving the potential to lead to mould growth.
- 6.2. Certain activities (i.e. tape and mud of drywall, painting, pressure washing, concrete cutting with water or other water-based dust-suppression) introduce high amounts of moisture into the room environment and ventilation and or drying is required to control local moisture.
- 6.3. An enclosure properly set-up to contain other contaminants will similarly contain/control high levels of airborne moisture. A wet-vac should be available on-site for activities which have a risk of water spillage of more than 5 gallons at any instance.
- 6.4. Standing and or stagnate water must be avoided on construction sites, for a number of reasons, including, but not limited to; insects breed in these bodies of water, the water may give off odours, it is a nuisance to walk through, and it may be an ice hazard in cold weather.
- 6.5. It is important that all water leaks and flooding are reported immediately to the HRCE's project manager and building supervisor. Where works to existing "plumbing" is to occur the water lines (potable, heating, fire suppression) must be isolated and drained (de-energized/de-pressurized) following Lock Out - Tag Out procedure. Adequate supplies such as buckets and absorbents should be present when drains are not available to drain a line.
- 6.6. When an interruption to the water supply, potable or service, is to occur then the "owner's representative" and building supervisor should be notified 24 hours in advance. Bottled water provision may be required.
- 6.7. Materials used in the construction and or maintenance activities are to be stored in dry areas. The introduction of materials to the activities with moisture levels above the acceptable (XXX%)CNBC states for wood, on dry weight basis, a max of 19%, I can't find info on drywall but assume it is much lower range is prohibited as these materials are highly susceptible to colonization by mould spores.

7. Fumes

- 7.1. Fumes may be produced on a project site for a variety of reasons such as use of motorized equipment, off gassing of sealants, adhesives and finish products, cutting/torching processes, exposure of sanitary systems, process ignition gases such as propane and acetylene, proximity of project temporary washrooms, radon, etc.
- 7.2. The impact of fumes on occupants may range from discomfort to health risk, to life safety risk.

- 7.3. The project manager or supervisor must ensure that all potential fume sources are identified and remedial or control measures included in the scope of work by the contractor.
- 7.4. Monitoring equipment may be required to determine for example radon exposure or safety of confined space access.

8. Activity Assessment

- 8.1. Activities that may produce contaminants which require control may be considered as low, medium and high impact.
- 8.2. Low impact activities include routine maintenance and repairs that may create localized dust or odors or brief periods of noise which are not considered harmful to occupants but may be a nuisance which requires minimal control. These may include activities such as opening ceiling tiles or gyproc walls, replacing a plumbing fixture, paint touch ups, drilling through a wall, etc.
- 8.3. Medium impact activities include larger repair jobs or longer duration projects that will create more wide spread levels of contaminant which must be controlled to prevent exposure to building occupants. Boiler cleaning, ceiling replacement, long periods of hammer drilling, etc.
- 8.4. High impact activities include large demolition and construction projects, or jobs with exposure to contaminants that are a risk to health or life safety such as asbestos remediation, mould abatement, lead paint clean up, etc.

9. Hazard Assessment

- 9.1. A hazardous assessment is required to be completed for each job to ensure hazards are identified and corresponding controls are implemented. Depending upon the circumstances at the site it may be necessary to upgrade and/or add other precautions.
- 9.2. Determine the most appropriate hazard classification and apply the corresponding protocols. The attached hazard assessment identifies the minimum controls that must be in place during the corresponding activities. Depending on the specific circumstances at a site further controls may be required. When the hazards are deemed to be in the C or F category the form including specific controls must be submitted to the HRCE for review, prior to commencing work. The contractor may still be required to complete their own hazard assessment of the job/work.

10. Contaminant Controls Procedure for initiating work for all Contaminant Controls:

10.1. Contaminant Control I

- 10.1.1. The tradesperson or project manager for the HRCE will discuss the details, including the scope and any impacts of the job/project with the principal.
- 10.1.2. Ensure fire exiting requirements and life safety systems are addressed or adequate mitigating plans are implemented for the building, construction staff and building occupants.
- 10.1.3. Presence of lead paint or ACM's (Asbestos Containing Materials) must be determined prior to the start of any job. Specific protocols or Codes of Practice may apply.

- 10.1.4. Consideration will be given for work that is anticipated to generate significant noise, odours or VOC's (Volatile Organic Compounds) and this will be scheduled outside of school hours or during times when the noise will not disrupt occupant activities. This will require coordination with the Principal.
 - 10.1.5. The work area shall be isolated where possible. This may be achieved at varying levels, by closing doors and opening outside windows for ventilation or by installing appropriate hoarding and negative pressure units to ensure contaminants are not circulated throughout the school causing further health and safety concerns.
 - 10.1.6. Dust shall be minimized during the activity. When drilling, sanding or cutting is taking place, wetting the area may be necessary to reduce dust.
 - 10.1.7. Good housekeeping practices shall be maintained at all times on the work site. Bag and remove dust and debris from the building as soon as possible.
 - 10.1.8. Possible environmental impacts shall be managed and minimized. If work uncovers environmental contaminants or suspected contaminants such as oil spills (current or historic) or potentially friable asbestos materials (check the school asbestos audit) that may be disturbed, this information shall be brought to the attention of the HRCE's employee responsible for the project so that appropriate actions can be taken.
 - 10.1.9. When the activity is completed the work area shall be inspected and cleaned. Dust and debris shall be removed from the area and all efforts will be made to return items to their pre-maintenance activity location.
 - 10.1.10. The Principal shall be notified that the work is completed.
- 10.2. Contaminant Control II** - All Contaminant Control I measures shall apply, as well as;
- 10.2.1. Cover furniture, bookshelves and teaching materials with plastic sheets.
 - 10.2.2. Water misting while performing dust generating activities may be required.
 - 10.2.3. Seal un-used doors. Seal wall penetrations, electrical outlets, or any other source of air leaks in the construction area.
 - 10.2.4. Seal exhaust air vents in construction area and open the windows. If possible shut down air handling system in the area for duration of project.
 - 10.2.5. A walk out mat at exterior of exit door to trap dust may be required.
- 10.3. Contaminant Control III** - All Contaminant Control I and II measures shall apply, as well as;
- 10.3.1. Install an impermeable dust barrier from the true ceiling to the floor consisting of two layers of 6 mil fire retardant polyethylene or solid wall and sealed door. The wall shall remain in place until the job is finished and the clean-up is completed.
 - 10.3.2. Seal all wall penetrations.
 - 10.3.3. Seal off all return and supply air handling ducts and close all windows.
 - 10.3.4. Turn off the air handling system in the area of construction.
 - 10.3.5. Maintain negative air pressure in the construction area using HEPA filter equipped exhaust ventilation. The pressure differential between the project area of contamination and the building's occupied areas shall be demonstrable by a means approved by the HRCE employee responsible for the project.

- 10.3.6. Ensure that the air is exhausted directly outside and away from intake vents.
- 10.3.7. Vacuum all horizontal surfaces including drop cloths with a hepa vacuum.
- 10.3.8. Remove drop cloths.
- 10.3.9. Vacuum again all horizontal surfaces with HEPA Vacuum.
- 10.3.10. Restore ventilation.
- 10.3.11. Remove enclosure and equipment.

10.4. Control IV: (External Work)

- 10.4.1. External work may impact building interior or occupants.
- 10.4.2. To reduce the impact to building interior or occupants, it may be necessary to contain the work area from impacting building interior. This may include closing or opening windows, tarping ceilings to capture debris or water, temporary relocation of occupants or ventilation controls.
- 10.4.3. The job supervisor shall consider weather conditions and forecast to reduce the effect of any weather impacts to the building materials or building occupants.
- 10.4.4. It may be necessary to use protective tarps and ground cover sheets below equipment and work areas to contain building debris such as paint chips, materials, dust or oil from equipment.
- 10.4.5. When the job is completed and the tarps have been lifted, inspect the ground around the job for debris and clean as necessary.

Fire Protection

10.5. Type V: General Fire Protection

- 10.5.1. Ensure fire exiting requirements and life safety systems are addressed or adequate mitigating plans are implemented for the building, construction staff and building occupants. Staff must be aware of temporary modifications to fire safety plans.
- 10.5.2. MSDSs for all materials to be used must be reviewed and available on site.
- 10.5.3. Construction materials stored outside must be a minimum distance of ten feet from the building and be in a secured area.
- 10.5.4. Flammable or Combustible liquids must be stored as per Fire Code requirements. All flammable and combustible liquids or materials must be kept in a secure area at all times.

10.6. Control VI: Fire Protection (minor hot work) - All Contaminant Control V shall apply as well as;

- 10.6.1. Notify the Principal that a risk of fire has increased and the area in which the hot work will occur.
- 10.6.2. Refer and implement the HRCE's hot work permit process. At a minimum the following should be considered;
 - 10.6.2.1. Sweep the work area and remove all unnecessary materials in the vicinity; particularly all combustible and flammable materials and liquids shall be removed from the area (35 feet).
 - 10.6.2.2. Have an appropriate size fire extinguisher available.

- 10.6.2.3.** Inspect the work location for areas (such as a hole in the wall) where hot material or sparks could fall and smolder and close them off so that any hot debris can only fall within your field of view.
- 10.6.2.4.** If it is possible that the flame will go past the object being welded or soldered and excessively heat a flammable or combustible material, then either protect that material with a non-flammable material or wet the material and keep it wetted during the use of heat or grinding.
- 10.6.2.5.** Remain in the area while the joint and/or heated materials cool to room temperature (ambient) while checking for the smell or appearance of smoke in the area.
- 10.6.2.6.** Stay in the area for at least 2 hours and then re-inspect for any smell or appearance of smoke.
- 10.6.2.7.** Ask another staff person to inspect the area for the smell or appearance of smoke. Record who you asked to do the final inspection.
- 10.6.3.** Type VII: Fire Protection (hot work w fire watch) - All Contaminant Control V and VI shall apply as well as;
- 10.6.4.** Notify the Principal that a risk of fire has increased and the area in which the hot work will occur. If any life safety system components (sprinkler, detectors, fire alarms) are not function, hot work should not proceed until these systems are functioning unless fire watch procedures for life systems are followed. See Activation of Fire Watch for Life Safety Systems checklist. Appendix...XX
- 10.6.5.** Refer and implement the HRCE's hot work permit process. At a minimum the following should be considered;
 - 10.6.5.1.** Cover all floor openings with fire stop material. Seal duct work openings with metal covers or blankets and close all doors.
 - 10.6.5.2.** Ensure that there are no potentially explosive atmospheres in the area.
 - 10.6.5.3.** Hot work on vessels, pressure tanks or boilers, use only contractors who are qualified by nationally or internationally recognized boiler and pressure vessel code.
 - 10.6.5.4.** Notify the local fire department of the type of work and the work schedule.
 - 10.6.5.5.** Before hot work is started, designate one employee responsible to complete the fire watch: while work is in progress, during lunch breaks and other breaks and for one hour after all flames are extinguished for the day and monitor the area for an additional two hours. After three hours after the last flame has been extinguished, have a second employee do a final survey of the area for smells or evidence of smoldering or fire and record the inspection.

APPENDIX
Fire Watch Activation Checklist

1. Documentation (identify locations to be checked on an hourly basis, provide contact information for relevant HRCE staff and outside agencies} HRCE provided template to be used for documentation.
2. Procedure reviewed with Custodian or individual responsible for fire watch. Any high-risk areas shall be identified to be highlighted on the documentation page and checked during the rounds.
3. Staff working in the building have been notified of the Fire Watch and that they are responsible to monitor areas for signs of fire or smoke and have been reminded of required actions to take according to the school fire safety plan.
4. Staff responsible for fire watch have been trained in how to use a fire extinguisher. (PASS)
5. Staff responsible for the fire watch have a means of communication (cell phone or walkie-talkies)
6. Staff responsible for the fire watch are aware of the procedure for initiating fire alarm and what systems are functioning. i.e. systems (sprinklers, alarm panel or if school has monitoring company or if calling 911 is required)
7. The School Insurance Program (SIP) Emergency Information Line has been notified 1-902-448-2840
8. All relevant information has been documented in the school's fire books. Including date, time and reason for fire watch.

Fire Watch De-Activation Checklist

1. Document the date, time and actions taken to remedy the deficiency requiring the fire watch.
2. School Insurance Program (SIP) has been notified.
3. Copy of the Fire Watch documentation is kept in the fire book and the original is sent to the HRCE Project Representative.

END OF SECTION 01 35 13

SECTION 01 35 29 - OCCUPATIONAL HEALTH & SAFETY REQUIREMENTS

1. References

- 1.1. CSA S269.1-1975 Falsework for Construction Purposes.

2. CONSTRUCTION SAFETY MEASURES

- 2.1. Observe construction safety measures of:
 - 2.1.1. National Building Code 2010, Part 8
 - 2.1.2. National Fire Code of Canada
 - 2.1.3. Provincial Government, including but not limited to the:
 - 2.1.3.1. Occupational Health & Safety Act revised Statutes of Nova Scotia 1996, Chapter 7 and regulations.
 - 2.1.3.2. Workers' Compensation Act
 - 2.1.3.3. Fire Protection Act
 - 2.1.3.4. Dangerous Goods Transportation Act
- 2.2. In case of conflict or discrepancy the more stringent requirement shall apply.
- 2.3. Ensure that employees working on this specific project have met training requirements as legislated by the Nova Scotia Occupational Health & Safety Act and its regulations.
- 2.4. Where reference is made to jurisdictional authorities, it shall mean all authorities who have within their constituted powers the right to enforce the laws of the place of the building.

3. Equipment & Tools

- 3.1. Each user of equipment or tools shall be responsible to examine for sufficiency before use. Make equipment and tools safe if necessary.

4. WHMIS

- 4.1. Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets.
- 4.2. Have a copy of WHMIS data sheets available at the workplace on delivery of materials.

5. Hazardous Material

- 5.1. Should material resembling hazardous materials other than those identified with the Contract Documents, including but not limited to spray or trowel applied asbestos, be encountered in course of work; stop work immediately. Do not proceed until written instructions have been received from Consultant.
- 5.2. Where work entails use, storage, or disposal of toxic or hazardous materials, chemicals and or explosives, or otherwise creates a hazard to life, safety, health, or the environment; work shall be in accordance with the Jurisdictional Authority.

6. Site Cleaning

- 6.1. Except where special permission is obtained, maintain clear access on public sidewalks and roads.
- 6.2. Maintain walks and roads clear of construction materials and debris, including excavated material. Clean walks and roads as frequently as required to ensure that they are cleared of materials, debris and excavated material.

7. Fire Safety Requirements

- 7.1. Enforce fire protection methods, good housekeeping and adherence to local and Underwriter's fire regulations including, but not limited to, Fire Protection Act and the Provincial Building Code Act. Provide UL approved fire extinguishers, and other fire- fighting services and equipment, except where more explicit requirements are specified as the responsibility of individual Sections.
- 7.2. Smoking is not permitted on school property.
- 7.3. Advise Fire Chief in the area of Work of any work that would impede fire apparatus response, including but not limited to violation of minimum overhead clearance prescribed by the fire chief, erecting of barricades and digging of trenches and in areas where work is being done.
- 7.4. Ensure nothing subverts the integrity of fire protection provided for the building structure.

8. Reporting Fires

- 8.1. Know the location of the nearest fire alarm box and telephone, including the emergency phone number.
- 8.2. Report immediately all fire incidents to the fire department as follows:
 - 8.2.1. Activate nearest fire alarm box, or
 - 8.2.2. Telephone local fire department
 - 8.2.3. Where fire alarm box is exterior to building, the person activating the fire alarm box shall remain at the box to direct Fire Department to scene of the fire.
 - 8.2.4. When reporting a fire by telephone, give location of fire, name or number of building and be prepared to verify the location.

9. Safety Document Submission

- 9.1.** Ensure Safety Document Submission applies to Work of this specific project and site.
- 9.2.** Submit two (2) copies of Project Safety Document at the Pre-Construction Meeting. Do not commence Work nor deliver material on-site prior to submission.
- 9.3.** Include in Safety Document submission specific information detailing the methods and procedures to be implemented ensuring adherence to the acts, regulations, codes and policies specified in this section and to:
 - 9.3.1.** Ensure the Health & Safety of persons at or near the Work; including, but not limited to, the Public.
 - 9.3.2.** Ensure the measures and procedures of the regulatory agencies specified are carried out.
 - 9.3.3.** Ensure every employee, self-employed person and employer performing Work under this contract complies with the regulatory agencies specified.
 - 9.3.4.** Where changes to the methods and procedures in the execution of work change submitted safety methods and procedures, modify submitted Safety Documentation and submit modifications, in writing to the Consultant and Owner prior to implementation.

10. Safety Document Organization

- 10.1.** Organize information in the form of an instructional manual as follows:
 - 10.1.1.** Place in binders of commercial quality, accommodating 8½" x 11" paper size.
 - 10.1.2.** Cover: Identify binder with typed or printed title 'Project Safety Document' and list the title of project.
 - 10.1.3.** Provide tabbed fly leaf for each separate heading, with typed heading on tab.
 - 10.1.4.** Where drawings are within the safety document, provide with reinforced punched binder tab. Bind in with text; fold in larger drawings to size of text pages.
 - 10.1.5.** Arrange content under Safety Document headings specified herein.

11. Safety Document Headings

11.1. Employee Safety Training

11.1.1. Place, under this heading, a statement indicating employees working on this specific project have met specified training requirements, if required.

11.2. Company Safety Policy

11.2.1. Place, under this heading, information pertaining to the company's policy and commitment to Occupational Health & Safety, including the responsibilities of management, supervisors and workers.

11.3. Company Safety Rules in General Terms

11.3.1. Place, under this heading, information of a general, global nature, applying to every work environment where the company has staff and pertaining to rules directing compliance to policy. For example state company safety rules with respect to use of hard hats, safety glasses, safety foot ware, CSA approval on such items, and use of alcohol or non-prescription drugs.

11.4. Hazard Assessment

11.4.1. Place, under this heading, information identifying possible hazards specific to this project and identify safe methods and procedures for the execution of work to ensure safety in the workplace.

11.4.2. Arrange contents of this heading by technical section number of the project manual.

11.5. Emergency Action Plan

11.5.1. Place, under this heading, information detailing action to be taken in the event of various emergencies.

11.5.2. Arrange content under the following sub-headings:

11.5.2.1. First Aid

11.5.2.1.1. Include information concerning establishment of a First Aid Station, related supplies, staff awareness of location and staff training in First Aid Care of Casualties.

11.5.2.2. Contact of Emergency Support Groups:

11.5.2.2.1. Include relative information including phone location for emergency use, the emergency telephone numbers and their location for the various organizations which must be contacted in case of an emergency, and staff training in procedures.

Cessation of Work:

11.5.2.2.2. Include relative information how work cessation during emergencies is handled and communicated to persons present on site.

11.6. Joint Occupational Health & Safety Committee/Representative:

11.6.1. Place under this heading information detailing membership and terms of reference.

OCCUPATIONAL HEALTH & SAFETY SUMMARY FOLLOWS THIS PAGE

Occupational Health & Safety Summary (to be submitted with each monthly Progress estimate)

The following information summarizes Occupational Health & Safety activities on the project conducted by the Contractor during the month and includes activities of Subcontractors. Activities include all matters prescribed by the Occupational Health & Safety Act and Regulations and the submitted Occupational Health & Safety Document for the Project.

Indicate the applicable # number below:

List new Contractors on Site below:

____ new contractors on site,

____ orientations

____ toolbox talks

____ safety meetings

____ Joint Occupational Health
and Safety Committee meetings

____ hazard assessments

____ formal written inspections

____ warnings issued to employees or subcontractors

____ other, explain _____

The Contractor certifies that the above noted activity list is accurate and that during the month:

Check

All activities on the Project were found to be in compliance with the Occupational Health & Safety Act and Regulations

Some activities on the Project were not found to be in compliance with the Occupational Health & Safety Act and Regulations but were adequately corrected in an appropriate time frame. Explain

Prepared by

Certified by

(Contractor Project Manager)

(Contractor Senior Management)

END OF SECTION 01 35 29

SECTION 01 37 00 - SCHEDULE OF VALUES

1. Related Documents

- 1.1. General Conditions of Contract.

2. General

- 2.1. Submit to the Architect, and Owner, Schedule of Values, within twenty (20) days after signing Agreement.
- 2.2. Use Schedule of Values as basis for Contractor's Progress Claim.

3. Form Of Submittal

- 3.1. Form included at end of this Section.

4. Preparing Schedule Of Values

- 4.1. Itemize separate line item cost for work required.
- 4.2. Round off figures to nearest ten (10) dollars.
- 4.3. The sum of all values listed in the schedule shall equal the total contract sum.

5. Review And Submittal

- 5.1. After review by Architect and Owner, revise and resubmit Schedule as directed.
- 5.2. The form shall be completed and supported by such evidence as to its correctness as the Architect may reasonably direct.

SCHEDULE OF VALUES

#4234 - Window & Cladding Replacement –
Project Name *Dutch Settlement Elementary*

Architect

Contractor

Date

Halifax Regional Centre for Education – Schedule of Values		
Contract Item	Percentage	Dollar Value
Mobilization, bonding / insurance, safety, set up safety fencing and window access	10	
Materials - approved materials delivered to site . Approved area by HRCE	25	
Removal of existing windows and prepare window opening	15	
Install new windows	20	
Cladding, mill work, trim and finishes	20	
Close out documentation including copy of warranty	10	
Total	100 %	

END OF SECTION 01 37 00

SECTION 01 41 00 - REGULATORY AGENCIES

1. Jurisdictional Authorities

- 1.1. Where reference is made to jurisdictional authorities, it shall mean all authorities who have within their constituted powers the right to enforce the laws of the place of building.

2. Definitions

- 2.1. The "Constructor" named in the Construction Safety Act, Chapter 52, Revised Statutes of Nova Scotia, as amended by 1972, Chapter 25; and Construction Safety Regulations, pursuant to Chapter 52 R.S.N.S., including any amendments, shall mean the "Contractor" for the Work performed under this Specification.

3. Fire Prevention, Safety & Protection

- 3.1. General Construction Safety Measures:
- 3.1.1. Observe safety measures of the
 - 3.1.1.1. National Building Code 2010, Part 8.
 - 3.1.1.2. National Fire Code of Canada.
 - 3.1.1.3. Provincial Government, including but not limited to the Occupational Health & Safety Act Revised Statutes of Nova Scotia 1996, Chapter 320, and the Construction Safety & Industrial Safety Regulations made pursuant to the Occupational Health and Safety Act, 1996.
 - 3.1.1.4. Workers'/Workmen's Compensation Board.
 - 3.1.2. In case of conflict or discrepancy the more stringent requirement shall apply.
 - 3.1.3. Maintain clear emergency exit paths for personnel.
- 3.2. Except where special permission is obtained, maintain clear access on public sidewalks and roads.
- 3.3. Maintain walks and roads clear of construction materials and debris, including excavated materials. Clean walks and roads as frequently as required to ensure that they are cleared of materials, debris and excavated materials.
- 3.4. WHMIS:
- 3.4.1. Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health & Welfare Canada.
 - 3.4.2. Have a copy of WHMIS data sheets available at the workplace on delivery of materials.

Blockage of Roadways

- 3.5. Advise Fire Chief of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by fire chief, erecting of barricades and the digging of trenches.

4. Smoking Precautions

- 4.1. Observe, at all times, smoking regulations.

5. Rubbish And Waste Materials

- 5.1. Rubbish and waste materials are to be kept to a minimum.
5.2. The burning of rubbish is prohibited.

6. Flammable And Combustible Liquids

- 6.1. The handling, storage and use of flammable and combustible liquids are to be governed by the current National Fire Code of Canada.
6.2. Flammable and combustible liquids such as gasoline, kerosene and naphtha will be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes, requires the permission of the Fire Chief.
6.3. Transfer of flammable and combustible liquids is prohibited within buildings or jetties.
6.4. Transfer of flammable and combustible liquids will not be carried out in the vicinity of open flames or any type of heat-producing devices.
6.5. Flammable liquids having a flash point below 38°C such as naphtha or gasoline will not be used as solvents or cleaning agents.
6.6. Flammable and combustible waste liquids, for disposal, will be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and the Fire Department is to be notified when disposal is required.

7. Hazardous Substances

- 7.1. Work entailing the use of toxic or hazardous materials, chemicals and/or explosives, otherwise creates a hazard to life, safety or health, will be in accordance with the National Fire Code of Canada.
7.2. Where flammable liquids, such as lacquers or urethanes are to be used, proper ventilation will be assured and all sources of ignition are to be eliminated. The Fire Chief is to be informed prior to and at the cessation of such work.

8. Questions and/or Clarification

- 8.1.** Direct any questions or clarification on Fire Safety in addition to above requirements to Fire Chief.

9. Fire Inspection

- 9.1.** Site inspections by Fire Chief will be coordinated through HRCE Project Manager.
- 9.2.** Allow Fire Chief unrestricted access to the work site.
- 9.3.** Co-operate with the Fire Chief during routine fire safety inspection of the Work site.
- 9.4.** Immediately remedy all unsafe fire situations observed by the Fire Chief.

10. Reference Standards

- 10.1.** Where edition date is not specified, consider that references to manufacturer's and, published codes, standards and specifications are made to the latest edition, (revision) approved by the issuing organization, current at the date of this Specification.
- 10.2.** Reference standards and specifications are quoted in this Specification to establish minimum standards. Work which in quality exceeds these minimum standards shall be considered to conform.
- 10.3.** Should the Contract Documents conflict with specified reference standards or specifications the General Conditions of the Contract shall govern.
- 10.4.** Where reference is made to manufacturer's directions, instructions or specifications they shall include full information on storing, handling, preparing, mixing, installing, erecting, applying, or other matters concerning the materials pertinent to their use and their relationship to materials with which they are incorporated.
- 10.5.** Have a copy of each code, standard and specification, and manufacturer's directions, instructions and specifications, to which reference is made in this Specification, always available at construction site.
- 10.6.** Standards, specifications, associations, and regulatory bodies are generally referred to throughout the specifications by their abbreviated designations:

AA	The Aluminum Association
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ARI	Air Conditioning & Refrigeration Institute
ASTM	American Society for Testing & Materials
CCA	Canadian Construction Association
CGSB	Canadian General Standards Board
CSA	Canadian Standards Association
NSDTIR	Department of Transportation & Infrastructure Renewal, Province of Nova Scotia
IAO	Insurers Advisory Organization
NBC	National Building Code
NFPA	National Fire Protection Association
CANS	Construction Association of Nova Scotia
ULC	Underwriters Laboratories of Canada
WHMIS	Workplace Hazardous Materials Information System

END OF SECTION 01 41 00

SECTION 01 45 00 - QUALITY CONTROL

1. Section Includes

- 1.1. Inspection and testing, administrative and enforcement requirements
- 1.2. Tests and mix designs.
- 1.3. Mock-ups.
- 1.4. Mill tests.
- 1.5. Equipment and system adjust and balance.
- 1.6. Verification by affidavits and certificates that specified products meet requirements of reference standards: In applicable Sections of the Specification.
- 1.7. Testing, balancing and adjusting of equipment: In applicable Mechanical and Electrical Sections of the Specification.
- 1.8. Cutting & Patching: Section 01 11 41.

2. Related Sections

- 2.1. Section 01 33 00 Submittal Procedures: Submission of samples to confirm product quality.
- 2.2. Section 01 61 00 Material & Equipment: Material and workmanship quality – reference standards.
- 2.3. Section 01 77 00 Contract Closeout.

3. REVIEW OF WORK

- 3.1. The Owner shall have access to the Work. If part of the Work is in preparation at locations other than the Place of the Work, access shall be given to such work whenever it is in progress.
- 3.2. Give timely notice to the Owner's Representative, requesting review of the Work as indicated in the Contract Documents.
- 3.3. If the Contractor covers or permits to be covered Work that has been designated for review by the Owner before such is made, uncover such Work, have the review satisfactorily completed and make good such Work at no extra cost to Owner.

4. Inspection, Special Tests, Approvals

- 4.1. Engage the services of appropriate inspection testing agencies ensuring the Work meets codes, acts and regulations, and laws in force at the place of Work. Include such costs in the Contract Price.

- 4.2. Give timely notice requesting inspection to those required to provide inspections, special tests, or approvals, where Work is designated, by the Owner's instructions or the law of the place of Work, for special tests.
- 4.3. If the Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have the inspections or tests satisfactorily completed and make good such Work at no extra cost to the Owner.
- 4.4. The Owner may order any part of the Work to be examined if the Work is suspected to be not in accordance with the Contract Documents. If, upon examination such Work is found not in accordance with the Contract Documents, correct such Work and pay the cost of examination and correction. If such Work is found in accordance with the Contractor Documents, the Owner shall pay the cost of examination and replacement.

5. Independent Inspection Agencies

- 5.1. Independent Inspection/Testing Agencies may be engaged by the Owner for the purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by the Owner.
- 5.2. Provide access to the Work, and equipment required for executing inspection and testing by the appointed agencies.
- 5.3. Employment of inspection/testing agencies does not relax the Contractor's responsibility to perform Work, or carry out his own inspections and testing in accordance with the Contract Documents.
- 5.4. If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Owner at no cost to the Owner. Pay costs for retesting and reinspection.

6. Access To Work

- 6.1. Allow inspection/testing agencies access to the Work, off site manufacturing and fabrication plants.
- 6.2. Co-operate to provide reasonable facilities for such access.

7. Procedures

- 7.1.** Notify the appropriate agency and Owner in advance of the requirement for tests, in order that attendance arrangements can be made.
- 7.2.** Submit samples and/or materials required for testing, at specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in the Work.
- 7.3.** Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

8. Rejected Work

- 8.1.** Remove defective Work, whether the result of poor workmanship, use of defective products or damage and whether incorporated in the Work or not, which has been rejected, including (but not limited to) defective Work rejected by the Owner as failing to conform to the Contract Documents. Replace or re-execute in accordance with the Contract Documents.
- 8.2.** Make good other Contractor's work damaged by such removals or replacements promptly.
- 8.3.** If in the opinion of the Owner, it is not expedient to correct defective Work or Work not performed in accordance with the Contract Documents, the Owner may deduct from the Contract Price the difference in value between the Work performed and that called for by the Contract Documents, the amount of which shall be determined by the Owner.

9. Reports

- 9.1.** Submit four (4) copies of inspection and test reports to the Owner.
- 9.2.** Provide copies to Contractor's Consultant and Subcontractor of Work being inspected or tested.

10. Tests and Mix Designs

- 10.1.** Furnish test results and mix designs as may be requested.
- 10.2.** The cost of tests and mix designs beyond those called for in the Contract Documents or beyond those required by law of the Place of Work shall be appraised by the Owner and may be authorized as recoverable.

11. Mock-Up

- 11.1.** Prepare mock-up for Work for each finish in the Work and other work specifically requested in the specifications. Include for Work of all Sections required to provide mock-ups.
- 11.2.** Construct in all locations as specified in specific Section.
- 11.3.** Prepare mock-up for Owner's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in the Work.
- 11.4.** Failure to prepare mock-up in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- 11.5.** If requested the Owner will assist in preparing a schedule fixing the dates for preparation.
- 11.6.** Mock-ups may remain as part of the Work, unless specified otherwise in the Contract Documents.

12. Mill Tests

- 12.1.** Submit mill test certificates as may be requested.

13. Equipment And Systems

- 13.1.** Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.
- 13.2.** Refer to Contract Documents for definitive requirements.

END OF SECTION 01 45 00

SECTION 01 52 00 – CONSTRUCTION & TEMPORARY FACILITIES

1. General

- 1.1. Include in the Work construction and temporary facilities required as construction aids or by jurisdictional authorities or as otherwise specified. Install to meet needs of construction as Work progresses. Maintain construction and temporary facilities during use, relocate them as required by the Work, remove them at completion of need and make good adjacent Work and property affected by their installation.
- 1.2. Include in the Work construction and temporary facilities to provide for construction safety such as: fences, barricades, bracing, supports, storage, sanitation and first aid facilities, fire protection, stand pipes, electrical supply, construction equipment with its supports and guards, stairs, ramps, platforms, runways, ladders, scaffolds, guardrails, temporary flooring, rubbish chutes, and walkway, morality and guard lights, and as otherwise required of the Constructor by the Construction Safety Act, of the Province of Nova Scotia, as well as all other applicable regulations or jurisdictional authorities.
- 1.3. Construct temporary Work of new materials unless use of second-hand materials is approved.
- 1.4. Ensure that structural, mechanical, and electrical characteristics of temporary facilities are suitable and adequate for use intended. Be responsible that no harm is caused to persons and property by failure of temporary facilities because of placing, location, stability, protection, structural sufficiency, removal, or any other cause.
- 1.5. Locate temporary facilities as directed and coordinated with School Administration and HRCE.
- 1.6. Relocate construction and temporary facilities as required by the Progress of the Work, and remove at completion of Work.
- 1.7. Do not permit construction personnel to use new washroom and toilet facilities.
- 1.8. Interior work zones to be complete with temporary negative air ventilation units to be functioning at all times to control dust migration to occupied areas.
- 1.9. Refer also to HRCE Policies & Guidelines contained in Appendix A of Section 01 35 13.

2. Services

- 2.1. Temporary Electric Power:
 - 2.1.1. The Contractor will provide a source of electric power for all construction purposes.
 - 2.1.2. Coordinate with the Building Operator locations of power sources and arrange to connect under his direction.
 - 2.1.3. Install electric service distribution conductors and necessary components. Determine anticipated demand which will be placed on service during normal peak periods and obtain approval on this basis before making installation. Supply power of characteristics required by the Work. Install a power centre for miscellaneous tools

and equipment for each major building floor area with distribution box, a minimum of four 20 amp grounded outlets, and circuit breaker protection for each outlet. Make connections available to any part of the Work within distance of a 100'-0" extension.

2.2. Temporary Lighting:

2.2.1. Install lighting for

2.2.1.1. emergency evacuation, safety and security throughout the Project at intensity levels required by jurisdictional authorities.

2.2.1.2. performance of Work throughout Work areas as required, evenly distributed, and at intensities to ensure that proper installations and applications are achieved.

2.2.1.3. performance of finishing Work in areas as required, evenly distributed and of an intensity of at least 15 foot candles.

2.2.2. Permanent fluorescent lighting may be used during construction, provided that fixtures, lamps and lenses are completely cleaned. Incandescent sources may be used during construction to the extent of 20% of the total. Electrical Division Contractor to provide 20% spare lamps to the Owner for replacement purposes.

2.3. Temporary Sanitary Facilities:

2.3.1. Provide sanitary facilities for persons on the Work site. Facilities in areas of the building are only to be used under extraordinary circumstances and with prior approval.

2.4. Maintain fire protection as required by jurisdictional authorities. The Contractor is responsible for de-activating and re-activating Fire Alarm zones as required by the Work of the Contract and to maintain protection in the existing building.

3. Construction Aids

3.1. Hoists & Cranes:

3.1.1. Select, operate and maintain hoisting equipment and cranes as may be required. Operate such equipment only by qualified hoist or crane operators. Make hoist available for Work of each Section.

3.2. Building Enclosure:

3.2.1. Include in Work temporary enclosure for building as required to protect it, in its entirety or in its parts, against the elements, to maintain environmental conditions

required for Work. Design enclosures to withstand wind pressures required for the building by jurisdictional authorities. Erect enclosures to allow complete accessibility for installation of materials during the time enclosures remain in place.

3.3. Scaffolding:

- 3.3.1. Each user of scaffolding shall be responsible for its examination and testing for sufficiency before using it. He shall make it secure if necessary, or shall notify the Contractor in writing that he will not commence work until it is made secure; otherwise he will be held responsible for accidents due to its insufficiency.

4. Barriers

- 4.1. Install barricades for traffic control, and to prevent damaging traffic over exterior and interior finished areas, as well as safety barricades and otherwise, as may be required.
- 4.2. Construct hoardings and walkways as required by HRCE or jurisdictional authorities.

5. Protection

- 5.1. Protect roofs and podiums by substantial temporary construction to ensure that no damage occurs. Provide protection by materials of sufficient thickness to prevent all damage to structure and finish, and to waterproofing qualities of membranes, whenever each of these individual components are exposed. Damage shall include harm resulting from all construction work, such as falling objects, wheel and foot traffic, failure to remove debris, operation of machinery and equipment, and scaffolding and hoisting operations. Positively secure protection to prevent displacement from any cause.
- 5.2. Box with wood or otherwise protect from damage, by continuing construction, finished sills, jambs, corners, and the like.

END OF SECTION 01 52 00

SECTION 01 61 00 - MATERIAL & EQUIPMENT

1. General

- 1.1. Products refer to materials, manufactured components and assemblies, fixtures and equipment incorporated in the Work.
- 1.2. Use only products of Canadian manufacture unless such products are not manufactured in Canada, are specified otherwise, or are not competitive.
- 1.3. Products for use in the Project and on which the Tender was based shall be in production at that time, with a precise model and shop drawings available for viewing.
- 1.4. Where equivalent products are specified, or where alternatives are proposed under "substitution of products", these products claimed by the Contractor as equivalent shall be comparable in construction, type, function, quality, performance, and, where applicable, in appearance, as approved. Where specified equivalents are used in the tendered bulk sum price for the Work, they shall be subject to final approval.
- 1.5. Incorporate products in the Work in strict accordance with manufacturers' directions unless specified otherwise.
- 1.6. Products delivered to the Project site for incorporation in the Work shall be considered the property of the Owner. Maintain protection and security of products stored on the site after payment has been made for them.
- 1.7. Do not install permanently incorporated labels, trademarks and nameplates, in visible locations unless required for operating instructions or by jurisdictional authorities.

2. Specified Products

- 2.1. Products specified by manufacturer's name, brand name or catalogue reference shall be the basis of the bid and shall be supplied for the Work without exception in any detail, subject to allowable substitutions as specified.
- 2.2. Where several proprietary products are specified, any one of the several will be acceptable.
- 2.3. For products specified by reference standards, the onus shall be on the supplier to establish that such products meet reference standard requirements. The Architect may require affidavits from the supplier, as specified in Section 01 33 00, or inspection and testing at the expense of the supplier, or both, to prove compliance. Products exceeding minimum requirements established by reference standards will be accepted for the Work if such products are compatible with and harmless to Work with which they are incorporated.

3. Substitution Of Products During Progress Of Work

- 3.1.** Products substituted for those specified or approved, or both, shall be permitted only if the listed product cannot be delivered to maintain construction schedule and if the delay is caused by conditions beyond the Contractor's control.
- 3.2.** Obtain approval for substitutions. Application for approval of substitutions shall be made only by Contractor. Process proposals for substituted Work in accordance with procedures established for changes in the Work.
- 3.3.** Submit, with request for substitution, documentary evidence that substituted products are equal to, or superior to, approved products, and a comparison of price and delivery factors for both specified or approved products, and proposed substitute.
- 3.4.** Ensure that substituted products can be both physically and dimensionally incorporated in the Work with no loss of intended function, performance, space or construction time, and that spare parts and service are readily available. The Contractor shall be responsible for additional installation costs, including architectural and engineering fees, required by incorporation of substituted products, and for adaptations made otherwise necessary to ensure that above requirements are satisfied.

4. Product Handling

- 4.1.** Manufacture, pack, ship, deliver and store products so that no damage occurs to structural qualities and finish appearance, nor in any other way detrimental to their function or appearance, or both.
- 4.2.** Ensure that products, while transported, stored or installed, are not exposed to an environment which would increase their moisture content beyond the maximum specified.
- 4.3.** Schedule early delivery of products to enable Work to be executed without delay. Before delivery, arrange for receiving at site.
- 4.4.** Deliver package products, and store until use, in original unopened wrapping or containers, with manufacturer's seals and labels intact.
- 4.5.** Label packaged products to describe contents, quantity and other information as specified.
- 4.6.** Product handling requirements may be repeated and additional requirements specified, in other Sections.

5. Storage & Protection

- 5.1. Coordinate material delivery to ensure that areas within or on building are available to receive them.
- 5.2. Store manufactured products in accordance with manufacturer's instructions, when such instructions are attached to products or submitted by him.
- 5.3. Store finished products and woodwork under cover at all times.
- 5.4. Store and handle flammable liquids and other hazardous materials in approved safety containers and as otherwise prescribed by safety authorities. Store no flammable liquids or other hazardous materials in bulk within the Project.
- 5.5. Storage and special protection requirements may be repeated, and additional requirements specified, in other Sections.

6. Defective Products & Work

- 6.1. Products and Work found defective; not in accordance with the Specifications; or defaced or injured through negligence of the Contractor, his employees or subcontractors, or by fire, weather or any other cause will be rejected for incorporation in the Work.
- 6.2. Remove rejected products and Work from the premises immediately.
- 6.3. Replace rejected products and Work with no delay after rejection. Provide replacement products and execute replacement Work precisely as required by the Specification for the defective Work replaced. Previous inspection and payment shall not relieve the Contractor from the obligation of providing sound and satisfactory Work in compliance with this Project Manual.

7. Workers, Suppliers & Subcontractors

- 7.1. Assign Work only to workers, suppliers, and Subcontractors who have complete knowledge, not only of the conditions of this Project Manual, but of jurisdictional requirements, and reference standards and specifications.
- 7.2. Give preference to use of local workers, suppliers, and Subcontractors wherever possible.

8. Workmanship

- 8.1. Unless otherwise specified in a more detailed manner, workmanship shall be of the highest quality recognized by trade executing the Work in accordance with standard practices, by the best methods recommended by the manufacturer of the Product, and as approved by the Architect.

END OF SECTION 01 61 00

SECTION 01 77 00 – CONTRACT CLOSEOUT

1. Section Includes

- 1.1. Final cleaning.
- 1.2. Spare parts and maintenance materials.
- 1.3. Take over procedures.

2. Related Sections

- 2.1. Individual Specifications Sections: Specific requirements for operation and maintenance data.

3. Final Cleaning

- 3.1. Refer to the General Conditions of Contract.
- 3.2. Before final inspection, replace glass and mirrors broken, damaged and etched during construction, or which are otherwise defective.
- 3.3. In addition to requirements for cleaning-up specified in General Conditions of the Contract, include in Work final cleaning by skilled cleaning specialists on completion of construction.
- 3.4. Remove temporary protections and make good defects before commencement of final cleaning.
- 3.5. Remove waste products and debris other than that caused by the Owner, other contractors or their employees, and leave the Work clean and suitable for occupancy by Owner.
- 3.6. Remove surplus products, tools, construction machinery and equipment. Remove waste products and debris other than that caused by the Owner or other Contractors.
- 3.7. Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- 3.8. Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and floors and ceilings.
- 3.9. Vacuum clean and dust building interiors, behind grilles, louvres and screens as affected by Work.
- 3.10. Wax, seal, shampoo, buff or prepare floor finishes, as recommended by the manufacturer. Use products compatible with products used by building maintenance staff.
- 3.11. Broom clean and wash all horizontal and vertical surfaces as affected by Work.
- 3.12. Clean up and make good exterior grades, lawns, planting and surfaces after removal of temporary access and facilities.
- 3.13. Removing of visible labels left on materials, components, and equipment.
- 3.14. Maintain cleaning until Owner has taken possession of building or portions thereof.

4. Spare Parts And Maintenance Materials

- 4.1.** Spare parts and maintenance materials provided shall be new, not damaged or defective, and of the same quality and manufacture as Products provided in the Work. If requested, furnish evidence as to type, source and quality of Products provided.
- 4.2.** Defective Products will be rejected, regardless of previous inspections. Replace products at own expense.
- 4.3.** Store spare parts and maintenance materials in a manner to prevent damage, or deterioration.
- 4.4.** Provide spare parts, special tools, maintenance and extra materials in quantities specified in individual specification Sections.
- 4.5.** Provide items of same manufacture and quality as items in the Work.

5. Demonstration Of Systems & Equipment

- 5.1.** Give a complete demonstration of all systems and equipment in the presence of the Consultant at the following times:
- 5.2.** When each is 100% completed at the request of the Contractor.
- 5.3.** At time of inspection to validate final completion.
- 5.4.** At final completion for the benefit of the maintenance staff for the Project.
- 5.5.** Responsible personnel representing the Subcontractor responsible for the Work being demonstrated shall be present at each demonstration.

6. Submittals

- 6.1.** Submit with application for substantial performance certificate.
 - 6.1.1.** Certificate of Substantial Performance inspection report from electrical utility or inspection.
 - 6.1.2.** Certificate of verification of fire alarm system.
 - 6.1.3.** Certificate from the Fire Marshal's Office and I.A.O. of final inspection of sprinkler system.
 - 6.1.4.** Air balance reports.
 - 6.1.5.** Other reports required or specified.
 - 6.1.6.** Maintenance Manuals and Operating Instructions.
- 6.2.** Submit with application for release of final payment:
 - 6.2.1.** Final project record drawings.
 - 6.2.2.** Extra stock.
 - 6.2.3.** Performance bonds which shall remain in effect for one (1) year after take-over date.
 - 6.2.4.** Completed Liability Insurance Policy extended for one (1) year from take-over date.
 - 6.2.5.** Written guarantee covering all workmanship and materials used in the Work.
 - 6.2.6.** Maintenance bonds as specified.

- 6.2.7. Extended Warranties as specified
- 6.2.8. Certificate from Workers' Compensation Board.
- 6.2.9. Certificate from Health Services Tax Division.

7. Final Inspection Procedures

- 7.1. Schedule, make arrangements for and administer final inspections and close out in the following stages.
- 7.2. Contractor's Inspection:
 - 7.2.1. Determination that Project meets requirements for substantial performance and inspection is the responsibility of the Contractor.
 - 7.2.2. The Contractor and all Subcontractors shall conduct an inspection of the work, identify deficiencies and defects; repair as required. Notify the Consultant in writing of satisfactory completion of the contractor's Inspection and that corrections have been made. Request a Consultant's Substantial Performance Inspection.
- 7.3. Consultant's Inspection: Consultants and the Contractor will perform an inspection of the Work to identify obvious defects or deficiencies. The contractor shall correct Work accordingly.
- 7.4. Substantial Performance Inspection:
 - 7.4.1. When the items noted above are complete, request a substantial performance inspection of the Work by the Consultant, and the Contractor. If Work is deemed incomplete by the Consultant, complete the outstanding items and request a re-inspection.
 - 7.4.2. Substantial performance inspections shall be scheduled to begin within eight working days of the Contractor's request.
 - 7.4.3. Present at the substantial performance inspection will be:
 - 7.4.3.1. The Consultant and his Sub-consultants that he requires and notifies.
 - 7.4.3.2. The Owner's representatives, upon notification by the Consultant.
 - 7.4.3.3. The Contractor and such Subcontractors that he considers are required.
 - 7.4.3.4. The Contractor will compile a substantial performance deficiency list at this inspection and issue it to the Consultant and Owner.
 - 7.4.3.5. The Contractor shall correct substantial performance deficiencies before a date agreed upon by the Contractor and Consultant.
 - 7.4.3.6. Upon the Consultant's approval of substantial performance, the Contractor shall submit an application for a substantial performance certificate.
 - 7.4.3.7. When the Contractor has satisfied himself that these corrections have been completed in a satisfactory manner by his inspection he shall schedule a final Contractor's inspection by the Consultant, and the Owner's representatives if required, within five working days of the Contractor's request.

7.4.3.8. Upon the Consultant's approval of completion, the Contractor shall submit an application for a completion certificate.

8. Substantial Performance

- 8.1.** The Consultant will issue a Certificate of Substantial Performance when satisfied outstanding deficiencies noted during inspections prior to the Substantial Performance inspection have been corrected, the Work is substantially complete and is so certified by the Owner.
- 8.2.** A list of remaining deficiencies to be rectified before final acceptance will be attached to the Certificate of Substantial Performance.
- 8.3.** Make submissions specified in Subparagraph 1.06 of this Section.

9. Certificate For Release Of Amount Due At Substantial performance

- 9.1.** The Consultant will issue to the Owner a certificate for release of money in an amount equal to the amount due the Contractor under the Contract Documents provided the Consultant is satisfied the Work has been substantially completed.
- 9.2.** The certificate shall indicate the date of substantial performance.
- 9.3.** Payment shall be due in accordance with GC 5.4 and the Contract Documents.

10. Completion Certificate

- 10.1.** The Consultant will issue a Certificate of Completion (DSS Document DC670-92) when he is satisfied that outstanding deficiencies noted during inspections have been corrected and the Work is completed and is so certified by the Owner.
- 10.2.** The date of the completion certificate will commence the required sixty (60) day period before release of final payment.

11. Certificate For Release Of Final Payment

- 11.1.** Subject to the provisions of the Contract Documents, the Consultant will issue to the Owner a certificate for release of final payment sixty (60) days after date of completion certificate providing he is satisfied the Work has been completed.
- 11.2.** The certificate will be in an amount equal to the remaining money due the Contractor under the Contract, and shall indicate the date of final completion.
- 11.3.** Payment shall be due upon date of final completion.

12. Warranties

12.1. Establishment of Warranties:

12.1.1. Warranties shall commence on the Ready-for-Takeover date.

12.2. Warranty Period:

12.2.1. The Owner will advise the Consultant of defects observed during warranty periods.

12.2.2. The Consultant will notify the Contractor of defects observed during warranty period and request him to remedy the defects in accordance with the Contractor documents.

12.2.3. Thirty (30) days before expiration of warranties the Owner's representatives, the Consultant and the Contractor will inspect the Work as arranged by the Contractor noting defects of products and workmanship.

12.2.4. The Contractor shall immediately remedy such noted defects.

END OF SECTION 01 77 00

CONTRACTOR'S CHECKLIST

Pre-Closing Reminder to Proponents:

- This Request for Proposals (RFP) is a **two-file process**.
Please ensure that the submission instructions are followed carefully as noted in Section 00 21 13 – Information to Proponents to ensure your submission is compliant.
- Required Bid Security – (10% of the Contract price before HST)
- Please include a copy of your bid security in with your Price Submission file.
- Please submit your proposal to the submission email address: hrcetenders@hrce.ca
- The HRCE will use the CCDC-2, 2020 for this work. A copy of the Standard Construction Contract CCDC 2 – 2020 is available upon request and will form part of the contract documents.
- The HRCE Supplementary General Conditions for the CCDC-2, 2020 applicable for this work is available for review under Section 0073 00 of the RFP document.

Post Award Document Requirements:

- Certificate of Recognition from a safety audit organization, jointly signed with the WCB.
- Workers' Compensation Board Letter of Good Standing.
- Certificate of Good Standing from the Canadian Roofing Contractors Association and Roofing Contractors Association of Nova Scotia.
- Contract Security documentation – if required
- Insurance Certificate – As identified in the RFP.
- Schedule of Values
- Site Specific Safety Plan
- Hazard Assessment
- Listing of subcontractors
- Warranty information

The award letter will list the specific documents required and provide a submission timeframe.

A purchase order will be issued only after receipt of all required items.

Work is not authorized until purchase order is issued.

PROJECT EXPERIENCE AND REFERENCES FORMS

Project Experience and References Form

Refer Technical Submission Requirements in Section 11.3.1 Section I.

Project #1 – The most recent HRCE project, if applicable.

Company Name	
Brief Project Description	
Project Manager Name	
Project Dollar Value \$	
Reference Name and Position Title	
Reference Contact Info - Email Address - Phone Number	

Project Experience and References Form

Refer Technical Submission Requirements in Section 11.3.1 Section I.

Project #2 – The next most recent HRCE project, if applicable

Company Name	
Brief Project Description	
Project Manager Name	
Project Dollar Value \$	
Reference Name and Position Title	
Reference Contact Info - Email Address - Phone Number	

Project Experience and References Form

Refer Technical Submission Requirements in Section 11.3.1 Section I.

Project #3 – Any recent project

Company Name	
Brief Project Description	
Project Manager Name	
Project Dollar Value \$	
Reference Name and Position Title	
Reference Contact Info - Email Address - Phone Number	



Project Safety Plan Outline

During the planning of each project, environmental and occupational health and safety issues will be assessed like any other key project component.

Prior to beginning a new project, tendering contractors shall examine the work area to identify potentially hazardous site specific situations.

Once identified, these hazards should be prioritized on this Hazard Assessments/Project Safety Plan Outline and corrective *actions* noted to eliminate or control each hazard. The dates of when and names of the persons who are responsible for completing the *action* should also be assigned.

Copies of the completed Safety Plan Outline shall be submitted post award, sent to the HRCE Operations Services Regional Manager, made available on the job site and communicated to the workers.

Project Name: _____

Project Location: _____

Project Start date: _____

Project End date: _____

Company Name: _____

Completed by: _____

(Contractor's project manager)

Date: _____

Copy to: _____

PLANNING:

Does the Contractor's Occupational Health and Safety Program deal with the work activities associated with this project? Yes No

Describe tasks to be undertaken: _____

HAZARDS ASSESSMENT:

Identify the hazards that could present themselves on this project (e.g. live electrical wires, over water, confined space, etc) and describe what steps will be taken to prevent an incident (e.g. cover up, de-energize, safe work practices, netting, etc). Prioritize from #1 as needing immediate action.

#	Hazard	Required Action	Completed by	Date
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

ENVIRONMENTAL ASSESSMENT:

Identify the environmental issues that could present themselves on this project (e.g. oil spills, asbestos, etc.) and describe the action that will be taken to eliminate or reduce the risk of occurrence (e.g. mop kits, air sampling, etc.)

#	Hazard	Required Action	Completed by	Date
1				
2				
3				
4				
5				

EMERGENCY RESPONSE:

In the event of an incident, pre-plan the response and write up the procedures. Minimally, the following list should be completed and posted on site:

Contact	Phone #	Contact	Phone #
Fire	911	Poison Control	428-8161
Ambulance	911	Dangerous Goods	1-800-565-1633
Doctor	911	Waste Disposal	
Police	911	Insurance	
HRCE Office	493-5110	Min/Dept of Labour	1-800-952-2687
Min./Dept.of Transport.		Min/Dept of Environment	1-800-565-1633

- Identify and arrange source of first aid, ambulance and rescue.
- Accidents will be reported to: _____
- Accidents will be investigated by: _____
- Back-up call to: _____
- HRCE # emergency/after hours: day 493-5110 after 4:00 pm 442-2476

SAFETY MEETINGS:

On this project, given the nature of the work and the anticipated size of the work force, the following frequency will apply:

Site meetings _____
Site Audits _____
Follow up with HRCE Manager: _____

SITE IMPLEMENTATION:

- Health and Safety Rep & Safety Committee:
Establish liaison between HRCE, contractor, site administration
First Aid, PPE, other safety items as required.

- Documentation:
Applicable MSDS
Safety program
Applicable work procedures
Permits
First Aid Certification

TRAINING:

The following training/testing will be mandatory on site:

- 1) _____

- 2) _____

- 3) _____

1 General

1.1 RELATED WORK

- .1 Mortar and grout for masonry: Section 04 10 00
- .2 Masonry accessories: Section 04 15 00
- .3 Masonry reinforcing and tying: Section 04 16 00

1.2 REFERENCE STANDARD

- .1 Do masonry work in accordance with CAN3-S304-M78 except where specified otherwise.

1.3 JOB MOCK-UP

- .1 Construct mock-up panel of exterior masonry cavity wall 6'-0" high x 6'-0" long showing masonry colours and textures, use of reinforcement ties, air barrier membrane insulation, through wall flashings weep holes, mortar colouring, coursing, jointing and workmanship.
 - .1 Provide additional mock-up panels as required to illustrate the following:
 - .1 Window jamb and head including window frame section and air barrier connections.
 - .2 Soldier coursing and corbelling.
 - .2 Erect panels where directed, at least 7 days prior to Architect's inspection, and well in advance of starting project work.
 - .3 Remove sample panels when masonry work is completed.

1.4 PRODUCT STORAGE AND HANDLING

- .1 Deliver materials to job site in dry condition.
- .2 Keep materials dry until use, except where wetting of bricks is specified.
- .3 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

1.5 COLD WEATHER REQUIREMENTS

- .1 When air temperature is below 5 deg. C, take following precautions in preparing and using mortar:
 - .1 Heat sand slowly and evenly. Do not use scorched sand, having a reddish cast, in mortar.
 - .2 Heat water to 70 deg.C maximum; 20 deg.C minimum.
 - .3 After combining heated ingredients maintain temperature of mortar between 5 deg.C and 50 deg.C. until used.

- .4 Protect mortar from rain and snow.
- .2 Maintain dry beds for masonry and use dry masonry units only. Do not wet masonry units in cold weather.
- .3 When air temperature is below -4 deg. C, protect and heat masonry to maintain air temperature above 0 deg.C. on both sides of walls during operations and for period of 24 h after.
- .4 When air temperature is above -4 deg. C, erect windbreaks to prevent differential freezing of walls.

1.6 HOT WEATHER REQUIREMENTS

- .1 Protect freshly laid masonry from drying too rapidly, by means of waterproof, non-staining coverings.

1.7 PROTECTION

- .1 Keep masonry dry using waterproof, non-staining coverings that extend over walls and down sides sufficient to protect walls from wind driven rain, until masonry work is permanent construction.
- .2 Protect masonry and other work from marking and other damage. Protect completed work from mortar droppings. Use non-staining coverings.
- .3 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.

2 Products

2.1 MATERIALS

- .1 Masonry materials are specified in related Sections indicated in 1.1.

3 Execution

3.1 WORKMANSHIP

- .1 Build masonry plumb, level, and true to line, with vertical joints in alignment.
- .2 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

3.2 TOLERANCES

- .1 Deviation in joint thickness: +/-1/8".

3.3 EXPOSED MASONRY

- .1 Remove chipped, cracked, and otherwise damaged units in exposed masonry and replace with undamaged units.

3.4 JOINTING

- .1 Allow joints to set just enough to remove excess water, then tool with round jointer to provide smooth, compressed, uniformly concave joints.
- .2 Strike flush all joints concealed in walls and joints in walls to receive insulation air barrier, or other applied material except paint or similar thin finish coating.

3.5 JOINING OF WORK

- .1 Where necessary to temporarily stop horizontal runs of masonry, and in building corners.
 - .1 Step-back masonry diagonally to lowest course previously laid.
 - .2 Do not "tooth" new masonry.
 - .3 Fill in adjacent courses before heights of stepped masonry reach 4'-0".

3.6 CUTTING

- .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.

3.7 BUILDING-IN

- .1 Build in items required to be built into masonry.
- .2 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.
- .3 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.

3.8 WETTING OF BRICKS

- .1 Except in cold weather, wet clay bricks having an initial rate of absorption exceeding .025 oz./m²/min.: wet to uniform degree of saturation, 3 to 24 h before laying, and do not lay until surface dry.
- .2 Wet tops of walls built of bricks qualifying for wetting, when recommencing work on such walls.

3.9 PROVISION FOR MOVEMENT

- .1 In exterior brickwork cladding, provide horizontal "soft joints" in accordance with CAN3-534-M84, Clause 4.1.5.2.
- .2 Leave 1/4" space between top of non-load bearing walls and partitions and structural elements. Do not use wedges. Provide "soft joints".

3.10 LOOSE STEEL LINTELS

- .1 Not Used

3.11 CONTROL JOINTS

- .1 Replace control joints as indicated.
- .2 Caulk to meet requirements of 07 90 00.

3.12 AIR BARRIER & THROUGH WALL FLASHING

- .1 Install air barrier and through wall flashing to meet specified requirements of Section 07 19 00 and 04 15 00.

3.13 CAVITY WALL INSULATION

- .1 Install cavity wall insulation to meet specified requirements of Section 07 21 00 and 04 15 00.

END OF SECTION

1 General

1.1 RELATED WORK

- .1 Masonry Procedures: Section 04 05 00

1.2 REFERENCE STANDARD

- .1 Do masonry mortar and grout work in accordance with CSA A179-M1976 except where specified otherwise.

1.3 SAMPLES

- .1 Submit sample bricks to Architect showing colour and texture of new replacement bricks to be used.

2 Products

2.1 MATERIALS

- .1 To meet specified requirements of CSA A179-M1976.

2.2 MATERIAL SOURCE

- .1 Use same brands of materials and source of aggregate for entire project.

2.3 MORTAR TYPES

- .1 Mortar for exterior brick masonry above grade: Type N.
- .2 Mortar for brick masonry at or below grade: Type M.
- .3 Mortar for concrete masonry in exterior walls: Type S.
- .4 Mortar for interior concrete masonry: Type N.

2.4 MORTAR MIXES

- .1 Mix mortars as specified in CSA Standard A179-M1976. Use only dry aggregate. Test for bulking to determine accurate proportioning.
- .2 Use grey mortar.

3 Execution

3.1 MIXING

- .1 Mix grout to semi-fluid consistency.

END OF SECTION

1 General

1.1 REFERENCE STANDARDS

- .1 Do masonry reinforcing and tying in accordance with CAN3-S304-M78 and NBCC Latest edition Part 9 unless specified otherwise.

1.2 QUALITY CONTROL

- .1 Existing brick ties shall be reviewed by the Architect. Ties deemed in suitable condition by the architect may be reused in new work. Ties deemed to be in poor condition shall be replaced with new ties as indicated in 2.1.

2 Products

2.1 MATERIALS

- .1 For tying brick to existing concrete block, wood framing and/or structural concrete:
- .2 BL-5407 masonry Fastener System including:
- .3 BL-5407 Veneer Anchor, stainless steel, c/w 3/16" stainless steel tie, both sized to suit the cavity.
- .4 Fasteners: BL-5407 Stainless steel fastener, stainless steel washer and brass expansion sleeve. For concrete and concrete block and stainless steel screws for wood studs.
- .5 Mechanical insulation fastener: Wedge-Lok® fastener

2.2 ALTERNATE MANUFACTURER

- .1 Dur-o wal in identical configurations and materials to above.

3 Execution

3.1 JOINT REINFORCEMENT

- .1 Install joint reinforcement in all new masonry veneer in complete accordance with Manufacturer's instructions.
- .2 Place reinforcement continuously in horizontal joints at 16" o/c., beginning with course 16" above bearing and 24' o/c vertically, unless otherwise specified or indicated.

END OF SECTION

1 General

1.1 RELATED WORK

.1	Masonry Procedures:	Section 04 05 00
.2	Masonry Mortar and Grout for Masonry	Section 04 10 00
.3	Masonry Accessories	Section 04 15 00
.4	Masonry Reinforcing and Tying	Section 04 16 00
.5	Steel Lintels	Section 05 50 00

1.2 WORK INCLUDED BUT SPECIFIED ELSEWHERE

.1	Concrete For Lintels	Section 03 30 00
.2	Air Barrier Membrane	Section 07 19 00
.3	Cavity Wall Insulation	Section 07 21 00
.4	Caulking of Control Joints	Section 07 90 00

1.3 JOB MOCK-UP

- .1 Construction sample panels in accordance with Section 04 05 00, 1.4.

2 Products

2.1 FACE BRICK

- .1 Clay Face Brick: to CSA A82.1-M87.
- | | | |
|----|--|------------------|
| .1 | Type: | FBS |
| .2 | Grade: | SW |
| .3 | Size: | Standard modular |
| .4 | Include special shapes as required | |
| .5 | Stock pile brick required for entire project from same production run before work commences to ensure uniform colour and range for each selection. | |
- .2 Acceptable Products:
- .1 L.E. Shaw – Colour to be selected by Architect from Shaw’s complete range.

2.2 CONCRETE MASONRY UNITS

- .1 Standard Concrete Masonry Units: to CSA A165.1-M85.
- | | | |
|----|---|--|
| .1 | Modular concrete units as manufactured by L.E. Shaw Ltd., South Shore Ready Mix or V.J. Rice Ltd. | |
| .2 | Classification: Hollow units H/15/A/M, solid units S/15/A/M. | |
| .3 | Special Shapes: Provide bull-nosed units for all exposed corners and at window sills as detailed. Provide purpose-made shapes for lintels and bond beams. Provide additional special shapes as indicated. | |

3 Execution

3.1 LAYING MASONRY

- .1 Unless otherwise specified, lay masonry to meet specified requirements of CAN3-S304-M78.
- .2 Bond: running stretcher, soldier coursing, header coursing, corbelling, as indicated on drawings.
- .3 Coursing height: 200 mm for three bricks and three joints. 200 mm for one block and one joint.
- .4 Jointing: concave where exposed or where paint or similar thin finish coating is specified.
- .5 Masonry surfaces that flashings rest against are to be flushed smooth with mortar to ensure that they are not punctured.
- .6 Remove laitence, loose rust, scale and other foreign materials from supporting bed surfaces to ensure bonding.
- .7 Wet clay and shale masonry units before placing. Do not wet concrete units. Wet faces of work in place before laying new work. Ensure that units have no water adhering to their surfaces when laid, but shall be wet only to ensure that complete hydration takes place.

3.2 LINTELS

- .1 Build in steel lintels, supplied under Work of Section 05 55 00.
- .2 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated. End bearing, minimum 8".

3.3 BUILT-IN WORK

- .1 Build masonry around hollow metal door frames supplied and set under Section 08110. Ensure that anchors are well secured and that frames are true and plumb. Completely fill frames with mortar at masonry and concrete. Maintain protective frame covering and ensure that no mortar is left on frame faces.

3.4 AIR BARRIER

- .1 Install air barrier membrane to meet specified requirements of Section 07190.

3.5 FLASHINGS

- .1 Install flashings as per Section 04150.

3.6 CAVITY WALL INSULATION

- .1 Install cavity wall insulation to meet specified requirements of Section 07 21 00.

3.7 CAULKING OF CONTROL JOINTS

- .1 To meet requirements of 07 90 00.

3.8 CLEANING AND ADJUSTMENT

- .1 Patch masonry walls damaged by installation of Work of this Section, and which have been rejected as defective or otherwise damaged.
- .2 Point all holes in brick masonry mortar joints except weepholes.
- .3 Cut out defective mortar joints and repoint.
- .4 Wash down and brush brick walls to remove mortar and stains. Use only detergents, or proprietary masonry cleaners as recommended by the manufacturer.
- .5 Do not use wire brushes for cleaning.
- .6 Should specified cleaning methods be insufficient, proceed with other methods only with approval.
- .7 Protect adjacent materials and Work from damage while cleaning.

END OF SECTION

1 General

1.1 RELATED WORK

- .1 Section 09 90 00: Painting

1.2 REFERENCES

- .1 ASTM A53_87b Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- .2 ASTM A269_87a Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- .3 ASTM A307_87 Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile.
- .4 CGSB 1_GP_40M_79 Primer, Structural Steel, Oil Alkyd Type.
- .5 CGSB 1_GP_181M_77 Coating, Zinc_Rich, Organic, Ready Mixed.
- .6 CAN/CSA_G40.21_M87 Structural Quality Steels.
- .7 CSA G164_M1981 Hot Dip Galvanizing of Irregularly Shaped Articles.
- .8 CAN/CSA_S16.1_M89 Limit States Design of Steel Structures.
- .9 CSA W47.1_1983 Certification of Companies for Fusion Welding of Steel Structures.
- .10 CSA W55.3_1965 Resistance Welding Qualification Code for Fabricators of Structural Members Used in Buildings.
- .11 CSA W59_1989 Welded Steel Construction Metal Arc Welding.

1.3 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 30 00-Submittals.
- .2 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Collect, separate and recycle all site generated waste materials.

2 Products

2.1 MATERIALS

- .1 Steel sections and plates: to CAN/CSA_G40.21, Grade 300W and 350W.
- .2 Steel pipe: to ASTM A53 galvanized finish.
- .3 Welding materials: to CSA W59.

- .4 Bolts and anchor bolts: to ASTM A307.
- .5 Galvanizing: hot dipped galvanizing with zinc coating 600 g/m² to CSA G164.
- .6 Stainless steel tubing: to ASTM A269, Type 302 Commercial grade.
- .7 Chromium plating: chrome on steel with plating sequence of 0.009 mm thickness of copper, 0.010 mm thickness of nickel and 0.0025 mm thickness of chromium.
- .8 Shop coat primer: to CGSB 1_GP_40M.
- .9 Zinc primer: zinc rich, ready mix to CGSB 1_GP_181M.
- .10 Grout: non-shrink, non-metallic, flowable, 24h, MPa 15, pull-out strength 7.9 MPa.

2.2 FABRICATION

- .1 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.
- .2 Use self-tapping shake-proof flat headed screws on items requiring assembly by screws or as indicated.
- .3 Where possible, fit and shop assemble work, ready for erection.
- .4 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

2.3 SHOP PAINTING

- .1 Apply one shop coat of primer to metal items, with exception of galvanized or concrete encased items.
- .2 Use primer unadulterated, as prepared by manufacturer. Paint on dry surfaces, free from rust, scale, grease. Do not paint when temperature is lower than 7 °C.
- .3 Clean surfaces to be field welded; do not paint.

3 Execution

3.1 ERECTION

- .1 Do welding work in accordance with CSA W59 unless specified otherwise.
- .2 Companies to be certified under Division 1 or 2.1 of CSA W47.1 for fusion welding, CSA W55.3 for resistance welding.
- .3 Provide certification that all welded joints are certified by Canadian Welding Bureau.
- .4 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.

- .5 Provide suitable means of anchorage acceptable to Architect such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles.
- .6 Exposed fastening devices to match finish and be compatible with material through which they pass.
- .7 Provide components for building by other sections in accordance with shop drawings and schedule.
- .8 Make field connections with high tensile bolts to CAN/CSA_S16.1, or weld.
- .9 Hand items over for casting into concrete or building into masonry to appropriate trades together with setting templates.
- .10 Touch-up rivets, field welds, bolts and burnt or scratched surfaces after completion of erection with primer.
- .11 Touch-up galvanized surfaces with zinc rich primer where burned by field welding.
- .12 Promptly as the work proceeds and on completion, clean up and remove from the premises all rubbish and surplus materials resulting from the work of this section.

3.2 SCHEDULE OF MISCELLANEOUS ITEMS

- .1 General: This section includes work to complete metal items manufactured to detail, not specified in other sections and summarized but not restricted to the following:
 - .1 Galvanized steel shelf angles.
 - .2 Backing plates and fasteners as required
 - .3 Miscellaneous Metals: Provide and install all miscellaneous angles, channels, plates and brackets required to complete the project and any miscellaneous steel not specified or noted on the structural drawings.

END OF SECTION

1 General

1.1 GENERAL CONDITIONS

- .1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

- .1 To complete the rough carpentry for the project as shown or specified and summarized but not restricted to the following:
 - .1 Building framing.
 - .2 Blocking for wall mounted accessories.
 - .3 Rough carpentry as required to complete the project.

1.3 RELATED WORK

- .1 Painting Section 09 90 00

1.4 SOURCE QUALITY CONTROL

- .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood identification: by grade mark in accordance with applicable CSA standards.
- .3 All wood products used in this section shall be FSC certified.

2 Products

2.1 LUMBER MATERIAL

- .1 In conformance with minimum lumber grades for specific end uses of the NBC-Latest edition.
- .2 Moisture content of lumber at time of building in shall not exceed 19%.
- .3 Provide pressure treated lumber and pressure treated plywood for all balcony framing window, and louver blocking, roof curbs, cants ,other exterior blocking, bottom wall plates , all other locations indicated on the drawings and all locations exposed to the weather.

2.2 PLYWOOD

- .1 Douglas Fir plywood (DFP): to CSA 0121-M1978, standard construction.
- .2 Canadian softwood plywood (CSP): to CSA 0151-M1978, standard construction.

2.3 BLOCKING

- .1 Shall be 3/4" plywood.

2.4 FASTENERS

- .1 Nails, spikes and staples: to CSA B111-1974. Galvanized.
- .2 Bolts: 1/2" diameter galvanized unless indicated otherwise, complete with nuts and washers.
- .3 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.
- .4 Galvanizing: to CSA G164-M92, use galvanized fasteners for all work.

2.5 WOOD PRESERVATIVE

- .1 Surface applied wood preservative: coloured, copper naphthenate or 5% pentachlorophenol solution, water repellent preservative to meet specified requirements of CSA 080-1983.

2.6 DAMP PROOF MEMBRANE

- .1 6 mils polyethylene film.

3 Execution

3.1 CONSTRUCTION

- .1 Comply with requirements of NBC, Part 9, Latest Edition supplemented by the following paragraphs.

3.2 ERECTION

- .1 Install members true to line, levels and elevations.
- .2 Construct continuous members from pieces of longest practical length.
- .3 Install spanning members with "crown-edge" up.

3.3 NAILING STRIPS, GROUNDS & ROUGH BUCKS

- .1 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work. Apply felt paper against exterior masonry walls before installation of strapping.

3.4 CANTS, CURBS, BACKING

- .1 Install wood cants, fascia backing, nailers, curbs and other wood fascia supports as indicated on drawings and secure using galvanized fasteners.

3.5 SURFACE-APPLIED WOOD PRESERVATIVE

- .1 Treat all cut surfaces of pressure treated lumber and plywood with wood preservative, before installation.
- .2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.
- .3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.

3.6 DAMPPROOFING

- .1 Install dampproof membrane between wood members and concrete in contact with earth or on grade.

3.7 ADJUSTMENT

- .1 Ensure that bolted fasteners are drawn up tightly.

3.8 INSTALLATION OF PRESSED STEEL FRAMES

- .1 Install pressed steel frames supplied under Section 08 11 10 in locations other than steel stud partitions.
- .2 Set in place for building into masonry, and anchor frames to floor as provided by anchor clips.
- .3 Brace frames in place to prevent displacement until anchored into masonry and remove spreaders at floor after frames are anchored.

END OF SECTION

1 General**1.1 GENERAL CONDITIONS**

- .1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

- .1 To complete finish carpentry as shown or specified and summarized but not restricted to the following:
 - .1 Wood trim, etc
 - .2 Installation of finish door hardware as specified in Section 08 71 00.

1.3 WORK INSTALLED BUT FURNISHED BY OTHER SECTIONS

- .1 Finish Hardware: Section 08 71 00
- .2 Doors: Section 08 11 00

1.4 RELATED WORK SPECIFIED ELSEWHERE

- .1
 2. Rough Carpentry: Section 06 10 00

1.5 PROTECTION

- .1 Protect the work of this section and be responsible for all damage incurred. Replace damaged work with perfect materials at no additional cost.
- .2 Protect work of all other sections from damage resulting from the work of this section. Arrange and pay for the restoration of any such damage incurred.

1.6 EXAMINATION

- .1 Examine all work performed by other trades upon which the work of this section depends and be responsible for checking all dimensions at the site affecting this work.
- .2 Do not install the work of this section until all previous work which is to receive it and site conditions are satisfactory. Commencement of the work will indicate acceptance of the previous work and site conditions.

1.7 LEED ACCREDITATION

- .1 Not Used.

1.8 WASTE MANAGEMENT AND DISPOSAL

- .1 Collect, separate and recycle all site generated waste materials.

2 Products

2.1 GENERAL

- .1 Include Work of Section rough hardware required for its execution. Use non-corrosive hardware at exterior location.
- .2 Ensure that the use of adhesives in fabrication of laminated assemblies, do not contain urea formaldehyde.
- .3 All wood products used in this section shall be FSC certified.

2.2 MATERIALS

- .1 Wood and Plywood
 - .1 Wood: Grade mark hardwood lumber by the appropriate association under authority of the National Lumber Grades Authority. Where not exposed to view, use wood of grades suitable for fabrication, utility and structural needs. Where exposed to view, use wood to meet requirements of AWMAC Custom Grade Standard. Hardwood to be white maple.
 - .2 Hardwood plywood: to CSA 0115-M1982 of species and thickness indicated, flat cut book match veneer. Use veneer core with Type II bond. Select veneers to provide book match with a minimum variation of grains and colours from veneer to veneer and within units of cabinetry. Good grade where exposed to view and sound grade where not. Veneer to be maple.

3 Execution

3.1 INSTALLATION - GENERAL

- .1 Install Work plumb, level and straight, and fasten it securely to backing to support it and anticipated imposed loads.
- .2 Build work into construction as indicated on drawings or specified in other sections of this specification, or both.
- .3 Co-operate with other trades and proceed promptly with the work of this section as rapidly as job conditions permit.
- .4 Carefully read all other sections of the specifications describing work which is affected by the work of this section. Notify the Architect in writing of any condition which may adversely affect the proper execution of the work of this section.

3.2 INSTALLATION – FINISHED CARPENTRY

- .1 Set and secure materials and components in place, rigid plumb and square.
- .2 Apply water resistant building paper, (bituminous coating), over wood framing members in contact with masonry or cementitious construction.

- .3 Install work plumb, true and square, neatly scribed to adjoining
- .4 Make allowances around perimeter where fixed objects pass through or project into laminated plastic work to permit normal movement without restriction.
- .5 Provide cutouts for inserts, sinks, outlet boxes, etc. Round internal corners, chamfer edges and seal exposed core.
- .6 Build work into construction as indicated on drawings or specified in other sections of this specification, or both.
- .7 Co-operate with other trades and proceed promptly with the work of this section as rapidly as job conditions permit.
- .8 Touch up external and semi-exposed surfaces to provide complete finish. Remove all stickers and wipe down all surfaces. Trim and sand smooth all edges.
- .9 Wipe out interior surfaces, trim and sand smooth all edges.
- .10 Remove excess adhesive with recommended solvent.

3.3 INSTALLATION OF DOORS

- .1 Not Used

3.4 INSTALLATION OF FINISH HARDWARE

- .1 Install finish hardware where specified under Section 08 71 00.
- .2 Accurately locate and adjust hardware to meet manufacturer's instructions. Use special tools, jigs and templates as required.

3.5 ADJUSTMENT AND CLEANING

- .1 Adjust hinged doors to swing freely and easily, to remain stationary at any point of swing, to close evenly and tightly against stops without binding, and to latch positively when doors are closed with moderate force.
- .2 Adjust hardware so that latches and locks operate smoothly and without binding, and closers act positively with the least possible resistance in use. Lubricate hardware if required by supplier's instructions.
- .3 Clean hardware after installation in accordance with supplier's instructions.
- .4 Sand clean woodwork to leave free from finish defects in any exposed part.

3.6 CLEAN-UP

- .1 Promptly as the work proceeds and upon completion, clean up and remove from the premises all rubbish and surplus materials resulting from the work of this Section.

END OF SECTION

1 General

1.1 RELATED WORK

- | | | |
|----|----------------------|------------------|
| .1 | Rough Carpentry | Section 06 10 00 |
| .2 | Building Insulation | Section 07 21 00 |
| .3 | Sealants | Section 07 90 00 |
| .4 | Pressed Steel Frames | Section 08 11 00 |
| .5 | Vinyl Windows | Section 08 61 00 |

2 Products

2.1 MEMBRANE AIR BARRIER

- .1 Non-Permeable air barrier membrane. Blueskin 40 mil thick as manufactured by Henry. See drawings for locations.
- .2 Permeable air barrier membrane. Blueskin VP 160 as manufactured by Henry. See drawings for locations.
- .3 SPRAY-ON AIR BARRIER (only for hard to access areas or where membrane air barrier cannot be applied)
 - .1 Bakor Airbloc 06, 90 Mil
- .4 Approved Manufacturers: Provide equivalent products to architects satisfaction. Sopra Seal; W.R Grace; Nord- Bitumi; ; Fibregla

2.2 SHEET VAPOUR BARRIER

- .1 Polyethylene Film: to CAN2-51.34-M86, Type CMHC approved, Milrol-2000, 0.15 mm thick.

2.3 ACCESSORIES

- .1 Joint sealing tape: air resistant pressure sensitive adhesive tape, type recommended by vapour barrier manufacturer, 2" wide for lap joints and perimeter seals.
- .2 Sealant: in accordance with Section 07 90 00.
- .3 Primer: asphalt based solvent primer for use with air barrier membrane.
- .4 Moulded box vapour barrier: factory-moulded polyethylene box for use with recessed electric switch and outlet device boxes.

3 Execution

3.1 AIR BARRIER INSTALLATION

- .1 Apply air barrier where indicated, including to walls and roof sheathing.

- .2 Apply an additional 6" band of non permeable membrane air barrier around all window openings. Connect air barrier to thermal break of window and to adjacent air barrier.
- .3 Apply in strict accordance with manufacturer's instructions.
- .4 Roll completely after each sheet is applied.
- .5 Prime substrate as per manufacturer's recommendations for the intended application.
- .6 All side laps to be min. 2" and end laps min. 6".
- .7 Lap air barrier with vapour barrier at all openings.
- .8 Connect air barrier to window frames and door frames to provide air tight seals.
- .9 Apply spray on air barrier to any difficult detail areas which do not allow for easy installation of the sheet membrane.
- .10 Ensure continuity of air barrier by lapping spray on and roll on membrane air barriers.

3.2 SHEET VAPOUR BARRIER INSTALLATION

- .1 Install sheet vapour barrier on warm side of exterior wall and ceiling assemblies prior to installation of gypsum board to form continuous barrier.
- .2 Use sheets of largest practical size to minimize joints.
- .3 Inspect sheets for continuity. Repair punctures and tears with sealing tape before work is concealed.
- .4 Cut sheet vapour barrier to form openings and ensure material is lapped and sealed to door and window frames.
- .5 Lap and seal air barrier membrane over vapour barrier at openings to provide continuity.
- .6 Seal perimeter of sheet vapour barrier as follows:
 - .7 Apply continuous bead of sealant to substrate at perimeter of sheets.
 - .8 Lap sheet over sealant and press into sealant bead.
 - .9 Ensure that no gaps exist in sealant bead. Smooth out folds and ripples occurring in sheet over sealant.
- .10 Seal lap joints of sheet vapour barrier as follows:
 - .1 Attach first sheet to substrate.
 - .2 Apply continuous bead of sealant over solid backing at joint.
 - .3 Lap adjoining sheet minimum 6" and press into sealant bead.

- .4 Ensure that no gaps exist in sealant bead. Smooth out folds and ripples occurring over sealant.
- .11 Seal electrical switch and outlet device boxes that penetrate vapour barrier as follows:
 - .1 For sheet-type vapour barriers, install moulded box vapour barrier.
 - .2 Apply sealant to seal edges of flange to main vapour barrier and seal wiring penetrations through box cover.

END OF SECTION

1 General

1.1 WORK INCLUDED

- .1 To complete thermal insulation for resistance of heat transfer as shown or specified and summarized but not restricted to:

- .1 Exterior continuous rigid mineral wool board insulation

1.2 RELATED WORK SPECIFIED IN OTHER SECTIONS

Not Used

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Package insulation materials and label them to designate manufacturer, type, density and insulation value, and reference standard specification number if applicable.
- .2 Store insulation materials in dry areas, protected from wetting and traffic.
- .3 Store insulation board flat, on a flat surface, and to prevent edge damage and placing of materials on top of stored boards.
- .4 Protect polystyrene insulation from sunlight at all times until permanent cover is installed.

2 Products

2.1 GENERAL

- .1 Ensure that all materials of an insulation system, and the construction with which it is in contact, are compatible.

2.2 EXTERIOR CONTINUOUS INSULATION

- .1 Non-combustible, rigid, water repellent, mineral wool insulation board to ASTM C612, Type IVB.
 - .1 Size: 24 x 48 inches.
 - .2 Thickness: 1.5 inches.
 - .3 Acceptable Material: Rockwool COMFORTBOARD™ 80.
- .2 Fasteners
 - .1 Screws shall be stainless steel, compatible with strapping and cladding material.
 - .2 Screws shall be sized to accommodate all loads including torque loads and shall have a countersunk head.

3 Execution

3.1 EXAMINATION

- .1 Ensure that all surfaces to which insulation is applied are clean, reasonably smooth with no abrupt changes in plane, free of grease and with protruding fins of mortar or concrete removed, and that the surfaces are otherwise acceptable for insulation application as specified.
- .2 Ensure that furring is installed to suit insulation sizes and thicknesses, and to ensure proper support.

3.2 INSTALLATION

- .1 Exterior Continuous Insulation
 - .1 Install in strict accordance with manufacturer's instructions unless specified otherwise.
 - .2 Strapping : Vertical
 - .1 Spacing to match stud spacing, maximum spacing 16" o/c.
 - .3 Fastening:
 - .1 Minimum #12 stainless steel screws.
 - .2 Minimum embedment in stud back up: 1-1/2 "
 - .3 Maximum screw spacing: 12" vertical

3.3 ADJUSTMENT AND CLEANING

- .1 Fill all voids in insulation systems with insulation.
- .2 Remove adhesive from finish surfaces before it sets and clean them. Do not mar surfaces while removing and cleaning.

END OF SECTION

1 GENERAL

1.1 GENERAL CONDITIONS

- .1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

- .1 To complete installation of wood shingles as shown or specified and summarized but not restricted to the following:
 - .1 Building cladding.
 - .2 Air gap spacer or strapping
 - .2 Caulking as per Section 07 90 00

1.3 RELATED WORK

- .1 Sealants: Section 07 90 00
- .2 Painting: Section 09 90 00

1.4 SUBMITTALS

- .1 Submit under provisions of Section 01 33 00.

1.5 DELIVERY, STORAGE, AND HANDLING

- .1 Store products in manufacturer's unopened packaging until ready for installation.
- .2 Store materials protected from exposure to damaging environmental conditions and temperatures and humidity conditions recommended by the manufacturer.

1.6 PROJECT CONDITIONS

- .1 Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.7 WARRANTY

- .1 Workmanship Warranty: Application limited warranty for 2 years.

2 PRODUCTS

2.1 WALL SHINGLES

- .1 Eastern white cedar, Extra "A", Blue Label, top grade, no imperfections, kiln dried.
- .2 Requests for approval of alternate products will be considered in accordance with provisions of Section 01 60 00.

2.2 AIR GAP SPACER MEMBRANE

- .1 Ventgrid12™ spacer membrane, installed as per manufacturer's instructions.

2.3 FASTENERS

- .1 Rust-resistant galvanized nails or staples, 1 1/4" to 1 1/2" long. Fasteners must penetrate at least 1/2" into the underlayment. For staples, use 7/16" minimum crown.
- .4 Galvanizing: to CSA G164-M92, use galvanized fasteners for all work.

2.4 FINISH

1. Field applied stain - Refer to 09 90 00.
2. Color:
 1. To Architect's selection from full range of colours including accent colours.

2.5 CAULKING

- .1 One part thermoplastic, elastomeric sealant to meet specified requirements of CGSB 10-M14.6 Tremco 830.

3 EXECUTION

3.1 CONSTRUCTION

- .1 Comply with requirements of NBC 2005, Part 9, supplemented by the following paragraphs:

3.2 ERECTION

- .1 Install siding and trim true to line, levels and elevations.

- .2 Construct continuous members from pieces of longest practical length.

3.3 WALL SHINGLE INSTALLATION

- .1 Install in complete accordance with manufacturer's instructions and best practices.
- .2 Install wall shingles 5" to the weather, 2 fasteners per shingle.
- .3 Provide underlayment and spacer membrane as per details on drawings.

3.10 FINISHING

- .1 Field stained - refer to Painting 09 90 00

3.11 PROTECTION

- .1 Protect installed products until completion of project.
- .2 Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

2 **Products**

2.1 **MATERIALS**

.1 Preformed Steel Siding

.1 ‘Type 1’ as noted in the drawings:

- .1 Roll Formed, galvanized steel, to custom profile for horizontal or vertical installations completed with all corner trims, j-channels, etc:
 1. Manufacturer: Mitten
 2. Product: Lux Panel
 3. Base Material Thickness: 0.559mm (24 Gauge)
 4. Exposed Face: 6”
 5. Profile: .438mm deep, 100.88 width, beveled face edges, preformed interlocking joints, fastener holes pre-punched.
 6. Colour: As selected from full range of colours by architect.
 7. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

.2 ‘Type 2’ as noted in the drawings:

- .1 Factory preformed 7/8” corrugated steel sheet 24 gage, pre-finished from manufacturer’s standard profiles. Include closures, gaskets, caulking, flashing and fasteners to effect weather-tight installation. Cut ends of sheets square and clean.
- .2 Manufacturer: Agway
- .3 Colour: As selected from full range of colours by Architect.
- .4 Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

.3 Exterior corners-wall: of material to match finish and profile of adjacent cladding material, shop cut and brake formed to correct angle.

.4 Accessories to exterior wall cladding, brake or bend to shape, of material and finish to match wall cladding, comprising cap flashings, drip flashings, internal corner flashings, copings and closures for head, jamb, sill & corners.

.2 Supports:

- .1 Steel stud framing to ASTM A653M sheet: minimum 18 gauge stainless steel z-girts at 24" o/c minimum, sizes and profile indicated
- .2 Steel angles and clips: Fabricate to profile indicated, field welded where possible.
- .3 Provide supports as per drawings and as per para. 3.3
- .3 Air barrier membrane:
 - .1 Air barrier membrane as per 07 19 00.

2.2 FINISHES

- .1 Face sheet shall have a Weather XL finish (Vicwest) or equivalent. Architect to select from full range of colours.
 - .1 Allow for 2 colours

2.3 APPROVED EQUALS

- .1 Flynn Canada, Canadian Metal Rolling Mills, Peerless, Robertson and Caradon to match Vic West profile noted above and to match specified liner panel and finish.

2.4 FLASHINGS

- .1 Provide pre-finished flashings, etc. as per drawings and as required to complete the installation.
- .2 Flashings to be the same gauge as siding material

2.5 CAULKING

- .1 One part polyurathane sealant: to meet specified requirements of CGSB Specification 19-GP-24M. Dymanic by Tremco or Vulkem by Mameco.

2.6 FABRICATION

- .1 Roll form profiled panels, and other work unless impossible because of special design. Use other forming methods only with approval.
- .2 Form bends sharp and true.
- .3 Fabricate systems to conform to shop drawings, and to allow for structure movements within the systems.
- .4 Fabricate systems with fasteners of same material as siding unless required otherwise for structural design, and of same colour as siding where exposed to view.
- .5 Fabricate systems to prevent entry of water into building and from collection within assembly, and to prevent infiltration of air through system.

- .6 Join intersecting parts together to provide tight, accurately fitted joints with adjoining surfaces in true planes.
- .7 Fabricate systems to conform to requirements of reference standards specified.
- .8 Erect systems by its fabricator, or franchised agent.
- .9 Provide manufacturer's recommended separation materials where steel siding meets aluminum work.
- .10 Provide all miscellaneous angles, fittings, etc. as required to complete the project.

3 Execution

3.1 EXAMINATION

- .1 Take site measurements to ensure that work is fabricated to fit structure; surrounding construction; around obstructions and projections in place, or as shown on Drawings; and to suit locations of services.
- .2 Verify that backup construction is aligned for proper installation of siding before commencing erection.

3.2 QUALIFICATIONS

- .1 Installation to be by trades people authorized by the manufacturer of the siding.

3.3 ERECTION

- .1 Erect systems complete with flashings forming part of the systems, clips, fasteners, and closures and caulking to meet same design criteria as specified for fabrication.
- .2 Cut and flash panel penetrations.
- .3 Erect work in straight lines that are true, level, and plumb.
- .4 Provide for different thermal and structural movement between systems and structure as well as between elements of systems.
- .5 Attach systems to sheathing and strapping and to other system components with fasteners of the same material and colour as the panels.
- .6 Erect systems by its fabricator, or franchised agent.
- .7 Provide manufacturer's recommended separation materials where steel siding meets aluminum work.
- .8 Provide all miscellaneous angles, fittings, flashings, etc. as required to complete the project.

3.4 ADJUSTMENT AND CLEANING

- .1 After erection, touch up prefinished coatings removed and damaged during erection.
- .2 Remove damaged, dented, defaced, defectively finished, or tool marked components and replace with new.
- .3 Refinish shop applied finishes in field only with approval.
- .4 Clean off dirt resulting from erection from surfaces exposed to view.

END OF SECTION

1 General

1.1 GENERAL CONDITIONS

- .1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 RELATED SECTIONS

- .1 It is intended that related sections below will provide material as outlined for flashings and trims.
- .2 Section 01 74 21 – Construction Waste Management
- .3 Section 07 90 00 – Sealants

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with the Construction Waste Management plan as per Section 01 74 21 Construction Waste Management.
- .2 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
- .4 Place materials defined as hazardous or toxic in designated containers.
- .5 Ensure emptied containers are sealed and stored safely for disposal away from children.
- .6 Divert unused metal materials from landfill to metal recycling facility as approved by Consultant.
- .7 Unused sealant material must be disposed of at an official hazardous material collections site as approved by Consultant.
- .8 Unused paint and sealant material must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .9 Fold up metal banding, flatten and place in designated area for recycling.

1.4 SUBMITTALS

- .1 Product data for flashings, gutters, downspouts, and accessories: Manufacturer's technical product data, installation instructions and general recommendations for each specified sheet material and fabricated product.
- .2 Submit minimum 300 mm long samples of typical flashings, gutters and downspouts showing profile, method of locking and anchoring and corner

condition, fabricated from materials specified.

- .3 Shop drawings showing layout, profiles, expansion provisions

1.5 QUALITY ASSURANCE

- .1 Fabricator's Qualifications:

- .1 Company specializing in aluminum gutter and downspout work with three years experience in similar size and type of installations.
- .2 Company specializing in metal flashing and trims work with three years experience in similar size and type of installations.

- .2 Installer: A firm with 3 years of successful experience with installation of aluminum gutter and downspout and sheet metal flashing and trim work of type and scope equivalent to Work of this Section.

1.6 JOB CONDITIONS

- .1 Schedule and co-ordinate installation of metal flashing, gutter and downspout components with work of other sections where it is integral or contiguous therewith.

2 PRODUCTS

2.1 FLASHING MATERIALS

- .1 Materials:

- .1 For walls: flashing shall be minimum 0.032", pre-finished aluminum sheet. Provide flashing painted each side with colors specified.
- .2 Lock strips 0.9 mm.

- .2 Double back exposed edges at least 12 mm.

- .3 Seams: space seams uniformly at maximum 2.5 m o.c. Unless otherwise indicated, use flat locked seams, lapped 25 mm. Make horizontal seams in directions of water flow. Mitre and seal corners.

- .4 Cleats and edge strips: non corrosive metal compatible with sheet metal, thickness as required to provide rigid support and positive securement for metal flashings.

- .5 Furnish everything necessary for complete metal flashing installation, including clips and fastening devices.

- .6 Back paint metal flashings with asphaltic paint where a membrane flashing does not provide separation between dissimilar metals.

2.2 ACCESSORIES

- .1 Isolation coating: alkali resistant bituminous paint.
- .2 Plastic cement.

- .3 Underlay for metal flashing: See drawings and Section 07 55 00
- .4 Sealants: one part polysulphide.
- .5 Cleats: of same material, and temper as sheet metal, minimum 50 mm wide. Thickness same as sheet metal being secured.
- .6 Fasteners: of same material as sheet metal, to CSA B111, ring thread flat head roofing nails of length and thickness suitable for metal flashing application. Otherwise use coated self-tapping fasteners meeting FM Approval Standards
- .7 Washers: of same material as sheet metal, 1 mm thick with rubber packings.
- .8 Touch-up paint: as recommended by prefinished material manufacturer.

2.3 GUTTERS AND DOWNSPOUTS

- .1 Not used

2.4 ISOLATION BETWEEN DISSIMILAIR METALS

- .1 Self adhering bituminous membrane minimum 1mm (40 mils.)

2.5 FABRICATION

- .1 Fabricate metal flashings and other sheet metal work as indicated.
- .2 Form pieces in 2440 maximum lengths. Make allowance for expansion at joints.
- .3 Hem exposed edges on underside 12 mm. and seal corners with sealant.
- .4 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
- .5 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

2.6 METAL FLASHINGS

- .1 Form flashings, copings and fascias to profiles indicated of 0.6 mm prefinished sheet material.

3 EXECUTION

3.1 APPLICATION

- .1 Workmanship shall be of best standard area practice and done in accordance with applicable Manufacturer's Written Instructions for the items of roofing specified herein.
- .2 Metal Drip Edge: Install metal drip edge along eaves and up rakes. Lap joints 101.6mm (4") and set in selvage roofing cement. Nail at 254mm (10") centres maximum.
- .3 Flashings: Application of Metal Trim and Flashings
 - .1 Flashings shall be as detailed with "West Coast" or "S" lock to provide for

expansion, and with clip strips.

- .2 Sheet metal work and metal counter flashing shall be as detailed and to CRCA Standard Details FL-500, FL-600 series as applicable.
- .3 Metal flashings shall have concealed fasteners wherever possible. Exposed fasteners shall be compatible type screws c/w watertight gaskets to the approval of the Consultant, including location of fasteners.
- .4 Exposed edges of all sheet metal work shall be doubled back 12.7mm (½”) in such a manner as to conceal them from view and to provide stiffeners.
- .4 Install provide and install all metal flashing and trim to best CRCA Standards.
- .5 Gutters and downspouts:
 - .1 Not used
- .6 Dissimilar metals
 - .1 Where dissimilar metals may come in contact with each other, provide isolation membrane to ensure complete separation.

3.2 PROTECTION

- .1 Protect the surrounding surfaces from damage resulting from the work of this section.

3.3 CLEANING

- .1 Promptly, as the work proceeds, and on completion, clean up and remove from the premises all rubbish and surplus materials resulting from the foregoing work.
- .2 Clean metal flashing at completion of work.
- .3 Remove deposits of cement from adjacent surfaces completely.

END OF SECTION

1 General

1.1 GENERAL CONDITIONS

- .1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

- .1 To complete joint sealants as shown or specified and summarized but not restricted to the following:
 - .1 Caulking of exterior building components
 - .2 Caulking of control joints.
 - .3 Exposed joints, between dissimilar materials and not concealed from view.
 - .4 Miscellaneous construction joints.

1.3 ENVIRONMENTAL CONDITIONS

- .1 Sealant and substrate materials to be minimum 5°C.
- .2 Should it become necessary to apply sealants below 5°C, consult sealant manufacturer and follow their recommendation.

2 Products

2.1 MATERIALS

- .1 Primers: Type recommended by sealant manufacturer.
- .2 Joint fillers:
 - .1 General: compatible with primers and sealants, outsized 30 to 50%.
 - .2 Polyethylene, urethane, neoprene or vinyl: extruded closed cell foam, Shore A hardness 20, tensile strength 140 to 200 kPa.
- .3 Bond breaker: pressure sensitive plastic tape, which will not bond to sealants.
- .4 Void filler: loose glass fibre.
- .5 Sealants:
 - .1 Colour of sealants will be selected from manufacturer's standard range by Architect.
 - .2 Acrylic solvent release, one part sealant: to meet specified requirements of CGSB 19-GP-5M.
 - .3 Silicone sealant: one part, mildew resistant to meet specified requirements of CGSB 19-GP-9M2.
 - .4 Two part polyepoxide sealant: to meet specified requirements of CGSB 19-GP-24M. "Dymeric" by Tremco Manufacturing Limited.

- .6 Joint cleaner: xylol, methylethyleketon or non-corrosive type recommended by sealant manufacturer and compatible with joint forming materials.

3 Execution

3.1 PREPARATION

- .1 Remove dust, paint, loose mortar and other foreign matter. Dry joint surfaces.
- .2 Remove rust, mill scale and coatings from ferrous metals by wire brush, grinding or sandblasting.
- .3 Remove oil, grease and other coatings from non-ferrous metals with joint cleaner.
- .4 Prepare concrete, glazed and vitreous surfaces to sealant manufacturer's instructions.
- .5 Examine joint sizes and correct to achieve depth ratio 1/2 of joint width with minimum width and depth of 1/4", maximum width 1".
- .6 Install joint filler to achieve correct joint depth.
- .7 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.
- .8 Apply bond breaker tape where required to manufacturer's instructions.
- .9 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

APPLICATION

- .10 Apply sealants, primers, joint fillers, bond breakers to manufacturer's instructions. Apply sealant using gun with proper size nozzle. Use sufficient pressure to fill voids and joints solid. Superficial pointing with skin bead is not acceptable.
- .11 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities. Neatly tool surface to a slight concave joint.
- .12 Apply sealant to joints between windows or door frames, to adjacent building components, around perimeter of every external opening, to control joints in masonry walls, concrete walls, concrete floor joints, between water closets and floor, and where indicated.
- .13 Caulk joints in site painted materials after adjacent surfaces have been painted.
- .14 Apply two part polyepoxide sealant at all locations except where another is specified.

3.2 CLEANING

- .1 Clean adjacent surfaces immediately and leave work neat and clean. Remove excess sealant and droppings using recommended cleaners as work progresses. Remove masking after tooling of joints.

END OF SECTION

1 General

1.1 RELATED WORK

- .1 Steel door frames Section 08 11 10
- .2 Glazing: Section 08 80 05
- .3 Painting: Section 09 90 00

1.2 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 30 00.
- .2 Indicate door types and cutouts for glazing and louvres.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Not Used.

2 Products

2.1 MATERIALS

- .1 Sheet steel: 18 ga. base thickness, commercial grade steel to ASTM A366-72, Class 1 finished to ASTM A526(1975) W25 wiped zinc finish.
- .2 Glazing stops: minimum 20 ga. base thickness sheet steel with W25 wiped zinc finish to ASTM A525-80a screw fixed.
- .3 Door Core:
 - .1 Exterior Doors: Hollow steel, vertically stiffened with steel ribs and all voids filled with incombustible, semi-rigid fibrous insulation or urethane, 1.5 lb./cu.ft., minimum density.
 - .2 Interior Doors: Honeycomb, structural core consisting of kraft paper having 3/4" cell size to thickness indicated.
- .4 Fire Doors: Fire doors shall carry a Fire Underwriter's Laboratory label of classes as required by the drawings.
- .5 Primer: for touch up to CGSB 1-GP-181M+Amdt-Mar-78.

2.2 FABRICATION

- .1 The following fabricators are approved to perform work of this section:
 - .1 Apex Machine Works Ltd., S.W. Flemming Ltd., Macotta Co. of Canada Ltd., Daybar Industries Ltd., Artek.
- .2 Fabricate steel doors as detailed, in accordance, with Canadian Steel Door and Frame Manufacturer's Association, "Canadian Manufacturing Specifications for Steel Doors and Frames", 1978 for hollow steel construction, except where specified otherwise.

- .3 Mortise, reinforce, drill and tap doors and reinforcements to receive hardware using templates provided by finish hardware supplier. Reinforcement gauges to meet or exceed CSDFMA specification.
- .4 Make provision for louvres and glazing as indicated and provide necessary glazing stops.
- .5 Construct rail and stile doors in same manner as flush doors.
- .6 Conceal weld where possible; if exposed, grind and buff smooth to match adjacent surfaces.
- .7 Touch up doors with primer where galvanized finish damaged during fabrication.
- .8 All exterior door joints to be sealed to prevent moisture penetration.
- .9 Top of all exterior doors to be fitted with vinyl cap.
- .10 Weep holes to be provided in bottom closure channel of all exterior doors.

3 Execution

3.1 INSTALLATION

- .1 Installation of hollow metal doors supplied by this Section and finishing hardware supplied under Work of Section 08 71 00 is specified under Work of Section 06 20 00.

3.2 ADJUSTMENT AND CLEANING

- .1 Refinish damaged and defective work before completion of project.
- .2 Adjust operable parts for correct function.

END OF SECTION

1 General

1.1 RELATED WORK SPECIFIED ELSEWHERE

- | | | |
|----|--------------------------|------------------|
| .1 | Unit Masonry | Section 04 21 00 |
| .2 | Rough Carpentry | Section 06 10 00 |
| .3 | Sealants | Section 07 90 00 |
| .4 | Steel hollow metal doors | Section 08 11 00 |
| .5 | Door Hardware | Section 08 71 00 |
| .6 | Glazing | Section 08 80 05 |
| .7 | Painting | Section 09 90 00 |

1.2 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 30 00.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Coordinate all work related to Section 01355 Waste Management Disposal with Contractor.

1.4 LEED

- .1 Not Used.

2 Products

2.1 MATERIALS

- .1 Sheet steel: commercial grade steel to ASTM A366-72, Class 1 finished to ASTM A526(1975) W25 wiped zinc finish.
- .1 Frames: generally 16 ga. base thickness steel.
 - .2 Floor anchors, channel spreaders and wall anchors: minimum 16 ga. base thickness steel.
 - .3 Guard boxes: minimum 22 ga. base thickness steel.
 - .4 Glazing stops: minimum 20 ga. base thickness steel, tamperproof.
- .2 Reinforcing channel: to CSA G40.21-M1978, type 300W.
- .3 Door bumpers: black neoprene single stud.
- .4 Primer: to CGSB 1-GP-181M+Amdt-Mar-78.

2.2 FABRICATION

- .1 The following fabricators are approved to perform work of this section:

- .1 Apex Machine Works Ltd., S.W. Fleming, Macotta Co. of Canada Ltd., Daybar Industries Ltd., Artek
- .2 Fabricate frames as detailed, to Canadian Steel Door and Frame Manufacturer's Association, "Canadian Manufacturing Specifications for Steel Doors and Frames", 1978; except where specified otherwise.
- .3 Exterior door frames to be thermally broken.
- .4 Cut mitres and joints accurately and weld continuously on inside of frame profile.
- .5 Grind welded corners and joints to flat plane, fill with metallic paste filler and sand to uniform smooth finish.
- .6 Touch up frames with primer where galvanized finish damaged during fabrication.
- .7 Provide adjustable jamb anchors for fixing at floor.
- .8 Prepare frames for specified hardware with mortises and reinforcement. Drill and tap to template information.
- .9 Construct thermally broken frames using steel core, separating exterior portion of frame from interior portion with polyvinyl chloride thermal breaks.
- .10 Install 3 bumpers on strike jamb for each single door.
- .11 Reinforce head of frames wider than 4'-0" in unsupported width.
- .12 Provide labelled fire rated frames where required.

3 Execution

3.1 INSTALLATION

- .1 Set frames plumb, square, level and at correct elevation.
- .2 Secure anchorages and connections to adjacent construction.
- .3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 4'-0" wide. Remove temporary spreaders after frames are built-in.
- .4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.

3.2 CLEANING AND ADJUSTMENT

- .1 Refinish damaged and deflective Work before completion of Project. Refinish exposed surfaces to ensure that no variation in appearance is discernible.
- .2 Clean work for specified finishing at completion of installation.

END OF SECTION

1 General

1.1 RELATED WORK

- .1 Sealants Section 07 90 00
- .2 Finish hardware Section 08 71 10
- .3 Glazing Section 08 80 50

1.2 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 33 00
- .2 Indicate each type of door and frame, extrusion profiles, method of assembly, section and hardware reinforcement, locations of exposed fasteners and finishes.

1.3 MAINTENANCE DATA

- .1 Provide maintenance data for cleaning and maintenance of aluminum finishes for incorporation into maintenance manual specified in Section 01 33 00.

1.4 PROTECTION

- .1 Apply temporary protective coating to finished surfaces. Remove coating after erection. Do not use coatings that will become hard to remove or leave residue.

1.5 ALLOWANCE TOLERANCES

- .1 Fabricate work to a tolerance of +/- 1/16" for vertical, horizontal and diagonal dimensions of units under 6'-0" and +/- 1/8" for dimensions greater than 6'-0".

1.6 EXTENDED WARRANTY

- .1 Submit a warranty of the Work of this Section covering the period for four years beyond the expiration of the performance bond specified in the General Conditions to the Contract.
- .2 Defective Work shall include, but not be restricted to: leaking, loosening of whole or of parts of units, breakage or deformation of unit metal work, glass breakage (other than by accidental cause), and fading or discoloration of factory applied finishes.
- .3 This Section shall assume responsibility for extended warranties of caulking and glazing included in the Work of this Section and specified in Sections 07 90 00 and 08 08 50 respectively.

2 Products

2.1 MATERIALS

- .1 Aluminum extrusions: Aluminum Association alloy AA6063-T5, anodizing quality.

- .2 Sheet aluminum: Aluminum Association alloy AA5005-H32.
- .3 Steel reinforcement: to CAN3-G40.21-M81, grade 44W hot dip galvanized to CSA G164-1965 (R1972).
- .4 Fasteners: aluminum, or stainless steel, finished to match adjacent material.
- .5 Weather strip: replaceable mohair.
- .6 Threshold: Crowder 7" wide, full width of door opening.
- .7 Isolation coating: alkali resistant, bituminous paint or epoxy solution.
- .8 Glass: Tempered glass to CAN/CGSB-12.1-M79, Type 2, Class B.
- .9 Glazing Materials: in accordance with Section 08 80 00.
- .10 Sealants: in accordance with Section 07 90 00, colour selected by Architect.
- .11 Finish hardware as specified in Section 08 71 00.

2.2 FINISHES

- .1 Finish exposed surfaces of aluminum components in accordance with Aluminum Association Designation System for Aluminum Finishes - Latest Edition.
 - .1 All doors: Clear anodized aluminum.
 - .2 All frames and screens: clear anodized aluminum.

2.3 METAL FINISHES

- .1 Finish steel clips and reinforcing steel with 280 g/m² zinc coating to CSA G164-1965(R1972).

2.4 FABRICATION

- .1 Construct doors, transom panels, frames and screens to profiles and maximum face sizes as shown.
- .2 Design frames and screens in exterior walls to:
 - .1 Accommodate expansion and contraction within service temperature range of -35 deg.C to 75 deg. C.
 - .2 Limit deflection to 1/175th of clear span tested to ASTM E330-79 under wind loads for building locality as ascertained by NBC Supplement No. 1 Climatic Information for Building Design in Canada.
- .3 Make allowances for deflection of structure. Ensure that structural loads are not transmitted to aluminum work.
- .4 Provide structural steel reinforcement for strength, stiffness and connections.
- .5 Fit intersecting members to flush hairline weather-tight joints and mechanically fasten together, except where indicated otherwise.

- .6 Conceal fastenings from view. Exposed fastenings where indicated.
- .7 Form cut-outs, recesses, mortising or milling for finishing hardware as specified in Section 08710. Reinforce with aluminum or galvanized steel plates.
- .8 Field apply isolation coating to aluminum in contact with dissimilar metals, cementitious materials.
- .9 Provide replaceable weather stripping at exterior and vestibule door openings. Pile sweep strip applied to door rail.

2.5 ALUMINUM FRAMES AND SCREENS

- .1 Frames for doors and screens to be aluminum extrusions 2" x 6" with minimum wall thickness 0.120".
- .2 Style and manufacturer: Alumicor 3400G Series , Kawneer 450T Series,.
- .3 Acceptable Manufacturers: Anotec 60 Series, Fulton FG 3000 MP, Prevost to meet specified requirements.
- .4 Frames for doors and screens to be by same manufacturer as aluminum doors.
- .5 Interior frames and screens to be 1 3/4" x 4" sections – Alumicor 800, or Kawneer 450, clear anodized aluminium.

2.6 ALUMINUM DOORS – SWING TYPE

- .1 Construct doors of porthole extrusions with minimum wall thickness of 0.120".
- .2 Type: Swing.
- .3 Style and manufacturers: Alumicor, Series 400B, Kawneer Medium Duty 350, Fulton and Prevost to match construction of Alumicor, Series 400B. Interior aluminum doors other than vestibule doors are to be Kawneer 190 or Alumicor 100A.
- .4 Reinforce mechanically-joined corners of doors by welding, spigotting, welding and spigotting or by one piece of cast aluminum angle to produce sturdy door unit.
- .5 Glazing stops: interlocking snap-in type for dry glazing. Exterior stops: tamper-proof type.
- .6 Finish Hardware provided by 08 71 00.

3 EXECUTION

3.1 INSTALLATION

- .1 Install work plumb, square, level free from warp, twist and superimposed loads.
- .2 Secure work in required position. Do not restrict thermal movement.
- .3 Install hardware in accordance with Section 08 71 10 - Finish Hardware.

.4 Adjust operable parts for correct function.

.5 Isolate from cementitious materials.

3.2 GLAZING

.1 Glaze aluminum doors, screens and sidelights using clear tempered glass in accordance with Section 08 80 50.

3.3 CAULKING

.1 Where required seal between members of aluminum work and adjacent work, as well as between members of aluminum work.

.2 Apply sealant in accordance with Section 07 90 00.

END OF SECTION

1 General

1.1 GENERAL CONDITIONS

- .1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 RELATED WORK

- .1 Contract Close Out Section 01 70 00
- .2 Sheet Waterproofing and Air Barrier Section 07 19 00
- .3 Sealants Section 07 90 00

1.3 REFERENCE STANDARDS

- .1 Do windows and doors in accordance with AAMA/WDMA/CSA 101/I.S.2/A440, NAFS – North American Fenestration Standard/Specification for Windows, Doors, and Skylights,” and CSA A440S1, Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, NAFS – North American Fenestration Standard/Specification for Windows, Doors, and Skylights.

1.4 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 30 00.
- .2 Indicate materials and large scale details for head, jamb, and sill, profiles of components, elevations of unit, anchorage details, description of related components.

1.5 SAMPLE WINDOWS

- .1 Submit a full size sample window with the Shop Drawings complete with pre-painted vinyl.
- .2 Do not manufacture windows until the Architect approves sample.

1.6 APPROVED WINDOWS

- .1 Kohler, Supreme Series
- .2 Atlantic Windows, Designer Series, High Performance
- .3 Marvin, Wood-Ultrex , High Performance
- .4 Alternate manufacturers able to meet all of the requirements of this Section will be considered by the Architect prior to tender closing upon submittal of sample window and frame cut away.

- .1 Note: Windows not able to meet performance criteria as noted in item 2.1.1 standard of acceptance will not be considered.

2 Products

2.1 WINDOW AND PATIO DOOR MATERIALS

.1 WINDOWS

- .1 Standard of Acceptance for windows: This specification section is based on Kohler Supreme Series, awning and fixed windows with the following performance criteria per CSA A440S1-17:
 - .1 Performance Class: **CW**
 - .2 Minimum Performance Grade: **40**
 - .3 Minimum Design Pressure: **1920 Pa.**
 - .4 Minimum Water Penetration Resistance Test Pressure: **400 Pa.**
 - .5 Minimum Canadian Air Infiltration / Exfiltration: **A2**
- .2 Windows generally comprising: Mix of Awning, hopper and fixed all with insulating lites. Window units shall be of size, layout and fenestrations as shown on the drawings.
 - .1 Frame and sash shall be welded PVC, reinforced, assembled and with operating hardware installed.
 - .2 Frame depth shall be 3 1/4"
 - .3 Frame shall have a minimum of 9 closed wall chambers
- .3 Multiple weather stripping.
- .4 Dry glazing, complete with an exterior point bead of caulking - GE Brand SCS2800 "Silglaze II"
- .5 Inside glass stop.
- .6 Galvanized steel installation brackets
- .7 Glazing: insulating glass with 1/2" air space with low E argon glass, solar ban 60 (or ES72) on number 3 surface and warm edge spacer. Provide muntin bars on arched windows as per drawings.
- .8 Jamb extensions to be all PVC 3/4 " return, supplied by window manufacturer, as per drawings.

- .9 1" Brick mould to be all PVC supplied by window manufacturer, as per drawings and to be large enough to cover rough buck. Secure with acrylic adhesive.
- .10 Windows shall be modified at the factory to limit opening to 4" with stainless steel restrictors. Devices used to limit window opening shall be removable, using simple hand tools.
 - .1 Colour: White exterior, white interior.
- .11 Sealants: in accordance with Section 07 90 00, colour selected by Architect.
- .12 Air seal interface gasket: 60 mil self-adhering membrane of rubberized asphalt. (Blueskin or Architect approved equal.)

2.2 WINDOW FABRICATION

- .1 Fabricate fixed, and casement windows and patio doors as indicated on drawings and to requirements of CSA as per 1.3 Reference Standards.
- .2 Brace frames to maintain squareness and rigidity during shipment and installation.
- .3 Reinforce frames as required to meet specified performance criteria under 2.1.1 and 2.2.

2.3 WINDOW GLAZING

- .1 Factory glaze windows.
- .2 Provide exterior point bead caulking to exterior face of sealed units as per manufacturer's instructions.

2.4 SHEET METAL FLASHINGS

- .1 Metal Flashing and Trim: 24 Gauge prefinished aluminium
 - .1 Colour: White
- .2 Provide materials and types of fasteners, protective coatings, sealants and other miscellaneous items as required to complete sheet metal flashing and trim installation .

3 Execution

3.1 WINDOW INSTALLATION

- .1 Set window units in prepared openings plumb, square and level, free from warp, twist or superimposed loads.
- .2 Install windows in strict accordance with Manufacturer's instructions & details on drawings.

- .3 Back caulk all windows with a generous bead of caulking.
- .4 Secure work adequately and accurately to structure in required position, in manner not restricting normal movement of PVC windows. Use galvanized installation brackets.
- .5 Secure rubberized asphalt air seal (Bueskin) to window frame and wall sheathing as per details on drawings. Seal Blueskin to adjacent materials. Note special detail for carrying Blueskin under window sills.
- .6 Fill void between wood framing and window frame with low expansion spray foam and caulk between interior side of window frame and wood framing, all as per details on drawings.
- .7 Adjust opening sash and hardware to operate smoothly.

3.2 CAULKING

- .1 Seal joints between frame members, fixed window units and other non-operating components of window assembly with sealant to provide weather tight seal at outside and air vapour seal at inside. Provide backer rods and caulking as per drawings.
- .2 Apply sealant in accordance with Section 07 90 00. Conceal sealant within window components except where exposed use is permitted by Architect.

END OF SECTION

1 General

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements listed in Division 1

1.2 RELATED WORK

- | | | |
|----|----------------------------|------------------|
| .1 | Pressed Steel Frames | Section 08 11 00 |
| .2 | Wood Doors | Section 08 21 00 |
| .3 | Aluminium Doors and Frames | Section 08 11 16 |
| .4 | Steel Hollow Metal Doors | Section 08 11 00 |

1.3 REFERENCE STANDARDS

- .1 Standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacture's Association.
- .2 CAN/CGSB-69.18-M90/ANSI/BHMAA156.1-1981, Butts and Hinges.
- .3 CAN/CGSB-69.19-M89/ANSI/BHMAA156.3-1984, Exit Devices.
- .4 CAN/CGSB-69.20-M90/ANSI/BHMAA156.4-1986, Door Controls (Closers).
- .5 CAN/CGSB-69.21-M90/ANSI/BHMAA156.5-1984, Auxiliary Locks & Products.
- .6 CAN/CGSB-69.22-M90/ANSI/BHMAA156.6-1986, Architectural Door Trim.
- .7 CAN/CGSB-69.24-M90/ANSI/BHMAA156.8-1982, Door Controls - Overhead Holders.
- .8 CAN/CGSB-69.29-M90/ANSI/BHMAA156.13-1980, Mortise Locks and Latches.
- .9 CAN/CGSB-69.34-M90/ANSI/BHMAA156.18-1984, Materials and Finishes.
- .10 CAN/CGSB-69.34-M89/ANSI/BHMAA156.19-1984, Power Assist and Low Energy Power Operated Doors.

1.4 QUALITY ASSURANCE

- .1 Meet all requirements of the local building code and all other applicable regulations.
- .2 Products listed in Part 2 of this specification establish the minimum requirements for this project. Approval for alternate products must be requested in writing seven (7) days prior to tender closing date. Deviation from specified products will require the supply and installation of correct products, any/all associated costs.
- .3 Qualified suppliers must have in their employ a Certified A.H.C. (Architectural

Hardware Consultant) as licensed by the Door and Hardware Institute. The supplier must have a minimum of two (2) years experience furnishing hardware for similar projects. Only firms that can extend manufacturers warranty to the project are to be considered as suppliers.

- .4 Inspection of supplied Finishing Hardware will be done by a Certified A.H.C., in the employ of the Hardware Supplier, who will issue a complete Site Inspection Report to the Architect.

1.5 REQUIREMENTS REGULATORY AGENCIES

- .1 Use ULC/ULI listed and labeled hardware for doors in fire separations and exit doors.

1.6 SUBMITTALS

- .1 Alternate products must be submitted 5 days prior to tender closing for approval.
- .2 Prepare and submit three (3) copies of a detailed hardware schedule listing product numbers size and finishes. Include three (3) sets of catalog cuts.
- .3 Furnish other sections with two (2) complete sets of hardware templates for related fabricating and installation.
- .4 Submit for owner review and comments two (2) key schedules listing the door number, hardware heading or item, and the key group.
- .5 Where electrical hardware is to be supplied, provide wiring diagrams showing all wire termination points. Where electrical hardware is to be supplied and installed provide the contractor with riser diagrams listing the correct wire runs and back box sizes as well as 115 VAC requirements.

1.7 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00 - Shop Drawings, Product Data, Samples.
- .2 Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.
- .3 After approval samples will be returned for incorporation into the Work.

1.8 PRODUCT DELIVERY, HANDLING, AND STORAGE

- .1 Deliver each hardware item in its original package complete with all fasteners, keys, templates, and installation instructions required for installation.
- .2 Clearly mark each container with the door opening number and the hardware schedule item or heading number.
- .3 The contractor must store hardware delivered in a secure area. The storage area must contain adequate shelf space to hold all the hardware off the floor. Ensure the area is kept dry and clean.
- .4 When requested, package items of hardware separately for delivery to other fabricators for their installation.

1.9 SITE INSTRUCTION

- .1 Manufacturers of products supplied to this project are to provide a site instruction to the finishing hardware installers, detailing how each of their products are to be installed. This instruction is to provide a thorough knowledge of the product and its function prior to installation.
- .2 Each manufacturer of product supplied to this project is to provide the end user with a product seminar, combining function, servicing and trouble-shooting. Furnish the end user with service/parts manuals and instructions for each product used on site.

1.10 MAINTENANCE DATA

- .1 Provide operation and maintenance data for door closers, lock sets, door holders and fire exit hardware for incorporation into manual specified in Section 01730 Operation and Maintenance Manual.
- .2 Brief maintenance staff regarding proper care, cleaning, and general maintenance.

1.11 MAINTENANCE MATERIALS

- .1 Supply two sets of wrenches for door closers lock sets and fire exit hardware.

1.12 WARRANTY

- .1 Provide a written warranty for a period of one (1) year for all hardware supplied, 5 years on cylindrical locks and 10 year on door closers (lifetime on closer shell).

PART 2

PRODUCTS

2.1 BUTT HINGES

- .1 All butt type hinges will be five knuckle ball bearing.
- .2 Exterior out swing doors must be non-ferrous and have non-removable pins (NRP).
- .3 Where the door width exceeds 3'0" (914mm) supply 5" (127) high hinges.
- .4 Supply two (2) hinges for doors up to 5'0" (1525 mm) high and an additional hinge for each 2'5" (760 mm) or fraction thereof in door height.
- .5 Specified Products: Mont-Hinge BB1079

2.2 CENTER HUNG PIVOTS

- .1 Center hung pivots will be “Camtrol” double- acting type, with surface mounted floor pivot, and frame mounted head pivot, that can bear up to 100 lbs per door.
- .2 Pivot set shall have steel anchor arms and complete pivot housing for door thickness of 1 ¾”, and door width up to 44”.
- .3 Camtrol pivot shall have only three moving parts in each pivot, and allows snug application without rounding door edge.
- .4 Specified products: Hager

2.3 CONTINUOUS HINGES

- .1 All full height hinges must be knuckle type with nylon bearings between each knuckle.
- .2 Supply an aluminum hinge for out swinging exterior doors and a steel hinge for all labeled and interior doors.
- .3 Specified products: Gallery Specialty Hardware CH931/CH941

2.4 LOCKS AND LATCHSETS

- .1 Locksets and latchsets are to be cylindrical, lever type, and meet ANSI Grade 1 or 2, A117.1 Accessibility, and ULC requirements.
- .2 Lever trim must have concealed through bolt mounting, and the levers are to be solid cast with a return to the door face. All locks are to have heavy duty cast mounting plates, threaded hub and locking nut, and stainless steel interlocking spindle.
- .3 Provide ¾” latch throw for pairs of labeled doors.
- .4 All locksets and cylinders supplied for this project must have 6-pin cores, master keyed as directed.
- .5 Specified products: Schlage ND-P-OME Series / AL-P-OME Series

2.5 EXIT DEVICES

- .1 All exit devices will be low profile push pad style devices. Outside trim will have the same trim design as the locksets. Furnish all devices in dull chrome plated finish. Exit hardware must have the correct life safety or fire rated labels attached to the active case. Ensure that the actuating push pad covers 1/2 of the door opening.

- .2 Exit devices installed on exterior doors must have dead-locking latch bolts to ensure tamper-proof security.
- .3 Where pairs of double egress doors are detailed to have two (2) vertical rod exit devices, provide fire labeled devices less bottom rods.
- .4 Specified products: Von Duprin 98 / 9827 Series

2.7 DOOR CLOSERS

- .1 Door closers will all have full adjustment features including back check, closing speed, and latch speed control.
- .2 All interior door closers will have reduced opening force spring power to meet the barrier free codes of 22N (5 lbs.)
- .3 Surface mounted door closers are to be located on the room side of the door whenever possible or as directed by the architect.
- .4 Provide all mounting plates for door closers required for use with concealed overhead door stops.
- .5 Door closers are to have full body covers to match the project finishes. Installation instructions must be inside all door closer covers.
- .6 At high abuse and exterior door locations door closers shall be equipped with a rigid main arm c/w shock absorbing spring located in the soffit plate. Alternately furnish these doors with a grade one closer and separate overhead doorstop.
- .7 Specified products: LCN 4011 / 4021 / 4031 Series

2.8 ELECTROMAGNETIC LOCKS

- .1 Furnish Electromagnetic locks to exceed ANSI/BHMA A156.23 Grade 3 standards, and listed by Underwriters Laboratories Canada where required. Electromagnetic locks are to have fully automatic voltage selection, modular design, and armature housing which holds the armature in place, eliminating noise and sagging.
- .2 It is the responsibility of the finishing hardware supplier to provide Riser Diagrams, Point to Point Diagrams and method of operation notes for each of the openings utilizing these products.
- .3 Specified products: Locknetics 320+ Series

2.9 DOOR OPERATORS

- .1 Door operators will be supplied and installed by this section. The operator must include hydraulic door control features including back check and latch speed. Wiring / electrical connection will be by Division 16, Electrical, and include hook up of all wire runs and all hook up to related releasing hardware (i.e.: electric strike/mag lock).

- .2 Supply the activating switches as required to suit the details shown in elevation or as listed in the hardware schedule.
- .3 Specified products: LCN9540 Series

2.10 PULLS AND PLATES

- .1 Supply door trim as listed in the hardware schedule. Pulls are supplied with back to back (BTB) or through bolt mounting as required. When push plates are listed with door pulls, install the push plate to conceal the through bolt.
- .2 All kickplates, push plates, and bumper plates must have all sides beveled and corners rounded to ensure there are no sharp edges. Supply plates with tape mounting or if screws are listed, with counter sunk screw holes. The plates will be .050 thick unless listed otherwise, and sized to suit door width. Kickplate will be door width less 1.5" (35 mm) for single doors, and less 1" (25 mm) for pairs of doors.
- .3 Specified products: Ives, Gallery Specialty Hardware

2.11 DOOR STOPS AND HOLDERS

- .1 Wall stops are only to be used on proper wall conditions such as block or masonry. Supply floor stops with sufficient height to suite the floor condition or undercut of doors.
- .2 Overhead stops and holders will be surface mounted unless there is a conflict with door closers or other hardware.
- .3 Electromagnetic door holders will be heavy duty, tri-voltage, standard profile, and recessed wall mount.
- .4 Specified products: Gallery Specialty Hardware, Glynn-Johnson, LCN

2.12 DOOR SEALS

- .1 Perimeter seals must be supplied to fully cover all gaps between the door, frame, and floor condition to seal against weather, sound, or smoke.
- .2 Frame gasketing must be closed cell neoprene. The extruded housing must have a rib to prevent distortion during installation. Aluminum frames will be equipped with felt inserts by the frame supplier.
- .3 Door bottoms will be heavy duty and have an adjustment screw to ensure proper contact with the floor. Supply the correct drop insert for carpet where required.
- .4 Thresholds must be installed to ensure the door bottom makes full contact. Supply thermally broken thresholds for all exterior door openings.
- .5 Specified products: Unique Weatherstrip & Thresholds

2.13 KEYING

- .1 Door locks, cylinders, and cabinet locks to be keyed under a new factory registered Grand Master key system, using a Schlage Security Everest "D" Registered Keyway. Prepare a detailed keying

schedule showing all doors grand master keyed, master keyed, keyed differently, keyed alike or keyed alike in groups as directed, and in conjunction with the owner's representative.

- .2 Provide three (3) keys for every lock and cylinder in this contract.
- .3 Provide three (3) Master keys for every MK and GMK group in this contract.
- .4 Stamp keying code numbers on all keys and cylinders supplied.
- .5 Provide temporary construction cylinders during building construction.
- .6 Provide all permanent lock cylinders and keys to Owner's representative on site.

PART 3 EXECUTION

3.1 INSPECTION

- .1 The Architectural Hardware Consultant (A.H.C.) supplying hardware for this project shall inspect all the door openings to ensure that hardware installation is complete, and that all hardware items are installed and operating as intended.
- .2 A written report is to be furnished to the Contractor, Architect & Owner detailing each opening in need of corrective action. A final inspection will be required to confirm satisfactory operation.

3.2 INSTALLATION

- .1 The general contractor shall obtain a copy of ANSI/DHI A115.1G-94, "Installation Guide for Doors and Hardware". It is the intent of this document to be used as a reference guide in the proper handling, storage, and installation of finishing hardware, and doors and frames. This document can be obtained through the Door and Hardware Institute.
- .2 Other trades installing hardware must follow all manufacturer's instructions including door closer adjustment, handing of locksets as required, and degree of door swing. Advise the consultants if door frames are not square and plumb and prevent proper door installation.
- .3 Mount hardware to suit door elevations. Unless otherwise directed by the consultant, install hardware at the following mounting heights:

Locksets	40"	(1015mm)
Exit device	40"	(1015mm)
Push/Pull	42"	(1065mm)
Deadlock	60"	(1524mm)
Deadlock	48"	(1220mm) per OBC intent.
- .4 When requested, the hardware supplier will instruct the installer as to how various newer or unusual items that are required to be installed for proper performance.

3.3 HARDWARE SCHEDULE

END OF SECTION

1 GENERAL

1.1 GENERAL CONDITIONS

- .1 The General Conditions of the contract as well as provisions of Division 1 at the beginning of these specifications shall be deemed to apply and be a part of this section of the specification.

1.2 WORK INCLUDED

- .1 The intent of this section of the specification is to complement the drawings in describing all of the glass and glazing work for the project.
- .2 Installation of glass for work described in the following Sections are part of the work of this Sections:
 - .1 08 11 00 Steel Hollow Metal Doors
 - .2 08 11 10 Pressed Steel Frames
 - .3 08 11 16 Aluminum Doors & Frames
 - .4 08 21 00 Wood Doors
 - .5 08 50 50 Aluminum Curtain Wall

1.3 EXTENDED WARRANTY

- .1 Submit a warranty of the Work of this Section covering the period for four years beyond the expiration of the performance bond specified in the General Conditions.
- .2 Defective Work shall include, but not be restricted to: leaking, loosening of whole or of parts of units, breakage or deformation of work, glass breakage (other than by accidental cause), seal failure and fading or discolouration of factory applied finishes.

2 PRODUCTS

2.1 WORK INCLUDED

- .1 Clear Sheet Glass: to CAN2-12.2-M76 B quality.
- .2 Polished Plate or Float Glass to CAN2-12.3-M76, glazing quality.
- .3 Clear wired glass: to CAN2-12.11-M76, Type 1, wire mesh style 4, 1/4" thick.
- .4 Vision Glass, Insulating Glass Units: Factory sealed double glazed units. Outer lite 6mm heat resistant, colour to be specified by Architect; Inner lite 6 mm tempered, low E solar ban 60 (or ES72) on number 3 surface float glass; with a hermetically sealed space of 1/2" width complete with low E argon and warm edge spacer.

- .5 Translucent Glass Units: Factory sealed double glazed units. Outer lite 6mm heat resistant, Silk screened Ceramic Frit (40% coverage) Colour determined by Architect – High opacity white; Inner lite 6 mm clear tempered,; with a hermetically sealed space of ½" width complete with low E argon and warm edge spacer.
- .6 Spandrel panels: One lite 6mm heat strengthened glass, complete with Ceramic Frit. Colour determined by Architect.
- .7 Clear tempered glass: to CAN2-12.1-M79, Type 2, Class B 1/4" thick.

2.2 GLAZING AND SEALING COMPOUND MATERIALS

- .1 Glazing Compound: oil base, to CGSB 19-GP-6M, Type 1.
- .2 Sealant Compound: one component acrylic base, to CGSB 19-GP-5M+Amdt-Nov-79, gun grade.
- .3 Glazing Tape: glazing gaskets, 10-15 durometer hardness, paper release.
- .4 Setting Blocks: neoprene, Shore "A" durometer hardness 70-90.
- .5 Spacer shims: neoprene, Shore "A" durometer hardness 40-50.
- .6 Primer-sealers and cleaners: to glass manufacturer's standard.

3 EXECUTION

3.1 WORKMANSHIP

- .1 Remove protective coatings and clean contact surfaces with solvent and wipe dry.
- .2 Apply primer-sealer to contact surfaces.
- .3 Place setting blocks as per manufacturer's instructions.
- .4 Install glass, rest on setting blocks, ensure full contact and adhesion at perimeter.
- .5 Install removable stops, without displacing tape or sealant.
- .6 Provide edge clearance of 1/8" minimum.
- .7 Insert space shims to center glass in space. Place shims at 2'-0" o.c. and keep 1/4" below sight line.
- .8 Apply cap bead of sealant at exterior void.
- .9 Apply sealant to uniform and level line, flush with sightline and tooled or wiped with solvent to smooth appearance.
- .10 Do not cut or abrade tempered glass.

3.2 INSTALLATION

- .1 All glass units will be glazed using one of the two methods described below:

- .1 Glass units shall be bedded to the exterior with Butyl tape; a heel bead of acoustic sealant shall be applied to the complete interior perimeter of the glass unit to seal the unit to the sash or frame. An interior finish of removable vinyl "Vision Strip" shall be applied and inserted into the open channel and anchored into the acoustic heel bead.
- .2 Glass units shall be bedded to the exterior with Butyl tape, recessed 1/8" minimum. Fill the recess with a bead of Silglaze. Glass unit to be further bedded in a seal of acoustic sealant around the complete interior perimeter to seal glass unit to the sash or frame. An interior finish of Butyl tape shall be used to bed the interior stop to the glazing unit.

3.3 ADJUSTMENT AND CLEANING

- .1 Replace scratched, etched, or defective glazing resulting from manufacture, setting, handling, or storage before or during installation.
- .2 Immediately remove sealant and compound droppings from finished surfaces. Remove labels after work is completed.

END OF SECTION

1 General

1.1 RELATED WORK

- .1 Finish Carpentry Section 06 20 00
- .2 Doors and frames: Section 08 11 10, 08 21 00

1.2 WASTE MANAGEMENT AND DISPOSAL

- .1 Collect, separate and recycle all site generated waste materials.

1.3 LEED DOCUMENTATION

- .1 Not Used.

1.4 REFERENCE STANDARDS

- .1 The best practices specified or recommended in CAN2-85.100-M81 shall govern for materials, methods and procedures.

1.5 ENVIRONMENTAL REQUIREMENTS

- .1 Do not apply paint finish in areas where dust is being generated.
- .2 Ensure that all areas in which paint is applied are well-ventilated and broom clean.
- .3 Do not apply paint unless a uniform minimum 50°F air temperature has been achieved in the installation area for 24 hours prior to and after application.

1.6 PROTECTION

- .1 Cover or mask surface adjacent to those receiving finish to protect work of others from damage and soil.

1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Deliver to site each container sealed and labelled with manufacturer's name, catalogue number or brand name, colour, formulation type, reducing instructions, and reference standard specification number if applicable.
- .2 Store only acceptable project materials at site, and in an area specifically set aside for purpose that is locked, ventilated, maintained at a temperature of over 4°C, and protected from direct rays of sun. Ensure that health and fire regulations are complied with in storage area.

1.8 EXTRA STOCK

- .1 Deliver to Owner on completion of Work, and as he directs, sealed containers of each finish painting material applied, and in each colour. Label each container as for original, including mixing formula. Provide one litre of extra stock when less

than 40 litres are used for project, 4 litres of extra stock when 40 to 50 litres are used, and 8 litres of extra stock when over 150 litres are used.

1.9 ECO-LOGO

- .1 All paint products are to be "Eco-Logo" approved products. Supply appropriate certificate from manufacturer.
- .2 All paints to be premium low order, zero VOC.

1.10 TECHNICAL REPRESENTATION

- .1 Manufacturer's Obligations
 - .1 The manufacturer shall play an active role in the application of his product during the period of this contract. The manufacturer shall be represented at all these meetings by a qualified technical representative, trained as a paint inspector with a minimum of 5 years experience. The technical representative shall be approved by the Architect.
 - .2 The project shall be subdivided into "Sectors of Work":
 - .1 A minimum of three inspections per sector from the Manufacturer's representative must be made prior to and during application of this work to ensure proper application.
 - .2 After each visit provide a written report to the Architect within 5 working days.
 - .3 30 days prior to any painting, a prejob conference shall be held to confirm methods, materials, etc. for this contract. Items to be present: specifications, finish schedule, colour schedule, product data sheets - MSDS.

1.11 PREJOB CONFERENCE

- .1 After the award of this contract and prior to the preparation of a mock sample area, a pre-job conference shall be held with the following people present:
 - .1 The Architect, Owner and Project Manager
 - .2 The applicator and his designated inspectors and crew supervisors who will be working on site on this project
 - .3 The paint manufacturer's trained paint inspector.

1.12 COLOUR SELECTION

- .1 Colours will be selected by the Architect.
- .2 There is no limit to the number of colours that will be selected.

2 Products

2.1 MATERIALS

- .1 Acceptable Manufacturers: Benjamin Moore or approved equal.
- .2 Paint materials: to Ecologo and CGSB Standards listed in Finishing Formulae.
- .3 Paint materials for each coating formulae to be products of a single manufacturer.

3 Execution

3.1 EXAMINATION

- .1 Ensure that surfaces to receive finishing materials are satisfactory for specified materials; have been provided as specified in the Work of other Sections; will not adversely affect execution, permanence, or quality of Work; and can be put into an acceptable condition by means of preparation specified in this section.
- .2 Defective painting and finishing Work resulting from application to unsatisfactory surfaces will be considered the responsibility of those performing the Work of this Section.

3.2 EXTENT OF WORK

- .1 All new work in finished areas is to be painted.
- .2 Where a room or surface is called to be painted, all work in the room or surface other than pre-finished work is to be painted.

3.3 PREPARATION OF SURFACES

- .1 General:
 - .1 Vacuum clean interior areas immediately before finishing work commences.
 - .2 Remove from surfaces: grease, oil, dirt, dust, ridges, and other soil and materials that would adversely affect the adhesion or appearance of finish coatings.
 - .3 Rust on surfaces primed under work of other Sections shall be removed and the areas re-primed under the Work of these Sections.
 - .4 Finish, patch and smooth surfaces to remove cracks, holes, ridges, and similar blemishes.
 - .5 Touch-up damaged prime coats on shop primed metals with same priming material. Feather out edges of shop coat and smooth repair coat into shop coat surfaces.
 - .6 Scrub mildewed surfaces with a solution of tri-sodium phosphate, bleach with a solution of one part sodium hypochlorite (Javex) to three parts water, and rinse with clear water.

- .2 Masonry:
 - .1 Fill minor holes and cracks in concrete, and concrete masonry with Portland cement grout.
 - .2 Remove dirt, scale, loose mortar, and similar foreign matter by brushing.
- .3 Touch up shop paint primer on steel with CGSB 1-GP-40M to CGSB 85-GP-14M.
- .4 Prepare galvanized steel and zinc coated surfaces to CGSB 85-GP-16M.
- .5 Gypsum Board:
 - .1 Fill minor holes and depressions, caused by accidental damage, with drywall joint compound, and sand smooth when it is set, taking care not to raise nap of paper cover.
- .6 Wood:
 - .1 Sand finish surfaces smooth with No. 00 sandpaper.
 - .2 Clean soiled surfaces with an alcohol wash.
 - .3 Wipe off dust and other loose dirt, or vacuum clean before application of coatings.
 - .4 Seal knots, pitch, and sapwood with two coats of uncut orange shellac, or an application of special sealer.
 - .5 After prime coat is dry and sanded, fill nail and screw holes, and cracks with wood filler, or with putty for interior work and caulking compound for exterior work. Colour fillers to match wood or stain if surfaces are given clear final coatings. Smooth, sand and prime fillers when set.

3.4 APPLICATION

- .1 Consult with Architect before proceeding with application of finishes to surfaces for which a formula is given in specification.
- .2 Apply paint to concrete block by spray and back roll method.
- .3 Sand and dust between each coat to remove defects.
- .4 Finish bottoms, edges, tops and cutouts of doors after fitting as specified for door surfaces.
- .5 Finish closets and alcoves as specified for adjoining rooms.
- .6 Apply each coat only after preceding coat is dry and hard, or as otherwise directed by material manufacturer.
- .7 Priming and Back Priming:

- .1 Verify, by review of other sections of this specification, the extent of surfaces primed under work of other sections. Priming of un-primed surfaces shall be included in Work of this Section.
- .2 Back-prime exterior and interior woodwork, frames, fitments and similar work as soon as it is delivered and before installed. Use exterior primer compatible to finish coat for exterior work, and enamel under-coater for interior work to receive paint or enamel finishes. Prevent primer from running over faces.
- .3 Prime tops and bottoms of painted wood doors with enamel under-coater, and tops and bottoms of clear finished doors with gloss varnish. When doors are stained apply varnish after staining. Remove doors to prime and finish.
- .4 Brush out and force primers into grain of wood, and into crevices, cracks and joints in all materials.

3.5 MECHANICAL AND ELECTRICAL EQUIPMENT

- .1 Paint exposed conduits, pipes, hangers and other mechanical and electrical equipment occurring in finished areas. Colour and texture to match adjacent surfaces, except as noted otherwise.
- .2 Paint all exterior louvres, etc.
- .3 Keep sprinkler heads free from paint.
- .4 Paint both sides of plywood backboards for equipment before installation.

3.6 COLOURS

- .1 Colours of paints, including shades of stains, shall be applied to match approved samples.
- .2 Colours will be selected by the Architect.

3.7 INTERIOR FINISHES

- .1 Formula 7: for gypsum board walls apply: one coat latex primer-sealer ICI #8130 Spedwall primer, two coats latex eggshell enamel. ICI #59311 No VOC Lifemaster
- .2 Formula 9: for gypsum board ceilings, apply: one coat primer sealer ICI # 8130 Spedwall primer one coat flat paint ICI #59170 No VOC Lifemaster
- .3 Formula 16: for primed ferrous metal surfaces apply: one coat enamel undercoat ICI # 9431 Ultra, two coats gloss enamel Devoe #4208 Devflex
- .4 Formula 18: for woodwork to receive natural finish apply: one coat shellac CGSB 1-GP-16M-Amdt-Feb-81, Type 2; two coats varnish gloss CGSB

1-GP-36M, Type 1, PPG #77-5 series; one coat varnish satin finish CGSM
1-GP-36M, Type 2, PPG #77-9

- .5 Formula 16: for primed ferrous metal surfaces apply:
one coat enamel undercoat ICI #9431 Ultra
Two coats gloss enamel Devoe #4208 Devflex
- .6 Formula 17: for galvanized and zinc coated metal apply (after etching):
one coat galvanized metal primer two coats enamel semi-gloss enamel
Devoe #4216 Devflex one coat varnish satin finish ICI #1880 Varnish
- .7 Formula 20: for metal doors: one coat enamel undercoat primer Devoe #
4020 Devflex primer, two coats finish coats Devoe #4216 Devflex acrylic
- .8 Formula 22: Interior metal door frames: spray two coats Devoe #4216
Devflex in desired colour-satin finish
- .9 Formula 24: for insulation covering apply: one coat tinted enamel
undercoat ICI # 250 Gripper, one coat egg shell enamel ICI # 59311 No
VOC Lifemaster

3.8 EXTERIOR FINISHES

- .1 Formula 30: for galvanized and zinc coated metal apply: New spancaled
galvanized metal - Abrade with fine sand paper to remove passivation. Apply: 1
coat Pitt-Tech Primer, Devoe # 4020 Devflex Primer, 2 coats Pitt-Tech Gloss,
Devoe #4208 Devflex
- .2 Formula 31: for all exterior doors, frames, miscellaneous trim, mechanical and
electrical equipment: 1 coat Pitt-Tech Primer, Devoe #4020 Devflex Primer, 2
coats Pitt-Tech Gloss, Devoe #4208 Devflex
- .3 Formula 32: For all exposed exterior cement board:
Mapei Plainiseal88 cementitious coating, applied as per manufacturers
instructions.

END OF SECTION



April 10, 2024

HRCE - Halifax Regional Centre for Education
33 Spectacle Lake Drive
Dartmouth, Nova Scotia, B3B 1X7

Re: Hazardous Building Materials Assessment (Management)
Dutch Settlement Elementary School, 990 NS-277, Dutch Settlement, NS
Pinchin File: 336128.014

HRCE – Halifax Regional Centre for Education (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment of Dutch Settlement Elementary School located at 990 NS-277, Dutch Settlement, NS.

Pinchin performed the assessment between March 11 and March 13, 2024. The assessor was unaccompanied during the assessment. The assessment was completed outside of regular school hours when teachers and students were not present. The assessed area was only occupied by maintenance staff at the time of the assessment.

The objective of the assessment was to document the locations of specified hazardous building materials, evaluate their condition and develop corrective action plans as required. This assessment is only to be used for the purposes of long-term management and routine maintenance. The results of this assessment are not to be used for construction, renovation, demolition or project tendering purposes.

The **assessed area** consisted of all interior and exterior areas of the building accessible with a 6-foot ladder, excluding the roof.

The assessment was performed to establish the type of specified hazardous building materials, locations and approximate quantities incorporated in the structure(s) and its finishes.

For the purpose of the assessment and this report, hazardous building materials are defined as follows:

- Asbestos
- Lead
- Silica
- Mercury
- Polychlorinated Biphenyls (PCBs)
- Mould and Water Damage



1.0 RECOMMENDATIONS

1.1 On-going Management and Maintenance

The following recommendations regard on-going management and maintenance work involving the ACM identified.

1.1.1 Asbestos

Inspect all accessible confirmed and presumed ACM at reasonable intervals and update the written documentation annually, as required by provincial guidelines.

Update the asbestos inventory report for all new information obtained (i.e., new materials, change of condition, abatement performed).

Remove ACM before alteration or maintenance work if ACM may be disturbed. Follow appropriate asbestos precautions for the classification of work as per applicable regulations and guidelines.

Asbestos-containing materials must be disposed of at a landfill approved to accept asbestos waste.

1.1.2 Lead

For lead-containing or lead-based paints (i.e., greater than the EACC guideline of 0.1% (1,000 mg/kg) for lead-containing paints, and 0.5% (5,000 mg/kg) for lead-based), construction disturbance may result in over-exposure to lead dust or fumes. The need for work procedures, engineering controls and personal protective equipment should be assessed on a site-specific basis to comply with applicable regulations, and guidelines.

For paints identified as having low levels of lead (i.e., equal to or above 0.009% (90 mg/kg) but less than or equal to the EACC guideline of 0.1% (1,000 mg/kg) for lead-containing paints special precautions are not recommended unless aggressive disturbance (grinding, blasting, torching) is planned.

Exposure from construction disturbance of paints containing lead less than 0.009% (90 mg/kg) is assumed to be insignificant.

Items painted with paints containing elevated levels of lead may be a hazardous waste. Test lead-painted materials for leachable lead and other metals prior to disposal. Metallic components coated with lead paint do not require leachate testing and can be disposed of as non-hazardous construction and demolition (C&D) waste.

Lead-containing items should be recycled when taken out of service.

1.1.3 Silica

Disturbance of silica-containing products during maintenance activities may result in excessive exposures to airborne silica, especially if performed indoors and dry. Cutting, grinding, drilling or demolition of



materials containing silica should be completed only with proper respiratory protection and other worker safety precautions that comply with per applicable regulations and guidelines.

1.1.4 Mercury

Do not break lamps. Recycle and reclaim mercury from fluorescent lamps when taken out of service. Mercury is classified as a hazardous waste and must be disposed of in accordance with applicable regulations.

1.1.5 PCBs

When light fixtures are removed from service, examine light ballasts for PCB content. If ballasts are not clearly labelled as “non-PCB” or are suspected to contain PCBs; package and ship ballasts for destruction at a federally permitted facility. All ballasts that contain PCBs must be removed from service and disposed of by December 31, 2025.

1.2 Construction and Demolition

This assessment report does not provide sufficient detail to support renovation and demolition work. Therefore, perform a detailed intrusive assessment before building renovation or demolition operations. The assessment should include destructive testing (e.g., coring, removal of building finishes and components), and sampling of any other materials not tested (e.g., roofing materials, caulking, mastics).

2.0 BACKGROUND INFORMATION

2.1 Assessed Area Description Summary

Description Item	Details
Building Use	Elementary school
Floors Above Grade	Two
Floors Below Grade	One
Total Area (square feet)	21,156
Year of Construction	1920 (original)
Additions	1983 major renovation/addition
Structure	Concrete, structural steel, wood
Exterior Cladding	Wood, concrete, metal
HVAC	Boiler with radiators
Roof	Unknown (Not assessed)
Flooring	Vinyl floor tiles, ceramic tiles, wood
Wall and Ceiling Finishes	Drywall, ceramic tiles, lay-in ceiling tiles



2.2 Existing Reports

2.2.1 Review of Previous Reports

A report provided by HRCE pre-dated 2000 and was not utilized, based on significant regulatory changes since the report publication, and the likelihood that site conditions, including renovations, have resulted in significant changes for the reported information.

3.0 FINDINGS

Any quantities listed in this report or data tables are estimated based on visual approximations only and are subject to variation.

3.1 Asbestos

The following table summarizes the materials evaluated for asbestos in the assessed area. For details on approximate quantities, condition, friability, accessibility, and locations of hazardous building materials; refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed Report in Appendices V and VI.

Any quantities listed in this report or data tables are estimated based on visual approximations only and are subject to variation.

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Material Specific Notes
S0001 ABCDE FG	Ceiling, Wall Drywall and joint compound	Chrysotile	Yes	7,908 SF	1
S0002 ABC	Mechanical Equipment Boiler Caulking Blue	None Detected	No	1 LF	
S0003 ABC	Wall Caulking Grey	None Detected	No	3 LF	
S0004 ABC	Floor Vinyl Floor Tile and Mastic 12" white with beige flecks	None Detected	No	2,669 SF	
S0005 ABC	Floor Vinyl Floor Tile and Mastic 9" tan	Chrysotile	Yes	800 SF	2
S0006 ABC	Piping Parging Cement	Chrysotile	Yes	1 EA	
S0007 ABC	Other Window Caulking Grey	Chrysotile	Yes	120 LF	



Hazardous Building Materials Assessment (Management)

Dutch Settlement Elementary School, 990 NS-277, Dutch Settlement, NS
 HRCE – Halifax Regional Centre for Education

April 10, 2024
 Pinchin File: 336128.014

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Material Specific Notes
S0008 ABC	Ceiling Ceiling Tiles (lay-in) 24" x 48" pinhole and fissure	None Detected	No	628 SF	
S0009 ABC	Floor Vinyl Floor Tile and Mastic 12" beige with brown and white streaks	Chrysotile	Yes	16 SF	2
S0010 ABC	Floor Vinyl Floor Tile and Mastic 12" grey with black and white streaks	None Detected	No	260 SF	
S0011 ABCDE FG	Ceiling, Wall Drywall and joint compound	None Detected	No	30,708 SF	3
S0012 ABC	Other Window Caulking Red	None Detected	No	8 LF	
S0013 ABC	Other Window Caulking Black butyl tape	None Detected	No	38 LF	
S0014 ABC	Duct Mastic Brown	None Detected	No	224 LF	
S0015 ABC	Ceiling Ceiling Tiles (lay-in) 24" x 48" swirled pinhole	None Detected	No	1,818 SF	
S0016 ABC	Floor Vinyl Floor Tile and Mastic 12" brown with white and brown flecks	None Detected	No	1,663 SF	
S0017 ABC	Floor Vinyl Floor Tile and Mastic 12" beige with tan streak	Chrysotile	Yes	3,719 SF	2
S0018 ABC	Floor Vinyl Floor Tile and Mastic 12" white with grey flecks	None Detected	No	282 SF	
S0019 ABC	Floor Vinyl Floor Tile and Mastic 12" off white with beige flecks	None Detected	No	1,196 SF	
S0020 ABC	Duct Mastic, Grey	None Detected	No	312 LF	
S0021 ABC	Ceiling Ceiling Tiles (lay-in) 24" x 48" pinhole and fissure	None Detected	No	8,220 SF	
S0022	Other Sink Mastic, Grey	Chrysotile	Yes	3 EA	



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Pinchin File: 336128.014

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Material Specific Notes
S0023 ABC	Floor Vinyl Floor Tile and Mastic 12" blue with white and black flecks	None Detected	No	3,995 SF	
S0024 ABC	Wall Door Caulking White	None Detected	No	20 LF	
S0025 ABC	Other Window Caulking White	None Detected	No	310 LF	
S0026 ABC	Other Window Caulking Black	None Detected	No	160 LF	
V9500	Floor Mortar Ceramic tile thinset	Presumed Asbestos	Yes	798 SF	
V9500	Floor Vinyl Floor Tile and Mastic 12" off white with beige flecks, 12" black with white flecks	Presumed Asbestos	Yes		
V9500	Wall Mortar Ceramic tile thinset	Presumed Asbestos	Yes	1,442 SF	
V0000	Ceiling Ceiling Tiles (lay-in) 12"x24" pinhole and fissure, 12"x 24" dense pinhole and fissure	Non Asbestos	No	Throughout	
V0000	Mechanical Equipment Boiler Caulking Silicone	Non Asbestos	No		
V0000	Other Window, Countertop Caulking Silicone	Non Asbestos	No		
V0000	Piping Caulking Silicone	Non Asbestos	No		

Material Specific Notes:

1. Samples collected from 1920 phase of the building (Phase A).
2. Vinyl floor tiles are asbestos-containing, and mastic is non-asbestos.
3. Samples collected from 1983 phase of the building (Phase B).

General Notes:

Materials identified as Sample Number V9500 were either observed to be present or based on the construction of the building/equipment are likely present in concealed locations. These materials have not been sampled and are presumed to contain asbestos based on historical known use of asbestos. Sampling of these materials may be completed prior to disturbance.



Materials identified as Sample Number V9000 were observed to be present and were determined to contain asbestos based on previous analytical results, or labelling (e.g., Transite clearly labelled by the manufacturer).

Materials identified as Sample Number V0000 were determined to be non-asbestos based on the manufacture date and known end of use of asbestos in these products.

3.1.1 Excluded Asbestos Materials

The following is a list of materials which may contain asbestos and were excluded from the assessment. These materials are presumed to contain asbestos until otherwise proven to be non-asbestos by sampling and analysis:

- Roofing felts and tar, mastics
- Electrical components
- Insulation under metal clad boilers and vessels
- Mechanical packing, ropes, and gaskets
- Soffit and fascia boards
- Vibration dampers on HVAC equipment
- Ropes and gaskets in cast-iron bell and spigot joints
- Sealants on pipe threads

3.2 Lead

Refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed Report in Appendices V and VI for details on locations, condition and approximate quantities on paints sampled and their locations.

Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present	Materials Specific Notes
L0001	Wall Drywall and joint compound Light yellow paint	<0.008%	No	5,870 SF	
L0002	Wall Drywall and joint compound Beige	0.47%	Yes	480 SF	
L0003	Wall Drywall and joint compound Off white	<0.008%	No	23,685 SF	
L0004	Other Wood Blue	<0.008%	No	30 EA	



Hazardous Building Materials Assessment (Management)

Dutch Settlement Elementary School, 990 NS-277, Dutch Settlement, NS
HRCE – Halifax Regional Centre for Education

April 10, 2024
Pinchin File: 336128.014

Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present	Materials Specific Notes
L0005	Wall Drywall and joint compound Yellow	<0.008%	No	75 SF	
L0006	Wall Drywall and joint compound Light green	0.065%	Yes	1,760 SF	
L0007	Wall Drywall and joint compound Grey	0.012%	Yes	1,040 SF	
L0008	Wall Drywall and joint compound Light blue	<0.008%	No	1,148 SF	
L0009	Wall Wood White paint	0.068%	Yes	4,000 SF	
L0010	Wall Wood Sea blue	1.5%	Yes	510 LF	
L0011	Structure Concrete (poured) Sky blue	<0.0082%	No	440 SF	

General Notes:

Results above 0.1% (1,000 mg/kg) are considered lead-containing, and over 0.5% (5,000 mg/kg) are considered lead-based.

Results less than or equal to 0.1% (1,000 mg/kg), but equal to or greater than 0.009% (90 mg/kg), are considered low-level lead paints or surface coatings in accordance with the EACC guideline.

Paints containing lead less than 0.009% (90 mg/kg) is assumed to be insignificant.

3.2.1 Lead Products and Applications

Refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed Report for details on lead-products including their locations and quantities.

Sample Number	Material Description	Confirmed Hazard	Total Quantity Present
V9500	Batteries In Emer. Lights	Yes	19 EA

General Notes:

Items identified as Sample Number V9500 were observed to be present but could not be definitively determined to contain lead (e.g., inaccessible batteries).



3.2.2 Excluded Lead Materials

Lead may be present in a number of materials which were not assessed and/or sampled. The following materials, where found, should be considered to contain lead.

- Electrical components, including wiring connectors, grounding conductors, and solder
- Solder on pipe connections

3.3 Silica

Crystalline silica is a presumed component of the following materials:

- Concrete
- Masonry and mortar
- Ceramic tiles and grout

3.4 Mercury

Refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed Report in Appendices V and VI for details on mercury-containing products including their locations and quantities.

Sample Number	Material Description	Confirmed Hazard	Total Quantity Present
V9500	Light Fixture	Yes	408 EA
V0000	Light Fixture	No	
V0000	Thermostat	No	21 EA

General Notes:

Items identified as Sample Number V9500 were observed to be present but could not be definitively determined to contain mercury (e.g., inaccessible lamps and thermostats).

Items identified as Sample Number V0000 are items that historically may have contained mercury; however, have been visually identified as non-mercury types (e.g., LED lamps, digital or electric thermostats).

3.5 Polychlorinated Biphenyls

Refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed Report in Appendices V and VI for details on PCB-products including their locations and quantities.



Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present
P0001	Caulking White	<0.5 mg/kg	No	310 LF
P0002	Caulking Black	<0.5 mg/kg	No	160 LF
V9500	Light Ballasts		Yes	192 EA
V0000	Caulking		No	

General Notes:

Materials identified as Sample Number V9500 were either observed to be present or based on the construction of the building/equipment are likely present in concealed locations. These materials have not been sampled and are presumed to contain PCBs based on historical known use. Sampling of these materials may be completed prior to disturbance.

Materials identified as Sample Number V0000 were determined to be non-PCB based on previous analytical results, the manufacture date and regulated restrictions of PCBs. It can also include items that historically may have contained PCBs; however, have been visually identified as non-PCB types (e.g., LED light fixtures).

3.5.1 Excluded PCB Materials

PCBs are known to be present in several materials and equipment which were not assessed or sampled. The following materials, where found, should be presumed to contain PCBs until sampling proves otherwise.

- Capacitors within or associated with electrical equipment
- Caulking and sealants (except where sampled)
- Paints

4.0 METHODOLOGY

Pinchin conducted a room-by-room assessment (rooms, corridors, service areas, exterior, etc.) to identify the hazardous building materials as defined in the scope.

The assessment was limited to non-intrusive testing. Concealed spaces such as those above solid ceilings and within shafts and pipe chases were accessed via existing access panels only. Destructive testing of flooring was not conducted (under multiple layers of flooring). Demolition of walls, solid ceilings, structural items, interior finishes or exterior building finishes, to determine the presence of concealed materials was not conducted. Sampling of roofing materials was not conducted.

For further details on the methodology including test methods and evaluation criteria, refer to Appendix III.



5.0 REFERENCES

The following legislation and documents were referenced in completing the assessment and this report:

1. Nova Scotia Occupational Safety General Regulation (N.S. Reg. 53/2013).
2. A Guide to Removal of Friable Asbestos-Containing Material.
3. A Guide to Assessment and Management of Asbestos in the Workplace.
4. Asbestos Waste Management Regulations, N.S. Reg. 53/95.
5. Lead in the Workplace: A Guide to Working with Lead, revised January 18, 2019.
6. The Environmental Abatement Council of Canada (EACC) Lead Guideline for Construction, Renovation, Maintenance or Repair.
7. Guidelines for Disposal of Contaminated Solids in Landfills.
8. Nova Scotia Environment Act, 1994-95.
9. Mercury Diversion Standard, N.S. Reg. 161/2018.
10. PCB Management Regulations, N.S. Reg. 163/97.
11. PCB Regulations, SOR/2008-273, Canadian Environmental Protection Act.
12. Surface Coating Materials Regulations, SOR/2016-193, Canada Consumer Product Safety Act.
13. Consolidated Transportation of Dangerous Goods Regulations, including Amendment SOR/2019-101, Transportation of Dangerous Goods Act.
14. Mould Guidelines for the Canadian Construction Industry, Standard Construction Document CCA 82 – 2004 (Revised 2018), Canadian Construction Association.

6.0 LIMITATIONS

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.



7.0 CLOSURE

Contact the undersigned should you have any questions.

Sincerely,

Pinchin Ltd.

Prepared by:

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- | | | |
|-------|---------------|---|
| Encl: | APPENDIX I | Drawings |
| | APPENDIX II-A | Asbestos Analytical Certificates |
| | APPENDIX II-B | Lead Analytical Certificates |
| | APPENDIX II-C | PCB Analytical Certificates |
| | APPENDIX III | Methodology |
| | APPENDIX IV | Location Summary Report |
| | APPENDIX V | Hazardous Materials Summary Report / Sample Log |
| | APPENDIX VI | Confirmed and Presumed Report |
| | APPENDIX VII | Photographs |

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 Template: Master Template HBMA Management, HMIS, HAZ April 18, 2023

APPENDIX I
Drawings



LEGEND

-  PINCHIN LOCATION NUMBER
-  ASBESTOS BULK SAMPLE
-  LEAD BULK SAMPLE
-  PCB BULK SAMPLE

-  PHASE A
-  PHASE B

ASBESTOS-CONTAINING MATERIALS:

-  VINYL FLOOR TILES
-  DRYWALL AND JOINT COMPOUND

FOR CLARITY, THE FOLLOWING ASBESTOS-CONTAINING MATERIALS, ARE PRESENT IN THE ASSESSED AREA, BUT HAVE NOT BEEN HATCHED ON THE DRAWING:

- CAULKING
- SINK MASTIC

NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



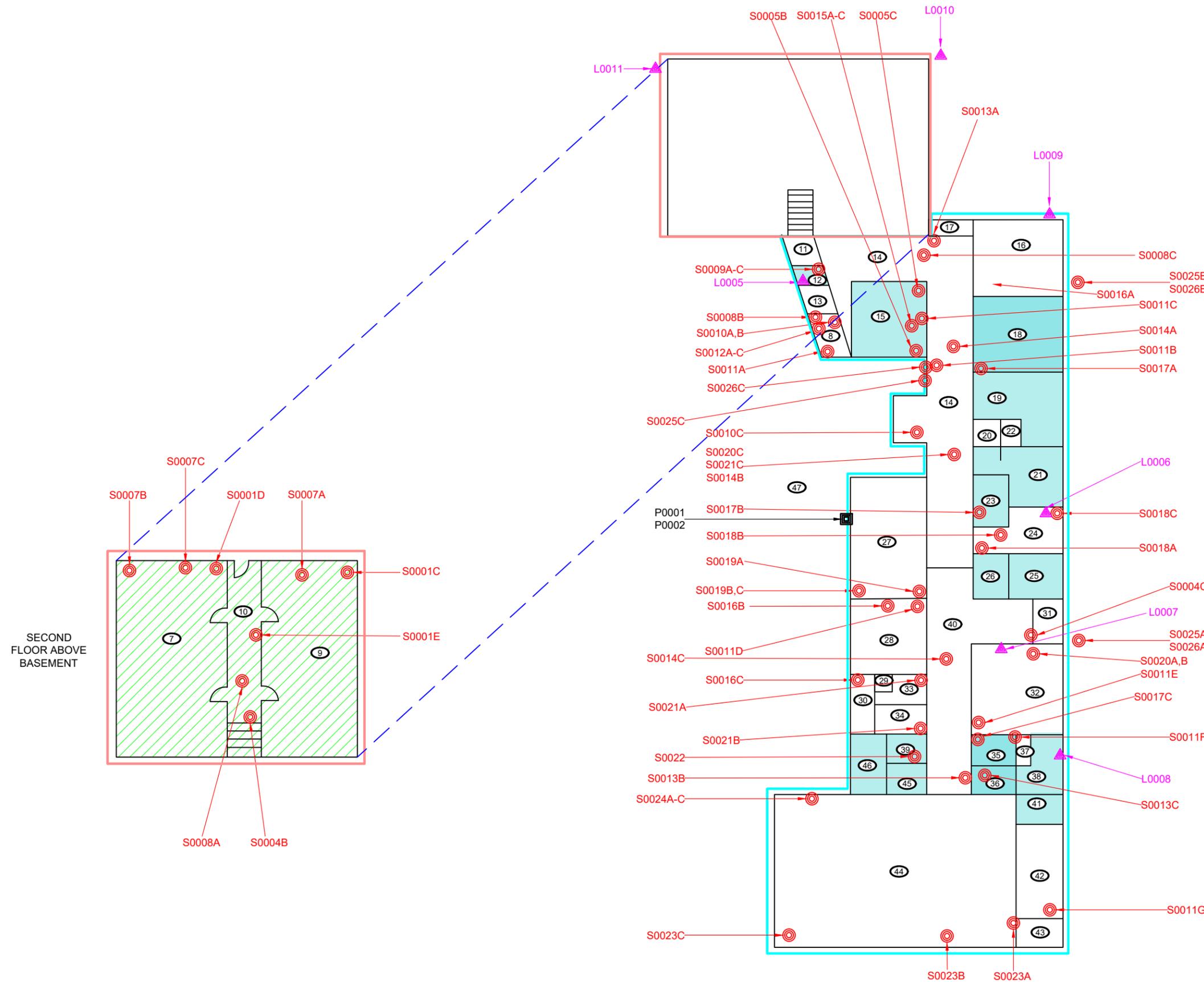
PROJECT NAME:
HAZARDOUS BUILDING MATERIALS ASSESSMENT

CLIENT NAME:
HALIFAX REGIONAL CENTRE FOR EDUCATION

PROJECT LOCATION:
**DUTCH SETTLEMENT ELEMENTARY
990 NOVA SCOTIA 277,
DUTCH SETTLEMENT, NOVA SCOTIA**

FIGURE NAME:
GROUND FLOOR SAMPLE LOCATION PLAN

PROJECT NUMBER: 336128.014	SCALE: NOT TO SCALE
DRAWN BY: NJ	REVIEWED BY: SH
DATE: APRIL 2024	FIGURE NUMBER: 1 OF 2



SECOND FLOOR ABOVE BASEMENT



LEGEND

-  PINCHIN LOCATION NUMBER
-  ASBESTOS BULK SAMPLE
-  LEAD BULK SAMPLE
-  PHASE A

ASBESTOS-CONTAINING MATERIALS:

-  THERMAL SYSTEM INSULATION
-  VINYL FLOOR TILES
-  DRYWALL AND JOINT COMPOUND

FOR CLARITY, THE FOLLOWING ASBESTOS-CONTAINING MATERIALS, ARE PRESENT IN THE ASSESSED AREA, BUT HAVE NOT BEEN HATCHED ON THE DRAWING:

- CAULKING
- SINK MASTIC

NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



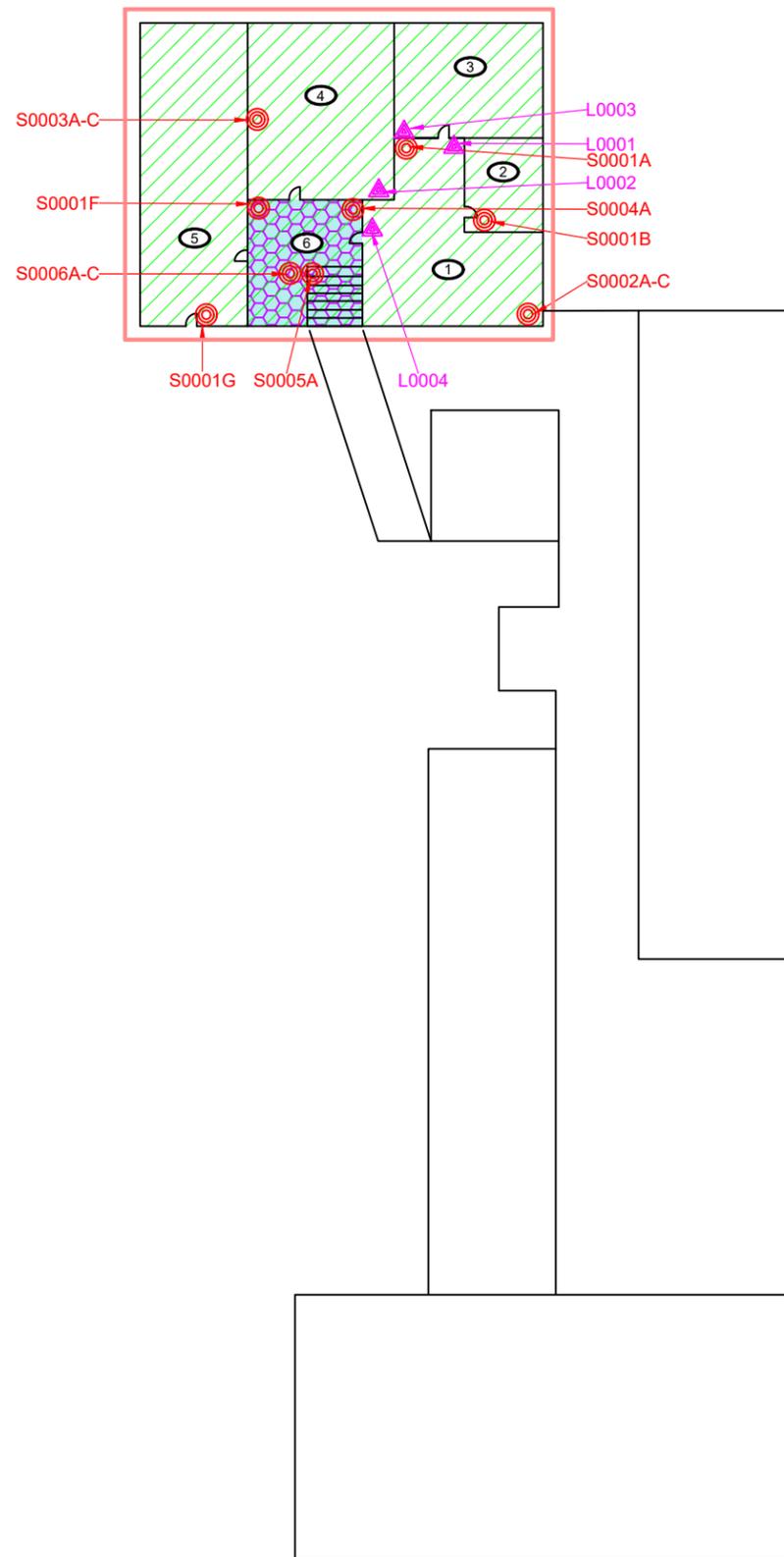
PROJECT NAME:
HAZARDOUS BUILDING MATERIALS ASSESSMENT

CLIENT NAME:
HALIFAX REGIONAL CENTRE FOR EDUCATION

PROJECT LOCATION:
**DUTCH SETTLEMENT ELEMENTARY
990 NOVA SCOTIA 277,
DUTCH SETTLEMENT, NOVA SCOTIA**

FIGURE NAME:
BASEMENT SAMPLE LOCATION PLAN

PROJECT NUMBER: 336128.014	SCALE: NOT TO SCALE
DRAWN BY: NJ	REVIEWED BY: SH
DATE: APRIL 2024	FIGURE NUMBER: 2 OF 2



APPENDIX II-A
Asbestos Analytical Certificates



Pinchin Ltd. Asbestos Laboratory *Certificate of Analysis*

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Analyst(s): N. Gerrow / R. Janssen

Date Received: March 14, 2024 **Samples Submitted:** 41
Date Analyzed: March 21, 2024 **Phases Analyzed:** 49

The Pinchin Ltd. Dartmouth asbestos laboratory is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 201032-0) for the 'EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples,' and the 'EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials'; and meets all requirements of ISO/IEC 17025:2017. The Pinchin asbestos laboratory uses the aforementioned methods of analysis.

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. A reported concentration of less than (<) the regulatory threshold indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with provincial regulatory requirements where applicable. Multiple phases within a sample are analyzed and reported separately.

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This report relates only to the items tested.

This report relates only to the items tested and is valid only when signed with a protected, authorized, electronic signature. This report may not be reproduced, except in full, without the written approval of Pinchin Ltd. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. Internal verification studies, quality assurance / control data and laboratory documentation on measurement uncertainty are available upon request.



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Date Analyzed: March 21, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0001A Wall, Drywall And Joint Compound, Loc:1, Old Boiler Room *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0001B Ceiling, Drywall And Joint Compound, Loc:2, Supply Room *DJC only*	Homogeneous, white, drywall joint compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
S0001C Wall, Drywall And Joint Compound, Loc:9, Classroom *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0001D Wall, Drywall And Joint Compound, Loc:7, Classroom *DJC only*	Homogeneous, beige, drywall joint compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
S0001E Wall, Drywall And Joint Compound, Loc:10, Hallway *DJC only*	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0001F Ceiling, Drywall And Joint Compound, Loc:6, Landing and Stairwell *DJC only*	a) Homogeneous, light grey, drywall joint compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
	b) Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0001G Wall, Drywall And Joint Compound, Loc:5, Library *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Date Analyzed: March 21, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0002A Mechanical Equipment, Boiler, Caulking, Blue, Loc:1, Old Boiler Room	Homogeneous, blue, putty material.	None Detected	Non-Fibrous Material > 75%
S0002B Mechanical Equipment, Boiler, Caulking, Blue, Loc:1, Old Boiler Room	Homogeneous, blue, putty material.	None Detected	Non-Fibrous Material > 75%
S0002C Mechanical Equipment, Boiler, Caulking, Blue, Loc:1, Old Boiler Room	Homogeneous, blue, putty material.	None Detected	Non-Fibrous Material > 75%
S0003A Wall, Caulking, Grey, Loc:4, Furnace Room	Homogeneous, grey, cementitious material.	None Detected	Non-Fibrous Material > 75%
S0003B Wall, Caulking, Grey, Loc:4, Furnace Room	Homogeneous, grey, cementitious material.	None Detected	Non-Fibrous Material > 75%
S0003C Wall, Caulking, Grey, Loc:4, Furnace Room	Homogeneous, grey, cementitious material.	None Detected	Non-Fibrous Material > 75%
S0004A Floor, Vinyl Floor Tile And Mastic, 12" White With Beige Flecks, Loc:6, Landing and Stairwell	3 Phases: a) Homogeneous, light beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, grey, levelling compound.	None Detected	Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Date Analyzed: March 21, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0004B Floor, Vinyl Floor Tile And Mastic, 12" White With Beige Flecks, Loc:10, Hallway	a) Homogeneous, light beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0004C Floor, Vinyl Floor Tile And Mastic, 12" White With Beige Flecks, Loc:40, Hallway	a) Homogeneous, light beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0005A Floor, Stairs, Vinyl Floor Tile And Mastic, 9" Tan, Loc:6, Landing and Stairwell	a) Homogeneous, grey, consolidated, vinyl floor tile.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0005B Floor, Stairs, Vinyl Floor Tile And Mastic, 9" Tan, Loc:15, Classroom	a) Homogeneous, grey, consolidated, vinyl floor tile.		Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Date Analyzed: March 21, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0005C Floor, Stairs, Vinyl Floor Tile And Mastic, 9" Tan, Loc:15, Classroom	a) Homogeneous, grey, consolidated, vinyl floor tile.	None Detected	Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.		Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		
S0006A Piping, Parging Cement, Loc:6, Landing and Stairwell	Homogeneous, grey, soft, parging cement.	Chrysotile 50-75%	Non-Fibrous Material 25-50%
S0006B Piping, Parging Cement, Loc:6, Landing and Stairwell			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
S0006C Piping, Parging Cement, Loc:6, Landing and Stairwell			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
S0007A Window, Caulking, Grey, Loc:9, Classroom	Homogeneous, grey, soft, sticky, caulking material.	Chrysotile 5-10%	Synthetic Fibres 10-25%
			Non-Fibrous Material > 75%
S0007B Window, Caulking, Grey, Loc:7, Classroom			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
S0007C Window, Caulking, Grey, Loc:7, Classroom			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Date Analyzed: March 21, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0008A Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:10, Hallway	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 25-50% Man-Made Vitreous Fibres 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
S0008B Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:8, Office	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 25-50% Man-Made Vitreous Fibres 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
S0008C Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:14, Hallway	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 25-50% Man-Made Vitreous Fibres 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
S0009A Floor, Vinyl Floor Tile And Mastic, 12" Beige With Brown And White Streaks, Loc:12, Custodian Closet	2 Phases: a) Homogeneous, beige, consolidated, vinyl floor tile. b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	Chrysotile 0.5-5% None Detected	Non-Fibrous Material > 75% Tar and other Non-Fibrous Material > 75%
S0009B Floor, Vinyl Floor Tile And Mastic, 12" Beige With Brown And White Streaks, Loc:12, Custodian Closet	2 Phases: a) Homogeneous, beige, consolidated, vinyl floor tile. b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Not Analyzed Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Date Analyzed: March 21, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0009C Floor, Vinyl Floor Tile And Mastic, 12" Beige With Brown And White Streaks, Loc:12, Custodian Closet	2 Phases: a) Homogeneous, beige, consolidated, vinyl floor tile.	None Detected	Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.		Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		
S0010A Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black And White Streaks, Loc:8, Office	a) Homogeneous, grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0010B Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black And White Streaks, Loc:8, Office	a) Homogeneous, grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, grey, levelling compound.	None Detected	Non-Fibrous Material > 75%
S0010C Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black And White Streaks, Loc:14, Hallway	a) Homogeneous, grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310104
Date Analyzed: March 21, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0011A Wall, Drywall And Joint Compound, Loc:8, Office *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0011B Wall, Drywall And Joint Compound, Loc:14, Hallway *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0011C Wall, Drywall And Joint Compound, Loc:15, Classroom *DJC only*	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0011D Wall, Drywall And Joint Compound, Loc:28, Classroom *DJC only*	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0011E Wall, Drywall And Joint Compound, Loc:32, New Boiler Room *DJC only*	2 Phases: a) Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0011F Wall, Drywall And Joint Compound, Loc:35, Custodian Room *DJC only*	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0011G Wall, Drywall And Joint Compound, Loc:42, Stage Area *DJC only*	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%

Reviewed by:

Reporting Analyst:

Jason Stapleton
2024.03.21 17:39:49-03'00'

Pinchin Ltd.
2024.03.21 17:39:17-03'00'

Analyzed By: NG / RJ

Reviewed By: _____

Report Sent By: _____

Please only analyze the first leveling compound in each vinyl flooring sample set

Pinchin Ltd. - Asbestos Laboratory
Internal Asbestos Bulk Sample Chain of Custody

Client Name:	HRCE	Project Address:	990 NS-277, Dutch Settlement, NS
Portfolio/Building No:		Pinchin File:	0336128.014
Submitted by:	Shawn Harris	Email:	sharris@pinchin.com
CC Results to:	Allain Thebeau	CC Email:	athebeau@pinchin.com
Date Submitted:	March 14 2024	Required by:	Month Day 2020
# of Samples:	41	Priority:	5 Day Turnaround
Year of Building Construction (Mandatory, Years ONLY):			
Do NOT Stop on Positive (Sample Numbers):	S0001, S0011		
Pinchin Group Company (Mandatory Field):	Pinchin		
HMIS2 Building Reference #:	131434/202421134831905		

To be Completed by Lab Personnel Only:			
Lab Reference #:	b310104	Time:	24 hour clock
Received by:	Reid Janssen	Date:	March 14 2024

Name(s) of Analyst(s): N Gerrow / R. Janssen

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0001	A	Wall, Drywall And Joint Compound, Loc:1, Old Boiler Room *DJC only* <u>ND</u>
S	0001	B	Ceiling, Drywall And Joint Compound, Loc:2, Supply Room *DJC only* <u>CH 0.5-5</u>
S	0001	C	Wall, Drywall And Joint Compound, Loc:9, Classroom *DJC only* <u>ND</u>
S	0001	D	Wall, Drywall And Joint Compound, Loc:7, Classroom *DJC only* <u>CH 0.5-5</u>
S	0001	E	Wall, Drywall And Joint Compound, Loc:10, Hallway *DJC only* <u>ND</u>
S	0001	F	Ceiling, Drywall And Joint Compound, Loc:6, Landing and Stairwell *DJC only* <u>@CH 0.5-5 bND</u>
S	0001	G	Wall, Drywall And Joint Compound, Loc:5, Library *DJC only* <u>ND</u>

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0002	A	Mechanical Equipment,Boiler,Caulking,Blue,Loc:1,Old Boiler Room ND
S	0002	B	Mechanical Equipment,Boiler,Caulking,Blue,Loc:1,Old Boiler Room ND
S	0002	C	Mechanical Equipment,Boiler,Caulking,Blue,Loc:1,Old Boiler Room ND
S	0003	A	Wall,Caulking,Grey,Loc:4,Furnace Room ND
S	0003	B	Wall,Caulking,Grey,Loc:4,Furnace Room ND
S	0003	C	Wall,Caulking,Grey,Loc:4,Furnace Room ND
S	0004	A	Floor,Vinyl Floor Tile And Mastic,12" White With Beige Flecks,Loc:6,Landing and Stairwell a)ND b)ND c)ND
S	0004	B	Floor,Vinyl Floor Tile And Mastic,12" White With Beige Flecks,Loc:10,Hallway a)ND b)ND
S	0004	C	Floor,Vinyl Floor Tile And Mastic,12" White With Beige Flecks,Loc:40,Hallway a)ND b)ND
S	0005	A	Floor,Stairs,Vinyl Floor Tile And Mastic,9" Tan,Loc:6,Landing and Stairwell a)CH05-5 b)ND
S	0005	B	Floor,Stairs,Vinyl Floor Tile And Mastic,9" Tan,Loc:15,Classroom a)(na) b)ND
S	0005	C	Floor,Stairs,Vinyl Floor Tile And Mastic,9" Tan,Loc:15,Classroom a)(na) b)ND
S	0006	A	Piping,Parging Cement,Loc:6,Landing and Stairwell CH 50-75
S	0006	B	Piping,Parging Cement,Loc:6,Landing and Stairwell (na)
S	0006	C	Piping,Parging Cement,Loc:6,Landing and Stairwell (na)

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0007	A	Window, Caulking, Grey, Loc:9, Classroom CH S-10
S	0007	B	Window, Caulking, Grey, Loc:7, Classroom (na)
S	0007	C	Window, Caulking, Grey, Loc:7, Classroom (na)
S	0008	A	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:10, Hallway ND
S	0008	B	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:8, Office ND
S	0008	C	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:14, Hallway ND
S	0009	A	Floor, Vinyl Floor Tile And Mastic, 12" Beige With Brown And White Streaks, Loc:12, Custodian Closet a) CHOS-S b) ND
S	0009	B	Floor, Vinyl Floor Tile And Mastic, 12" Beige With Brown And White Streaks, Loc:12, Custodian Closet a) (na) b) ND
S	0009	C	Floor, Vinyl Floor Tile And Mastic, 12" Beige With Brown And White Streaks, Loc:12, Custodian Closet a) (na) b) ND
S	0010	A	Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black And White Streaks, Loc:8, Office a) ND b) ND
S	0010	B	Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black And White Streaks, Loc:8, Office a) ND b) ND c) ND
S	0010	C	Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black And White Streaks, Loc:14, Hallway a) ND b) ND
S	0011	A	Wall, Drywall And Joint Compound, Loc:8, Office *DJC only* ND
S	0011	B	Wall, Drywall And Joint Compound, Loc:14, Hallway *DJC only* ND
S	0011	C	Wall, Drywall And Joint Compound, Loc:15, Classroom *DJC only* ND

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0011	D	Wall,Drywall And Joint Compound,Loc:28,Classroom *DJC only* ND
S	0011	E	Wall,Drywall And Joint Compound,Loc:32,New Boiler Room *DJC only* AND bND
S	0011	F	Wall,Drywall And Joint Compound,Loc:35,Custodian Room *DJC only* ND
S	0011	G	Wall,Drywall And Joint Compound,Loc:42,Stage Area *DJC only* ND



Pinchin Ltd. Asbestos Laboratory *Certificate of Analysis*

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Analyst(s): J. Stapleton

Date Received: March 14, 2024 **Samples Submitted:** 43
Date Analyzed: March 22, 2024 **Phases Analyzed:** 61

The Pinchin Ltd. Dartmouth asbestos laboratory is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 201032-0) for the 'EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples,' and the 'EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials'; and meets all requirements of ISO/IEC 17025:2017. The Pinchin asbestos laboratory uses the aforementioned methods of analysis.

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. A reported concentration of less than (<) the regulatory threshold indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with provincial regulatory requirements where applicable. Multiple phases within a sample are analyzed and reported separately.

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This report relates only to the items tested.

This report relates only to the items tested and is valid only when signed with a protected, authorized, electronic signature. This report may not be reproduced, except in full, without the written approval of Pinchin Ltd. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. Internal verification studies, quality assurance / control data and laboratory documentation on measurement uncertainty are available upon request.



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0012A Window, Caulking, Red, Loc:8, Office	Homogeneous, reddish brown, caulking material.	None Detected	Non-Fibrous Material > 75%
S0012B Window, Caulking, Red, Loc:8, Office	Homogeneous, reddish brown, caulking material.	None Detected	Non-Fibrous Material > 75%
S0012C Window, Caulking, Red, Loc:8, Office	Homogeneous, reddish brown, caulking material.	None Detected	Non-Fibrous Material > 75%
S0013A Window, Caulking, Black Butyl Tape, Loc:14, Hallway	Homogeneous, black, soft, sticky, caulking material.	None Detected	Cellulose 0.5-5% Non-Fibrous Material > 75%
S0013B Window, Caulking, Black Butyl Tape, Loc:40, Hallway	Homogeneous, black, soft, sticky, caulking material.	None Detected	Cellulose 0.5-5% Non-Fibrous Material > 75%
S0013C Window, Caulking, Black Butyl Tape, Loc:36, Office	Homogeneous, black, soft, sticky, caulking material.	None Detected	Cellulose 0.5-5% Non-Fibrous Material > 75%
S0014A Duct, Mastic, Brown, Loc:14, Hallway	Homogeneous, brown, mastic material.	None Detected	Wollastonite 5-10% Non-Fibrous Material > 75%
S0014B Duct, Mastic, Brown, Loc:14, Hallway	Homogeneous, brown, mastic material.	None Detected	Wollastonite 5-10% Non-Fibrous Material > 75%
S0014C Duct, Mastic, Brown, Loc:40, Hallway	Homogeneous, brown, mastic material.	None Detected	Wollastonite 5-10% Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0015A Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Swirled Pinhole, Loc:15, Classroom	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0015B Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Swirled Pinhole, Loc:15, Classroom	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0015C Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Swirled Pinhole, Loc:15, Classroom	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0016A Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Brown Flecks, Loc:16, Classroom	2 Phases: a) Homogeneous, tan, consolidated, vinyl floor tile. b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected None Detected	Non-Fibrous Material > 75% Tar and other Non-Fibrous Material > 75%
S0016B Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Brown Flecks, Loc:28, Classroom	2 Phases: a) Homogeneous, tan, consolidated, vinyl floor tile. b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected None Detected	Non-Fibrous Material > 75% Tar and other Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0016C Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Brown Flecks, Loc:30, Office	a) Homogeneous, tan, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0017A Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streak, Loc:18, Classroom	a) Homogeneous, tan, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, yellow, adhesive material on the back of vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
S0017B Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streak, Loc:23, LAN Room	a) Homogeneous, tan, consolidated, vinyl floor tile.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0017C Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streak, Loc:35, Custodian Room	a) Homogeneous, tan, consolidated, vinyl floor tile.		Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0018A Floor, Vinyl Floor Tile And Mastic, 12" White With Grey Flecks, Loc:24, Main Office	a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0018B Floor, Vinyl Floor Tile And Mastic, 12" White With Grey Flecks, Loc:24, Main Office	a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0018C Floor, Vinyl Floor Tile And Mastic, 12" White With Grey Flecks, Loc:24, Main Office	a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0019A Floor, Vinyl Floor Tile And Mastic, 12" Off White With Beige Flecks, Loc:27, Classroom	a) Homogeneous, light beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material >75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0019B Floor, Vinyl Floor Tile And Mastic, 12" Off White With Beige Flecks, Loc:27, Classroom	a) Homogeneous, light beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0019C Floor, Vinyl Floor Tile And Mastic, 12" Off White With Beige Flecks, Loc:27, Classroom	a) Homogeneous, light beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0020A Duct, Mastic, Grey, Loc:32, New Boiler Room	a) Homogeneous, grey, mastic material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, green, mastic material.	None Detected	Non-Fibrous Material > 75%
S0020B Duct, Mastic, Grey, Loc:32, New Boiler Room	a) Homogeneous, grey, mastic material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, green, mastic material.	None Detected	Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0020C Duct, Mastic, Grey, Loc:14, Hallway	a) Homogeneous, grey, mastic material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, green, mastic material.	None Detected	Non-Fibrous Material > 75%
S0021A Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:33, Washroom	Homogeneous, tan, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0021B Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:34, Washroom	Homogeneous, tan, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0021C Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:14, Hallway	Homogeneous, tan, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0022 Sink, Mastic, Grey, Loc:39, Kitchen	Homogeneous, black, tar material.	Chrysotile 0.5-5%	Tar and other Non-Fibrous Material > 75%
S0023A Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Black Flecks, Loc:44, Gymnasium	a) Homogeneous, blue, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0023B Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Black Flecks, Loc:44, Gymnasium	a) Homogeneous, blue, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0023C Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Black Flecks, Loc:44, Gymnasium	a) Homogeneous, blue, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, yellow, soft, sticky material on the back of vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	c) Homogeneous, grey, levelling compound.	None Detected	Non-Fibrous Material > 75%
S0024A Wall, Door, Caulking, White, Loc:44, Gymnasium	Homogeneous, white, caulking material.	None Detected	Non-Fibrous Material > 75%
S0024B Wall, Door, Caulking, White, Loc:44, Gymnasium	Homogeneous, white, caulking material.	None Detected	Non-Fibrous Material > 75%
S0024C Wall, Door, Caulking, White, Loc:44, Gymnasium	Homogeneous, white, caulking material.	None Detected	Non-Fibrous Material > 75%
S0025A Window, Caulking, White, Loc:47, Exterior	Homogeneous, grey, caulking material.	None Detected	Non-Fibrous Material > 75%
S0025B Window, Caulking, White, Loc:47, Exterior	Homogeneous, grey, caulking material.	None Detected	Non-Fibrous Material > 75%



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: HRCE, 990 NS-277, Dutch Settlement, NS
Project No.: 0336128.014
Prepared For: S. Harris / A. Thebeau

Lab Reference No.: b310106
Date Analyzed: March 22, 2024

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0025C Window, Caulking, White, Loc:47, Exterior	Homogeneous, grey, caulking material.	None Detected	Non-Fibrous Material > 75%
S0026A Window, Caulking, Black, Loc:47, Exterior	Homogeneous, black, caulking material.	None Detected	Non-Fibrous Material > 75%
S0026B Window, Caulking, Black, Loc:47, Exterior	Homogeneous, black, caulking material.	None Detected	Cellulose 0.5-5% Synthetic Fibres 0.5-5% Non-Fibrous Material > 75%
S0026C Window, Caulking, Black, Loc:47, Exterior	Homogeneous, black, caulking material.	None Detected	Cellulose 0.5-5% Synthetic Fibres 0.5-5% Non-Fibrous Material > 75%

Reviewed by:

Pinchin Ltd.
2024.03.22 10:52:54-03'00'

Reporting Analyst:

Jason Stapleton
2024.03.22 10:50:00-03'00'

Analyzed By: SS

Reviewed By: NG

Report Sent By: _____

Please only analyze the first leveling compound in each vinyl floor sample set.

Pinchin Ltd. - Asbestos Laboratory Internal Asbestos Bulk Sample Chain of Custody

Client Name:	HRCE	Project Address:	990 NS-277, Dutch Settlement, NS
Portfolio/Building No:		Pinchin File:	0336128.014
Submitted by:	Shawn Harris	Email:	sharris@pinchin.com
CC Results to:	Allain Thebeau	CC Email:	athebeau@pinchin.com
Date Submitted:	March 14 2024	Required by:	Month Day 2020
# of Samples:	43	Priority:	5 Day Turnaround
Year of Building Construction (Mandatory, Years ONLY):			
Do NOT Stop on Positive (Sample Numbers):			
Pinchin Group Company (Mandatory Field):		Pinchin	
HMIS2 Building Reference #:		131434/202421134831905	

To be Completed by Lab Personnel Only:			
Lab Reference #:	b310106	Time:	24 hour clock
Received by:	Reid Janssen	Date:	March 14 2024
Name(s) of Analyst(s): J. Stapleton			

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)	
S	0012	A	Window,Caulking,Red,Loc:8,Office	ND
S	0012	B	Window,Caulking,Red,Loc:8,Office	ND
S	0012	C	Window,Caulking,Red,Loc:8,Office	ND
S	0013	A	Window,Caulking,Black Butyl Tape,Loc:14,Hallway	ND
S	0013	B	Window,Caulking,Black Butyl Tape,Loc:40,Hallway	ND
S	0013	C	Window,Caulking,Black Butyl Tape,Loc:36,Office	ND
S	0014	A	Duct,Mastic,Brown,Loc:14,Hallway	ND

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0014	B	Duct,Mastic,Brown,Loc:14,Hallway ND
S	0014	C	Duct,Mastic,Brown,Loc:40,Hallway ND
S	0015	A	Ceiling,Acoustic Tile,Ceiling Tiles (lay-in),24" X 48" Swirled Pinhole,Loc:15,Classroom ND
S	0015	B	Ceiling,Acoustic Tile,Ceiling Tiles (lay-in),24" X 48" Swirled Pinhole,Loc:15,Classroom ND
S	0015	C	Ceiling,Acoustic Tile,Ceiling Tiles (lay-in),24" X 48" Swirled Pinhole,Loc:15,Classroom ND
S	0016	A	Floor,Vinyl Floor Tile And Mastic,12" Brown With White And Brown Flecks,Loc:16,Classroom a1 ND b1 ND
S	0016	B	Floor,Vinyl Floor Tile And Mastic,12" Brown With White And Brown Flecks,Loc:28,Classroom a1 ND b1 ND
S	0016	C	Floor,Vinyl Floor Tile And Mastic,12" Brown With White And Brown Flecks,Loc:30,Office a1 ND b1 ND
S	0017	A	Floor,Vinyl Floor Tile And Mastic,12" Beige With Tan Streak,Loc:18,Classroom a1 ND b1 ND
S	0017	B	Floor,Vinyl Floor Tile And Mastic,12" Beige With Tan Streak,Loc:23,LAN Room a1 CHG.5-5 b1 ND
S	0017	C	Floor,Vinyl Floor Tile And Mastic,12" Beige With Tan Streak,Loc:35,Custodian Room a1 (NA) b1 ND
S	0018	A	Floor,Vinyl Floor Tile And Mastic,12" White With Grey Flecks,Loc:24,Main Office a1 ND b1 ND
S	0018	B	Floor,Vinyl Floor Tile And Mastic,12" White With Grey Flecks,Loc:24,Main Office a1 ND b1 ND
S	0018	C	Floor,Vinyl Floor Tile And Mastic,12" White With Grey Flecks,Loc:24,Main Office a1 ND b1 ND
S	0019	A	Floor,Vinyl Floor Tile And Mastic,12" Off White With Beige Flecks,Loc:27,Classroom a1 ND b1 ND

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0019	B	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Beige Flecks, Loc:27, Classroom a) ND b) ND
S	0019	C	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Beige Flecks, Loc:27, Classroom a) ND b) ND
S	0020	A	Duct, Mastic, Grey, Loc:32, New Boiler Room a) ND b) ND
S	0020	B	Duct, Mastic, Grey, Loc:32, New Boiler Room a) ND b) ND
S	0020	C	Duct, Mastic, Grey, Loc:14, Hallway a) ND b) ND
S	0021	A	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:33, Washroom ND
S	0021	B	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:34, Washroom ND
S	0021	C	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 48" Pinhole And Fissure, Loc:14, Hallway ND
S	0022		Sink, Mastic, Grey, Loc:39, Kitchen c) 0.5-5
S	0023	A	Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Black Flecks, Loc:44, Gymnasium a) ND b) ND
S	0023	B	Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Black Flecks, Loc:44, Gymnasium a) ND b) ND
S	0023	C	Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Black Flecks, Loc:44, Gymnasium a) ND b) ND c) ND
S	0024	A	Wall, Door, Caulking, White, Loc:44, Gymnasium ND
S	0024	B	Wall, Door, Caulking, White, Loc:44, Gymnasium ND
S	0024	C	Wall, Door, Caulking, White, Loc:44, Gymnasium ND

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0025	A	Window, Caulking, White, Loc:47, Exterior ND
S	0025	B	Window, Caulking, White, Loc:47, Exterior ND
S	0025	C	Window, Caulking, White, Loc:47, Exterior ND
S	0026	A	Window, Caulking, Black, Loc:47, Exterior ND
S	0026	B	Window, Caulking, Black, Loc:47, Exterior ND
S	0026	C	Window, Caulking, Black, Loc:47, Exterior ND

APPENDIX II-B
Lead Analytical Certificates



EMSL Canada Inc.

2756 Slough Street, Mississauga, ON L4T 1G3

Phone/Fax: (289) 997-4602 / (289) 997-4607

<http://www.EMSL.com>

torontolab@emsl.com

EMSL Canada Or	552403936
CustomerID:	55PINC50
CustomerPO:	336128.014
ProjectID:	

Attn: **Shawn Harris**
Pinchin Environmental
42 Dorey Avenue
Dartmouth, Nova Scotia, NS B3B 0B1

Phone: (902) 461-9999
 Fax: (902) 461-9932
 Received: 3/15/2024 09:36 AM
 Collected: 3/13/2024

Project: 336128.014

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	Collected	Analyzed	Weight	RDL	Lead Concentration
L0001 552403936-0001	3/13/2024	3/15/2024	0.2555 g	0.0080 % wt	<0.0080 % wt
	Site: Light yellow paint, Location 1				
L0002 552403936-0002	3/13/2024	3/15/2024	0.2565 g	0.016 % wt	0.47 % wt
	Site: Beige paint, Location 4				
L0003 552403936-0003	3/13/2024	3/15/2024	0.2545 g	0.0080 % wt	<0.0080 % wt
	Site: Off white paint, Location 3				
L0004 552403936-0004	3/13/2024	3/15/2024	0.2553 g	0.0080 % wt	<0.0080 % wt
	Site: Blue Paint, Location 1				
L0005 552403936-0005	3/13/2024	3/15/2024	0.2488 g	0.0080 % wt	<0.0080 % wt
	Site: Yellow paint, Location 12				
L0006 552403936-0006	3/13/2024	3/15/2024	0.2493 g	0.0080 % wt	0.065 % wt
	Site: Light green paint, Location 24				
L0007 552403936-0007	3/13/2024	3/15/2024	0.2463 g	0.0081 % wt	0.012 % wt
	Site: Grey paint, Location 32				
L0008 552403936-0008	3/13/2024	3/15/2024	0.2541 g	0.0080 % wt	<0.0080 % wt
	Site: Light blue paint, Location 38				
L0009 552403936-0009	3/13/2024	3/15/2024	0.2522 g	0.0080 % wt	0.068 % wt
	Site: White paint, Location 47				
L0010 552403936-0010	3/13/2024	3/15/2024	0.2488 g	0.080 % wt	1.5 % wt
	Site: Sea blue paint, Location 47				
L0011 552403936-0011	3/13/2024	3/15/2024	0.2426 g	0.0082 % wt	<0.0082 % wt
	Site: Sky blue paint, Location 47				

Rowena Fanto, Lead Supervisor
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. 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.

* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON AIHA LAP, LLC-ELLAP Accredited #196142

Initial report from 03/21/2024 17:03:44

APPENDIX II-C
PCB Analytical Certificates



CLIENT NAME: PINCHIN LTD.
42 Dorey Avenue
Dartmouth, NS B3B0B1
(902) 461-9999

ATTENTION TO: Shawn Harris/Allain Thebeau

PROJECT: 336128.014

AGAT WORK ORDER: 24X129460

TRACE ORGANICS REVIEWED BY: Jason Coughtrey, Operation Manager

DATE REPORTED: Mar 21, 2024

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24X129460

PROJECT: 336128.014

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
 TEL (902)468-8718
 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Shawn Harris/Allain Thebeau

SAMPLING SITE:

SAMPLED BY:

Total Polychlorinated Biphenyls in Solids

DATE RECEIVED: 2024-03-14

DATE REPORTED: 2024-03-21

		P0001, White		P0002, Black	
SAMPLE DESCRIPTION:		Caulking		Caulking	
SAMPLE TYPE:		Other		Other	
DATE SAMPLED:		2024-03-13		2024-03-13	
Parameter	Unit	G / S	RDL	5724834	5724835
Total Polychlorinated Biphenyls	mg/kg		0.5	<0.5	<0.5
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-140		69	68

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
 Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Quality Assurance

 CLIENT NAME: PINCHIN LTD.
 PROJECT: 336128.014
 SAMPLING SITE:

 AGAT WORK ORDER: 24X129460
 ATTENTION TO: Shawn Harris/Allain Thebeau
 SAMPLED BY:

Trace Organics Analysis

RPT Date: Mar 21, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Total Polychlorinated Biphenyls in Solids															
Total Polychlorinated Biphenyls	1		0.5	0.6	NA	< 0.5	120%	60%	140%	103%	60%	140%	122%	60%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
 If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By: _____





Method Summary

CLIENT NAME: PINCHIN LTD.

AGAT WORK ORDER: 24X129460

PROJECT: 336128.014

ATTENTION TO: Shawn Harris/Allain Thebeau

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Total Polychlorinated Biphenyls	ORG-120-5106	EPA SW846/8081/8080	GC/ECD
Decachlorobiphenyl	ORG-120-5106	EAP SW846 3510C/8080/8010	GC/ECD



Laboratory Use Only

Arrival Condition: Good Poor (see notes)
 Arrival Temperature: 18.7/18.8
 Hold Time: _____
 AGAT Job Number: 24x129460

Notes: _____

Chain of Custody Record

webearth.agatlabs.com • www.agatlabs.com

Report Information

Company: Pinchin Ltd.
 Contact: Shawn Harris/Allain Thebeau
 Address: 42 Dorey Avenue
Dartmouth, Nova Scotia
 Phone: 902.225.9324 Fax: _____
 Client Project #: 336128.014
 AGAT Quotation: _____
 Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):

1. Name: Shawn Harris
 Email: sharris@pinchin.com
 2. Name: Allain Thebeau
 Email: athebeau@pinchin.com

Report Format

- Single Sample per page
 Multiple Samples per page
 Excel Format Included
 Export

Regulatory Requirements (Check):

- List Guidelines on Report Do not list Guidelines on Report
 PIRI
 Tier 1 Res Pot Coarse
 Tier 2 Com N/Pot Fine
 Gas Fuel Lube
 CCME CDWQ
 Industrial NSEQS-Cont Sites
 Commercial HRM 101
 Res/Park Storm Water
 Agricultural Waste Water
 FWAL
 Sediment Other _____

Turnaround Time Required (TAT)

- Regular TAT 5 to 7 working days
 Rush TAT Same day 1 day
 2 days 3 days

Date Required: _____

Invoice To

Same Yes / No

Company: Pinchin Ltd.
 Contact: _____
 Address: 42 Dorey Avenue
Dartmouth, NS
 Phone: _____ Fax: _____
 PO/Credit Card#: _____

Drinking Water Sample: Yes No Salt Water Sample Yes No
 Reg. No.: _____

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments - Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: <input type="checkbox"/> Total <input type="checkbox"/> Diss <input type="checkbox"/> Available	Mercury	<input type="checkbox"/> BOD <input type="checkbox"/> CBOD	pH	<input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/> VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) <input type="checkbox"/> low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC <input type="checkbox"/> P/A <input type="checkbox"/> MPN <input type="checkbox"/> MF	<input type="checkbox"/> HPC <input type="checkbox"/> Pseudomonas	Fecal Coliform <input type="checkbox"/> MPN <input type="checkbox"/> MF	Other:	Other:	Hazardous (Y/N)	
P0001, White caulking	03/13/2024																												
P0002, Black caulking	03/13/2024																												

Samples Relinquished By (Print Name): Shawn Harris	Date/Time 03/13/2024/9:50	Samples Received By (Print Name): <i>[Signature]</i>	Date/Time	Pink Copy - Client	Page 1 of 1
Samples Relinquished By (Sign): <i>[Signature]</i>	Date/Time 03/13/2024/9:50	Samples Received By (Sign): <i>[Signature]</i>	Date/Time	Yellow Copy - AGAT	
				White Copy - AGAT	

APPENDIX III
Methodology



1.0 GENERAL

An investigation was conducted to identify the type of Hazardous Building Materials incorporated in the structure and its finishes.

Information regarding the location and condition of hazardous building materials encountered and visually estimated quantities were recorded. The locations of any samples collected were recorded on small-scale plans. As-built drawings and previous reports were referenced where provided.

Sample collection was conducted in accordance with our Standard Operating Procedures.

1.1 Asbestos

The investigation for asbestos included friable and non-friable asbestos-containing materials (ACM). A friable material is a material that when dry can be crumbled, pulverized or powdered by hand pressure, or a material that has already become crushed, pulverized, or powdered.

A separate set of samples was collected of each type of homogenous material suspected to contain asbestos. A homogenous material is defined by the US EPA as material that is uniform in texture and appearance, was installed at one time, and is unlikely to consist of more than one type or formulation of material. The homogeneous materials were determined by visual examination and available information on the phases of construction and prior renovations.

Samples were collected at a rate that is in compliance with the requirements of local regulations and guidelines. The sampling strategy was also based on known ban dates and phase out dates of the use of asbestos; sampling of certain building materials is not conducted after specific construction dates. In addition, to be conservative, several years past these dates are added to account for some uncertainty in the exact start / finish date of construction and associated usage of ACM. In some cases, manufactured products such as asbestos cement pipe were visually identified without sample confirmation.

The asbestos analysis of select materials was completed using a stop-positive approach. Only one result meeting the regulated criteria was required to determine that a material is asbestos-containing, but all samples must be analyzed to conclusively determine that a material is non-asbestos. The laboratory stopped analyzing samples from a homogeneous material once a result equal to or greater than the regulated criteria is detected in any of the samples of that material. All samples of a homogeneous material were analyzed if no asbestos is detected. In some cases, all samples were analyzed in the sample set regardless of result.

The analysis was performed in accordance with Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials, July 1993.

Analytical results were compared to the following criteria:

Jurisdiction	Friable	Non-Friable
Nova Scotia	0.5% ¹	0.5%

Where building materials are described in the report as “non-asbestos” or “does not contain asbestos”, this means that either no asbestos was detected by the analytical method utilized in any of the multiple samples or, if detected, it is below the lower limit of an asbestos-containing material in the applicable regulation. Additionally, these terms are used for materials which historically are known to not include asbestos in their manufacturing.

Asbestos materials were evaluated in order to make recommendations regarding any remedial work. The priority for remedial action was based on several factors:

- Friability (friable or non-friable)
- Condition (good, fair, poor, debris)
- Accessibility (ranking from accessible to all building users to inaccessible)
- Visibility (whether the material is obscured by other building components)
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in good condition)

For a complete description of the Evaluation Criteria and Basis of Recommendations, refer to Annex A.

1.2 Lead

Samples of distinctive paint finishes, and surface coatings present in more than a limited application, where removal of the paint is possible were collected. The samples were collected by scraping the painted finish to include base and covering applications.

Analysis for lead in paints or surface coatings was performed in accordance with EPA Method No. 3050B/Method No. 7420; flame atomic absorption.

Analytical results were compared to the following criteria.

Jurisdiction	Units (%)	Units (ppm) / (mg/kg)
Nova Scotia	0.009	90

Other lead building products (e.g. batteries) were identified by visual observation only.

¹ Or any amount if vermiculite



1.3 Silica

Building materials known to contain crystalline silica (e.g. concrete, tile, brick, masonry, mortar) were identified by visual inspection only. Pinchin did not perform sampling of these materials for laboratory analysis of crystalline silica content.

1.4 Mercury

Building materials, products or equipment (e.g. thermostats, lamp tubes), suspected to contain mercury were identified by visual inspection only. Dismantling of equipment suspected of containing mercury was not performed. Sampling of these materials for laboratory analysis of mercury content was not performed.

1.5 Polychlorinated Biphenyls

The potential for light ballast and oil filled transformers to contain PCBs was based on the age of the building, a review of maintenance records, and examination of labels or nameplates on equipment, where present and accessible. The information was compared to known ban dates of PCBs and Environment Canada publications.

Dry type transformers were presumed to be free of dielectric fluids and hence non-PCB.

Fluids (mineral oil, hydraulic, Aroclor or Askarel) in transformers or other equipment were not sampled for PCB content.

Select caulking and sealants were sampled and submitted for PCB analysis following EPA 3550C/8082A.

Sample results are compared to the criteria of 50 mg/kg for solids as stated in the PCB Regulation, SOR/2008-273.

1.6 Visible Mould

The presence of mould or water damage was determined by visual inspection of exposed building surfaces. If any mould growth or water damage was concealed within building cavities it was not addressed in this assessment.

Template: Methodology for Hazardous Building Materials Assessment, HAZ, January 16, 2024

METHODOLOGY ANNEX A EVALUATION CRITERIA

1.0 EVALUATION CRITERIA AND BASIS OF RECOMMENDATIONS

The detailed asbestos assessment provides information regarding the location, condition, accessibility and friability of the asbestos-containing materials (ACM). In order to make recommendations for compliance with current regulations, Pinchin developed the following criteria.

2.0 EVALUATION OF CONDITION

2.1 Friable Sprayed or Trowelled Fireproofing, Thermal Insulation and Texture Finishes (Surfacing Materials)

To evaluate the condition of ACM sprayed or trowelled on fireproofing, sprayed or trowelled thermal insulation (non-mechanical), or texture, decorative or acoustic finishes, the following criteria are applied:

Good	Surface of material shows no significant signs of damage, deterioration or delamination. Good condition includes unencapsulated or unpainted fireproofing or texture finishes, where no or limited delamination or damage is observed, or encapsulated fireproofing or texture finishes where the encapsulant or paint has been applied after the damage or fallout occurred.
Poor	A sprayed material that shows signs of significant damage or is significantly delaminating or deteriorating. This may be limited to surface delamination or some portion of the substrate may be exposed.

In Locations where damage exists in isolated areas, both good and poor condition may be applicable. The extent of each condition will be recorded. Fair condition is not utilized in the evaluation of ACM sprayed or trowelled fireproofing, sprayed or trowelled thermal insulation (non-mechanical), or texture, decorative or acoustic finishes.

The evaluation of the above products above ceilings may be limited by the number of observations and by building components such as ducts or full height walls that obstruct the above ceiling observations.

2.2 Friable Mechanical or Thermal System Insulation (TSI)

To evaluate the condition of mechanical insulation on vessels, boilers, breeching, ducts, pipes, fan units, equipment etc. the following criteria are applied:

Good	Insulation is completely covered in jacketing and exhibits no evidence of damage or deterioration. No insulation is exposed. Includes conditions where the jacketing has minor damage (i.e. scuffs or stains), but the jacketing is not penetrated.
Fair	Minor penetrating damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination) or undamaged insulation that has never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation ranges from minor to none. Damage can be repaired.

Poor	Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired. Includes components where insulation may have been removed incompletely.
-------------	---

The evaluation of mechanical insulation may be limited by the number of observations made and building components such as ducts or full height walls that obstruct observations. It is often not possible to observe each foot of mechanical insulation from all angles.

2.3 Potentially Friable Materials and Miscellaneous Friable Materials

Potentially friable ACM are products that are basically non-friable while in place but have the potential to generate friable dust upon removal or if significantly disturbed without appropriate procedures. These products may become friable if damaged. Potentially friable materials include materials such as acoustic ceiling tiles and plaster. To evaluate the condition of potentially friable materials, the following criteria are applied:

Good	No significant damage or deterioration. Still serving its intended use as a building material or finish.
Fair	Showing signs of some cracking or breakage, but is not deteriorating (e.g. cracked plaster, broken but in place ceiling tile, missing tile or section of plaster etc.). The condition is such that it is still serving its intended use as a building material or finish but may require repair for mainly cosmetic purposes.
Poor	Significant deterioration or breaking apart of the material. Material has deteriorated to the point it is not serving its intended use as building material or finish. Material has deteriorated to a point it has become friable. Normally potentially friable ACM in Poor condition is not repairable and requires at least localized removal and replacement.

2.4 Non-Friable Materials

Non-friable ACM cover a wide range of products with a wide variation in their tendency to release dust or asbestos fibres to the air. Many of these materials, (particularly where the matrix is an unweathered bitumen, asphalt or tar material) do not release fibres except in very unusual circumstances or during significant disturbance (e.g. use of abrasive power tools). Others with a cementitious matrix (asbestos-cement products) can more readily release dust due to abrasion, demolition, weathering, etc. The potential for asbestos release from non-friable ACM is always lower than from friable ACM. To evaluate the condition of non-friable Materials, the following criteria are applied:

Good	No significant damage or deterioration. Still serving its intended use as a building material or finish.
-------------	--



Fair	Showing signs of some cracking or breakage but is not deteriorating (e.g. cracked vinyl floor tile, missing piece of tile or transite, etc.). The condition is such that it is still serving its intended use as a building material or finish but may require repair for mainly cosmetic purposes.
Poor	Significant deterioration or breaking apart of the material to the point at which it cannot be repaired, and it will require at least local removal. Material has deteriorated to the point it is not serving its intended use as building material or finish. Material may have deteriorated to a point where traffic or disturbance may cause it to become friable.

2.5 Evaluation of ACM Debris

The identification of the exact location or presence of debris on the top of ceiling tiles is limited by the number of observations made and the presence of building components such as ducts or full height walls that obstruct observations.

The presence of fallen or dislodged ACM is noted separately from the ACM source and is referred to as Debris. Debris may be friable if from a friable ACM source or a badly deteriorated non-friable ACM source. Debris may also be non-friable (such as fallen pieces of transite sheet or mastic fittings, or broken, dislodged floor tiles).

Debris	Debris may be friable or non-friable but is always identified as debris.
---------------	--

2.6 Evaluation of Presumed Asbestos-Containing Material (PACM)

Presumed asbestos-containing materials (PACM), are building materials that may contain asbestos but were not sampled or analyzed due to inaccessibility or the need to perform destructive testing to obtain a reasonable sample set. Evaluation of these materials is based on the assumption that these PACM are asbestos-containing.

A list of PACM is provided in the report and they are generally not included in the detailed room by room reports. Typically, they are excluded because they are inaccessible or present in very small quantities. If PACM are evaluated, Pinchin uses the criteria that correspond with the type (and friability) of the material listed above.

3.0 EVALUATION OF ACCESSIBILITY

The accessibility of building materials known or suspected of being ACM is rated according to the following criteria:

Access (A)	Common areas of the building within reach of all building users (approximately 8' - 9' from floor or standard ceiling height). Includes other areas where occupant activities may result in disturbance of material that is not normally within reach from floor level, but may be disturbed by common activities (e.g. gymnasiums, workshops, warehouses.)
-------------------	---

Access (B)	Areas of the building accessed primarily by Maintenance/Caretaking/Janitorial Staff and within reach without use of a ladder. Includes areas within reach in Boiler Rooms, Electrical Rooms, Janitors Closets, Elevator Rooms, Mechanical Rooms, etc. Includes materials within reach from fixed ladders or catwalks, mezzanines, and accessible pipe chases.
Access (C) and Visible	Areas of the building above 8' - 9' where use of a ladder or scaffold is required to reach the ACM. Only includes ACM that are visible to view without the removal or opening of other building components such as ceiling tiles or service access panels. Visible column on HMIS sheets will say YES.
Access (C) and not Visible	Areas of the building above 8' - 9' where use of a ladder or scaffold is required to reach the ACM. Includes ACM that are not visible to view and require the removal of a building component to see, such as ceilings tiles or access panels to view and access. Includes rarely entered crawl spaces, attic spaces, etc. Observations will be limited to the extent visible from the access points. Visible column on HMIS sheets will say NO.
Access (D)	Areas of the building behind inaccessible solid ceiling systems, walls or equipment etc. where demolition of the ceiling, wall or equipment etc. is required to reach the ACM. Material inaccessible due to height or location or is only accessed under unusual situations. Evaluation of condition and extent of ACM is limited or impossible, depending on the surveyor's ability to visually examine materials in Access D.

4.0 ACTION MATRIX AND DEFINITIONS

Pinchin’s evaluation of the viability of a specific asbestos control option is based on the consideration of the friability, condition, accessibility and visibility of a material. The logic used is that damaged ACM located in an area frequently accessed by all building occupants is of a higher priority than damaged ACM located in an infrequently accessed service area. The action matrix considers the potential for fibre release (primarily from friable ACM) and the possible concerns from regulatory bodies and many building occupants to all damaged ACM (including non-friable).

In any building with asbestos, many current regulations require an Asbestos Management Program be implemented. Depending on the condition and the accessibility, more active measures such as repair or removal may be recommended. The following matrix provides guidance for recommended Actions in the absence of renovation or demolition. In the event of construction or maintenance activity which will disturb ACM more aggressive control or removal will be required.

4.1 Action Matrix

The following tables outline the action decisions based on the relationship of assessed factors. Table I applies to friable ACM. Table II applies to non-friable ACM.

Table I Decision Matrix for Friable ACM

Access	Condition			Debris
	Good	Fair	Poor	
(A)	Action 5 ¹	Action 5 ²	Action 3	Action 1
(B)	Action 7	Action 6 ³	Action 3	Action 1
(C) Visible	Action 7	Action 6	Action 3	Action 2
(C) Not Visible	Action 7	Action 7	Action 4	Action 2
(D)	Action 7	Action 7	Action 7	Action 7

Table II Decision Matrix for Potentially Friable and Non-Friable ACM

Access	Condition			Debris
	Good	Fair	Poor	
(A)	Action 7	Action 7 ⁴	Action 3	Action 1
(B)	Action 7	Action 7	Action 3	Action 1
(C) Visible	Action 7	Action 7	Action 4	Action 2
(C) Not Visible	Action 7	Action 7	Action 4	Action 2
(D)	Action 7	Action 7	Action 7	Action 7

4.2 Action Definitions

The following are the definitions in the Action Matrix Table presented above:

Action Definitions

Action 1	Clean-Up of ACM Debris Restrict access that is likely to cause a disturbance of the ACM Debris and clean up ACM Debris. Utilize appropriate asbestos precautions.
Action 2	Precautions for Access Which may Disturb ACM Debris Use appropriate means to isolate the debris or to limit entry to the area which may disturb the material. At locations where ACM Debris can remain in place in lieu of removal or clean-up (e.g. Debris on top of ceiling tiles or behind lockable door), Utilize appropriate asbestos precautions to enter the area if this will disturb debris. The precautions will be required until the ACM Debris has been cleaned up.

¹ If friable ACM in access (A)/Good condition is not proactively removed Action 7 (Manage) is recommended.

² If friable ACM in access (A)/Fair condition is not proactively removed repair is recommended.

³ If friable ACM in access (B)/Fair condition is likely to be disturbed after repair proactive removal is recommended.

⁴ Action 7 is recommended for all non-friable ACM in Fair condition however some clients may wish to repair or take some action primarily for cosmetic reasons



Action Definitions

Action 3	ACM Removal Remove ACM. Utilize asbestos procedures appropriate to the scope of the removal work. Until it is removed, restrict access to the material so it is not disturbed.
Action 4	Precautions for Work Which may Disturb ACM in Poor Condition. Utilize appropriate asbestos precautions if ACM may be disturbed by work on or near ACM. This does not require restricting access to the area, only control of work which may contact or disturb the ACM. Removal is the only viable option if work will disturb ACM.
Action 5	Proactive ACM Removal Remove friable ACM where the presence of friable asbestos in Good condition is not desirable. If friable ACM in Fair condition is not removed, then Repair friable ACM.
Action 6	ACM Repair Repair friable ACM in Fair condition which is not likely to be damaged again or disturbed by normal use of the area or room. Pinchin recommends proactive removal if friable ACM is likely to be damaged or disturbed during normal use of the area or room.
Action 7	Asbestos Management Program with Routine Surveillance Implement an Asbestos Management Program, including routine surveillance of ACM. Reassess materials regularly (typically once per year).

Master Template: Methodology Annex A to Appendix I Evaluation Criteria, HAZ, August 17, 2023

APPENDIX IV
Location Summary Report

Client:HRCE

Site: 990 NS-277, Dutch Settlement, NS

Building Name: Dutch Settlement Elementary School

Survey Date: 2024-03-11

Last Re-Assessment:

Building Phases: A: 1920 , B: 1983

Location No.	Name or Description	Area ft ²	Floor No.	Bldg. Phase	Notes
1	Old Boiler Room	355	B	A	
2	Supply Room	94	B	A	
3	Electrical Room	160	B	A	
4	Furnace Room	120	B	A	
5	Library	508	B	A	
6	Landing and Stairwell	80	B	A	
7	Classroom	600	2	A	
8	Office	150	1	B	
9	Classroom	720	2	A	
10	Hallway	196	2	A	
11	Washroom	80	1	B	
12	Custodian Closet	16	1	B	
13	Washroom	80	1	B	
14	Hallway	1350	1	B	
15	Classroom	750	1	B	
16	Classroom	760	1	B	
17	Vestibule	45	1	B	
18	Classroom	760	1	B	
19	Classroom	760	1	B	
20	Washroom	36	1	B	
21	Staffroom	390	1	B	
22	Washroom	36	1	B	
23	LAN Room	90	1	B	
24	Main Office	270	1	B	
25	Office	168	1	B	
26	Supply Room	120	1	B	
27	Classroom	1195	1	B	
28	Classroom	755	1	B	
29	Washroom	36	1	B	
30	Office	140	1	B	
31	Side Vestibule	90	1	B	
32	New Boiler Room	880	1	B	
33	Washroom	160	1	B	
34	Washroom	160	1	B	
35	Custodian Room	100	1	B	
36	Office	180	1	B	
37	Washroom	36	1	B	
38	Office	200	1	B	
39	Kitchen	142	1	B	
40	Hallway	785	1	B	
41	Storage Room	165	1	B	
42	Stage Area	850	1	B	
43	Supply Room	76	1	B	
44	Gymnasium	3995	1	B	
45	Gymnasium Office And Washroom	110	1	B	
46	Gymnasium Equipment Room And Washroom	310	1	B	
47	Exterior	0		A	

APPENDIX V
Hazardous Materials Summary Report / Sample Log

Client:HRCE **Site:** 990 NS-277, Dutch Settlement, NS **Building Name:** Dutch Settlement Elementary School **Survey Date:** 2024-03-11

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
Asbestos	S0001 ABCDEFGH	Ceiling, Wall, Ceiling, Wall Drywall And Joint Compound	1,2,3,4,5,6,7,9,10	A	0	7908	0	0	Chrysotile	Yes	NF
Asbestos	S0002 ABC	Mechanical Equipment Boiler Caulking Blue	1	A	1	0	0	0	None Detected	No	
Asbestos	S0003 ABC	Wall Caulking Grey	4	A	3	0	0	0	None Detected	No	
Asbestos	S0004 ABC	Floor Vinyl Floor Tile And Mastic 12" White With Beige Flecks	5,6,10,14,18,40	A,B	0	2669	0	0	None Detected	No	
Asbestos	S0005 ABC	Floor Stairs Vinyl Floor Tile And Mastic 9" Tan	6,15	A,B	0	800	0	0	Chrysotile	Yes	NF
Asbestos	S0006 ABC	Piping Parging Cement	6	A	0	0	1	0	Chrysotile	Yes	F
Asbestos	S0007 ABC	Other Window Caulking Grey	7,9	A	120	0	0	0	Chrysotile	Yes	NF
Asbestos	S0008 ABC	Ceiling Acoustic Tile Ceiling Tiles (lay-in) 24" X 48" Pinhole And Fissure	8,10,11,13,14,37	A,B	0	628	0	0	None Detected	No	
Asbestos	S0009 ABC	Floor Vinyl Floor Tile And Mastic 12" Beige With Brown And White Streaks	12	B	0	16	0	0	Chrysotile	Yes	NF
Asbestos	S0010 ABC	Floor Vinyl Floor Tile And Mastic 12" Grey With Black And White Streaks	8,14	B	0	260	0	0	None Detected	No	
Asbestos	S0011 ABCDEFGH	Wall, Ceiling, Wall Drywall And Joint Compound	8,11,12,13,14,15,16,17,18,19,20,21,22,23,24 25,26,27,28,29,30,31,32,33,34,35,36,37,38,39 40,41,42,43,44,45,46	B	0	30708	0	0	None Detected	No	
Asbestos	S0012 ABC	Other Window Caulking Red	8	B	8	0	0	0	None Detected	No	
Asbestos	S0013 ABC	Other Window Caulking Black Butyl Tape	14,36,40,44,45	B	38	0	0	0	None Detected	No	
Asbestos	S0014 ABC	Duct Mastic Brown	14,40	B	224	0	0	0	None Detected	No	
Asbestos	S0015 ABC	Ceiling Acoustic Tile Ceiling Tiles (lay-in) 24" X 48" Swirled Pinhole	7,9,15	A,B	0	1818	0	0	None Detected	No	
Asbestos	S0016 ABC	Floor Vinyl Floor Tile And Mastic 12" Brown With White And Brown Flecks	16,18,28,30	B	0	1663	0	0	None Detected	No	
Asbestos	S0017 ABC	Floor Vinyl Floor Tile And Mastic 12" Beige With Tan Streak	18,19,21,23,25,26,35,36,38,39,41,45,46	B	0	3719	0	0	Chrysotile	Yes	NF
Asbestos	S0018 ABC	Floor Vinyl Floor Tile And Mastic 12" White With Grey Flecks	18,24	B	0	282	0	0	None Detected	No	
Asbestos	S0019 ABC	Floor Vinyl Floor Tile And Mastic 12" Off White With Beige Flecks	27,41	B	0	1196	0	0	None Detected	No	
Asbestos	S0020 ABC	Duct Mastic, Grey	14,32,40	B	312	0	0	0	None Detected	No	
Asbestos	S0021 ABC	Ceiling Acoustic Tile Ceiling Tiles (lay-in) 24" X 48" Pinhole And Fissure	14,15,16,18,19,20,21,22,23,24,25,26,27,28,30 31,33,34,35,36,37,38,39,40,41,43,45,46	B	0	8220	0	0	None Detected	No	
Asbestos	S0022	Other Sink Mastic, Grey	21,39	B	0	0	3	0	Chrysotile	Yes	NF
Asbestos	S0023 ABC	Floor Vinyl Floor Tile And Mastic 12" Blue	44	B	0	3995	0	0	None	No	

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
		With White And Black Flecks							Detected		
Asbestos	S0024 ABC	Wall Door Caulking White	44	B	20	0	0	0	None Detected	No	
Asbestos	S0025 ABC	Other Window Caulking White	47	A	310	0	0	0	None Detected	No	
Asbestos	S0026 ABC	Other Window Caulking Black	47	A	160	0	0	0	None Detected	No	
Asbestos	V9500	Floor Mortar 12" Grey Tiles, Red Rectangles, Small Square Grey Tiles, Small White And Beige Tiles	11,13,17,20,22,29,31,33,34,37,45,46	B	0	798	0	0	Presumed Asbestos	Yes	NF
Asbestos	V9500	Floor Vinyl Floor Tile And Mastic 12" Black With White Flecks, 12" Off White With Beige Flecks	18,38	B	0	0	0	0	Presumed Asbestos	Yes	NF
Asbestos	V9500	Wall Base Mortar Rectangular Grey Tiles, Square Blue Tiles, Square Peach Tiles	11,13,20,22,29,33,34,37,45,46	B	0	1442	0	0	Presumed Asbestos	Yes	NF
Asbestos	V0000	Ceiling Acoustic Tile Ceiling Tiles (lay-in) 12"x 24" Dense Pinhole And Fissure	8,12,14,15,16,18,19,21,23,24,25,27,28,30,33,34,35,36,38,39,40,41,43,45,46	B	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Ceiling Acoustic Tile Ceiling Tiles (lay-in) 12"x24" Pinhole And Fissure	1,8,9,10,11,13,14,15,16,18,20,21,22,23,24,25,27,28,29,35,36,38,40,45,46	A,B	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Mechanical Equipment Boiler Caulking White	1	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Other Window, Countertop Caulking Clear	3,4,11,13,20,22,29,33,34,37,47	A,B	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Other Window Caulking Grey	8,47	A,B	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Other Window Caulking White	15,47	A,B	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Piping Caulking Grey	1,3,23	A,B	0	0	0	0	Non Asbestos	No	
Paint	L0001	Wall Drywall And Joint Compound Light Yellow Paint	1,28,39,42,43,44,45,46	A,B	0	5870	0	0		No	-
Paint	L0002	Wall Drywall And Joint Compound Beige	4	A	0	480	0	0	Lead (High)	Yes	-
Paint	L0003	Wall Drywall And Joint Compound Off White	3,5,6,7,8,9,10,11,13,14,15,16,17,18,19,20,22,23,25,26,27,29,30,31,33,34,35,40,41,42	A,B	0	23559	0	0		No	-
Paint	L0004	Other Wood Blue	1,4,5,7,8,9,12,14,15,16,17,18,19,21,23,24,27,28,30,35,36,38,39,41,43,44	A,B	0	0	30	0		No	-
Paint	L0005	Wall Drywall And Joint Compound Yellow	12	B	0	75	0	0		No	-
Paint	L0006	Wall Drywall And Joint Compound Light Green	21,24	B	0	1760	0	0	Lead (Low)	Yes	-
Paint	L0007	Wall Drywall And Joint Compound Grey	32	B	0	1040	0	0	Lead (Low)	Yes	-
Paint	L0008	Wall Drywall And Joint Compound Light Blue	36,37,38	B	0	1148	0	0		No	-
Paint	L0009	Wall Wood White Paint	47	A	0	4000	0	0	Lead (Low)	Yes	-

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
Paint	L0010	Wall Wood Sea Blue	47	A	510	0	0	0	Lead (High)	Yes	-
Paint	L0011	Structure Concrete (poured) Sky Blue	47	A	0	440	0	0		No	-
Lead Product	V9500	Batteries In Emer. Lights	3,5,6,10,11,13,14,31,32,33,34,40	A,B	0	0	19	0	Presumed Lead Product	Yes	-
PCB	P0001	Caulking White	47	A	310	0	0	0	-	No	-
PCB	P0002	Caulking Black	47	A	160	0	0	0	-	No	-
PCB	V9500	Light Ballasts	1,2,3,4,5,6,7,9,10,11,12,13,14 15,16,17,18,19,20,21,23,24,25,26,27,28 30,31,32,33,34,35,36,37,38,39,40,41,42 43,44,45,46	A,B	0	0	192	0	Presumed PCB	Yes	-
PCB	V0000	Caulking	1,3,4,8,11,13,15,20,22,23,29,33,34 37,47	A,B	0	0	0	0	-	No	-
Mould	V9500	Ceiling Tiles (lay-in)	10	A	0	4	0	0	Presumed Mould	Yes	-
Hg	V9500	Light Fixture	1,2,3,4,5,6,7,9,10,11,12,13,14 15,16,17,18,19,20,21,23,24,25,26,27,28 30,31,32,33,34,35,36,37,38,39,40,41,42 43,44,45,46	A,B	0	0	408	0	Presumed Hg	Yes	-
Hg	V0000	Light Fixture	20,22,29	B	0	0	0	0	-	No	-
Hg	V0000	Thermostat	5,7,9,13,16,17,18,19,21,25,27,28,30 31,32,33,34,36,38,45,46	A,B	0	0	21	0	-	No	-

Legend:

Sample number		Units			
S####	Asbestos sample collected	SF	Square feet	NF	Non Friable material.
L####	Paint sample collected	LF	Linear feet	F	Friable material
P####	PCB sample collected	EA	Each	PF	Potentially Friable material
M####	Mould sample collected	%	Percentage		
V####	Material visually similar to numbered sample collected				
V0000	Known non Hazardous Material				
V9000	Material is visually identified as Hazardous Material				
V9500	Material is presumed to be Hazardous Material				
[Loc. No.]	Abated Material				

APPENDIX VI
Confirmed and Presumed Report

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #2 : Supply Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 94

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling ¹		Drywall and joint compound			C	Y		94(7)			SF	S0001B	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall ²		Drywall and joint compound			A	Y		288(7)			SF	V0001	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Unpainted
2 - Unpainted

Client: HRCE
Location: #2 : Supply Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 94

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other ¹	Wood	1		EA				No	

1 - Door, unpainted

Client: HRCE
Location: #2 : Supply Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 94

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9500	Presumed

Client: HRCE
Location: #2 : Supply Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 94

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #3 : Electrical Room Floor: B Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling ¹		Drywall and joint compound			C	Y		160(7)			SF	V0001	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall ²		Drywall and joint compound			A	Y		290(7)			SF	V0001	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Partly unpainted
 2 - Unpainted

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #3 : Electrical Room Floor: B Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other ¹	Metal							No	

1 - Door

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #3 : Electrical Room Floor: B Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #3 : Electrical Room Floor: B Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #3 : Electrical Room Floor: B Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #5 : Library
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 508

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling ¹		Drywall and joint compound			C	Y		508(7)			SF	V0001	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Ceiling		Drywall and joint compound			C	Y		508(7)			SF	V0001	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		1200(7)			SF	S0001G	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Partly unpainted

Client: HRCE
Location: #5 : Library
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 508

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE
Location: #5 : Library
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 508

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	12	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #5 : Library
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: B

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 508

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	6	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #6 : Landing and Stairwell Floor: B Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling ¹		Drywall and joint compound			C	Y		80(7)			SF	V0001	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Ceiling		Drywall and joint compound			C	Y		80(7)			SF	S0001F	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor	Stairs	Vinyl Floor Tile and Mastic, 9" tan			A	Y		50(7)			SF	S0005A	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Piping		Parging Cement	Elbow		C	Y		1(7)			EA	S0006ABC	Chrysotile	50-75%	Confirmed Asbestos	F
Wall		Drywall and joint compound			A	Y		210(7)			SF	V0001	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Partly unpainted

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #6 : Landing and Stairwell Floor: B Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #6 : Landing and Stairwell Floor: B Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #6 : Landing and Stairwell Floor: B Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #7 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 600

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Other ¹	Window	Caulking, Grey			A	Y		60(7)			LF	S0007BC	Chrysotile	5-10%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		1100(7)			SF	S0001D	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Painted off white

Client: HRCE
Location: #7 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 600

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	18	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #7 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 600

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	9	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #9 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 720

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Other ¹	Window	Caulking, Grey			A	Y		60(7)			LF	S0007A	Chrysotile	5-10%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		1120(7)			SF	S0001C	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Painted off white

Client: HRCE
Location: #9 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 720

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	18	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #9 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 720

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	9	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #10 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 196

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Wall		Drywall and joint compound			A	Y		1430(7)			SF	S0001E	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #10 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 196

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other ¹	Wood	1		EA				No	

1 - Door, unpainted

Client: HRCE
Location: #10 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 196

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE
Location: #10 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 196

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9500	Presumed

Client: HRCE
Location: #10 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 196

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

Client: HRCE
Location: #10 : Hallway

Site: 990 NS-277, Dutch Settlement, NS
Floor: 2

Building Name: Dutch Settlement Elementary School
Room #:
Area (sqft): 196

Survey Date: 2024-03-11

Last Re-Assessment: 0000-00-00

MOULD								
System	Material	Visible	Quantity	Unit	Sample Type	Sample No	Sample Description	Mould
Ceiling	Ceiling Tiles (lay-in)	Y	4	SF	V	9500		Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #11 : Washroom Floor: 1 Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Small square grey tiles		Ceramic Tiles	D	N		80(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Rectangular grey tiles		Ceramic Tiles	D	N		120(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive
 2 - Sampling would be too destructive

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #11 : Washroom Floor: 1 Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #11 : Washroom Floor: 1 Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #11 : Washroom Floor: 1 Room #: Area (sqft): 80
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #12 : Custodian Closet
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 16

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with brown and white streaks			A	Y		16(7)			SF	S0009ABC	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #12 : Custodian Closet
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 16

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed

Client: HRCE
Location: #12 : Custodian Closet
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 16

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #13 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 80

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, 12" grey tiles		Ceramic Tiles	D	N		80(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Rectangular grey tiles		Ceramic Tiles	D	N		120(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

- 1 - Sampling would be too destructive
- 2 - Sampling would be too destructive

Client: HRCE
Location: #13 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 80

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE
Location: #13 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 80

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #13 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 80

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #14 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 1350

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	5	EA	V9500	Presumed

Client: HRCE
Location: #14 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 1350

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	20	EA	V9500	Presumed

Client: HRCE
Location: #14 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 1350

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	10	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #16 : Classroom Floor: 1 Room #: Area (sqft): 760
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	18	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #16 : Classroom Floor: 1 Room #: Area (sqft): 760
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	9	EA	V9500			Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #17 : Vestibule Floor: 1 Room #: Area (sqft): 45
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Red rectangles		Ceramic Tiles	D	N		20(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #17 : Vestibule Floor: 1 Room #: Area (sqft): 45
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other ¹	Metal							No	

1 - Door

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #17 : Vestibule Floor: 1 Room #: Area (sqft): 45
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Thermostat	1	EA	V0000	
Light Fixture	2	EA	V9500	Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE

Site: 990 NS-277, Dutch Settlement, NS

Building Name: Dutch Settlement Elementary School

Location: #17 : Vestibule

Floor: 1

Room #:

Area (sqft): 45

Survey Date: 2024-03-11

Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #18 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 760

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		730(7)			SF	S0017A	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor ¹		Vinyl Floor Tile and Mastic, 12" off white with beige flecks			A	Y						V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Patch

Client: HRCE
Location: #18 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 760

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	18	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #18 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 760

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	9	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #19 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 760

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		758(7)	2(7)		SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #19 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 760

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	18	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #19 : Classroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 760

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	9	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #20 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Small white and beige tiles		Ceramic Tiles	D	N		36(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Square peach tiles		Ceramic Tiles	D	N		120(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

- 1 - Sampling would be too destructive
- 2 - Sampling would be too destructive

Client: HRCE
Location: #20 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed
Light Fixture ¹		EA	V0000	

- 1 - Light bulb

Client: HRCE
Location: #20 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #21 : Staffroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 390

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		726(7)	4(7)		SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Other	Sink	Mastic, Grey			C	N		1(7)			EA	V0022	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #21 : Staffroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 390

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Wall	Drywall and joint compound	950		SF	V0006	Light green	Pb: 0.065 %	Lead (Low)	

Client: HRCE
Location: #21 : Staffroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 390

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	8	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #21 : Staffroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 390

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	4	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #22 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Small white and beige tiles		Ceramic Tiles	D	N		36(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Square peach tiles		Ceramic Tiles	D	N		120(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

- 1 - Sampling would be too destructive
- 2 - Sampling would be too destructive

Client: HRCE
Location: #22 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture ¹		EA	V0000	

- 1 - Light bulb

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #23 : LAN Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 90

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		90(7)			SF	S0017B	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #23 : LAN Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 90

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed

Client: HRCE
Location: #23 : LAN Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 90

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #25 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 168

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		168(7)			SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #25 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 168

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other ¹	Wood							No	

1 - Unpainted

Client: HRCE
Location: #25 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 168

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #25 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 168

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #26 : Supply Room Floor: 1 Room #: Area (sqft): 120
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		120(7)			SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #26 : Supply Room Floor: 1 Room #: Area (sqft): 120
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other ¹	Wood							No	

1 - Unpainted

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #26 : Supply Room Floor: 1 Room #: Area (sqft): 120
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #26 : Supply Room Floor: 1 Room #: Area (sqft): 120
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #29 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Small white and beige tiles		Ceramic Tiles	D	N		36(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Square peach tiles		Ceramic Tiles	D	N		120(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

- 1 - Sampling would be too destructive
- 2 - Sampling would be too destructive

Client: HRCE
Location: #29 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture ¹		EA	V0000	

- 1 - Light bulb

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #30 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 140

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	18	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #30 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 140

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	9	EA	V9500			Presumed

Client: HRCE
Location: #31 : Side Vestibule
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 90

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Red rectangles		Ceramic Tiles	D	N		70(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE
Location: #31 : Side Vestibule
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 90

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other ¹	Metal	2		EA				No	

1 - Door

Client: HRCE
Location: #31 : Side Vestibule
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 90

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS

Building Name: Dutch Settlement Elementary

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Location: #31 : Side Vestibule
Survey Date: 2024-03-11

Floor: 1

School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 90

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Thermostat	1	EA	V0000	
Light Fixture	2	EA	V9500	Presumed

Client: HRCE

Site: 990 NS-277, Dutch Settlement, NS

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 90

Location: #31 : Side Vestibule
Survey Date: 2024-03-11

Floor: 1

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #33 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Small white and beige tiles		Ceramic Tiles	D	N		160(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Square peach tiles		Ceramic Tiles	D	N		260(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive
 2 - Sampling would be too destructive

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #33 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #33 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Thermostat	1	EA	V0000	
Light Fixture	4	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #33 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #34 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Small white and beige tiles		Ceramic Tiles	D	N		160(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Square blue tiles		Ceramic Tiles	D	N		260(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive
 2 - Sampling would be too destructive

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #34 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #34 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Thermostat	1	EA	V0000	
Light Fixture	4	EA	V9500	Presumed

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #34 : Washroom Floor: 1 Room #: Area (sqft): 160
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #36 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 180

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		180(7)			SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #36 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 180

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	6	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #36 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 180

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	3	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #37 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor ¹		Mortar, Small white and beige tiles		Ceramic Tiles	D	N		36(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Square blue tiles		Ceramic Tiles	D	N		54(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

- 1 - Sampling would be too destructive
- 2 - Sampling would be too destructive

Client: HRCE
Location: #37 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed

Client: HRCE
Location: #37 : Washroom
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 36

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #38 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 200

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		198(7)			SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor ¹		Vinyl Floor Tile and Mastic, 12" black with white flecks			A	Y						V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Patch

Client: HRCE
Location: #38 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 200

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE
Location: #38 : Office
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 200

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #39 : Kitchen
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 142

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		142(7)			SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Other	Sink	Mastic, Grey			C	N		2(7)			EA	S0022	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE
Location: #39 : Kitchen
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 142

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9500	Presumed

Client: HRCE
Location: #39 : Kitchen
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 142

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #40 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 785

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	4	EA	V9500	Presumed

Client: HRCE
Location: #40 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 785

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	12	EA	V9500	Presumed

Client: HRCE
Location: #40 : Hallway
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 785

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	6	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #42 : Stage Area
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #: _____ Area (sqft): 850
Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	32	EA	V9500	Presumed

Client: HRCE
Location: #42 : Stage Area
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #: _____ Area (sqft): 850
Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	16	EA	V9500			Presumed

Client: HRCE
Location: #43 : Supply Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #: _____ Area (sqft): 76
Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9500	Presumed

Client: HRCE
Location: #43 : Supply Room
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor: 1

Building Name: Dutch Settlement Elementary School
Room #: _____ Area (sqft): 76
Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #46 : Gymnasium Equipment Room And Washroom Floor: 1 Room #: Area (sqft): 310
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streak			A	Y		259(7)	3(7)		SF	V0017	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor ¹		Mortar, Small white and beige tiles		Ceramic Tiles	D	N		48(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall ²	Base	Mortar, Square peach tiles		Ceramic Tiles	D	N		148(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive
 2 - Sampling would be too destructive

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #46 : Gymnasium Equipment Room And Washroom Floor: 1 Room #: Area (sqft): 310
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9500	Presumed
Thermostat	1	EA	V0000	

Client: HRCE Site: 990 NS-277, Dutch Settlement, NS Building Name: Dutch Settlement Elementary School
 Location: #46 : Gymnasium Equipment Room And Washroom Floor: 1 Room #: Area (sqft): 310
 Survey Date: 2024-03-11 Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	2	EA	V9500			Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE
Location: #47 : Exterior
Survey Date: 2024-03-11

Site: 990 NS-277, Dutch Settlement, NS
Floor:

Building Name: Dutch Settlement Elementary
School
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 0

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Wall	Wood	3000	1000	SF	L0009	White paint	Pb: 0.068 %	Lead (Low)	
Wall ¹	Wood	430	80	LF	L0010	Sea blue	Pb: 1.5 %	Lead (High)	

1 - On trim

Legend:

Sample number		Units		Other	
S####	Asbestos sample collected	SF	Square feet	A	Access
L####	Paint sample collected	LF	Linear feet	V	Visible
P####	PCB sample collected	EA	Each	AP	Air Plenum
M####	Mould sample collected	%	Percentage	F	Friable material
V####	Material is visually identified to be identical to S####	LF	Linear feet	NF	Non Friable material
V0000	Known non hazardous material			PF	Potentially Friable material
V9000	Material visually identified as a Hazardous Material			Pb	Lead
V9500	Material is presumed to be a hazardous material			Hg	Mercury
				As	Arsenic
				Cr	Chromium

Access	
A	Accessible to all building occupants
B	Accessible to maintenance and operations staff without a ladder
C	Accessible to maintenance and operations staff with a ladder. Also rarely entered, locked areas
D	Not normally accessible

Condition	
Good	No visible damage or deterioration
Fair	Minor, repairable damage, cracking, delamination or deterioration
Poor	Irreparable damage or deterioration with exposed and missing material

Visible	
Y	The material is visible when standing on the floor of the room, without the removal or opening of other building components (e.g. ceiling tiles or access panels).
N	The material is not visible to view when standing on the floor of the room and requires the removal of a building component (e.g. ceilings tiles or access panels) to view and access. Includes rarely entered crawlspaces, attic spaces, etc. Observations will be limited to the extent visible from the access points.
L	The material is partially visible to view when standing on the floor of the room and requires the removal of a building component (e.g. ceiling system or access panels) to view completely and access. Includes partially viewed access points to crawlspaces, attic spaces, etc. without entering. Observations are limited to the extent visible from the access points.

Air Plenum	
Yes or No	The material is in a return air plenum or in a direct airstream or there is evidence of air erosion (e.g. duct for heating or cooling blowing directly on or across an ACM). This field is only completed where Air Plenum consideration is required by regulation.

Colour Coding	
	The material is a hazardous material, either by analytical results or by visible identification.
	The material is presumed to be a hazardous material, based on visual appearance, and was not sampled due to limited access or the non-destructive nature of sampling.

Action			
(1)	Clean up of ACM Debris	(2)	Precautions for Access Which may Disturb ACM Debris
(4)	Precautions for Work Which may Disturb ACM in Poor Condition	(5)	Proactive ACM removal (Minimum repair required for fair condition)
(7)	Management program and surveillance	(3)	ACM removal
		(6)	ACM repair

APPENDIX VII
Photographs



S0001A (Confirmed Asbestos), Wall, Drywall and joint compound, Old Boiler Room (Location #: 1)



S0005A (Confirmed Asbestos), 9" tan, Floor, Stairs, Vinyl Floor Tile and Mastic, Landing and Stairwell (Location #: 6)



S0006A (Confirmed Asbestos), Piping, Parging Cement, Landing and Stairwell (Location #: 6)



S0007C (Confirmed Asbestos), Grey, Other, Window, Caulking, Classroom (Location #: 7)
Painted off white



S0009A (Confirmed Asbestos), 12" beige with brown and white streaks, Floor, Vinyl Floor Tile and Mastic, Custodian Closet (Location #: 12)



S0017A (Confirmed Asbestos), 12" beige with tan streak, Floor, Vinyl Floor Tile and Mastic, Classroom (Location #: 18)



S0022 (Confirmed Asbestos), Other, Sink, Mastic, Grey, Kitchen (Location #: 39)



V9500 (Presumed Asbestos), Wall, Base, Thin-set under ceramic tiles, Washroom (Location #: 11)



V9500 (Presumed Asbestos), Floor, Thin-set under ceramic tiles, Washroom (Location #: 11)



V9500 (Presumed Asbestos), Floor, Thin-set under ceramic tiles, Washroom (Location #: 13)



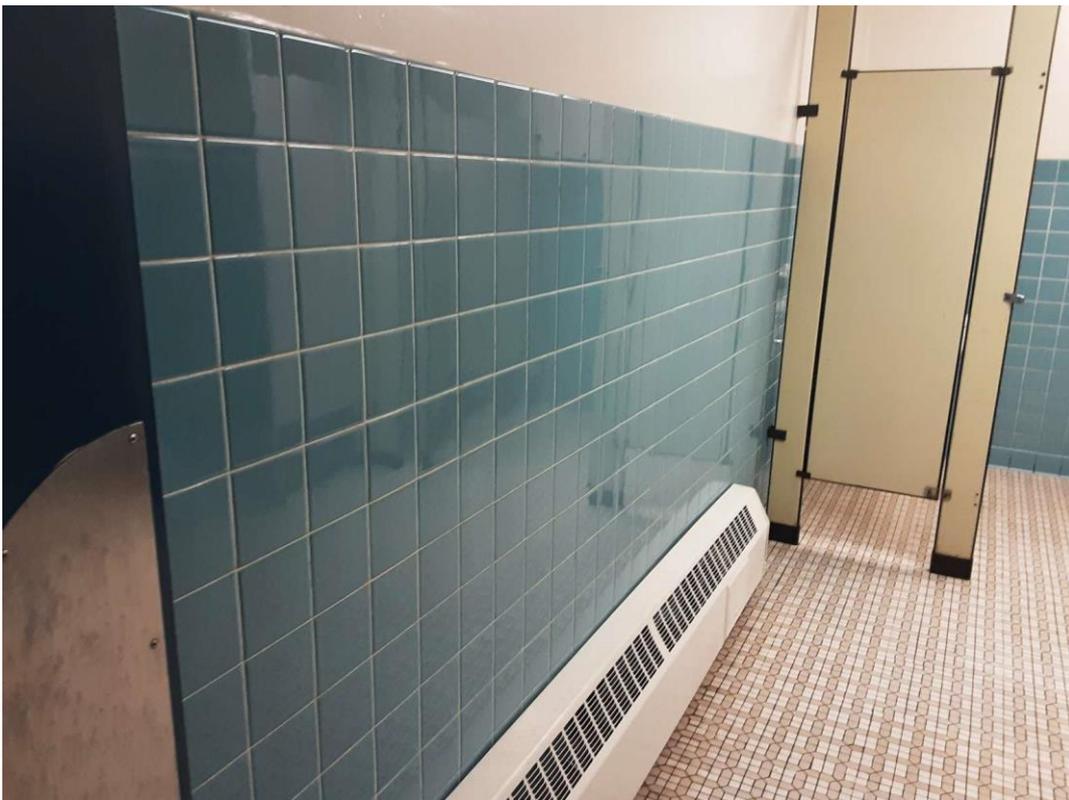
V9500 (Presumed Asbestos), Floor, Thin-set under ceramic tiles, Vestibule (Location #: 17)



V9500 (Presumed Asbestos), Wall, Base, Thin-set under ceramic tiles, Washroom (Location #: 20)



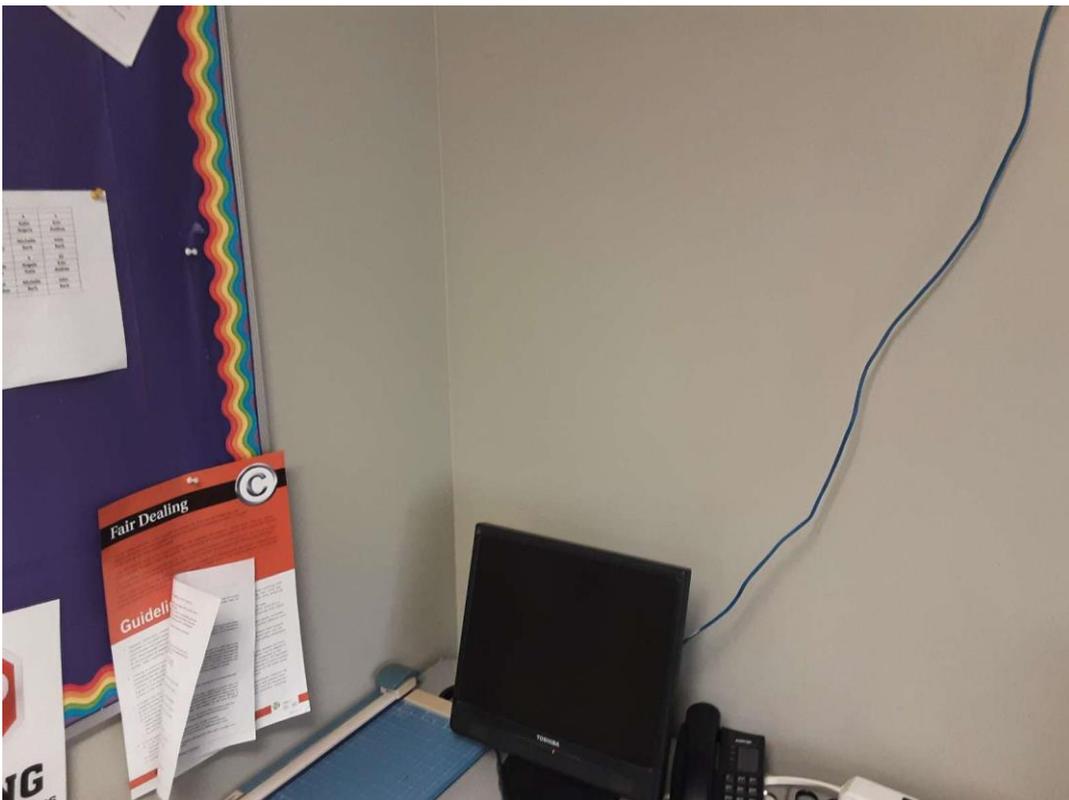
V9500 (Presumed Asbestos), Floor, Thin-set under ceramic tiles, Washroom (Location #: 20)



V9500 (Presumed Asbestos), Wall, Base, Thin-set under ceramic tiles, Washroom (Location #: 34)



L0002 (Lead, High), Beige, Wall, Furnace Room (Location #: 4)



V0006 (Lead, Low), Light green, Wall, Staffroom (Location #: 21)



L0006 (Lead, Low), Light green, Wall, Main Office (Location #: 24)



L0007 (Lead, Low), Grey, Wall, New Boiler Room (Location #: 32)



L0009 (Lead, Low), White paint, Wall, Exterior (Location #: 47)



L0010 (Lead, High), Sea blue, Wall, Exterior (Location #: 47)
On trim



Lead Products, V9500(Presumed), BATTERIES IN EMER. LIGHTS, Library (Location #: 5)



Halifax

Regional Centre for Education

FINAL
Asbestos
Management Program
HRCE Facilities

Prepared for:

**Halifax Regional Centre for
Education**

33 Spectacle Lake Drive
Dartmouth, Nova Scotia B3B 1W8

August 28, 2023

Pinchin File: 322126.000



IMPORTANT CONTACTS

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Approved Abatement Contractors

Company	Contact Name	Phone	Email
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1.0 INTRODUCTION

Halifax Regional Centre for Education (HRCE) is committed to protect the health and safety of workers and occupants. This Asbestos Management Program (AMP) has been developed to meet responsibilities as an employer, and as a building owner to manage operational issues respecting asbestos and to maintain compliance with applicable regulations for disturbance of asbestos-containing materials (ACM) during demolition, renovation, alteration, maintenance, repair or other activities.

2.0 SCOPE

The AMP provides information and procedures for Asbestos Management of all HRCE owned or occupied facilities in Nova Scotia.

The AMP applies to all HRCE staff as well as all service providers and contractors performing work in HRCE facilities.

The AMP outlines requirements for HRCE personnel involved in acquisition of property which may contain ACM. It applies to all categories of property with the exception of vacant lands. If HRCE decides to lease property in the future ACM should be considered when developing their lease agreement and this AMP should be amended to address leased properties occupied by the HRCE.

The AMP is a management system to control the disturbance of ACM during demolition, renovation, alteration, maintenance, repair or other activities.

The AMP incorporates the following elements:

- Asbestos Assessments and Reassessments.
- Regulatory Requirements and HRCE Policies.
- Roles and Responsibilities.
- Notifications.
- Training Requirements.
- Emergency Reaction and Procedures.
- Record Keeping.
- Contractor Requirements.

3.0 OBJECTIVE

The AMP is a management system primarily intended to identify ACM and control disturbance of ACM by using proper procedures during demolition, renovation, alteration, maintenance, repair or other activities. The objective in preparing and instituting this AMP is to ensure that known or suspected ACM is managed



so that maintenance staff, construction workers and occupants are safeguarded in accordance with applicable regulations.

4.0 BACKGROUND INFORMATION AND HEALTH EFFECTS

The following is a very brief summary of the hazards and health effects from asbestos exposure:

- Occupational exposure to asbestos can cause fatal lung disease.
- Asbestos must become airborne and be inhaled to be hazardous. A physical disturbance or direct contact with ACM is required to cause it to become airborne. The mere presence of asbestos is not hazardous.
- Asbestos may remain in buildings so long as it is in good condition and undisturbed. No Provincial or Federal Regulations require the removal of ACM as long as it is enclosed, encapsulated or managed appropriately and removed prior to building demolition.

5.0 REGULATORY REQUIREMENTS AND HRCE POLICIES

5.1 Regulatory Requirements

This AMP was implemented in response to the following legislation in effect as of August 28, 2023.

All building operations, whether performed by HRCE, or service providers, shall adhere to the requirements outlined in this document and all applicable regulations, guidance documents and acceptable professional standards.

The following regulations and guidelines were in place at the time this AMP was prepared:

1. Occupational Health and Safety Act, N.S. Reg. 52/2013.
2. A Guide to Removal of Friable Asbestos-Containing Material.
3. A Guide to Assessment and Management of Asbestos in the Workplace.
4. Asbestos Waste Management Regulations, N.S. Reg. 53/95

6.0 HRCE POLICIES RELATED TO ASBESTOS

HRCE has established the following policies related to asbestos independent of applicable regulations:

- HRCE may opt for removal of ACM with minor damage as opposed to repair or encapsulation when cost-effective unless removal is not practicable. ACM with major damage must be removed.
- At existing leased properties where HRCE is a tenant, when ACM is discovered during any improvement, addition, renovation, demolition, maintenance, repair of any kind, or at



any other time, the Owner (Landlord) shall promptly remove the ACM from the leased premises, if possible within the existing lease agreement.

- HRCE may perform Low Risk asbestos operations, where appropriately trained to perform the work.
- All Moderate and High asbestos operations must be undertaken by an Asbestos Abatement Contractor. Asbestos Abatement Contractors may also perform Low Risk asbestos operations.

7.0 ASBESTOS-CONTAINING MATERIALS AT HRCE FACILITIES

Refer to the individual Asbestos Assessment or subsequent Asbestos Reassessment Reports prepared for the Facility, provided in Appendix G. In some cases, Hazardous Materials Assessment or Designated Substance Survey Reports have been prepared and these reports include information regarding asbestos and other hazardous materials (e.g. lead, mercury, silica, and PCBs).

All assessment reports or subsequent Asbestos Reassessment Reports have been, or will be, prepared to comply with applicable asbestos regulations and this AMP.

Asbestos Assessment Reports are key components of this AMP, as the reports define the locations of ACM and Presumed ACM (PACM) present in the facility, the condition of ACM, the friability, the type of asbestos and the approximate quantity.

7.1 Asbestos Assessments

Refer to the Asbestos Assessment or Hazardous Building Materials Assessment Report in Appendix G for further information on the methodology of the assessment(s) completed for the Facility.

HRCE will engage a Consultant to perform asbestos assessments for all facilities. The report is to be completed following a methodology compliant with applicable regulations and acceptable professional standards. The report must comment on the condition of the ACM, include recommendations for remedial action, and is to include the risk classification for any abatement required.

In facilities which are leased, copies of the initial asbestos assessment, and any subsequent reassessments, shall be provided by the Owner to HRCE, and maintained on Site, or HRCE will have an asbestos assessment report prepared and complete subsequent reassessments, limited to the leased space.

7.2 Reassessment of ACM

All ACM and PACM identified in the Facilities will be inspected at reasonable intervals, and at minimum annually, a reassessment of all ACM and PACM will be completed with written documentation.



The reassessment of ACM and PACM will be completed by a Consultant (Qualified Person) or HRCE staff, using the form provided in Appendix E.

7.2.1 Reassessment in Unassessed Areas

Where assessments have been completed in only a portion of schools, all non-sampled materials (including but not limited to ceiling tiles, vinyl floor tiles, vinyl sheet floor, etc.) are to be presumed to contain asbestos, and reassessed during their yearly inspection of the suites.

When feasible, arrangements should be made to access previously unassessed areas during the annual reassessments. If during any annual or other inspections, materials not previously sampled are found to be damaged (spalling finishes, debris, etc.), samples are to be collected and the material is to be identified as asbestos or non-asbestos. Remedial action and removal procedures are to be decided accordingly if the materials are found to contain asbestos.

7.3 Distribution of Assessment and Reassessment Reports

HRCE will ensure that each assessment and reassessment report is distributed or accessible to the following:

- HRCE JOHSC and/or Occupational Health and Safety Representative (OHS Representative).
- A hard copy will be sent to each facility. Electronic copies will be made available.
- Building Operators, Maintenance Personnel, Janitorial Staff.
- Project Managers or Construction Managers planning or performing work in a HRCE Building.
- Outside contractors that could potentially disturb ACM through their work.

8.0 PRE-CONSTRUCTION HAZARDOUS BUILDING MATERIALS ASSESSMENT

Prior to the commencement of any work that requires renovation, construction or demolition, the Facility or specific areas of the Facility to be impacted by the work shall be assessed for ACM, as well as other hazardous building materials (e.g. lead, mercury, silica, and PCBs), (the “**Pre-Construction Hazardous Building Materials Assessment**”).

The Pre-Construction Hazardous Building Materials Assessment must be performed by a Consultant and include destructive or intrusive testing of enclosed areas.

Sampling may include the following:



- Prior to disturbance of materials presumed to contain asbestos listed in the assessment reports, collect samples of materials that were not previously sampled/identified (refer to Asbestos Assessment Report or Hazardous Materials Report).
- Unidentified suspect materials that were not sampled during the initial survey, but which may be present located within enclosed areas such as pipe/duct insulations in ceiling spaces, chases or shafts. If such areas will be affected by the work, entry to these areas and sampling of suspect materials shall be performed.
- Assessment of existing visible floor, wall and ceiling finishes to assess and sample concealed finishes (e.g., vinyl flooring under carpet or other vinyl flooring, drywall over plaster, etc.)
- Other hazardous building materials shall be sampled and analyzed or identified prior to disturbance as required by provincial regulatory requirements. Other hazardous building materials may include lead, mercury, silica, polychlorinated biphenyls, mould, etc.

Upon receiving the Pre-Construction Hazardous Building Materials Assessment report, if asbestos and/or other hazardous building materials are present in the area, specifications (large scale projects) or a scope of work (small scale projects) for removal shall be prepared, provided, and reviewed by the Constructor or contractor prior to any renovation, construction, or demolition work.

HRCE will employ an Abatement Contractor to perform abatement of other hazardous materials and/or ACM that may be disturbed by construction, renovation, or demolition work using appropriate regulated procedures.

9.0 REMEDIAL WORK – DAMAGED MATERIALS

Where damage is observed, HRCE will refer to the existing Asbestos or Hazardous Building Materials Assessment or subsequent Asbestos Reassessment Reports (as required) to determine if the damaged materials are ACM or PACM.

Where damaged suspected asbestos-containing materials are not included in the existing Asbestos or Hazardous Building Materials Assessment Report(s), an assessment and/or sampling of these damaged materials must be conducted prior to repair of damage, unless materials are treated as ACM, and appropriate asbestos operations are followed.

If damaged materials contain asbestos and the regulated abatement procedure to be used is not detailed in the recommendations section of the existing Asbestos or Hazardous Building Assessment Materials report, HRCE will contact a Consultant to determine applicable asbestos abatement procedures and to develop a scope of work and performance specifications, as required.



HRCE will employ an Abatement Contractor to perform the remedial work required (removal of damaged ACM) and a Consultant to perform inspection and air monitoring as soon as practicable upon receiving the report/notice of damage.

10.0 NOTIFICATION

10.1 Notification to Occupants

HRCE will inform the JOSHC of any planned sampling, assessment or abatement work that is to be conducted within the applicable HRCE building(s) to ensure that all aspects of committee involvement are complied with.

Tenants must be notified of ACM in their leased space and in common areas of the building that they have access to and may disturb the ACM.

HRCE will notify all new tenants of the presence of ACM in the space they are occupying. Notification is to be completed prior to occupancy via the tenant lease agreement.

Upon institution of this AMP, and upon completion of asbestos assessments in a recently assessed or recently purchased property, where tenants have not been notified via their lease agreement, HRCE will notify occupants of the presence of asbestos in the space they are occupying.

10.2 Notification of Contractors

Contractors that perform work which may disturb ACM within the Facility must be notified of the presence of asbestos (by providing the Asbestos or Hazardous Building Materials Assessment Report). Notification will be sent to these parties prior to project or maintenance work (e.g. janitorial, telephone, cable, etc.).

Contractors are to inform all sub-trades of the presence of all ACM or PACM identified in the work area and include this information in their respective contract agreement.

If suspect ACM not identified in the contract agreement is discovered during the course of the work, the Contractors are to stop all work which might disturb the suspect ACM and notify the appropriate HRCE personnel (i.e. Property Manager and/or Project Manager as applicable) or Constructor, as the case may be.

Prior to performing work, contractors must complete and return the Contractors Notification Package (Appendix B) and HRCE will maintain acknowledgement forms from these packages.

10.3 Notification of Maintenance Personnel

HRCE will inform their own staff that will perform janitorial work, maintenance work or project work of the presence of asbestos in the Facility in which they are working. This will be completed by providing access



to the AMP and the most recent Asbestos Assessment or Hazardous Building Materials Assessment Report and training.

10.4 Notification of Project Managers, Architects and Engineers

HRCE will inform their project managers, architects and engineers of the presence of asbestos in the facility in which they are arranging for or planning work. This will be completed by providing access to the AMP, and the most recent Asbestos Assessment or Hazardous Building Materials Assessment Report.

10.5 Notification of Authorities Having Jurisdiction

Regulations in place at the time of this AMP development do not require notifications regarding asbestos-containing materials, except for:

- A major release of a hazardous substance (per Section 63 of the Occupational Health and Safety Act).

11.0 TRAINING REQUIREMENTS

HRCE will employ a Consultant to ensure staff have received appropriate training.

HRCE employees which will not undertake asbestos abatement work or will not disturb asbestos may be provided training including the following:

- Health effects of asbestos exposure.
- Overview of the existence of applicable regulations and risk classification.
- Identification of common types of ACM (so as to not disturb them).
- Understanding a typical asbestos survey report.
- Their responsibilities under the policies in this AMP and Regulations.

HRCE employees will undertake asbestos abatement work shall receive training including the following:

- Health effects of asbestos exposure.
- Applicable regulations and risk classification.
- Identification of common types of ACM.
- Asbestos Work Procedures limited to Low Risk Operations.
- Understanding a typical asbestos survey report.
- Their responsibilities under the policies in this AMP and Regulations.

HRCE will maintain a record of training of their employees.



HRCE requires all service providers, contractors, etc. to provide appropriate training to all workers who perform work in HRCE Facilities which will, or potentially may, disturb ACM.

12.0 RESPONSE TO DISTURBANCE OF ASBESTOS, PROCEDURES AND CONTACTS

HRCE staff and contractors may encounter fallen material that is suspected confirmed to contain asbestos or uncover a material that was previously unidentified and is suspected to contain asbestos. HRCE staff and contractors shall follow the protocol “Response to Disturbance of Asbestos” in Appendix C.

13.0 CLASSIFICATION OF ABATEMENT WORK

Refer to Appendix F for the classification of asbestos work.

14.0 INSPECTION AND AIR MONITORING OF ASBESTOS WORK

14.1 Visual Inspection

The primary method of ensuring compliance when conducting asbestos removal or abatement work is visual inspection of the site and work practices by a Competent Worker or Asbestos Consultant.

14.2 Air Monitoring During Asbestos Work

Per the “Asbestos in the Workplace: A Guide to the Removal of Friable Asbestos Containing Material” dated November 21, 2013:

- During the removal of friable asbestos-containing materials, where a Glove Bag is not used, and the air from the enclosure is exhausted inside the building, daily air sampling is required outside the enclosure.
- At the completion of removal of friable asbestos-containing materials, clearance air sampling must be performed prior to dismantling of the site isolation and engineering controls.

Air sampling above the regulatory requirements may be performed, as identified in the following sections.

Air monitoring and analysis during asbestos removal or abatement will be performed using Phase Contrast Microscopy (PCM) following the NIOSH 7400 method. PCM air samples must be submitted for analysis to a laboratory participating in a recognized quality control program such as the AIHA Asbestos Analysts Testing (AAT) Program or the Quality Control Program of the IRSST (the Institut de recherche Robert-Sauvé en santé et en sécurité du travail).



The PCM method does not characterize the types of fibres present. In cases where elevated fibre concentrations are identified, or the actual asbestos concentration is required, Transmission Electron Microscopy following the NIOSH 7402 method may be used.

The acceptable limit for PCM samples is as follows:

- as low as reasonably achievable (ALARA) outside the work area, and/or 0.01 fibres/cubic centimetre (f/cc).
- 0.01 f/cc for clearance air sampling.

Where TEM analysis is performed, the acceptable limits would be 0.01 asbestos fibres/cubic centimeter.

14.3 Low Risk – Inspection and Air Monitoring

14.3.1 Inspection

The Project Manager, an assigned Competent Worker, or an Abatement Consultant, will inspect the work upon completion of work to ensure all ACM has been removed and the area adequately cleaned of dust and debris.

14.3.2 Air Monitoring

Air monitoring is not required; however, projects may be evaluated on a case by case basis, and air sampling performed where desired.

14.4 Moderate Risk and Glove Bag – Inspection and Air Monitoring

14.4.1 Inspection

An Abatement Consultant will perform daily inspections throughout the abatement, and inspect the work upon completion of work to ensure all ACM has been removed and the area adequate cleaned of visible dust and debris. Upon completion of inspection and air monitoring (if required) by the Abatement Consultant, the site isolation may be dismantled.

The Project Manager or an assigned Competent Worker may inspect for final cleanliness after the site isolation has been dismantled.

14.4.2 Air Monitoring

PCM air monitoring will be conducted daily and at completion of abatement. Air monitoring will be conducted in occupied areas adjacent to the Asbestos Work Area or Glove Bag Work Area during contaminated work.



PCM air monitoring will be used for air clearance within the Asbestos Work Areas prior to re-occupancy. Where enclosures have been constructed to define the Asbestos Work Area, aggressive clearance air sampling will be performed.

14.5 High Risk – Inspection and Air Monitoring

14.5.1 Inspection

An Abatement Consultant will perform daily inspections throughout the abatement, and inspect the work upon completion of work to ensure all ACM has been removed and the area adequately cleaned of visible dust and debris. Upon completion of inspection and air monitoring by the Consultant, the site isolation may be dismantled.

The Project Manager or an assigned Competent Worker may inspect for final cleanliness after the site isolation has been dismantled.

14.5.2 Air Monitoring

PCM air monitoring will be conducted on a daily basis.

Air monitoring will be conducted at the perimeter of the Asbestos Work Area (in occupied areas adjacent to the Work Area) to ensure no leakage from the enclosure.

Aggressive clearance air monitoring must be performed within the Asbestos Work Areas. Where PCM samples fail to meet the 0.01 f/cc criteria:

- Contractors may be requested to reclean the Asbestos Work Areas, or;
- Transmission Electron Microscopy (TEM) may be used.

Once the clearance air testing is satisfactory:

- a. The site isolation and engineered controls may be removed.
- b. A copy of the air sample report is to be:
 - a. provided and maintained on site by the Contractor, when abatement work is part of a project;
 - b. provided to the Owner, and a copy is kept on file;
 - c. provided to the JOHSC or the OHS representative, if any, for the workplace and for the building



15.0 RECORD KEEPING AND DOCUMENTATION RETENTION

HRCE will keep the following records:

- Asbestos and / or Hazardous Building Materials Assessment Reports.
- Reassessment Reports.
- Tenant Notification Letters and dates posted or transmitted.
- Contractor Notification Packages and Acknowledgement Forms.
- Asbestos Project Work Records.
- Consultant Asbestos Abatement Completion Reports (including Daily Inspection and Air Monitoring Reports).
- Bulk sample analytical results from any sampling.
- Emergency response project records.

16.0 CONSULTANT QUALIFICATIONS

Consultants employed by HRCE for asbestos work are to meet the following minimum requirements:

- Display competency in asbestos and hazardous materials consulting
- Maintain a health and safety management system that meets provincial standards.
- Maintain a Comprehensive General Liability Policy, with a minimum of \$5,000,000 in coverage.
- Maintain an Errors and Omissions Policy, with a minimum of \$5,000,000.
- Maintain an Automobile or Fleet Policy, and Non-Owned Automobile Policy with a minimum of \$2,000,000 in coverage.
- Maintain valid provincial worker's compensation coverage
- Accredited to analyze PCM air samples or use an accredited laboratory.

17.0 ASBESTOS ABATEMENT CONTRACTOR QUALIFICATIONS

Contractors employed by HRCE are to meet the following minimum requirements:

- Maintain a Comprehensive General Liability Policy, provided on an "occurrence" basis, for a minimum of \$5,000,000 in coverage.
- Maintain an Asbestos Liability or Contractors Pollution Liability Policy, provided on an "occurrence" basis, with a minimum of \$5,000,000 in coverage.



- Maintain an Automobile or Fleet Policy, and Non-owned Automobile Policy with a minimum of \$2,000,000 in coverage.
- Maintain valid provincial worker's compensation coverage.
- All supervisors and workers performing abatement work are to be trained in the procedures being used, health effects or asbestos, applicable personal hygiene procedures, personal protection equipment used and respirator care.
- All workers are to be fit tested for respirators.
- Maintain a health and safety management system that meets provincial standards.

18.0 MAINTENANCE AND JANITORIAL WORK

HRCE personnel and contracted janitorial staff will not:

- Sweep/vacuum in areas of damaged ACM.
- Sweep/vacuum/remove ACM debris.
- Disturb ACM.
- Remove ACM.

HRCE will employ an Abatement Contractor to perform these tasks, where required.

Alternately, HRCE will employ the appropriately trained trade contractor if there is other work to be completed that will disturb ACM (e.g. installing electrical equipment through an asbestos-containing plaster wall).

19.0 MAINTENANCE OF THE AMP

This AMP is to be re-evaluated, and possibly revised, each time there is a substantial change to the any provincial regulation, or policy change. This AMP must be reviewed at least annually and updated as necessary.

20.0 ROLES AND RESPONSIBILITIES

This section defines the roles and responsibilities of HRCE personnel instituting this AMP and provide effective management of ACM at their facilities.

The AMP Facilitator has the primary responsibility to administer the AMP and ensure it is instituted and effective.

The following table summarizes the responsibilities of HRCE personnel:



Reference No.	Responsibility/Task	AMP Section Reference	AMP Facilitator	Facility Manager	Project Team	Client Staff	Consultant
1	Maintenance of the AMP	19.0	X				
2	Employ a Consultant to prepare Asbestos Assessment Reports for any facility where one is not available/prepared	7.1	X	X			
3	Employ a Consultant to prepare Asbestos Assessment Reports in newly purchased facilities	7.1	X	X			
4	Employ a Consultant to reassess facilities where ACM has been confirmed	7.2	X	X			
5	Distribute Asbestos Assessment and Reassessment Reports	7.3	X				
6	Upon receiving assessment and reassessment reports, employ a contractor to perform remedial abatement work to remove damaged ACM. Use applicable provincial procedures	9.0	X	X			
7	As required, prior to performing asbestos work, engage a Consultant to perform inspection and air monitoring	14.0	X	X	X		
8	Ensure that an intrusive pre-construction assessment for ACM is performed prior to any renovation, alteration or demolition	8.0		X	X		X
9	Conduct bulk sampling of suspect materials that have not been sampled or presume the materials to be an ACM	8.0		X	X		X
10	Employ a Consultant (as applicable) to prepare a scope of work prior to large scale abatement as part of construction, renovation or demolition.	9.0		X	X		
11	Provide existing occupants at the outset of this AMP, or occupants in newly purchased facilities, a letter notifying the lessee of ACM within their space, and instruction not to disturb the ACM.	10.1	X	X			



Reference No.	Responsibility/Task	AMP Section Reference	AMP Facilitator	Facility Manager	Project Team	Client Staff	Consultant
12	Ensure all Project Managers, Architects, Engineers and others arranging for, or planning, work in the Facility are provided with the most current asbestos (re)assessment report.	10.4	X	X	X	X	
13	Provide contractors working in HRCE facilities the most current asbestos information and notification via the Contractor Information Package	10.2		X	X	X	
14	Employ a Consultant to train HRCE personnel	11.0	X				
15	Response to an uncontrolled spill or disturbance of asbestos following emergency procedures in Appendix C	12.0	X	X	X	X	
16	Keep all records as required by this program (excepting contractor package acknowledgement)	15.0	X				
17	Keep records of contractor package acknowledgement for each project (contractors to submit via email and keep record)	15.0	X	X	X		
18	Ensure Consultants meet the required qualifications	16.0	X	X	X		
19	Ensure contractors meet the required qualifications	17.0		X	X		X
20	Ensure maintenance and janitorial work is performed so that it does not disturb ACM and unnecessary disturbance of ACM is avoided	18.0				X	
21	Report any unplanned disturbance to ACM or damage to ACM	12.0	X	X	X	X	

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 Master Template for Asbestos Management Program, HAZ, ON Only, February 19, 2020

GLOSSARY

Amended Water	Water with wetting agent added for purpose of reducing surface tension to allow thorough wetting of ACM.
Asbestos-Containing Material(s) (ACM)	Material identified by an appropriate laboratory analytical method (e.g. EPA 600/R-93/116, NIOSH 9000, or NIOSH 9002) to contain at least 0.5% of any type of asbestos, and vermiculite that is identified to contain any amount of asbestos using EPA method 600/R-04/004 if other analytical methods do not identify the presence of asbestos.
Asbestos	Any and all types of asbestos (generally considered as Actinolite; Amosite; Anthophyllite; Chrysotile; Crocidolite; Tremolite, and Libby Amphibole).
Asbestos Work Area	Area where work is being performed which will or may disturb ACM including overspray and fallen material or settled dust that may contain asbestos.
Competent Worker	In relation to specific work, means a worker who, <ul style="list-style-type: none"> • qualified because of that person's knowledge, training and experience to do the assigned work in a manner that will ensure the health and safety of every person in the workplace; and • knowledgeable about the provisions of the Occupational Health and Safety Act and regulations that apply to the assigned work, and the potential or actual danger to health or safety associated with the assigned work.
Encapsulation	The application of a liquid sealant to asbestos-containing materials; the sealant may penetrate and harden the material (penetrants) or cover the surface with a protective coating (bridging sealants). Also called encasement. This is generally not advisable.
Enclosure	Enclosure of ACM means the construction of solid enclosure (walls, ceiling, bulkhead etc.) around ACM, or An Enclosure means the site isolation including hoarding walls, polyethylene sheeting and seals that isolates an Asbestos Work Area.
Friable Material	Material that: when dry, can be crumbled, pulverized or powdered by hand pressure, or is crumbled, pulverized or powdered. Includes previously non-friable asbestos-containing material that has become damaged to the extent that it may be crumbled, pulverized, or reduced to powder by hand pressure.
Glove Bag Removal	A method of removing friable insulation from a piping system using a prefabricated bag which isolates the section of insulation being removed.
HEPA Filter	High Efficiency Particulate Aerosol filter that is at least 99.97 percent efficient in collecting a 0.3 micrometre aerosol.
HEPA Filtered Negative Pressure Unit:	Portable air handling unit which extracts air directly from the Asbestos Work Area and discharges the air to the exterior of the building after passing through a HEPA filter.



JOHSC	Joint Occupational Health and Safety Committee.
Phase Contrast Microscopy (PCM)	A method which uses an optical microscope to determine airborne fibres, normally in an occupational setting. Results are presented as a number of fibres per cubic centimetre (f/cc). The method of analysis is based on the US National Institute for Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7400, issue 2, Asbestos and Other Fibres by PCM (August 15, 1994).
Transmission Electron Microscopy (TEM)	A method which uses an electron microscope to determine airborne asbestos fibres. Results are presented in fibres per cubic centimetre of air (f/cc). The method of analysis is The U.S. National Institute of Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7402, Issue 2: Asbestos by TEM (Aug 15, 1994).
Low, Moderate and High Procedures	Work classifications and procedures defined under provincial health and safety regulations.
US EPA	United States Environmental Protection Agency.

APPENDIX A

Letter of Notification to Tenants Regarding Asbestos in Premises



LETTER OF NOTIFICATION TO TENANTS REGARDING ASBESTOS IN PREMISES

The following wording should be utilized in communicating the presence of asbestos to a tenant or lessee.

To Occupant

This letter is being provided as notification of the presence of asbestos within the building at [building name and/or address]. HRCE has recently had an asbestos assessment performed of the entire building and has established a program to manage all asbestos in a safe and prudent fashion.

Our Consultant inspected all areas of the building and made recommendations, where necessary, for removal or repair of asbestos. All such work [has been completed/will be completed shortly] with appropriate inspection and supervision. All asbestos remaining is subject to the Asbestos Management Program (AMP) as required by Provincial Regulations and our own due diligence. A copy of the assessment report and the AMP are available for review at the [Office].

The continuing presence of the remaining asbestos does not pose a risk of exposure to occupants as long as it remains under this management program. Staff have been given appropriate training and are aware of its presence.

If you have any concerns, please contact the AMP Facilitator at [phone number].

APPENDIX B
Contractor Notification and Acknowledgement Form



CONTRACTOR NOTIFICATION AND ACKNOWLEDGEMENT FORM

HRCE has identified the presence of various asbestos-containing materials (ACM) within [HRCE Facility name] located at [address]. An asbestos inventory report showing the locations and amounts of these materials is available for viewing from the AMP Facilitator.

The disturbance of ACM is to be undertaken by Asbestos Abatement Contractors that maintain the appropriate insurance coverage and meet the requirements set out in the Asbestos Management Program (AMP).

The following activities may disturb asbestos materials. The AMP Facilitator must be notified of the following:

- Any removal, repair or disturbance of any ACM.
- Ceiling entry which may disturb sprayed-fireproofing or pipe insulation, or debris on the ceiling.
- Any other operation which may generate airborne asbestos from friable asbestos.
- The disturbance of any material excluded from the Facility's asbestos assessment report.
- Discovery of any material excluded from the survey.

Declaration by Contractor

The Contractor and their sub-contractors shall follow the work procedures as specified by HRCE's AMP and shall not disturb ACM without using proper procedures in accordance the provincial regulations and guidelines, and this AMP, including prior notification to the AMP Facilitator. All asbestos waste will be packaged, transported and disposed of in accordance with applicable regulations.

Notification of Asbestos Abatement

All Contractors who perform work at facilities where ACM is present must be notified of the presence of the ACM if their work may bring them into contact, or close proximity to, the ACM. This notification may include janitorial, security, telephone, computer cabling suppliers, mechanical maintenance contractors, etc.

All contractors who perform work, including telephone, computer cabling suppliers, electrical and mechanical contractors, etc., at HRCE facilities, where asbestos-containing spray-applied insulation is present above ceilings are to be notified that Moderate Risk Procedures may be required for any entry to, or work within the ceiling space, determined by condition of material, scope of work, and potential for disturbance of the material.



Contractors are to:

- Notify municipal Landfill site as per provincial regulations.
- Inform all sub trades of the presence of ACM identified in the contract documents.
- If suspect ACM not identified in the contract documents are discovered during the course of the work, the Contractors are to stop all work which might disturb the suspect ACM. The contractor is to notify the Constructor (if applicable), HRCE and the JOHSC or OHS Representative for the workplace.

By signing below, the Contractor acknowledges they have received, read and understand the requirements of HRCE's AMP.

Building (Address): _____

Project: _____

Contractor: _____

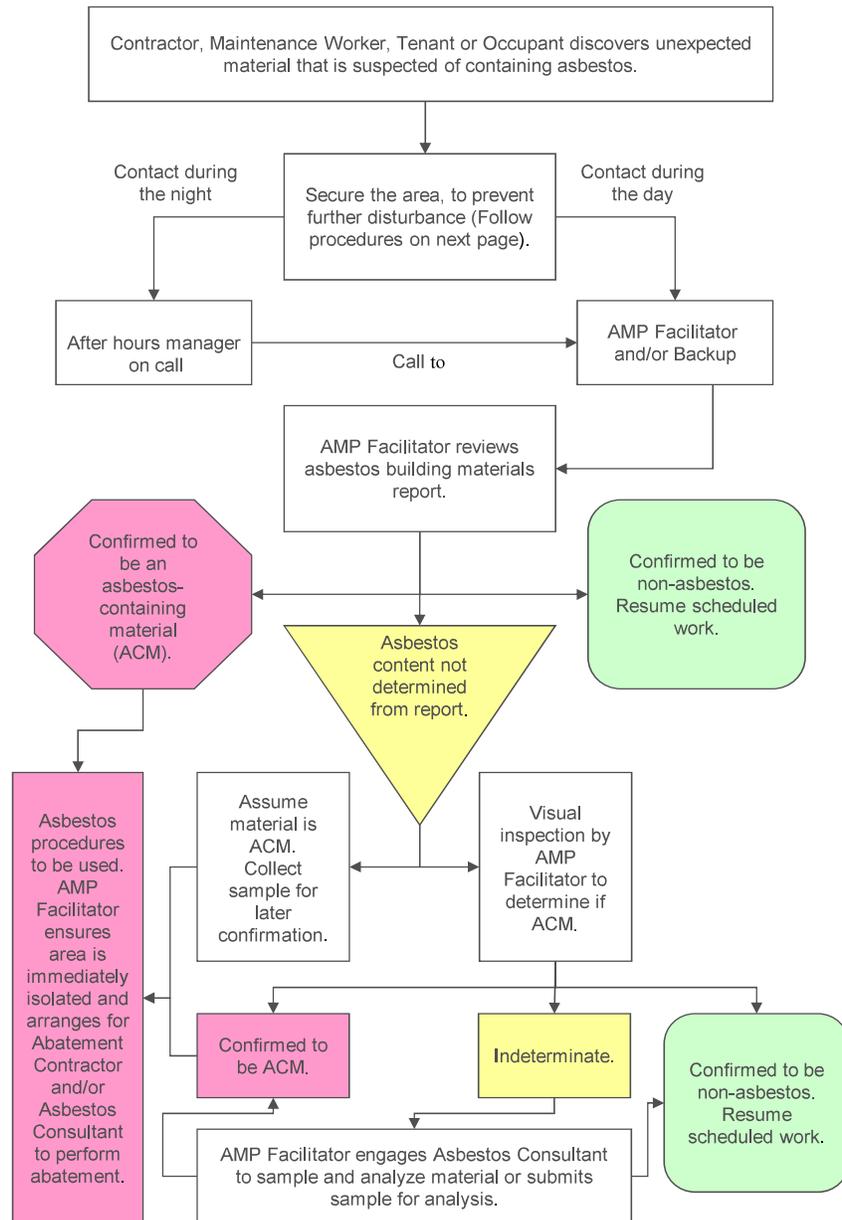
Name and Title: _____

Signature: _____

Date: _____

APPENDIX C
Response to Disturbance of Asbestos

EMERGENCY RESPONSES AND NOTIFICATION IN THE EVENT OF ASBESTOS-SUSPECT MATERIAL DISCOVERED DURING MAINTENANCE OR CONTRACTED WORK OR REPORTED BY OCCUPANT/TENANT





EMERGENCY REACTION IN THE EVENT OF SUSPECTED ASBESTOS SPILL

If asbestos-containing materials or suspect materials have been disturbed improperly, follow these directions:

- Do not clean up, cover, move or contact asbestos-containing or suspect material. Cease work in the area and do not resume work that risks disturbing the suspect material. Workers are to leave the area and the HRCE AMP Facilitator is to be notified immediately.
- Isolate the area by locking doors if this can be done without blocking emergency or fire routes.
- If it is not possible to safely isolate the area, the AMP Facilitator will notify appropriate persons not to enter the area. If possible, post security to prevent unnecessary access.
- The AMP Facilitator will arrange to shut down ventilation systems to the affected area including supply, return and exhaust.
- The AMP Facilitator will determine if asbestos is contained in the debris. If material cannot be confirmed asbestos-free by records or appearance, follow procedures below.
- The AMP Facilitator will contact an Asbestos Consultant to sample the material or identify the material visually.
- If the material is confirmed or assumed to contain asbestos, the AMP Facilitator is to contract an Asbestos Abatement Contractor to clean-up contaminated area.
- At their option, the AMP Facilitator may decide to employ an Asbestos Consultant to perform air monitoring and consulting, prior to, during, and/or after clean-up to determine airborne fibre concentrations prior to, and during, the work and to ensure airborne fibre levels are within acceptable limits to re-occupy the space. The AMP Facilitator must notify the Joint Occupational Health and Safety Committee of the results of air monitoring or testing.
- Enable ventilation systems after air monitoring or clean up of ACM.

APPENDIX D
Asbestos Project Work Record



ASBESTOS PROJECT WORK RECORD

Building: _____
(Building Address or Name)

Date: _____
(Today's Date)

Project Number: _____
(HRCE Project Number or Purchase Order Number)

Project Type:

- Emergency Planned Project
 Low Risk Moderate Risk Glove Bag High Risk

Area of Work: _____
(Room Name, Number, Floor etc.)

Description: _____
(Brief description of abatement, material, system, etc.)

Project Start Date: _____
(Mobilization date)

Project End Date: _____
(After dismantling/clean-up)

Contractor: _____
(Contracting firm or employee)

Telephone: _____
(Contractor or employee telephone)

Consultant: _____
(Name of consulting firm/contact if any)

Telephone: _____
(Consultant telephone)

Pre-Construction Assessment for asbestos-containing material (ACM) and other hazardous building materials (e.g. lead, mercury, silica, and PCBs) performed and report provided to Contractor?

Yes No (Explain) _____

Air Sampling during abatement?

Yes No



Clearance Air Monitoring performed after abatement?

Yes No

Air Monitoring results to Joint Occupational Health and Safety Committee (if applicable)?

Yes No

Asbestos Survey Updated to Reflect Changes in ACM Inventory?

Yes No, no changes to ACM inventory resulted

No, to forward copies to Consultant prior to next re-assessment

Asbestos waste removed from site and disposed of?

Yes, ACM waste documentation attached No, ACM waste not generated

No, ACM waste remains on site for later disposal

Append the following information relating to asbestos abatement to this work record, if applicable, and file Asbestos Work Record and attachments with Asbestos Management Program. Check where attached.

Submittals including Insurance Yes No

Waste Documentation Yes No

Specifications, Change Orders, Drawings Yes No

Consultant Inspection Reports Yes No

Air Monitoring Results Yes No

Analytical Certificates Yes No

Provincial Regulatory reports Yes No

Additional Correspondence Yes No

APPENDIX E
Reassessment of ACM

APPENDIX F
Classifications of Abatement Work

CLASSIFICATIONS OF ABATEMENT WORK

Nova Scotia regulations/guidelines do not specifically classify asbestos work procedures, and only prescribe removal of friable materials including the use of Glove Bags.

In the absence of defined work classifications, the following are the generally accepting work classifications:

Low Risk

- installation or removal of ACM ceiling tiles (less than 7.5 m²) without damage*.
- installation or removal of non-friable ACM, other than ceiling tiles, without damage*.
- damaging* non-friable ACM that is wetted and where the work is done using non-powered hand-held tools.

Moderate Risk

- removal of less than one square metre of drywall where ACM joint-filling compounds were used.
- enclosure of friable ACM.
- application of tape, a sealant or other covering to pipe or boiler insulation that is ACM.
- installing or removing ACM ceiling tiles that cover an area of 7.5 m² or more if the work is done without damaging the tiles.
- damaging non-friable ACM using non-powered hand-held tools if the material is not wetted.
- cleaning or removing filters used in air handling equipment in a building that has sprayed ACM insulation.
- glove bag removals of ACM insulation.
- Work that may expose a worker to asbestos and that is not classified as a Low Risk or High Risk operation, is also to be classified as a Moderate Risk operation.

High Risk

- removal or disturbance of friable ACM.
- the removal of all or part of a false ceiling to access a work area, if ACM is likely to be lying on the surface of the false ceiling.
- spray application of a sealant to friable ACM.



- cleaning or removal of air-handling equipment, including rigid ducting but not including filters, in a building that has sprayed ACM insulation.
- repair, alteration or demolition of a kiln or furnace made, in part, of refractory materials that are ACM.
- Use of power tools not attached to dust-collecting devices with HEPA filters on non-friable ACM.

* **damage** includes breakage, cutting, abrading, grounding, sanding, and vibration.

APPENDIX G
Site Specific Report(s)

DUTCH SETTLEMENT ELEMENTARY WINDOW AND CLADDING REPLACEMENT

ISSUED FOR TENDER MARCH 2024



A000	COVER PAGE
A100	SITE PLAN
A101	FLOOR PLAN - MAIN LEVEL
A102	FLOOR PLAN - LOWER LEVEL
A200	EXTERIOR ELEVATIONS - EXISTING / DEMO
A201	EXTERIOR ELEVATIONS - PROPOSED
A500	DETAILS
A501	DETAILS
A600	WINDOW AND DOOR SCHEDULES

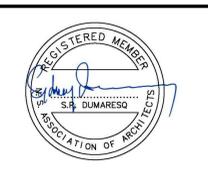
KEY PLAN

GENERAL NOTES

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IF DIMENSION DOES NOT MEASURE 1" DRAWINGS IS NOTE PRINTED TO SCALE

DATE	#	ISSUE
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SCALE:

DRAWN BY: Staff

REVIEWED BY:

DATE: March 2024

PROJECT TITLE
DUTCH
SETTLEMENT
ELEMENTARY ROOF
REPLACEMENT

Project Number

SHEET TITLE
COVER PAGE

KEY PLAN

GENERAL NOTES

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DRAWN BY: Author

REVIEWED BY:

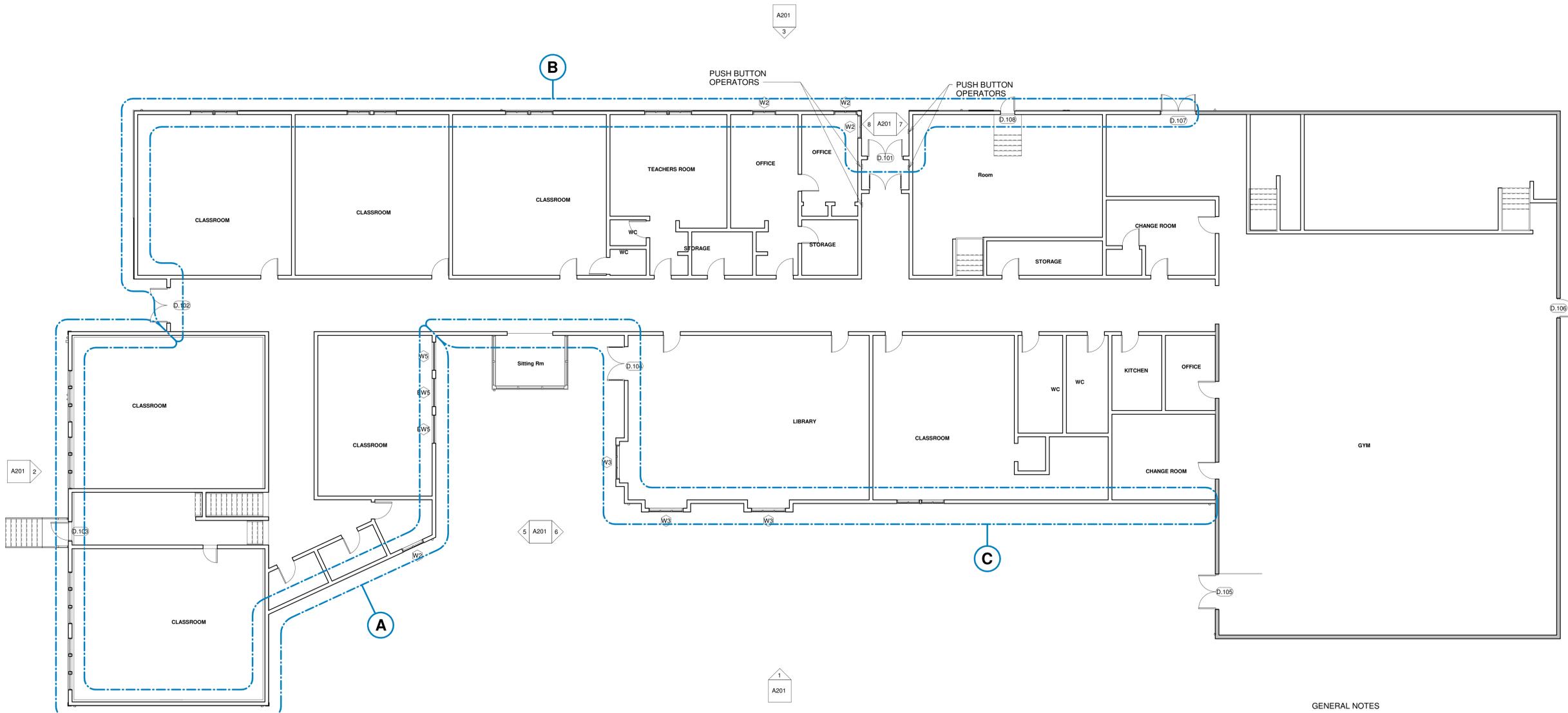
DATE: March 2024

PROJECT TITLE
DUTCH SETTLEMENT ELEMENTARY ROOF REPLACEMENT

Project Number

SHEET TITLE
FLOOR PLAN - MAIN LEVEL

A101



1 Level 1 - PROPOSED
 1/8" = 1'-0"

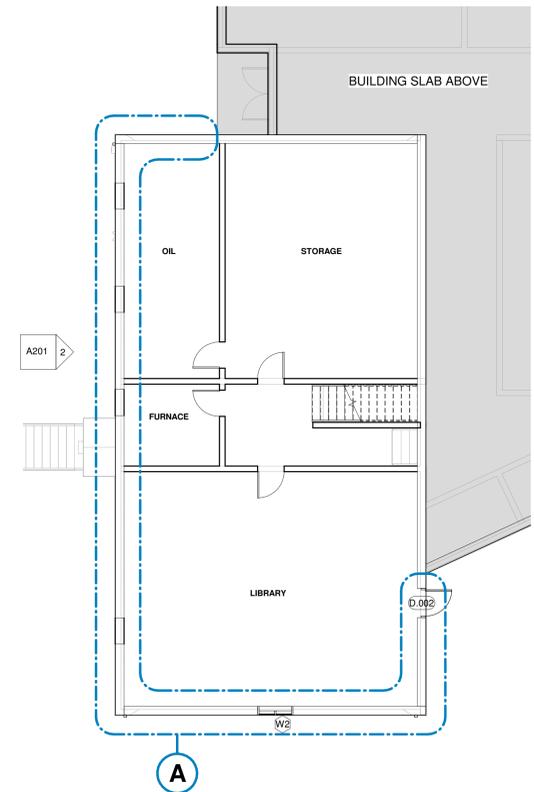
GENERAL NOTES

- GENERAL CONTRACTOR TO VERIFY DIMENSIONS OF ALL WINDOW ROUGH OPENINGS PRIOR TO ORDERING WINDOWS.
- GENERAL CONTRACTOR TO REMOVE AND RE-INSTALL ALL EXISTING SERVICE, PIPING, DOWNSPOUTS, ETC. UNLESS OTHERWISE NOTED
- MAKE GOOD ALL EXISTING SURFACES, LANDSCAPING, FINISHES, ETC. DAMAGED BY THE WORK.

DEMOLITION NOTES

- HRCE WILL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION OF EXISTING SECURITY CAMERAS AND EXTERIOR SPEAKERS. ALL OTHER ELECTRICAL AND MECHANICAL DISCONNECTIONS, REMOVALS AND RECONNECTIONS TO BE BY THE GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- GENERAL CONTRACTOR TO REMOVE AND DISPOSE OF ALL HAZARDOUS MATERIALS IN STRICT ACCORDANCE WITH PROVINCIAL REGULATIONS AND THE HRCE'S ASBESTOS MANAGEMENT PLAN.

Notes
 1/4" = 1'-0"



1 Basement - PROPOSED
 1/8" = 1'-0"

KEY PLAN

GENERAL NOTES

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SCALE: 1/8" = 1'-0"

DRAWN BY: Author

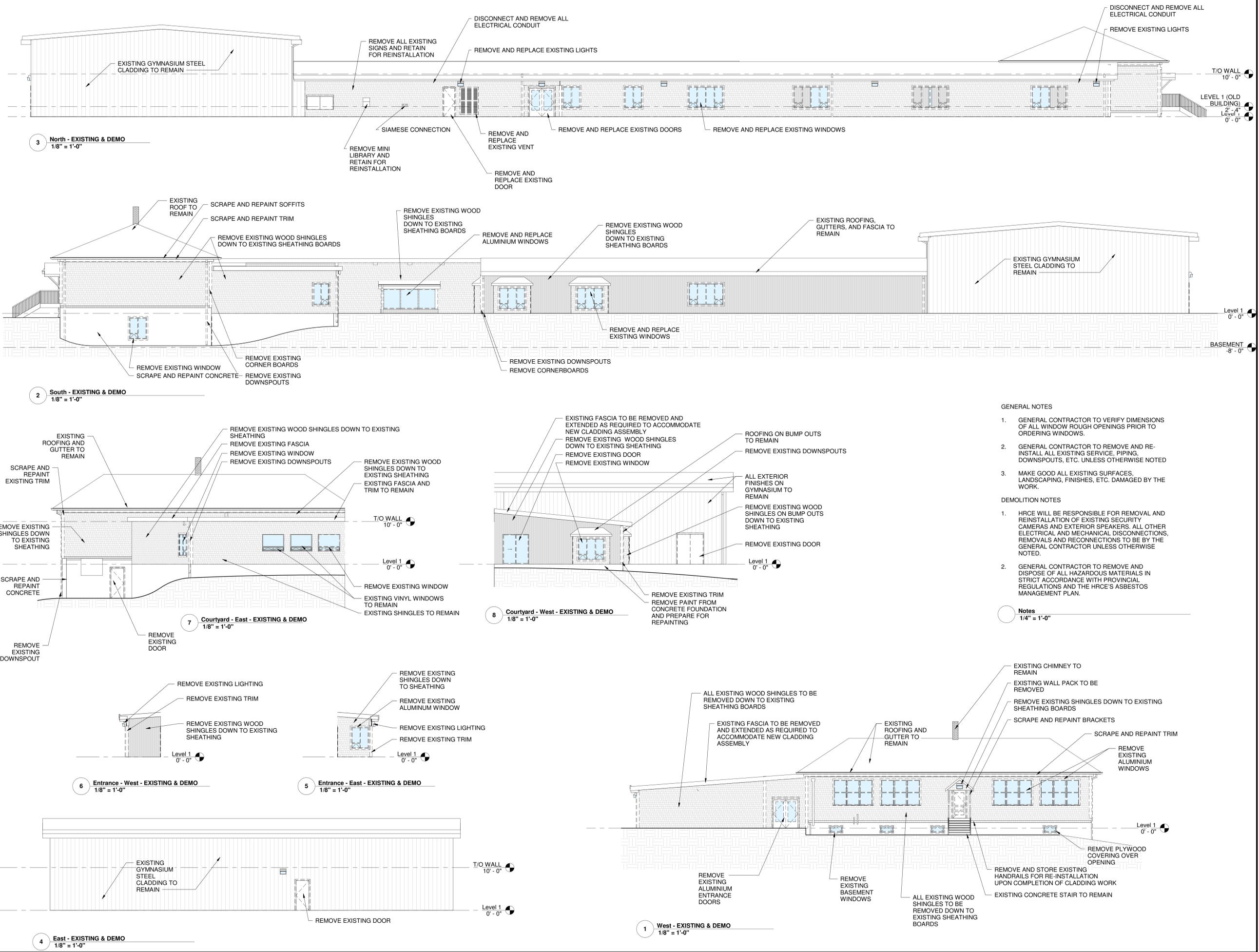
REVIEWED BY:

DATE: March 2024

PROJECT TITLE
DUTCH SETTLEMENT ELEMENTARY ROOF REPLACEMENT

Project Number

SHEET TITLE
FLOOR PLAN - LOWER LEVEL



KEY PLAN

GENERAL NOTES

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- GENERAL CONTRACTOR TO REMOVE AND RE-INSTALL ALL EXISTING SERVICE, PIPING, DOWNSPOUTS, ETC. UNLESS OTHERWISE NOTED
- MAKE GOOD ALL EXISTING SURFACES, LANDSCAPING, FINISHES, ETC. DAMAGED BY THE WORK.

DEMOLITION NOTES

- HRCE WILL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION OF EXISTING SECURITY CAMERAS AND EXTERIOR SPEAKERS. ALL OTHER ELECTRICAL AND MECHANICAL DISCONNECTIONS, REMOVALS AND RECONNECTIONS TO BE BY THE GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- GENERAL CONTRACTOR TO REMOVE AND DISPOSE OF ALL HAZARDOUS MATERIALS IN STRICT ACCORDANCE WITH PROVINCIAL REGULATIONS AND THE HRCE'S ASBESTOS MANAGEMENT PLAN.

Notes
1/4" = 1'-0"



SCALE: As indicated

DRAWN BY: Author

REVIEWED BY:

DATE: March 2024

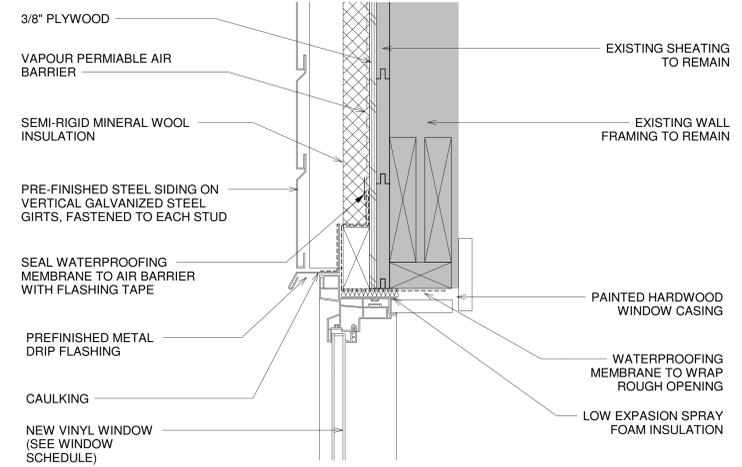
PROJECT TITLE
DUTCH SETTLEMENT ELEMENTARY ROOF REPLACEMENT

Project Number

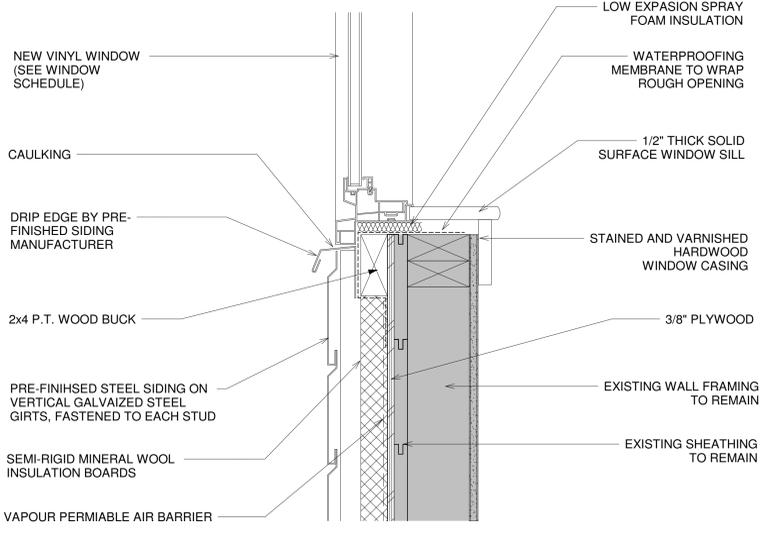
SHEET TITLE

EXTERIOR ELEVATIONS - EXISTING / DEMO

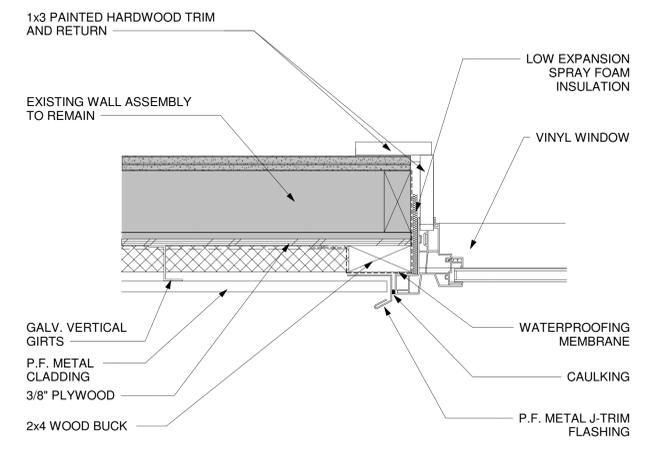
A200



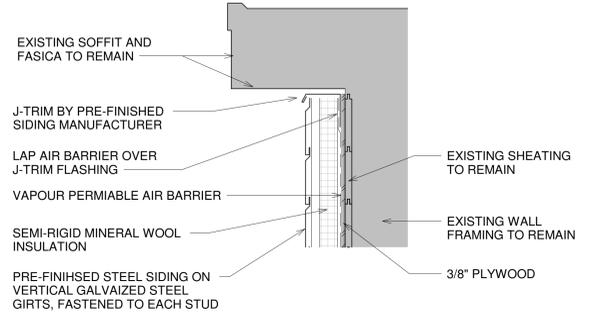
1 001 - WINDOW DETAIL HEADER @ WOOD WALL
 3" = 1'-0"



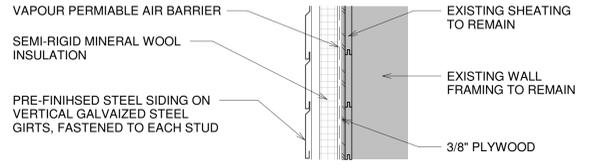
2 002 - WINDOW DETAIL SILL @ WOOD WALL
 3" = 1'-0"



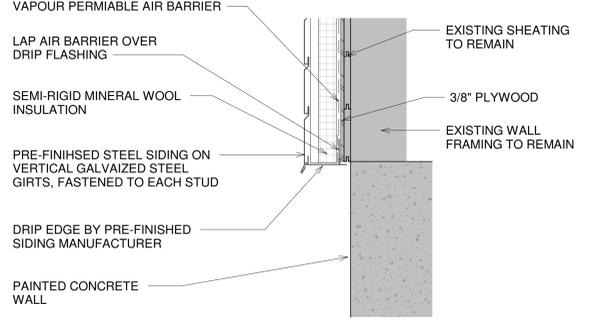
3 003 - WINDOW JAMB DETAIL @ WOOD FRAMING
 3" = 1'-0"



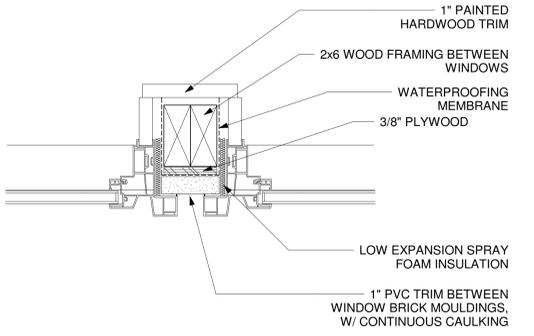
10 007 - WOOD WALL AT SOFFIT
 1 1/2" = 1'-0"



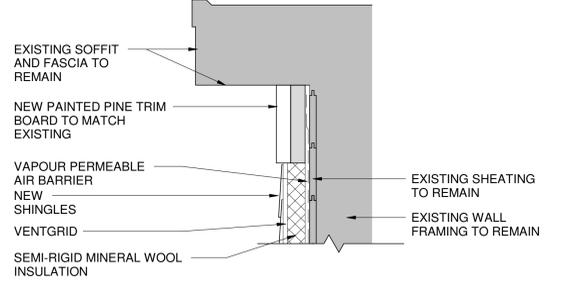
9 006 - TYPICAL WALL ASSEMBLY AT WOOD WALL - w/ SHINGLES
 1 1/2" = 1'-0"



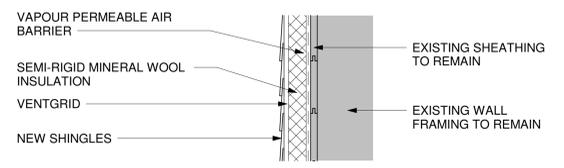
8 005 - WOOD WALL TO CONCRETE
 1 1/2" = 1'-0"



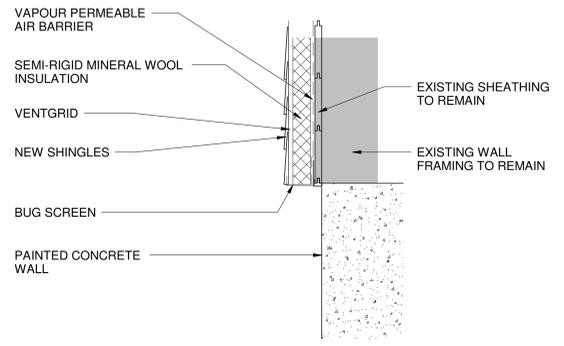
7 004 - WINDOW JAMB DETAIL @ CENTRE FRAMING
 3" = 1'-0"



4 WOOD WALL AT SOFFIT - w/ SHINGLES
 1 1/2" = 1'-0"



5 TYPICAL WALL ASSEMBLY AT WOOD WALL - w/ SHINGLES
 1 1/2" = 1'-0"



6 WOOD WALL TO CONCRETE - w/ SHINGLES
 1 1/2" = 1'-0"

KEY PLAN

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Project Number	
SHEET TITLE	DETAILS



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