Halifax
Regional Centre for Education

RFT #4241

Gym Floor Replacement
Bicentennial School

RFT Closing Date:	**Wed – May 29, 2024**
RFT Closing Time:	**2:00pm ATL**
Ready-for-Takeover Date:	**August 27, 2024**

HRCE Procurement Contact:
Don Walpola, Buyer
Tel: (902) 464-2000 ext 2223
Email: dwalpola@hrce.ca

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

School Location:
Bicentennial School
85 Victoria Road
Dartmouth, NS
Halifax, B3A 1T9

Mandatory Site Meeting for Bidders:
Thur – May 23 at 4:30pm
Bicentennial School
Please meet at School Entrance

RFT submissions will be accepted only by email at: hrcetenders@hrce.ca

To obtain documents, please 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 the pandemic.

The Terms and Conditions of the RFT 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 RFT prior to submitting a Proposal/Bid.

DRAWING LIST

ARCHITECTURAL

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 **Gym Floor Replacement** at **Bicentennial School**, to remove the existing materials and equipment in areas as noted on the drawings and specifications prepared by **FBM Architecture.**

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 27, 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 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.

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

2.0 List of Drawings

ARCHITECTURAL

END OF SECTION 00 00 15

SECTION 00 05 00 - LIST OF CONSULTANTS

Owner:

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

Don Walpola, Buyer
Office: (902) 464-2000 ext 2223
dwalpola@hrce.ca

Consultant:

FBM Architecture
5560 Cunard Street,
Halifax, NS B3K 1C4

Greg Washer
Office: (902) 429-4100 ext117
washer@fbm.ca

END OF SECTION 00 05 00

SECTION 00 21 13 – INFORMATION FOR PROPONENTS

Invitation:

1. Bid Call

1.1. The Halifax Regional Centre for Education (HRCE) will receive offers in the form of a bid from proponents which is signed and electronically received on or before the date and time specified on the cover sheet of this document. The HRCE deems the correct time to be the time indicated on the email received date and time. 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@gnspes.ca.** If you encounter difficulties kindly contact the HRCE Procurement team for further clarification.

1.2. Bids received after the closing time/date will not be considered.

1.3. Proponents are to submit completed Request for Tender (RFT) documents by email.

The electronic file should be named:

"**Gym Floor Replacement_4241_Proponent Name**"

1.4. Bids will be opened at the time indicated on the cover sheet of this document. Effective April 1, 2014 public openings are no longer held for any Tenders or RFTs relating to goods, services or construction for the HRCE. All bid 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.

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 Tender (RFT) is to obtain an offer to perform all work associated with ***RFT #4241, Gym Floor Replacement*** at ***Bicentennial School*** 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 RFT document.

2.4. Ready-for-Takeover of the project is to be achieved on or before **August 27, 2024**, provided the contract is awarded within ten (10) business days after the RFT closing.

2.4.1. In the event that the contract is not awarded within ten (10) 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 officially 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 Division 01 requirements.

4. Availability

4.1. RFT documents can be obtained as per the directions on the cover sheet of this document.

4.2. RFT 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 Halifax Regional Centre for Education is not responsible for accuracy of documents and project postings obtained from any other source.

5. Examination

5.1. Bid documents are on display at the offices of the Construction Association of Nova Scotia (CANS), Halifax, NS.

5.2. Upon receipt of bid documents, proponents should verify that documents are complete. Proponents should notify the HRCE Procurement by email at dwalpola@hrce.ca, should the documents be incomplete, or upon finding discrepancies or omissions in the bid documents.

5.3. Bidders shall become fully aware of the content of all tender documents for the preparation of the Bidder's submission.

6. Clarification and Addenda

6.1. Proponents must notify Don Walpola, Buyer, by email at dwalpola@hrce.ca no less than **five (5)** working days before the RFT Closing regarding any questions, omissions, errors or ambiguities found in contract documents. If HRCE considers that correction, explanation or interpretation is necessary, a reply will be produced in the form of an addendum, a copy of which will be posted on the novascotia.ca/tenders and/or the HRCE website as applicable. It is the responsibility of the Bidder to ensure all addenda are received and acknowledged.

6.2. Addenda will be issued no less than three (3) business days before the RFT closing date and time and will form part of the Contract Documents.

6.3. Verbal answers to queries are not binding. 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 Halifax Regional Centre for Education.

6.4. Proponents are to complete Tender Form (section 00 41 13) acknowledging that addenda have been received.

6.5. Where HRCE publishes an Addendum or Addenda modifying the terms of the RFT/RFP documents, or changing the Project or Contract Documents in any manner, HRCE shall not be liable for an 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 or Addenda, regardless of whether the publication occurs prior to or after a Supplier has submitted an RFT/RFP submission.

6.6. Any Addendum and all Addenda issued by HRCE shall be become part of the Contract Documents, unless specifically excluded from the Contract Documents in writing published by HRCE, and 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 bid documents stipulate a particular product, alternatives may be considered by the Consultant up to five (5) working days before the RFT closing date and time. Bidders must forward their written requests by email to dwalpola@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 bid 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 RFT 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. Bid Submission

11.1. The email subject line or body must identify the name of the proponent/company and the RFT name and number.

11.2. Proponents shall be solely responsible for the delivery of their bids in the manner and time prescribed.

12. Conditions of the Request for Tender (RFT) Process

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

13. Amendment or Withdrawal of Bids

13.1. Bid packages may be **withdrawn** from the RFT 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 RFT closing time and if endorsed by the same party or parties who signed and executed the offer. If the amendment relates to the price, it must be labeled "Price Amendment" along with the RFT 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. Bid Ineligibility (Reason for Rejection)

14.1. HRCE may reject a bid which has been received prior to the closing time where:

14.1.1. The bid is not submitted on the required forms (Section 00 41 13) included herein.

14.1.2. The bid is submitted by facsimile or regular mail or hand delivery.

14.1.3. There are omissions of information that the HRCE in its sole discretion deems to be significant.

14.1.4. The bid has conditions attached which are not authorized by the invitation to bid**.**

14.1.5. The bid fails to meet one or more standards specified in the invitation to bid.

14.1.6. All addenda have not been acknowledged.

14.1.7. Any other defect which, in the opinion of the HRCE brings the meaning of the bid into question.

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

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

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 facsimile or mail delivery or hand delivery are not acceptable and will be rejected.

16. Right to Accept or Reject any Tender

16.1. The HRCE reserves the right to reject any bid 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 bids 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 bids.

16.3. Without limiting the generality of any other provision herein, the HRCE reserves the right to accept or reject any bid in accordance with item #14 above (Bid 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 bid received by the HRCE. The HRCE reserves the right to reject any or all bids, or to accept any bid, or portion thereof, deemed in its best interest.

16.5. In the event that more than one proponent submit bids in an identical amount, 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 RFT/RFT implies no obligation on HRCE to accept any submission, or a portion of any submission. The lowest or any RFT/RFT submission will not necessarily be accepted.

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

17.2.1. the RFT/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 RFT/RFT has been issued;

17.2.3. information has been received by HRCE after issuance of the RFT/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 RFT/RFT submission is received in response to an RFT/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 RFT/RFT on new or modified RFT/RFT Documents.

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

19. Submission and Security Forms – Signatures

19.1. All bid 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 can be submitted with the bid via email. If requested by the HRCE, the vendor should be in agreement to 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 should be in agreement to provide the original bid bond without delay.**

20.5. Return of Bid Security:

20.5.1. The bid security of the unsuccessful proponents 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 intuition 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 statuary 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 RFT 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 Nova Scotia Construction Safety Association or approved recognized association or program.

23.2. Bid Signing

23.2.1. The bid 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. Bids shall remain open to acceptance and shall be irrevocable for a period of ninety (90) days after the RFT closing date.

24.2. Award/Selection/Acceptance of Offer

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

24.2.1.1. Compliance with bid requirements

24.2.1.2. Bid Price Submitted

24.2.1.3. All requirements stated in the tender package

24.2.2. The Owner's evaluation of any and all bids 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. All required contract security and insurance documentation;

26.1.1.3. A completed Schedule of Values (see Division 01 requirements);

26.1.1.4. A detailed Schedule of Work

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, as of April 1, 1997 and thereafter, is to pay all Harmonized Sales Tax (HST).

27.2. 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. Purchase Orders

28.1. The official purchase order will not be issued by the HRCE Purchasing Department until the CCDC-2 Contract Documents have been fully executed.

29. Invoices

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

29.2. Applications for progress payments should be submitted to HRCE's consultant and cc'd to **operations-invoices@hrce.ca** and HRCE's Project Manager.

END OF SECTION 00 21 13

SECTION 00 41 13 – TENDER FORM

1. Salutation:

To: **HALIFAX REGIONAL CENTRE FOR EDUCATION**
33 SPECTACLE LAKE DRIVE, DARTMOUTH, NS B3B 1X7
ATTN: DON WALPOLA, BUYER

For: **#4241 Gym Floor Replacement – Bicentennial School**

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 RFT.

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: All work for HRCE is to be completed during hours when schools are unoccupied, unless otherwise indicated in writing by the Operations Manager 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 bid 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 bids; 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 bid at any time before the time fixed as indicated in the section 00 21 13, item 13.1.

5. Contract Documents include:

The HRCE **has transitioned** from the CCDC-2, 2008 contract to the **CCDC-2, 2020** contract and 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 00 73 00 of the RFT 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

#4241 Gym Floor Replacement – Bicentennial School

This represents the total price to complete this project in its entirety.
Lump Sum Price will determine the award of this RFT.

_____ **/100 Dollars ($_____)**

(HST Excluded)

Award will be subject to Budget Availability.

****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**

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.

WHERE THERE IS A CONFLICT, WRITTEN WORD WILL GOVERN.

6.3 INDIVIDUAL PRICE – GYM FLOORING & STAGE FLOORING

The lump sum price provided in Section 6.2 represents the total price to complete this floor replacement project in its entirety. HRCE acknowledges that there are inherent costs savings and economies of scale achieved when awarding all work to a single bidder.

In the event that partial award is required, please provide pricing per each individual section as listed below. Each price is to include all management costs (administration, mobilization, etc.) as required to perform the entirety of the work for that specific section. HRCE acknowledges that management costs are higher on a per section basis, compared to management costs associated with all sections priced as one lump sum.

The expectation is that the pricing provided below represents the entire price to complete that specific section, should it be the only section awarded.

Section 1. GYMNASIUM FLOORING

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

Section 2. STAGE FLOORING

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

7. Completion Time:

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

7.1.1.1. **August 27, 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 ten (10) business days of RFT closing time.

8. Addenda Acknowledgement

We have received and noted the following addenda:

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

9. Supporting Information

9.1. References: (Minimum of three)

Tenderer to furnish particulars of at least three (3) similar contracts successfully completed or currently being carried to completion. The projects quoted should preferably be approximate in nature to the work now tendered for and be of comparable or greater size. References are to be submitted with the bid prior to closing date and time.

Contact Name & Phone #	Date	Contract Value
_____	From _____ to _____	$ _____
_____	From _____ to _____	$ _____
_____	From _____ to _____	$ _____

9.2. Bid submission to include a minimum of two letters of endorsement from clients commenting upon the contractor's ability to deliver quality projects, similar in scope and size, which met schedule and budget.

10. Proof Of Competency of Tenderer

10.1. Any tenderer 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.

10.1.1. The Tenderer acknowledges, as part of their bid submission, their responsibility and contract obligations to ensure that the proposed sub-contractors will fully perform the project requirements and meet the timings as detailed in this tender call.

10.2. Sub-Contractors: The Tenderer to provide the name and address of each major sub-contractor used in making up this tender. This list of sub-contractors is to be submitted with the bid prior to closing date and time. Only one sub-contractor shall be named for each part of the work to be sublet.

Subcontractor/Suppliers/Manufacturers	Service/Material

10.2.1. Project Personnel: The Tenderer to include below, the names, qualifications and previous experience of those people who will be directly involved with the project. The names shall, for example, include foremen, superintendent, project engineer and/or project manager, labourers and trade staff. This list of personnel is to be submitted with the bid prior to closing date and time.

Name	Position	Qualifications/Experience

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.

RFT #4241 Gym Floor Replacement – Bicentennial School

SIGNATURE:

SIGNED AND DELIVERED
in the presence of:

_____
Witness

CONTRACTOR

_____
Company name

_____
Signature of Signing Officer

_____
Name and Title (printed)

_____
Date

RFT #4241 Gym Floor Replacement – Bicentennial School

11. 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.

_____
Company name

_____
Witness

_____
Signature of Signing Officer

_____
Name and Title (printed)

_____
Date

END OF SECTION 00 41 13

SECTION 00 41 73 - PRICE AMENDMENT FORM
#4241 Gym Floor Replacement
Bicentennial School

Note: to be completed and forwarded for each Price amendment prior to RFT closing time and date as detailed on the cover sheet of the RFT 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 RFT 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:

9.12 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 HAXARDOUS 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. Bicentennial School, 85 Victoria Road, Dartmouth NS, B3A 1T9

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.

8.4. Removal of insulation on roof drains inside the building 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 Division 01 requirements.

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: Division 01 requirements

2.2. Submittals: Division 01 requirements

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 Division 01 requirements.

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 Division 01 requirements 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 Division 01 requirements.

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.** Obligee 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 Division 01 requirements.

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. Bid 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 he directs, 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 Division 01 requirements, 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 (note: not all sections listed below are applicable to this project):

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 09 64 00 Engineered Wood Flooring
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 64 00 Engineered Wood Flooring
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 Division 01 requirements.

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.

2.2.1.5. Hazardous materials including, asbestos, PCB, mercury, lead, fuel oil, fungi/mould, etc.

2.2.1.6. Excessive heat/cold

2.2.2. A description of the control measure which may include but not be limited to:

2.2.2.1. Isolation within an enclosure (water, noise, hazardous materials)

2.2.2.2. Ventilation and filtration

2.2.2.3. Dehumidifiers/blowers (moisture)

2.2.2.4. Personal protective equipment

2.2.2.5. Schedule outside or inside school hours

2.2.2.6. Sound dampeners

2.2.2.7. Monitoring

2.2.2.8. Security

2.2.3. Other Hazards created by the work, including but not limited to fire safety and the need to alter fire safety plans.

2.3. For small routine work orders the communication plan may only involve one tradesperson and the school principal or designate. This communication is equally as important for management of contaminant controls.

3. Contaminant Control Management

3.1. Regardless of the contaminant or control measure used, the following procedures shall apply for every project:

3.1.1. Every project, including all routine work requests, shall be assessed, as per this document, by appropriate personnel for potential contaminant risk.

3.1.2. Clear lines of communication must be established between project personnel, site supervisor or project manager and the school administration.

3.1.3. Control strategies as per this document, shall be, communicated to workers as well as the site JOHSC and implemented prior to starting the work.

3.1.4. Where isolation is used as a control, all entry points must be clearly posted to describe the purpose of the enclosure and limitations of access.

3.1.5. During the execution of the project, the control measures must be regularly inspected and maintained before the start of each work shift, and throughout the shift as required.

3.1.6. A process for stop work and remediation orders must be established to ensure the project manager; site supervisor and school administrator have a means to cease project operations when a contaminant control breach may impact the school environment. Breached control measures must be reported immediately to HRCE project manager upon discovery. He/she will be responsible to communicate to the school principal or designate. Work shall be stopped immediately until the control measures are re-established.

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 clothes
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 Y2 hour 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 work place.

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:

#_____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_____

List new Contractors on Site below:

_____
_____
_____
_____
_____
_____

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

_____
(Contractor Project Manager)

Certified by

_____
(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

Project Name *#4241 – Gym Floor Replacement – Bicentennial School*

Architect .....

Contractor .....

Date .....

Halifax Regional Centre for Education – Schedule of Values		
Contract Item	**Percentage**	**Dollar Value**
Mobilization, bonding / insurance, safety , and set up.	10	
Materials – approved materials delivered to site.	30	
Removal of existing flooring and related components.	30	
Installation of new flooring system.	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: Division 01 requirements.

2. Related Sections

2.1. Division 01 requirements for Submittal Procedures: Submission of samples to confirm product quality.

2.2. Division 01 requirements for Material & Equipment: Material and workmanship quality – reference standards.

2.3. Division 01 requirements for 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 lows 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 Division 01 requirements.

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 Division 01 requirements, 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:

- Please ensure that the submission instructions are followed carefully as noted in Section 00 21 13 – Information to Proponents to ensure your bid is compliant.
- Required Bid Security – (10% of the Contract price before HST) –
- Please include a copy of your bid security in with your Tender Form.
- Insurance Certificate
- Please submit your bid to HRCE's tender submission email address: hrcetenders@hrce.ca.
- Please ensure your bid submission is ***received*** by the HRCE before 2pm ATL. The email received date and time determines bid eligibility.
- 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 RFT 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.
- Contract Security documentation – if required
- Complete Insurance Certificate – As identified in the RFT.
- Schedule of Values
- Detailed Schedule of Work
- 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.

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 09 64 00 - Engineered Wood Flooring.

1.2 REFERENCES

.1 American Concrete Institute (ACI):

.1 ACI 117-10, ACI Manual of Practice: Specifications for Tolerances for Concrete Construction and Materials, and Commentary.

.2 ACI 301-16, Specification for Structural Concrete.

.3 ACI 302.1R-15, ACI Manual of Practice: Guide for Floor and Slab Construction.

.2 ASTM International (ASTM)

.1 ASTM C1107/C1107M-20, Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

.2 ASTM D1751-23, Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).

.3 ASTM D1752-18(2023), Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.

.3 CSA Group (CSA)

.1 CSA A23.1:19/A23.2:19, Concrete materials and methods of concrete construction / Test methods and standard practices for concrete.

.4 International Concrete Repair Institute (ICRI)

.1 ICRI Technical Guideline No. 310.2R-2013, Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.

1.3 QUALITY ASSURANCE

.1 Concrete work shall conform to CSA A23.1/CSA A23.2.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit manufacturer's printed product literature, specifications and data sheet for each product specified.

.2 Provide manufacturer’s printed recommendations for general maintenance, including cleaning instructions and submit a complete list of floor care products that will be required for on-going maintenance.

1.5 ENVIRONMENTAL REQUIREMENTS

.1 Temporary lighting:

.1 Minimum 1200 W light source, placed 2.5 m above floor surface, for each 40 sq.m. of floor being treated.

.2 Electrical power:

.1 Provide sufficient electrical power to operate equipment normally used during construction.

.3 Work area:

.1 Make the work area water tight protected against rain and detrimental weather conditions.

.4 Temperature:

.1 Maintain ambient temperature of not less than 10 degree C from 7 days before installation to at least 48 hours after completion of work and maintain relative humidity not higher than 40% during same period.

.5 Moisture:

.1 Ensure concrete substrate is within moisture limits prescribed by flooring manufacturer.

.6 Safety:

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.

.7 Ventilation:

.1 Arrange for ventilation system to be operated during installation of concrete floor treatment materials by use of approved portable supply and exhaust fans.

.2 Ventilate enclosed spaces in accordance with Division 01 requirements - Temporary Utilities.

.3 Provide continuous ventilation during and after coating application.

Part 2 Products

2.1 PERFORMANCE AND FINISHING REQUIREMENTS

.1 Submit written declaration components used compatible and not adversely affect finished flooring products and their installation adhesives.

.2 Required Floor Finish - General: FF 20 x FL 15; similar to CSA A23.1 Class A slab finishing, and as required by the hardwood flooring manufacturer, per Section 09 64 00 - Engineered Wood Flooring.

2.2 REPAIR MATERIALS

.1 Concrete Repair Mortar - Vertical and Overhead Locations: polymer-modified, cementitious, two-component, fast-setting mortar with migrating corrosion inhibitor added. Formulated for trowel application, designed especially for repair of overhead and vertical surfaces at temperatures between -5 and 10°C (23 and 50°F).

.1 Minimum bond strength at 28 days shall be 17 MPa; minimum compressive strength at 28 days shall be 50 MPa; minimum tensile splitting strength at 21 days shall be 5 MPa.

.2 Standard of Accpetance:

.1 SikaTop®-123 PLUS.

.2 Concrete Repair Mortar - Vertical and Horizontal Locations: polymer-modified, cementitious, two-component, fast-setting mortar with migrating corrosion inhibitor added. Formulated for trowel application, designed for use as structural repair material at parking structures at vertical and horizontal surfaces at temperatures between -5 and 10°C (23 and 50°F).

.1 Minimum bond strength at 28 days shall be 19 MPa; minimum compressive strength at 28 days shall be 50 MPa; minimum tensile splitting strength at 21 days shall be 5.5 MPa.

.2 Standard of Accpetance:

.1 SikaTop®-122 PLUS.

.3 Featheredging Materials: polymer-modified, with migrating corrosion inhibitor added, cementitious, two-component, fast-setting, trowel or rub applied, thin-coat mortar for concrete repairs, for skin coats, filling bugholes, honeycombing and for feather edging.

.1 Minimum bond strength at 28 days shall be greater than concrete; minimum compressive strength at 28 days shall be 35 MPa.

.2 Standard of Accpetance:

.1 SikaTop®-121 PLUS.

.4 Structural Grout: high-performance, non-shrink, fluid, cementitious grout with silica fume and two-stage shrinkage mechanism; compensating for shrinkage in both the plastic and the hardened states. It shall be non-metallic, contain no chlorides and able to be placed at various consistencies ranging from flowable to fluid by adjusting quantity of mix water.

.1 Minimum compressive strength to CAN/CSA A23.2at 28 days shall be 62 MPa; Bond to steel: > 0.2 MPa; Meets ASTM C1107, Grade C type grouts; Ministry of Transport Ontario approval for use in grouting bridge bearings as well as anchor bars.

.2 Standard of Accpetance:

.1 SikaGrout®-212 HP.

2.3 CURING COMPOUNDS

.1 Select low-VOC, water-based, organic-solvent-free curing compounds.

.1 Concrete Curing Compounds: maximum VOC limit 100 g/L in accordance with SCAQMD Rule #1113.

2.4 MIXES

.1 Mixing, ratios and application in accordance with manufacturer’s instructions and approved mix designs. Coordinate with Division 03: Cast-in-Place Concrete.

2.5 ACCESSORIES

.1 Water: potable.

.2 Isolation and Expansion Joint Filler:

.1 SAKRETE Concrete Expansion Joint, by KPM Industries Ltd., or similar of same type of material to same effect with same or better physical properties and performance characteristics. Product shall exceed the requirements of ASTM D4819 and ASTM D3575.

.3 Control Joint Filler:

.1 Two-component, epoxy-urethane, load bearing, self-levelling sealant.

.1 Acceptable Material:

.1 Euco Qwikjoint UVR, by Euclid Chemicals.

.2 Loadflex, Sika Canada.

.3 Planiseal Rapidjoint 15, by Mapei.

.4 ReziWeld FLEX, W. R. Meadows of Canada.

Part 3 Execution

3.1 EXAMINATION

.1 Verify that slab surfaces are ready to receive work of this Section.

3.2 GENERAL

.1 Work shall comply with manufacturers' printed installation instructions and illustrations, technical datasheets, and specifications.

.2 Perform GPR or other approved scanning procedure to determine locations of existing reinforcing prior to cutting, coring or drilling.

.3 Apply repair materials as required to result in a sold, uniform, smooth, flat concrete surface, with cracks, grooves and other damage repaired. Fill in hollows, low spots, and grooves, and grind high spots, bumps and peaks to produce smooth, level floors. Smooth out rough areas. Finish floor patches and repairs to a magnesium trowel finish.

.4 Floor level tolerances:

.1 Apply repair materials as required to achieve a smooth, level floor having a straightedge value of ±3 mm over 3050 mm. Straight edge testing on site will be performed by Consultant to verify compliance.

.5 Prepare concrete in compliance with ICRI Technical Guideline No. 310.2R recommendations.

3.3 REPAIRS

.1 Inspect surfaces for defects immediately after removal of forms. Repair or patch defects within 48 hours of removal of forms with cure repairs same as new concrete with Consultant's permission.

.2 Defective Areas: where patches are allowed, repair and patch areas to match surrounding areas in texture and colour.

3.4 FORMED CONCRETE

.1 The basic treatment of all formed concrete surfaces, exposed or unexposed, shall be to CSA A23.1/A23.2.

.2 Do not repair honeycomb areas until inspected by Consultant. Fill honeycomb in non-structural elements with mortar; repair honeycomb in structural elements in accordance with CSA Standard.

3.5 FILLING

.1 Apply thick bed mortar or self-levelling and smoothing underlayment as required to bring slab to within specified floor level tolerances, working into all nooks, cracks and spaces to fill flush with top of floor slab. Trowel to a smooth polished surface.

.2 Use featheredging method to fill and level depressions up to 19 mm (5/8") in thickness, to fill cracks, holes, chips etc. where topping must be finished to a featheredge. Apply in strict accordance to manufacturer's instructions.

.3 At juncture of resilient flooring and exposed concrete to provide feather edging for a distance of 150 mm (6") from + 3 mm to 0 mm (+ 1/8" to 0"), as indicated.

.4 Prepare substrate and install as per manufacturers recommendations, smooth finish.

3.6 PATCHING

.1 Patch all core holes, or chipped or gouged concrete surfaces using specified materials.

.2 Mix and install materials in compliance with manufacturer's instruction.

3.7 ANCHORING IN EXISTING CONCRETE

.1 Perform GPR or other approved scanning procedures to determine locations of existing reinforcing in existing concrete elements before installing anchor systems. Advise Consultant of findings before proceeding with the Work, and revise penetration and anchor locations as required and directed by Consultant.

.2 Core holes and set anchors in structural grout as required. Install per grout manufacturer's specifications.

3.8 EXISTING SLAB CLEANING AND PREPARATION

.1 Prepare concrete surfaces as recommended by ICRI Technical Guideline No. 310.2R.

.2 Scarify concrete slab at areas to receive concrete repair materials and toppings.

.3 Scarify concrete slab at areas to receive resilient and/or tile floor finishes.

.4 Clean floors as required and specified by floor finish manufacturer.

.5 Vacuum clean and remove all dust and debris. Leave slab clean, ready for new applications. Do not use power wash equipment.

3.9 CLEANING

.1 Progress Cleaning: clean in accordance with the requirements of Division 01. Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with the requirements of Division 01. Perform cleaning after installation to remove construction and accumulated environmental dirt.

.3 Manage and dispose of demolition and construction waste materials in accordance with the requirements of Division 01.

3.10 PROTECTION

.1 Protect installed products and components from damage during construction. Prohibit traffic on floor for 48 hours after installation.

.2 Repair damage to adjacent materials caused by Work of this Section.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 07 01 50.71 - Roofing Repairs.

.2 Section 09 64 00 - Engineered Wood Flooring

1.2 REFERENCES

.1 ASTM International (ASTM)

.1 ASTM A153/A153M-16a, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

.2 ASTM A307-21, Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.

.3 ASTM A653/A653M-22, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealled) by the Hot-Dip Process.

.4 ASTM B117-19, Standard Practice for Operating Salt Spray (Fog) Apparatus.

.5 ASTM C578-22, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.

.6 ASTM C954-22, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.

.7 ASTM C1289-22a, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

.8 ASTM D1761-20, Standard Test Methods for Mechanical Fasteners in Wood.

.9 ASTM D5055-19e1, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists.

.10 ASTM D5456-21e1, Standard Specification for Evaluation of Structural Composite Lumber Products.

.11 ASTM E1333-22, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber.

.12 ASTM F1482-21, Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring.

.13 ASTM F1667/F1667M-21a, Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.

.2 American Wood Preservers Association (AWPA):

.1 AWPA Book of Standards, 2022.

.2 AWPA M2 Standard for the Care of Preservative-Treated Wood Products

.3 ASME International:

.1 ASME B18.2.1-2012 (R2021), Square, Hex, Heavy Hex, and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head, and Lag Screws (Inch Series), Includes Errata (2013).

.2 ASME B18.6.1-1981 (R2016), Wood Screws (Inch Series).

.4 California Air Resources Board (CARB):

.1 Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products (2007).

.5 Canadian General Standards Board (CGSB):

.1 CAN/CGSB-11.3-M87, Hardboard. (Withdrawn)

.2 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type. (Withdrawn)

.3 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet for Use in Building Construction. (Withdrawn)

.4 CAN-CGSB 71.26-M88, Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems. (Withdrawn)

.6 Canadian Standards Association (CSA International):

.1 CSA A123.2-03 (R2018), Asphalt-Coated Roofing Sheets, Includes Update No. 1 (2006)

.2 CAN/CSA-A247-M86 (R1996), Insulating Fiberboard.

.3 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.

.4 CSA-G164-18, Hot Dip Galvanizing of Irregularly Shaped Articles, Includes Update No 1 (2020).

.5 CAN/CSA O80 Series:21 – Wood Preservation, Includes Administrative Update (2022) and Errata (2022).

.6 CSA O112 Series-M1977 (R2006), CSA Standards for Wood Adhesives (Withdrawn).

.7 CSA O121-17 (R2022), Douglas Fir Plywood.

.8 CSA O122-16 (R2021), Structural Glued-Laminated Timber.

.9 CSA O141-05 (R2019), Softwood Lumber.

.10 CSA O151-17 (R2022), Canadian Softwood Plywood.

.11 CSA O153:19, Poplar Plywood.

.12 CSA-O325:21, Construction Sheathing (Adopted NIST PS 2-18, with Canadian deviations). Includes Administrative Update (2021).

.13 CSA O437 Series-93(R2011), Standards on OSB and Waferboard (Withdrawn).

.14 CSA T530-99, Commercial Building Standard for Telecommunications Pathways and Spaces. (Adopted ANSI/TIA/EIA-569-A)

.7 National Lumber Grades Authority (NLGA):

.1 NLGA SPS 2-2019, Special Products Standards on Machine Graded Lumber.

.2 Standard Grading Rules for Canadian Lumber 2017.

.8 South Coast Air Quality Management District (SCAQMD), California State. (SCAQMD)

.1 SCAQMD Rule 1113-16, Architectural Coatings.

.2 SCAQMD Rule 1168-22, Adhesive and Sealant Applications.

.9 Sustainable Forestry Initiative (SFI) & Forest Implementation

.10 Underwriters' Laboratories of Canada (ULC)

.1 ULC 102.2-18, Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies. (ULC S102.2)

.2 ULC-701-11, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering (CAN/ULC-S701-11). (Withdrawn)

.3 ULC-770-15, Standard Test Method for Determination of Long-Term Thermal Resistance of Closed-Cell Thermal Insulating Foams (CAN/ULC-S770-15).

1.3 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

.1 Submittals shall meet the requirements of Division 01.

.2 Product Data:

.1 Submit manufacturer's printed product literature, specifications and data sheets.

.2 Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

.3 Samples:

.1 Submit 100 mm x 300 mm samples of cedar to receive finish, to the Consultant for review.

.4 Material Certificates:

.1 For dimensional lumber specified to comply with minimum allowable unit stresses, indicate species, grade, and design values for each use.

.2 For exposed items, omit grade stamp and provide certificates as to species, grade, stress grade, seasoning, moisture content, and other evidence as required to show compliance with the specifications.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Deliver wood products bundled or crated to provide adequate protection during transit. Inspect wood products for damage upon delivery and remove and replace damaged materials.

.2 Store materials a minimum of 150 mm off the ground on blocking. Keep materials under cover and dry. Provide for air circulation within and around stacks and under temporary coverings.

.3 Protect sheet materials to prevent breaking of corners and damage to surfaces.

Part 2 Products

2.1 LUMBER

.1 Lumber: to CSA-O141, softwood, S-P-F, S4S, graded and stamped in accordance with National Lumber Grading Association (NLGA) Standard Grading Rules for Canadian Lumber and as follows:

.1 Moisture Content: maximum 8% at time of installation.

.2 Maximum moisture content when used for attachment of drywall: 8%.

.3 Grade: No. 2 or better.

.4 Meeting requirements of the NBC.

2.2 PANEL MATERIALS

.1 Fire Rated Plywood Panels: to CSA O325, Class A fire retardant produced under Performance Standard PS-1, certified by the American Plywood Association.

.1 Standard of Acceptance:

.1 Purekor Fire Retardant Plywood.

.2 Exterior applications: exterior-grade Douglas fir sheathing, Grade B-B; exposure durability rating shall be 'EXTERIOR', and the glue used shall be a fully waterproof structural adhesive.

.3 Interior sheathing shall be ULC labelled fire resistant, provide grade stamp or certification as noted for fire retardant pressure treated lumber.

.4 Plywood Flooring:

.1 Locations: under gymnasium stage to provide a consistent level surface for equipment trolleys.

.2 High-Density Overlaid (HDO) Plywood, to CSA O325, 3-ply.

.3 Thickness: as required to provide a smooth, flush, level transition to adjacent new hardwood sports flooring.

.5 Pressure Preservative Treated Plywood:

.1 Plywood Grade: exterior grade sheathing.

.2 Treatment: In accordance with CAN/CSA O80 Series.

.3 Product: amine copper quat (ACQ) or copper Azole (CA).

.4 Retention:

.1 Above ground application: minimum of 4.0 kg/m3.

.2 Ground Contact Application: minimum of 6.4 kg/m3

.5 Water-borne preservative treated wood shall have maximum moisture content of 19% after treatment.

2.3 MISCELLANEOUS LUMBER

.1 Provide lumber for support or attachment of other construction.

.2 Select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work for blocking and nailers.

.3 Fabricate miscellaneous lumber from dimension lumber of sizes indicated, and into shapes shown on drawings.

.4 Moisture Content: 19% maximum for lumber items not specified to receive wood preservative treatment.

.5 Grade: for dimension lumber sizes provide No. 2 or Standard grade lumber per NLGA. For board-sized lumber, provide sheathing grade, S2S.

.6 Kiln dry lumber materials to 8% moisture content or less.

2.4 WOOD PRESERVATIVE

.1 Where lumber or plywood is indicated as preservative treated or is specified to be treated, treated in accordance with CAN/CSA O80.9M and AWPA.

.2 Wood preservatives containing arsenic or chromium are not permitted.

.3 Pressure treat above ground items with waterborne preservatives to minimum retention of 4.0 kg/m^3. After treatment, kiln-dry lumber and plywood to maximum moisture content of 19% and 15% respectively. Treat indicated items and the following:

.1 Wood cants, nailing strips, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapour barriers, and waterproofing.

.2 Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry and concrete.

.3 Wood framing members less than 460 mm above grade.

.4 Wood floor plates installed over concrete slabs directly in contact with earth.

.4 Pressure treat wood members in contact with ground or freshwater with waterborne preservatives to minimum of 6.4kg/m^3

.5 Fire-Retardant Treatment: to CAN/SCA O80.9M, CAN/CSA O80.20M and CAN/CSA O80.27M, pressure impregnated, and as follows:

.1 Flame Spread Classification: FSC 25 maximum.

.2 Smoke developed of not more than: 75.

.6 Complete fabrication of treated items before treatment where possible. If cut after treatment apply field treatment to cut surfaces.

.7 Wood Preservatives: Maximum allowable VOC limit 350 g/L in accordance with SCAQMD Rule #1113 - Architectural Coatings.

2.5 FASTENERS

.1 Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture. Where rough carpentry is exposed to weather (during or after construction), in ground contact, pressure preservative treated, or in area of high relative humidity, provide fasteners with hot dip zinc coating complying with ASTM A153 or of Type 304 stainless steel.

.2 Nails, Spikes, and Staples: ASTM F1667.

.3 Power Driven Fasteners: Fasteners with a CCMC or ICC-ES evaluation report acceptable to authorities having jurisdiction.

.4 Through Bolts and Anchor Bolts: ASTM A307, Grade A; with ASTM A563 hex nuts and where indicated flat washers, hot dip galvanized to ASTM A153.

.5 Wood Screws: ASME B18.6.1 or as specified on Drawings.

.6 Lag Screws: ASME B18.2.1

.1 All lag screws to be machined threaded, not cast threaded.

.2 Pre-drilled hole sized in wood members for lag screws to be in accordance with CSA O86.

.3 Lag screws are acceptable only where specifically indicated on the Drawings. Do not substitute lag screws for self-tapping wood screws.

2.6 FASTENER FINISHES

.1 Galvanizing: to CSA G164, use hot dipped galvanized fasteners for exterior work, interior highly humid areas, and pressure-preservative and fire-retardant treated lumber.

2.7 ACCESSORIES

.1 Provide all accessories as required for a complete installation.

.2 Sealants: in accordance with Section 07 92 00 – Joint Sealants.

.3 Subflooring adhesive: to CGSB-71.26, cartridge loaded.

.4 General purpose adhesive: to CSA O112 Series.

.5 Nails, spikes and staples: to CSA B111, hot dipped galvanized for exterior work and pressure preservative and fire retardant treated materials.

.6 Rough Hardware (bolts, nuts, washers, etc.): Hot dip galvanized in conformity to CSA G164 or Grade A low carbon steel, conforming to ASTM A307.

Part 3 Execution

3.1 INSTALLATION

.1 Comply with requirements of NBC supplemented by following paragraphs.

.2 Install members true to line, levels and elevations, square and plumb.

.3 Construct continuous members from pieces of longest practical length.

.4 Do not splice structural members between supports unless noted otherwise.

.5 Install spanning members with "crown-edge" up.

.6 Install panel materials so that grade-marks and other defacing marks are concealed.

.7 Install plywood flooring under stage with wood screws

.8 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.

.9 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using hot dipped galvanized steel fasteners.

.10 Install sleepers as indicated.

.11 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.

.12 Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

.13 Comply with AWPA M4 and revisions specified in CSA O80 Series, supplementary requirements to AWPA M2 for applying field treatment to cut surfaces of preservative-treated lumber.

3.2 POWER, TELECOMMUNICATIONS [AND DATA] PANEL BOARDS

.1 Install 19 mm fire rated fir plywood boards on all walls in telephone and data rooms receiving wiring and equipment; minimum 1220 mm x 2440 mm panels on periphery walls over 300 mm wide, mounted 150 mm off of finished floor.

.2 Paint panels with two coats of light coloured fire retardant intumescent paint finish; coat all sides of panels (back, front and sides) to meet the intent of fire rated panel requirements listed in CSA T530 and ANSI/TIA/EIA 569-A requirements.

3.3 ERECTION

.1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

.2 Countersink bolts where necessary to provide clearance for other work.

.3 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

3.4 SCHEDULE

.1 Install as indicated, and as required.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 ASTM International (ASTM)

- .1 ASTM C834-17, Standard Specification for Latex Sealants.
- .2 ASTM C919-19, Standard Practice for Use of Sealants in Acoustical Applications.
- .3 ASTM C920-18, Standard Specification for Elastomeric Joint Sealants.
- .4 ASTM C1193-16, Standard Guide for Use of Joint Sealants.
- .5 ASTM D2240-15e1, Standard Test Methods for Rubber Property, Durometer Hardness.

.2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

- .1 Safety Data Sheets (SDS).

1.2 COORDINATION

.1 Coordinate work of this Section with interfacing and adjoining work for proper sequencing of each installation and to provide positive weather resistance, durability of the work, and protection of materials and finishes.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submittals shall comply with the requirements of Division 01 requirements.

.2 Submit manufacturer’s product data as follows:

- .1 Submit manufacturer's published product literature, specifications and datasheets for all products and materials incorporated into the Work of Contract.
- .2 Provide one electronic copy of WHMIS SDS - Safety Data Sheets in accordance with WHMIS acceptable to Labour Canada, and Health and Welfare Canada.

.3 Submit manufacturer’s installation instructions for each product used.

- .1 Before performing work of this Section, submit the names of proposed materials.
- .2 When required by Consultant, submit test certificates from an approved Canadian material testing laboratory indicating that sealants meet the requirements specified, and that the tests have been conducted in accordance with ASTM D2240.

.4 Submit samples as follows:

- .1 Samples of back-up material, primer, joint fillers, and of each type and colour of sealant to be used. Cure samples under conditions anticipated at the site during application.

.5 Reports: submit written pre-installation meeting recommendations, field inspection, and test report results after each inspection.

.6 Submit Warranty.

1.4 QUALITY ASSURANCE

.1 Comply with ASTM C1193 guidelines.

.2 Pre-Installation Meeting:

.1 Arrange with manufacturer's representative to inspect substrates and to review installation procedures 48-hours in advance of installation.

.1 Review conditions under which work will be done.

.2 Joint condition and profile.

.3 Weather conditions.

.2 Submit written report of meeting to Consultant.

.3 Mock-up:

.1 Construct mock-up in accordance with Division 01 requirements.

.2 Construct mock-up to show location, size, shape, colour, and depth of joints complete with bond breaker, joint backing, primer, and sealant.

.3 Arrange for the manufacturer's representative's review and acceptance. Allow 48 hours after acceptance before proceeding with the work.

.4 Inform Consultant following construction of the mock-up. Allow 24 hours for review of mock-up by Consultant before proceeding with sealant Work.

.5 Mock-up may remain as part of the Work if accepted by Consultant. Remove and dispose of mock-ups not forming part of the Work.

1.5 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, handle, store and protect materials in accordance with manufacturer’s recommendations and instructions.

.2 Deliver containers labelled and sealed, complete with written application and maintenance instructions.

.3 Store materials in a dry, heated enclosure.

1.6 PROJECT CONDITIONS

.1 Environmental Limitations:

.1 Do not proceed with installation of joint sealants under following conditions:

.1 When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4 degrees C.

.2 When joint substrates are wet.

.2 Joint-Width Conditions:

.1 Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

.3 Joint-Substrate Conditions:

.1 Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

.2 Substrate must be clean, dry, and frost free.

1.7 WARRANTY

.1 Contractor warrants that sealant work will not leak, crack, crumble, melt, shrink, run, lose adhesion or stain adjacent surfaces for not less than two years from the date of Substantial Performance.

Part 2 Products

2.1 MANUFACTURERS

.1 Standard of Acceptance: Use products meeting the requirements of this Section and suitable to the application to which the sealant is to be applied, selections restricted to the manufacturers listed below:

- .1 BASF Master Builders
- .2 Chemtron Manufacturing Ltd.
- .3 Dow Corning Canada Inc.
- .4 GE Silicones Limited.
- .5 LymTal International.
- .6 Pecora Corporation.
- .7 PRC-DeSoto.
- .8 Sika Chemical of Canada Ltd.
- .9 Tremco Ltd.

.2 Use materials as received from manufacturer without additives or adulteration. Use one manufacturer's product for each Type specified. Where sealant applications cross or contact each other, ensure compatibility, maintenance of physical properties and performance characteristics, and continuity of seal.

2.2 PERFORMANCE/DESIGN CRITERIA

.1 Sealant system shall satisfy following requirements for duration of warranty period:

- .1 Waterproof, flexible, and thermally compatible with substrate under applicable service conditions.
- .2 Provide a weather-tight seal that does not allow moisture penetration.
- .3 Shall not lose adhesion to bonding surfaces, crack, or craze.
- .4 Shall not leak.

.2 Reference to products does not relieve manufacturer of responsibility to comply fully with specified criteria.

2.3 SEALANT MATERIALS

.1 Do not use caulking that emits strong odours, contains toxic chemicals or is not certified as mould resistant in air handling units.

.2 When low toxicity caulks are not possible, confine usage to areas which off-gas to exterior, are contained behind air barriers, or are applied several months before occupancy to maximize off-gas time.

.3 Unless otherwise specified, VOC content limits of sealants shall be in accordance with SCAQMD Rule 1168 and as follows:

- .1 Architectural Materials:
  - .1 Sealants: VOC content limit 250 g/L.
  - .2 Sealant Primers for Non-Porous Surfaces: VOC content limit 250 g/L.
  - .3 Sealant Primers for Porous Surfaces: VOC content limit 775 g/L.
- .2 Roofing:
  - .1 Non-Membrane Related Sealants: VOC content limit 300 g/L.
  - .2 Single Ply Roofing Sealants: VOC content limit 450 g/L.
  - .3 SBS Membrane Sealant Primer: VOC content limit 500 g/L.

.3 All Other Applications:

.1 Sealants: VOC content limit 420 g/L.

.2 Sealant Primers: VOC content limit 750 g/L.

2.4 SEALANT MATERIAL DESIGNATIONS

.1 Type S-1: Silicone Sealant; mould and mildew resistant.

.1 To ASTM C920; type S; grade NS; class 100/50; use NT, M, G, and A.

.2 Standard of Acceptance:

.1 790 Silicone, Dow Corning.
.2 Spectrum 1 Silicone, Tremco Inc.
.3 890NST, Pecora.

.2 Type S-2: Silicone Sealant; general construction and air-seal sealant.

.1 To ASTM C920: type S; grade NS; class 50; use NT, M, G, A, O.

.2 Standard of Acceptance:

.1 864NST or 895NST, Pecora Corporation.
.2 Dow Corning 795, Dow Corning
.3 Spectrum 2, Tremco Sealant & Waterproofing

.3 Type S-3: Silicone Sealant; structural glazing.

.1 To ASTM C920: type S; grade NS; class 25; use NT, A, G, O.

.2 Standard of Acceptance:

.1 995 Silicone, Dow Corning.
.2 Proglaze SSG, Tremco Inc.
.3 SSG4000, General Electric.
.4 895NST, Pecora.

.4 Type S-4: Acoustical Sealant; interior, non-hardening.

.1 To ASTM C834 Type P, Grade -18°C.

.2 Standard of Acceptance:

.1 Acoustical Sealant, Tremco.
.2 Metaseal, Chemtron.
.3 QuietZone acoustic sealant, Owens Corning.
.4 BA-98, Pecora.

.5 Type S-5: Multi-component polyurethane sealant; chemical curing, exterior wall sealant.

.1 To ASTM C920: type M; grade NS; class 50; use T, NT, M, A, O.

.2 Standard of Acceptance:

.1 Dymeric, Tremco.
.2 Sikaflex 2c NS, Sika.
.3 Sonolastic NP 2, BASF Sonneborn.
.4 DynaTrol II, Pecora.

.6 Type S-6: One-component polyurethane sealant; non-sag, for general construction.

.1 To ASTM C920: type S; grade NS; class 25; use NT, M, A, O.

.2 Standard of Acceptance:

.1 Polyurethane Sealant 540, 3M Company
.2 Dymonic or Dymonic FC, Tremco Inc
.3 Multiflex, Chemtron.

.4 Sonolastic NP 1, BASF Sonneborn.

.5 Sikaflex 1a, Sika.

.6 DynaTrol I-XL, Pecora.

.7 POURTHANE NS, by W. R. Meadows.

.7 Type S-7: Horizontal joint sealant; two-component, self-levelling.

.1 To ASTM C920: type M; grade P; class 25; use T, M, O.

.2 Standard of Acceptance:

.1 Sikaflex 2c SL, Sika.

.2 Sonolastic SL 2, BASF Sonneborn.

.3 THC-901, Tremco Inc.

.4 Urexpan NR-200, Pecora.

.8 Type S-8: One-part moisture curing, low modulus polyurethane sealant for sealing joints in level and slightly slope surfaces conforming to ASTM C920, type S, grade P, class 50, use T, M, A, O.

.1 Standard of Acceptance:

.1 Sonolastic SL 1, BASF Sonneborn.

.2 Vulkem 45 SSL, Tremco Inc.

.3 Urexpan NR-201b, Pecora.

.9 Type S-9: Control joint sealant: two-component, epoxy-urethane, self-levelling, load bearing saw cut or preformed control joints.

.1 Standard of Acceptance:

.1 Loadflex, Sika.

.2 Dynapoxy EP-800, Pecora.

.3 MasterSeal CR 190, BASF Building Systems

.10 Type S-10: All exterior door thresholds, Showers, and other Wet Areas (refer to Drawing details #8, A-5-1, and #9, A-555 for examples of threshold locations): two-component gun-grade, slump-resistant elastomeric polyurethane specially formulated for sealing joints in water-immersion conditions, and highly resistant to biodegradation by both aerobic and anaerobic bacteria; to Meets ASTM C920, Type M, Grade NS, Class 25, use T, NT, M, G, A, O; certified to CAN/ULC S115; Canadian Food Inspection Agency acceptance.

.1 Standard of Acceptance:

.1 Sikaflex 2c NS EZ Mix, by Sika Canada.

.2 Sikaflex 2c NS EZ Mix TG, by Sika Canada (traffic grade option).

2.5 ACCESSORIES

.1 Preformed compressible and non-compressible back-up materials that are non-staining, compatible with joint substrate, sealants, primers, and other joint fillers, and are approved for applications indicated by sealant manufacturer based on site experience and laboratory testing.

.1 Rod Type Sealant Backings:

.1 ASTM C1330, Type C (closed cell material with a surface skin), or Type B (bi-cellular material with a surface skin).

.2 Use any of the preceding types, as approved in writing by joint sealant manufacturer for joint application indicated.

.3 Size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

.4 Non-adhering to sealant, to maintain two sided adhesion across joint.

.2 High Density Foam.

.1 Extruded closed cell polyvinyl chloride (PVC), extruded polyethylene, closed cell, Shore A hardness 20, tensile strength 140 to 200 kPa, extruded polyolefin foam, 32 kg/m^3 density, or neoprene foam backer, size as recommended by manufacturer.

.3 Bond Breaker Tape.

.1 Polyethylene bond breaker tape which will not bond to sealant.

.2 Primer: Non-staining type as recommended by sealant manufacturer.

.3 Joint Cleaner: Non-corrosive solvent type recommended by sealant manufacturer for applicable substrate materials.

2.6 COLOURS

.1 Colours: to match adjacent materials as selected by Consultant from the manufacturer's available colour ranges.

Part 3 Execution

3.1 PROTECTION

.1 Protect installed work of other trades from staining, damage, or contamination.

3.2 EXAMINATION

.1 Verify condition of previously installed work upon which this Section depends. Report defects to Consultant. Commencement of work means acceptance of existing conditions.

.2 Ensure joints are suitable to accept and receive the sealants.

.3 Ensure surfaces are sound, dry, and free from dirt, water, frost, loose scale, corrosion, bitumen, paints, and other contaminants that may adversely affect the performance of the sealing materials.

.4 Do not apply sealant to masonry until mortar has cured.

.5 Before any sealing work is commenced, test the materials for indications of staining or poor adhesion.

.6 Ensure joints and spaces which are to receive sealants are less than 10 mm deep; not less than 6 mm wide; and not more than 19 mm wide.

3.3 SURFACE PREPARATION

.1 Perform cleaning to the extent required to achieve acceptable joint surfaces, and as approved by sealant manufacturer.

.2 Protect adjacent finishes from damage.

.3 Cleaning Procedures:

.1 Metal:

.1 Blast cleaning: Sandblast or iron shot blast surfaces requiring heavy cleaning down to bright metal. Remove loose matter by compressed air or commercial vacuum cleaner.

.2 Power tool cleaning: Clean surfaces by wire brush, impact tools, abrasive wheels or by buffing. Remove loose matter by compressed air or vacuum cleaner.

.3 Solvent cleaning: Clean with solvent applied by spray or brush. Wipe with clean, dry wiping cloths. Remove paints with paint remover and wipe with solvent. Remove residue.

.2 Concrete, Marble, Stone, Brick:

.1 Remove friable material with wire brush or by chipping, until surfaces are sound. Remove surface residue with a stiff brush, vacuum cleaner or compressed air.

.2 Concrete surfaces shall be cured for at least 28 days. Acid etch joint surfaces to remove alkaline salts and neutralize acid with a solution of tri sodium phosphate, followed by rinsing with clean, cold water.

.3 Allow joints to dry thoroughly.

.4 Completely remove resinous products used, such as curing compounds and form release agents.

.3 Glass, Ceramics, and Porcelain: Brush with solvent and wipe with clean, dry wiping cloths. Remove residue.

.4 Wood: Remove foreign matter such as soil, paint, grease, bitumen, resin with solvents, abrasives and paint removers; remove residue. Provide surfaces that are clean and dry.

.4 Do not exceed shelf life and pot life of the materials, and installation times, as stated by the manufacturers.

.5 Be familiar with the work life of the sealant to be used. Do not mix multiple component materials until required for use.

.6 Thoroughly mix multiple component sealants, and bulk sealants when recommended by manufacturer, using a mechanical mixer capable of mixing at 80-100 rpm without mixing air into the material. Continue mixing until the material is a uniform colour and free from streaks of unmixed material.

.7 Mask areas adjacent to joints to be sealed. Prevent contamination of adjacent surfaces. Remove masking promptly after the joint sealing has been completed.

3.4 INSTALLATION

.1 Install materials in compliance with the recommendations of their manufacturer.

.2 Fill joints with joint backing to produce joint profile with optimum sealant cross section. Provide joint depth of one half the joint width.

.3 Prime joints to receive sealants as recommended by the sealant manufacturer to prevent staining, to assist the bond and to stabilize pouring surfaces.

.4 Apply primer with a brush that will permit joint surfaces to be primed. Perform priming immediately before installation of sealants, allowing minimal time between priming and sealing as recommended by the sealant manufacturer.

.5 Sealants generally shall be of gun grade or knife grade non-sag consistency to suit the joint condition. Use gun nozzles of the proper sizes to suit the joints and the sealant material. Sealants for horizontal joints (other than overhead joints) shall be self-levelling type.

.6 Install sealant with pressure operated guns.

.7 Use sufficient pressure to fill all voids and joints solid. Sealant shall bond to the sides of the joint only and shall not adhere to the joint backing material. Provide bond breaker material where necessary.

.8 Pour or gun self-levelling, low viscosity grades of sealant into horizontal joints. If applied by gun, hold the nozzle to the bottom of the joints to ensure complete filling of the joints.

.9 Ensure that the correct sealant depth is maintained. Superficial coating with a skin bead will not be accepted.

.10 Except as otherwise specified, sealant installations shall be a full bead free from air pockets and embedded impurities, providing smooth surfaces, free from ridges, wrinkles, sags, air pockets and imbedded impurities.

.11 After joints have been completely filled, tool them neatly to a slightly concave surface.

.12 Tool sealants to achieve airtight joints. Use wet tools as required.

.13 Insert plastic vent tubes where required or shown, extending from the cavity to exterior face, sloped to the exterior. Seal around the tube and tool for positive adhesion. Insert joint backing for remainder of the joint. Do not plug vent tube during sealing operation.

3.5 CLEANING

.1 Immediately clean adjacent surfaces that have been soiled and leave work in a neat, clean condition. Remove excess materials and droppings using recommended cleaners and solvents.

3.6 REPAIR

.1 Cut out damaged sealant, repeat preparation, prime joints, and install new material as specified, and acceptable to the manufacturer.

3.7 FIELD ADHESION TESTING

.1 Field test joint sealant adhesion to substrates in the presence of Consultant as follows:

- .1 Extent of Testing: test completed and cured sealant joints as follows:
  - .1 Perform 10 tests for the first 300 m of joint length for each kind of sealant and joint substrate.
  - .2 Perform 1 test for each 300 m of joint thereafter or 1 test per each floor per elevation.
- .2 Test Method: test joint sealants according to method A, Field-Applied Sealant Joint Hand Pull Tab, Appendix X1, ASTM C1193 or Method A, Tail Procedure, ASTM C1521.
  - .1 For joints with dissimilar substrates, verify adhesion to each substrate separately. Extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
- .3 Inspect tested joints and report on finding for the following requirements:
  - .1 Joint cavities filled and free of voids.
  - .2 Sealant dimensions and configurations comply with sealant manufacturer's data sheet and printed installation requirements.
  - .3 No adhesive or cohesive failure noted during pull tests per ASTM criteria. Include data on pull distance used to test each kind of product and joint substrate.
- .4 Record tests results in a field-adhesion test log. Include dates when sealants were installed, name of worker responsible in each instance, test dates, test locations, whether joints were primed or not, adhesion results and percent elongations, sealant fill, sealant configuration and dimensions.
- .5 Repair sealant test locations by applying new sealants following approved preparation and application procedures.

.2 Evaluation of Field Adhesion Test results:

- .1 Sealants passing ASTM pull-tests and compliant with specifications will be considered satisfactory.

.2 Remove sealants that fail adhesion tests or do not meet specifications, and apply in accordance with approved preparation and application requirements.

.3 Retest re-applied sealants until test results are satisfactory and sealant application is compliant.

3.8 CLEANING

.1 Progress Cleaning: clean in accordance with Division 01 requirements. Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Division 01 requirements. Perform cleaning after installation to remove construction and accumulated environmental dirt.

.3 Manage and dispose of demolition and construction waste materials in accordance with Section 01 74 21 requirements.

3.9 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by Work of this Section.

3.10 SCHEDULES

.1 General Provisions:

.1 Examine the Contract Drawings and determine entire extent of Work of this Section. Seal joints at terminations, perimeters, transitions and penetrations.

.2 Where no specified type of sealant is shown or specified, choose one of the sealants specified in this Section appropriate for its location and conditions as recommended by the sealant manufacturer in accordance with its warranty provisions and datasheet.

.3 Make sealant selections consistent with manufacturer’s recommendations.

.2 Materials Schedule:

.1 Where no specified type of sealant is shown or specified, choose one of the sealants specified in this Section appropriate for its location as recommended by the sealant manufacturer in accordance with its warranty provisions and datasheet.

.2 Make sealant selections consistent with manufacturer’s recommendations.

.3 Use mould & mildew resistant silicone sealant Type S-1 for non-moving joints in washrooms and kitchens. Do not use on floors.

.4 Use silicone general construction sealant Type S-2 or Type S-5 and S-6 for all joints, interior and exterior, where no other specific sealant type specified.

.5 Use structural glazing silicone Type S-3 for sealing glass, interior and exterior.

.6 Use acoustical sealant Type S-4 and air seal sealant Type S-2 only where they will be fully concealed and only where no constant or consistent air pressure difference will exist across the joint.

.7 Use multi-component sealant type S-5, priming penetration element surfaces other than concrete, for mechanical and electrical service penetrations in concrete foundation walls.

.8 Use multi-component sealant Type S-7 for horizontal joint sealant of plaza, floors and decks, exterior areas only, subject to pedestrian and vehicular traffic.

.9 Use control joint sealant S-9 as filler for interior, horizontal saw cut or preformed control joints where joints are subject to load bearing conditions.

.10 Use wet area sealant S-10 for horizontal and vertical joints, and perimeter joints, at showers, exterior door threshold plates, and other wet area applications. Use traffic grade (TG) at horizontal floor locations as required.

.3 Exterior Sealant Schedule:

.1 The following list is provided for general guidance and is not intended to exhaust all of the locations where sealant is required. Refer to item 3.10.1 General Provisions of this Section for general provisions.

.2 Exterior sealant work is part of the work of this section. Install exterior sealant to:

.1 General: seal open joints in surfaces exposed to view and as required to make the building weather-tight and airtight.

.2 Exterior joints between dissimilar materials.

.3 Perimeters of exterior openings where frames meet exterior façade of building.

.4 Movement and control joints in exterior surfaces of iin-place concrete and masonry.

.5 Exterior joints between masonry and in-place concrete.

.6 Exterior joints in horizontal wearing surfaces.

.7 Exterior intake and exhaust louvres. Provide space in sealant at bottom for drainage.

.8 Below door thresholds (2 beads).

.9 Penetrations through exterior building elements.

.10 Where indicated on drawings.

.3 Foam sealant installation: Compression when expanded in joint, shall be 25% or uncompressed thickness. Depth shall be in accordance with manufacturer's sizing table.

.4 Interior Sealant Schedule:

.1 The following list is provided for general guidance and is not intended to exhaust all of the locations where sealant is required. Refer to item 3.10.1 General Provisions of this Section for general provisions.

.2 Install interior sealant to:

.1 Movement and control joints on exposed in-place concrete walls.

.2 Interior control and expansion joints in floor and wall surfaces.

.3 Raked out joints at junctions of masonry with concrete walls and columns, and at intersection of masonry walls and partitions.

.4 Perimeters of exterior door, curtain wall and window frames.

.5 Joints at tops of non-load bearing masonry walls at the underside of metal deck or in-place concrete, except where fire sealant and smoke sealant required.

.6 Perimeter and perimeter.

END OF SECTION

Part 1 General

1.1 SUMMARY

.1 Section includes requirements for the supply and installation of a new shock-absorbing hardwood athletic flooring system.

1.2 RELATED REQUIREMENTS

.1 Refer to drawings.

1.3 REFERENCES

.1 ASTM International (ASTM)

.1 ASTM D2047-17, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.

.2 ASTM D4263-83(2018), Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.

.3 ASTM E84-23d, Standard Test Method for Surface Burning Characteristics of Building Materials.

.4 ASTM F2117-10(2017), Standard Test Method for Vertical Rebound Characteristics of Sports Surface/Ball Systems; Acoustical Measurement.

.5 ASTM F2157-09(2018), Standard Specification for Synthetic Surfaced Running Tracks.

.6 ASTM F2569-11(2019), Standard Test Method for Evaluating the Force Reduction Properties of Surfaces for Athletic Use.

.2 Canadian Lumbermen's Association (CLA).

.1 CLA Grading Rules for Canadian Hardwood Strip Flooring.

.3 CSA International (CSA)

.1 CSA O121-08(R2013), Douglas Fir Plywood.

.4 Deutsches Institut Fur Normung E.V. (DIN) – German National Standard

.1 DIN 18032-1: Sports halls - Halls and rooms for sports and multi-purpose use - Part 1: Planning principles, 2014.

.2 DIN 18032-2: Sport halls - Halls for gymnastics, games and multi-purpose use - Part 2: Floors for sporting activities; Requirements, testing (Pre-standard), 2004.

.3 DIN 18032-3: Sports halls - Halls and rooms for sports and multi-purpose use - Part 3: Testing of safety against ball throwing, 2023.

.5 Maple Flooring Manufacturers Association (MFMA)

.1 MFMA Grading Rules.

.2 MFPA PUR Standards (Performance and Uniformity Rating Sports Specific Standards).

1.4 DEFINITIONS

.1 EMC: The equilibrium moisture content (EMC) occurs when the wood has reached an equilibrium with its environment and is no longer gaining or losing moisture.

1.5 ADMINISTRATIVE REQUIREMENTS

.1 Convene pre-installation meeting one week prior to beginning work of this specification section, with Contractor, Consultant, installer, manufacturer’s representative to:

.1 Verify project requirements.

.2 Review installation and substrate conditions.

.3 Coordination with other building trades.

.4 Review manufacturer's installation instructions and warranty requirements.

1.6 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Division 01 requirements.

.2 Product Data:

.1 Submit manufacturer's printed product literature, specifications and data sheet for each product specified.

.3 Samples.

.1 Submit three 300 mm long sample in same thickness colour and finish of materials to be installed. Include sample sets showing the full range of normal color and texture variations expected.

.2 Submit sample of ramp-type door threshold, clear anodized aluminum, accommodating a 1” height transition from gym floor to adjacent floor level, and of sufficient width to meet ADA safety criteria and Nova Scotia barrier-free requirements.

.4 Submit test results from DIN 18032-2 testing.

.5 Submit closeout data:

.1 Submit maintenance instructions for wood flooring assemblies and finish systems including a list of materials and equipment required to maintain the floor finish.

1.7 QUALITY ASSURANCE

.1 Manufacturer:

.1 Manufacturer of flooring shall be a firm specializing in manufacturing products specified in this section.

.2 Manufacturer shall be an established firm experienced in manufacturing engineered flooring to DIN standards.

.2 Flooring Installer:

.1 Installer shall be an established installer experienced in installing engineered wood flooring meeting DIN standards.

.3 Surface Appearance:

.1 Expansion spaces will not exceed 1/64" (0.4 mm) at time of installation and will be spread evenly across the floor with each row of flooring.

.2 Expansion spacing will be installed to allow for normal expected increases in Equilibrium Wood Moisture Content (EMC).

1.8 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with manufacturers recommendations

.2 Storage and Handling Requirements: Protect wood from exposure to moisture; moisture generating activities such as drywall, concrete, masonry, painting and grouting must be complete and cured prior to delivery of wood flooring.

.3 Store materials in original, undamaged containers or wrapping with manufacturer’s seals and labels intact.

.4 Handle units to avoid chipped edges.

.5 Store in dry, well ventilated storage areas. Never store outdoors. Storage area environments should be kept at 35 – 55% relative humidity and 16 – 21 degrees Celsius.

1.9 WORKING CONDITIONS

.1 The wood flooring specified herein shall not be installed until all masonry, painting, plaster, tile, marble and terrazzo work is completed, and overhead mechanical trades and painters have finished in the wood floor areas. The building shall be enclosed and weathertight

.2 The concrete subfloor shall be determined dry by industry standard testing procedures, free of foreign materials and turned over to the Installer (Flooring Contractor) broom clean. Moderate room temperature of 65 degrees (18 degrees Celsius) or more shall be maintained a week preceding and throughout the duration of the work. Humidity conditions within the building shall approximate the humidity conditions that will prevail when the building is occupied.

.3 Permanent heat, light and ventilation shall be installed and operating during and after installation, maintaining a range of temperature and humidity compatible with the expected low and high moisture content of the flooring. The wood moisture content range is determined by Flooring Installer based on the facility's mechanical controls and/or geographical location.

.4 Flooring must be stored in a dry, well-ventilated area, not in contact with masonry, to acclimate to building conditions and shall be installed at moisture content compatible with the normally expected environmental range of temperature and relative humidity achieved while the facility is occupied.

.5 General Contractor shall lock floor area after floor is finished to allow proper curing time. If general contractor or owner requires use of gym after proper curing time, he shall protect the floor by covering with non-marring Kraft paper or red rosin paper with taped joints until acceptance by owner of complete gymnasium floor.

.6 Working conditions as described above shall be followed. Variations and substitutions shall be submitted for approval to the Consultant who shall advise floor manufacturer of the same.

1.10 HUMIDITY CONTROL

.1 Since all wood flooring will expand and contract as relative humidity varies, it is important to minimize extremes between low and high. Hardwood flooring is manufactured at moisture content most compatible with a 35%-50% relative humidity range. Geographical regions and available mechanicals determine the typical range of temperature and humidity for each facility. Maintaining a 15% fluctuation between highest and lowest average indoor relative humidity provides limited shrinkage and growth. Facility managers should make use of available HVAC systems to prevent excessive tightening and shrinkage of flooring.

1.11 WARRANTY

.1 Provide flooring manufacturer’s standard limited warranty.

Part 2 Products

2.1 DESIGN AND PERFORMANCE REQUIREMENTS

.1 Flooring system shall meet or exceed the following minimum requirements:

.1 The Work of this Section shall comply with the requirements of Government of Nova Scotia DC350 Design Requirements Manual, Part 2, Section 2, Division 09, Section 09 64 00 Wood Flooring, 2010 Edition.

.2 The engineered wood flooring system shall have been tested under DIN 18032-2 by a recognized independent testing laboratory. Submit test results to Consultant demonstrating compliance.

.1 The engineered wood flooring system shall meet or exceed the requirements of DIN 18032-2 for Shock Absorption, Ball Rebound, Rolling Load and Friction tests. Submit test results to Consultant demonstrating compliance.

.3 Wood flooring shall be to CLA Grading Rules for Canadian Hardwood Strip Flooring, latest edition, and be MFMA certified.

2.2 MATERIALS

.1 Vapour Barrier: 6 mil (0.2mm) polyethylene sheet vapour barrier.

.2 Subfloor:

.1 Flooring manufacturer's system-specific factory-assembled subfloor panels with shock-absorbing resilient pads (Rezill™ pads or equivalent) attached.

.3 Flooring:

.1 25/32" (20mm) x 2-1/4" (57mm), Second & Better Grade, Northern Hard Maple Flooring, MFMA Grade marked and stamped.

.4 Fasteners:

.1 Flooring Fasteners: 1-3/4" (44mm) barbed cleats or coated staples.

.2 Subfloor Fasteners: 3/4" (19mm) coated staples or nails.

.3 Subfloor Attachment: 16-gauge (1.5mm) steel Green Play channel.

.4 Channel Attachment: 1-1/4" (32mm) long steel drive pins, or length as dictated by site conditions, achieving a minimum 900 lbs. (408.6 Kg) pullout strength applied with air driven or low velocity powder actuated tool.

.5 Finish Materials: flooring manufacturer's oil modified polyurethane seal and finish.

.6 Game Lines: Flooring manufacturer's enamel paint to colours as indicated on drawings, type compatible with floor finish.

.7 Wall Base: 3" (76mm) X 4" (102mm), heavy duty, molded, vented cove base with pre-molded outside corners.

.8 Standard of Acceptance:

.1 Connor Sports: Green Play™; System Number: 067D.

2.3 ACCESSORIES

.1 Provide all accessories as required for a complete installation.

.2 Door Thresholds: extended-ramp-type heavy-duty aluminum thresholds (clear anodized) accommodating a 1" height transition from gym floor to adjacent floor level, and of sufficient width to meet ADA safety criteria and Nova Scotia barrier-free requirements. Provide sample to Consultant for initial selection before ordering materials.

.3 Provide floor sockets and equipment anchors as required; confirm requirements with facility operator and Consultant prior to ordering materials.

2.4 PROTECTION MAT

.1 Standard of Acceptance:

.1 Ram Board Plus®, by Ram Board, Inc., plus manufacturer's recommended accessories.

.2 or equivalent temporary protection mat.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Work of this Section shall comply with manufacturer's published installation instructions, specifications and standard details.

3.2 EXAMINATION

.1 Ensure that the environmental conditions specified in item 1.8 WORKING CONDITIONS of this Section are met.

.2 Ensure that Work specified in other Sections which in execution could interfere with or damage flooring installation has been completed.

.3 Ensure that no contaminants are present on subfloor that would affect bond of adhesive.

.4 Examine substrates, areas, and conditions, with installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of work.

.5 Ensure concrete substrates have maximum 2.5% moisture content, exhibit normal alkalinity and no carbonization or dusting. Conduct tests to ASTM D4263 as required to establish that concrete meets flooring manufacturer's specifications.

.6 Verify concrete is clean and free of laitance, loose material, grease, oil, coatings and other contaminants that will interfere with bonding of adhesive. Concrete surface sealers must be removed if present.

.7 Verify concrete is flat, smooth, free from cracks, holes and ridges and other defects impairing performance or appearance.

.8 Proceed with installation only after unsatisfactory conditions have been corrected.

.9 Defective Work resulting from installation of flooring on unsatisfactory surfaces or because of adverse environmental conditions will be considered the responsibility of those performing the Work of this Section.

3.3 PREPARATION

.1 Prepare substrates according to manufacturer's printed recommendations.

.2 Clean subfloors to remove dirt, oil, grease and other foreign materials, and vacuum clean.

.3 Patch cracks, holes and depressions of small areas using manufacturer's recommended concrete repair and leveling materials. Sand and score patched areas smooth after material is cured.

.4 Remove doors from hinges at perimeter of work area. Undercut door slabs, sand and seal as necessary to accommodate new gymnasium finished floor position. Refer to architectural drawings for locations.

3.4 INSTALLATION

.1 Subfloor:

.1 Cover concrete with poly, sealing and lapping joints a minimum of 6” (152mm).

.2 Arrange subfloor assemblies at right angle to finish flooring with adjacent nailing rows set 12” (305mm) on center, and 11” (279mm) on center for 3rd Grade. Lap panel ends, providing 1/4” (6mm) end joint spacing, and secure with nails or staples while tightly pressing laps together. Place alternate rows of subfloor panels to nest evenly within adjacent panel rows. Provide 1-1/2” (38mm) expansion voids at perimeter and at vertical obstructions. Install solid blocking at doorways, under bleachers in the stacked position, and below portable goals.

.3 Secure panels to concrete with steel channel sections and anchorage pins fixed at every other panel joint along subfloor assemblies, and alternate side location of channel sections at each placement. Position channel sections in adjacent subfloor assemblies to form a stair step pattern throughout.

.2 Maple Flooring:

.1 Install maple flooring parallel to main playing court by power nailing or stapling at all sleeper locations. End joints shall be properly driven up.

.2 Size joints between flooring strips to allow for intermediate expansion in accordance with local humidity conditions.

.3 Provide 1-1/2" (38mm) expansion voids at perimeter and at all vertical obstructions.

.3 Install floor sockets and equipment anchors as required.

3.5 SANDING AND FINISHING

.1 Machine sand with coarse, medium, and fine paper to a smooth, even and uniform surface.

.2 Remove sanding dust from entire surface by tack or vacuum.

.3 Inspect entire area of floor to insure surface is acceptable for finishing, clean and completely free from sanding dust.

.4 Apply two (2) coats of approved seal and two (2) coats of approved finish per manufacture's instructions.

.5 Buff and clean floor between coats.

.6 Games Lines: Replicate existing game lines on newly installed flooring, between seal and first coat of finish.

3.6 BASE INSTALLATION

.1 Install vent cove base to walls with base cement or screws. Use pre-molded outside corners and mitered inside corners.

3.7 CLEANING

.1 Progress Cleaning: clean in accordance with requirements of Contract Documents. Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with requirements of Contract Documents. Perform cleaning after installation to remove construction and accumulated environmental dirt.

.1 At completion of Work, and after finish has cured for at least 72 hours, clean flooring.

.3 Manage and dispose of demolition and construction waste materials in accordance with requirements of Contract Documents.

3.8 PROTECTION

.1 Protect installed products and components from damage during construction.

.1 Place Protection Mat over cured floor to protect finishes during remainder of project until project is ready for occupancy.

.2 Repair damage to adjacent materials caused by Work of this Section.

3.9 SCHEDULE

.1 Coordinate with the work specified by Section 02 41 19 - Selective Demolition, and install new hardwood sports flooring system as indicated.

END OF SECTION

General

1.1 RELATED REQUIREMENTS

.1 Section 06 10 10 – Rough Carpentry

.2 Section 07 92 00 – Joints Sealants

1.2 REFERENCES

.1 ASTM International (ASTM)

.1 ASTM F710-19e1, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

.2 ASTM F1066-04(2018), Standard Specification for Vinyl Composition Floor Tile.

.3 ASTM F1861-21, Standard Specification for Resilient Wall Base.

.4 ASTM F1516-13(2018), Standard Practice for Sealing Seams of Resilient Flooring Products by the Heat Weld Method (when Recommended).

.2 Underwriters Laboratories of Canada (ULC):

.1 ULC 102.2-18, Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies (ULC S102.2).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide product data in accordance with Division 01 requirements.

.1 Submit one copy of product data for each type of product specified.

.2 Provide samples in accordance with Section Division 01 requirements.

.1 Submit duplicate 300 x 300 mm sample pieces of sheet material, 300 mm long base, nosing, feature strips, treads, edge strips.

.3 Closeout Submittals:

.1 Provide manufacturer’s printed recommendations for general maintenance, including cleaning instructions and guidelines for use of waxes and other protective coatings and appearance enhancers in accordance with Section Division 01 requirements.

.2 Submit warranties.

1.4 EXTRA MATERIALS

.1 Provide extra materials of resilient sheet flooring and adhesives in accordance with Section Division 01 requirements.

.2 Provide 2% of each colour, pattern and type flooring material required for project for maintenance use.

.3 Extra materials from same production run as installed materials.

.4 Deliver to Owner upon completion of the work of this section.

.5 Store where directed by Owner.

1.5 QUALITY ASSURANCE

.1 Regulatory Requirements: Provide products that meet requirements of ULC S102.2 as applicable for required flame spread ratings; labelled and listed by Underwriters Laboratories of Canada (ULC), or another testing and inspecting agency acceptable to authorities having jurisdiction.

.2 Qualifications: Provide proof of qualifications when requested by Consultant:

.1 Installer shall be Trade Qualified for their specific flooring products by the National Floor Covering Association.

.2 Resilient Flooring Installer: Use an installer who is competent in heat welding and have a minimum of three (3) years documented experience in the installation of resilient sheet flooring and seams in accordance with manufacturer's training or certification program:

.3 Source Limitations: Obtain each type, colour, and pattern of flooring or accessories specified from one source with resources to provide products of consistent quality in appearance and physical properties without delaying the Work.

1.6 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Division 01 Requirements.

.2 Deliver materials in good conditions to the jobsite in the manufacturer's original unopened containers that bear the name and brand of the manufacturer, project identification, and shipping and handling instructions.

.3 Store materials in a clean, dry, enclosed space off the ground, and protect from the weather and from extremes of heat and cold. Protect adhesive from freezing. Store flooring, adhesives and accessories in the spaces where they will be installed for at least 48 hours before beginning installation.

.4 Install flooring and accessories after the other finishing operations, including painting, have been completed. Close spaces to traffic during the installation of the flooring. Do not install flooring over concrete slabs until they are sufficiently dry to achieve a bond with the adhesive, in accordance with the manufacturer's recommended bond and moisture tests.

1.7 AMBIENT CONDITIONS

.1 Maintain air temperature and structural base temperature at flooring installation area above 20 degrees for 48 hours before, during and 48 hours after installation.

1.8 WARRANTIES

.1 Provide Manufacturer's Warranty for product to be free from manufacturer's defects for a period of 5 years from date of substantial performance.

.2 Contractor agrees to correct any deficiencies of labour or material found in the work performed for a period of 2 years from date of Substantial Performance.Products

1.9 MATERIALS

.1 Provide vinyl composite tile (VCT), treads (with non-slip safety nosing with contrasting colour), and rubber base, in accordance with Drawings; FloorScore certified.

.1 Vinyl composite tile: to ASTM F1066.

.2 Rubber base: to ASTM F1861.

1.10 COLOURS – GENERAL

.1 Colour(s): Colours for the products specified in this Section 09 65 00 shall be selected by the Consultant from the manufacturer's full range in each instance, but shall not exceed four different colours overall for the project.

1.11 RESILIENT TILE FLOORING

.1 Vinyl composition tile (VCT): 3 mm thick x 305 x 305 mm size, in standard colours selected by Consultant; FloorScore certified.

.2 Acceptable Materials:

.1 Armstrong Standard Excelon "Imperial".

.2 Mannington Essentials.

.3 Amtico Colour Through.

.4 Domco Azroc Cortina.

.5 Fextile Flex-Thru.

1.12 RESILIENT BASE

.1 Cove base, minimum 1200 mm and 100 mm high x 3 mm thick, including pre-moulded end stops and external corners; FloorScore certified.

.2 Acceptable Materials:

.1 Amtico rubber Cove Base.

.2 Johnsonite Rubber Cove Base.

.3 Wall Flowers, by Marley Flexco.

1.13 RESILIENT STAIR TREADS

.1 Thickness: 5 mm nominal thickness, square nose, full tread depth and width, integral abrasive safety strips, tread and strip colours as selected by Consultant; FloorScore certified.

.2 Acceptable Materials:

.1 Marathon Stair Tread for Visually Impaired by Amtico, City Square pattern.

.2 VIRH by Johnsonite, raised square pattern.

.3 Heavy duty square 2 type 800 with integral abrasive strips, by Marley Flexco.

1.14 ACCESSORIES

.1 Metal edge strips:

.1 Extruded, smooth, mill finish aluminum, with lip to extend under floor finish, shoulder flush with top of adjacent floor finish.

.2 Cap Strips: extruded aluminum, smooth, mill finish, with lip to extend under coved floor finish and profile to cover top of coved sheet flooring.

.3 Cove Support Strip:

.1 Pre-Fabricated Cove Base: fabricated from same materials and dye lots as resilient flooring, in maximum practical lengths, with 38 mm x 38 mm formed aluminum reinforcing bonded to back of base material.

.1 Riser: 100 mm.

.2 Toe: 85 mm.

.3 Acceptable Manufacturers:

.1 FlashCove Prefabricated Bases Inc., Telephone: 905-475-0915

.4 External corner protectors: extruded aluminum, smooth, mill finish, type recommended by flooring manufacturer.

.5 Sub-floor filler and leveler 2-part latex-type filler requiring no water, as recommended by flooring manufacturer for use with their product.

.6 Primers and adhesives: waterproof, of types recommended by resilient flooring manufacturer for specific material on applicable substrate, above, on or below grade.

.7 Welding rod: designed to weld seams of sheet flooring, as recommended by flooring manufacturer, colour as directed by Consultant.

.8 Sealer and wax: type recommended by resilient flooring material manufacturer for material type and location.

Part 2 Execution

2.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

2.2 SITE VERIFICATION OF CONDITIONS

.1 Ensure floors are clean, smooth, and flat to flooring manufacturer’s requirements and technical datasheets.

2.3 PREPARATION

.1 Remove existing flooring.

.2 Remove or treat old adhesives to prevent residual, old flooring adhesives from bleeding through to new flooring and/or interfering with the bonding of new adhesives.

.3 Clean floor and apply filler; trowel and float to leave smooth, flat hard surface. Prohibit traffic until filler cured and dry.

.4 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.

.5 Prime floor substrate to resilient flooring manufacturer's printed instructions.

2.4 INSTALLATION: GENERAL

.1 Provide high ventilation rate, with maximum outside air, during installation, and for 48 to 72 hours after installation. If possible, vent directly to outside. Do not let contaminated air recirculate through district or whole building air distribution system. Maintain extra ventilation for at least one month following building occupation.

.2 Apply adhesive uniformly using recommended trowel in accordance with flooring manufacturer's instructions. Do not spread more adhesive than can be covered by flooring before initial set takes place.

.3 Cut flooring around fixed objects.

.4 Install feature strips and floor markings where indicated. Fit joints tightly.

.5 Continue flooring over areas which will be under built-in furniture.

.6 Terminate flooring at centreline of door in openings where adjacent floor finish or colour is dissimilar.

.7 Install metal edge strips at unprotected or exposed edges where flooring terminates.

2.5 INSTALLATION: FLOOR TILE

.1 Lay flooring with joints parallel to building lines to produce symmetrical tile pattern. Border tiles minimum half tile width.

.2 Install flooring to grid pattern with continuous joints. Fit joints tightly.

.3 As installation progresses and after installation is complete, roll resilient tile flooring in accordance with manufacturer’s instructions.

2.6 INSTALLATION: BASE

.1 Lay out base to keep number of joints at minimum.

.2 Clean substrate and prime with one coat of adhesive.

.3 Apply adhesive to back of base.

.4 Set base against wall and floor surfaces tightly by using 3 kg hand roller.

.5 Install straight and level to variation of 1:1000.

.6 Scribe and fit to door frames and other obstructions. Use premoulded end pieces at flush door frames.

.7 Cope internal corners. Use premoulded corner units for right angle external corners. Use formed straight base material for external corners of other angles.

.8 Use toeless type base where floor finish will be carpet, coved type elsewhere.

.9 Install toeless type base before installation of carpet on floors.

.10 Heat weld base in accordance with manufacturer's printed instructions.

2.7 INSTALLATION: ACCESSORIES

.1 Install metal edge strips at unprotected and exposed edges where flooring terminates.

.2 Install cove support strips continuously where sheet flooring is to be coved to vertical surfaces.

.3 Install cap strips continuously to cover top edge of coved sheet flooring. Mitre corners. Top of cap strip shall be straight and level to variation of plus or minus 3 mm over 3 m straight edge.

2.8 FIELD QUALITY CONTROL

.1 Manufacturer's Field Services:

.1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

2.9 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning. Leave Work area clean at end of each day.

.1 Remove excess adhesive from floor, base and wall surfaces without damage.

.2 Clean, seal and wax floor and base surface to flooring manufacturer's printed instructions.

.2 Clean, strip, seal (2 coats) and wax (2 coats) floor and base surface to flooring manufacturer’s printed instructions.

.3 Manage and dispose of demolition and construction waste materials in accordance with Division 01 requirements.

2.10 PROTECTION

.1 Protect new floors from time of final set of adhesives until final inspection.

.2 Prohibit traffic on floor for 48 hours after installation.

.3 Protect floors until Substantial Performance by covering with breathable protection mat.

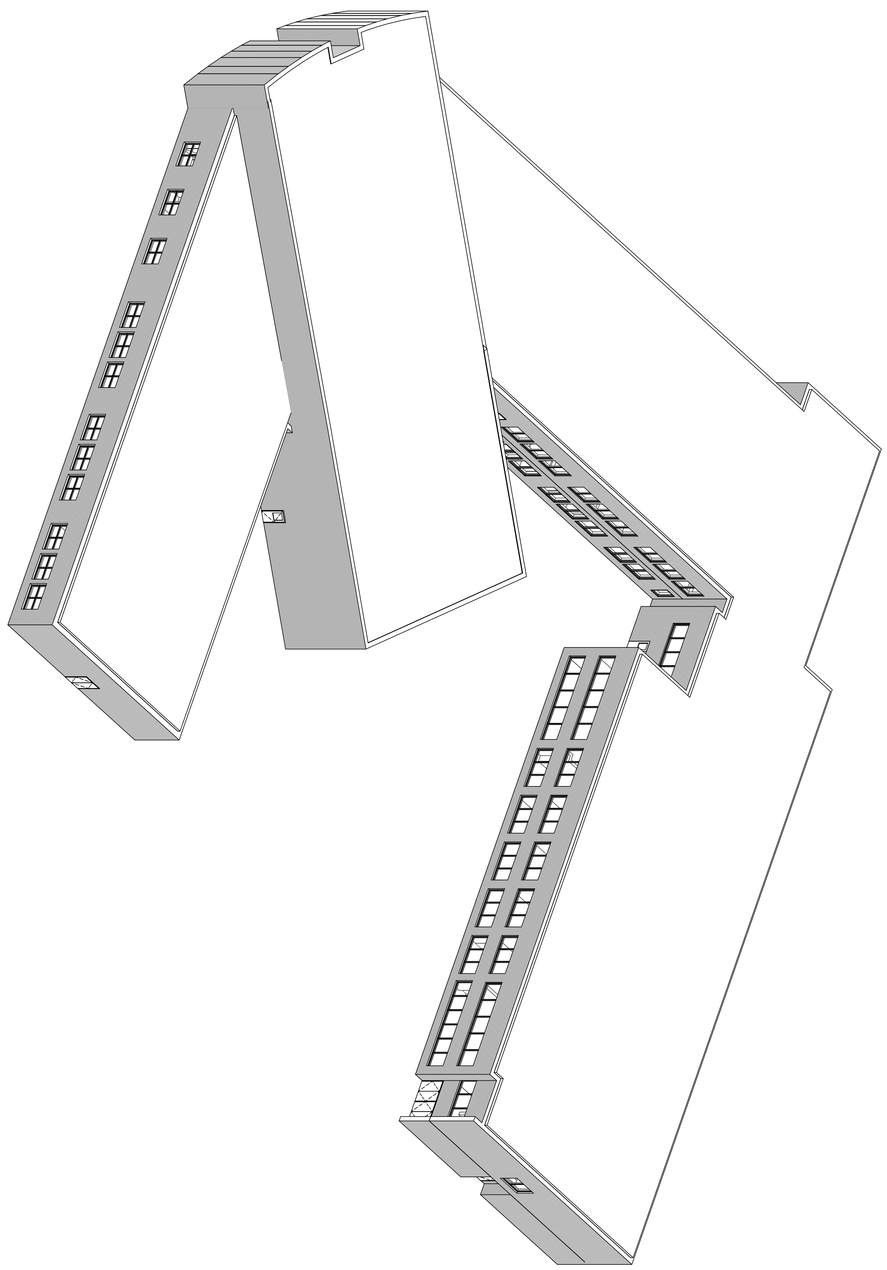
END OF SECTION

C:\Revit Projects\HRCE - Bicentennial School - Mechanical Upgrade - GYM FLOORING_ARCH_v23_washerB2BEY.rvt
2024-05-10 6:03:12 PM

DRAWING LIST

ARCHITECTURAL

A-111	FLOOR PLANS
A-121	FLOOR PLAN - GYM
A-401	DETAILS - GYM



FBM

DUMAC

DUMAC ENERGY LIMITED CONSULTING ENGINEERS

1201-6960 Cunard St.
Halifax, Nova Scotia
Canada B3K 1C4

902.423.1105
archprojects@fbm.ca
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CLIENT:

Halifax Regional Centre for Education

FBM PROJECT NO.: 2024-016-3 | DATE: 10 MAY 2024

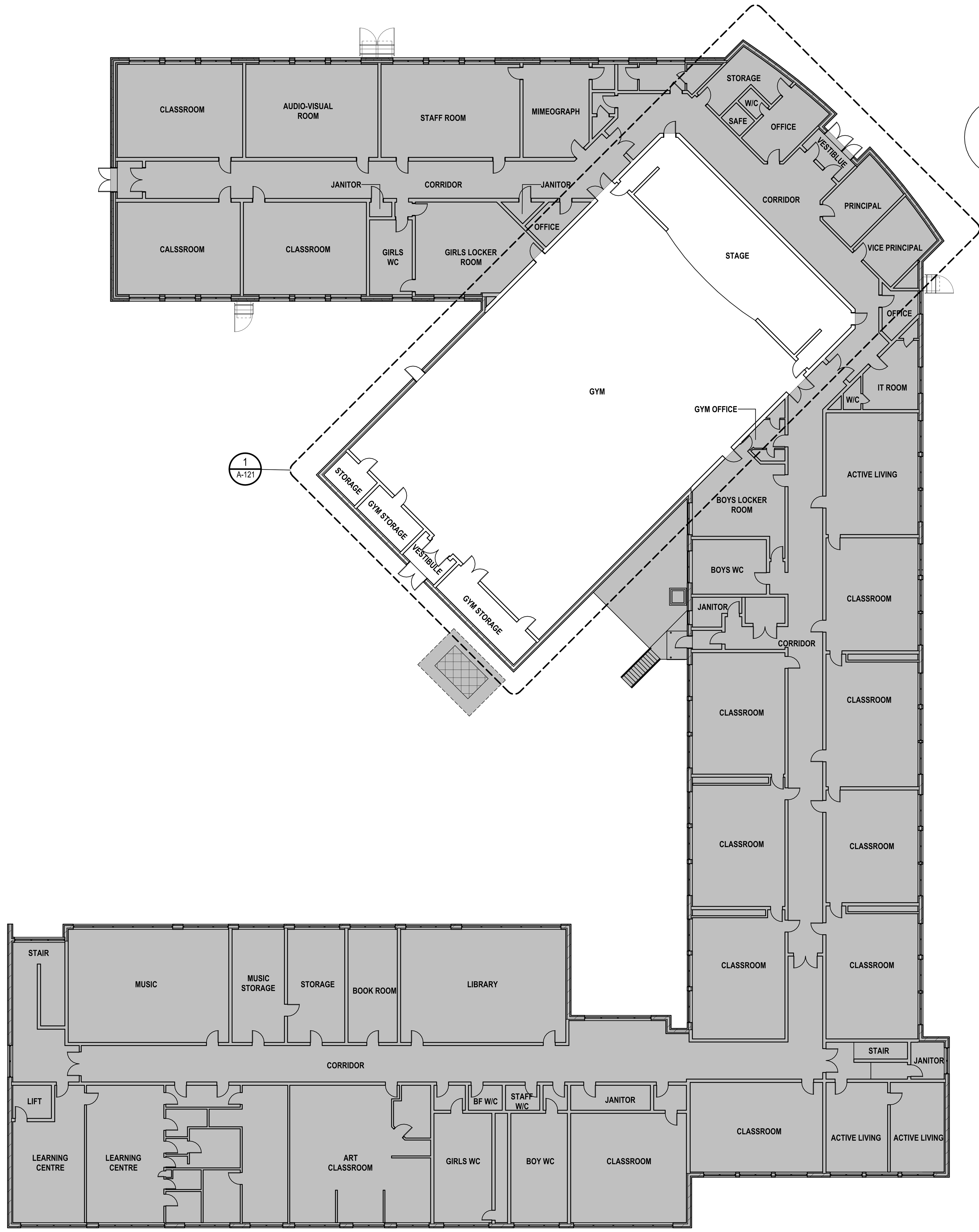
PROJECT NAME:

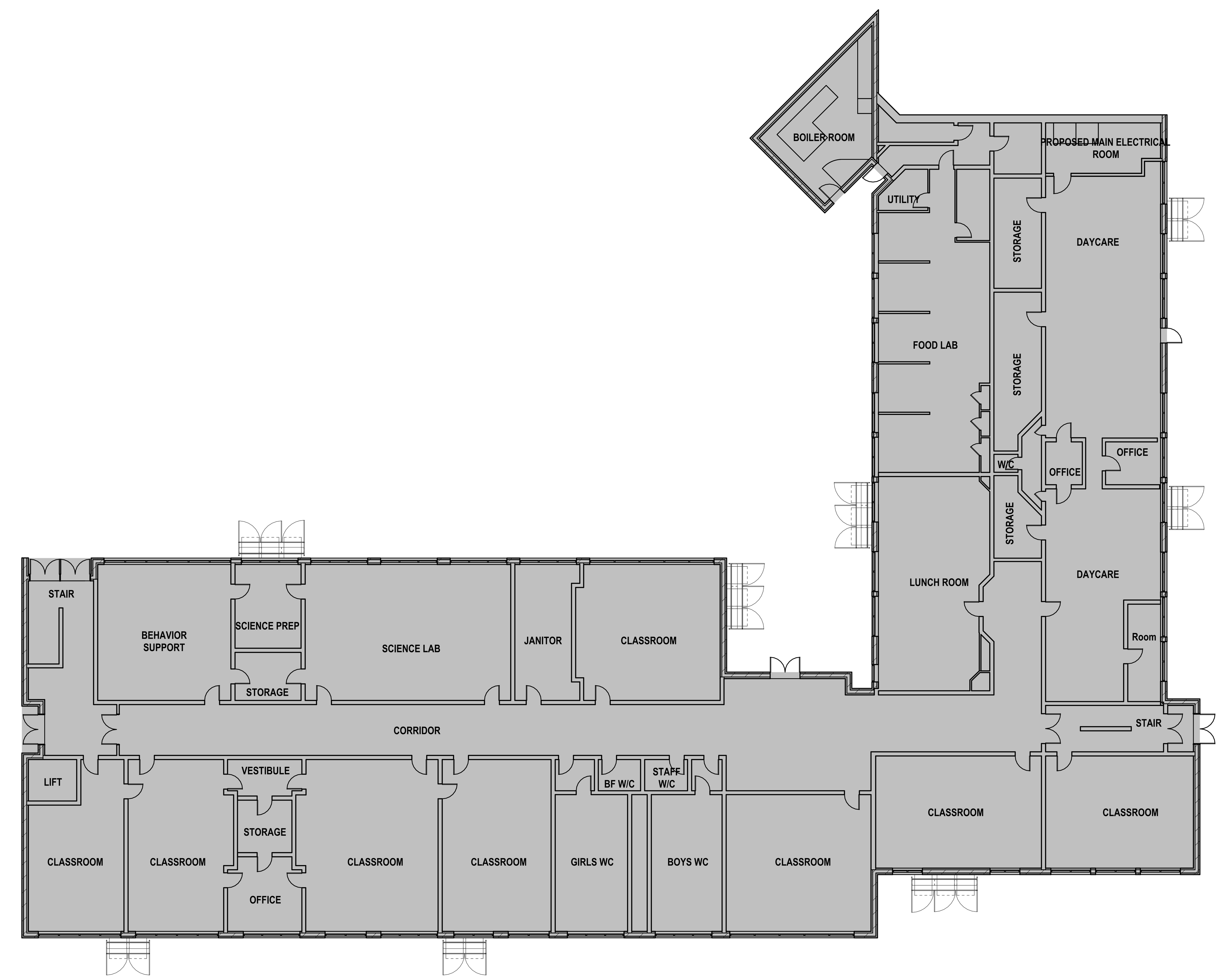
BICENTENNIAL SCHOOL - GYM FLOOR REPLACEMENT

85 VICTORIA ROAD, DARTMOUTH, NS B3A 1T9
ISSUED FOR TENDER

SCOPE OF WORK

NOT IN CONTRACT





1 A-111 MAIN LEVEL

SCALE: 1/16" = 1'-0"

2 A-111 BASEMENT

SCALE: 1/16" = 1'-0"

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No	REVISION	BY	DATE
0	ISSUED FOR TENDER		10 MAY 2024

STAMP

LICENSED ARCHITECT
MATTHEW CLAYTON GRACIE
NOVA SCOTIA ASSOCIATION OF ARCHITECTS

SCALE	As indicated
DRAWN	AL
CHECKED	GW
DATE	10 MAY 2024

PROJECT

BICENTENNIAL SCHOOL - GYM FLOOR REPLACEMENT

CLIENT

Halifax Regional Centre for Education

PROJECT No. 2024-016-3

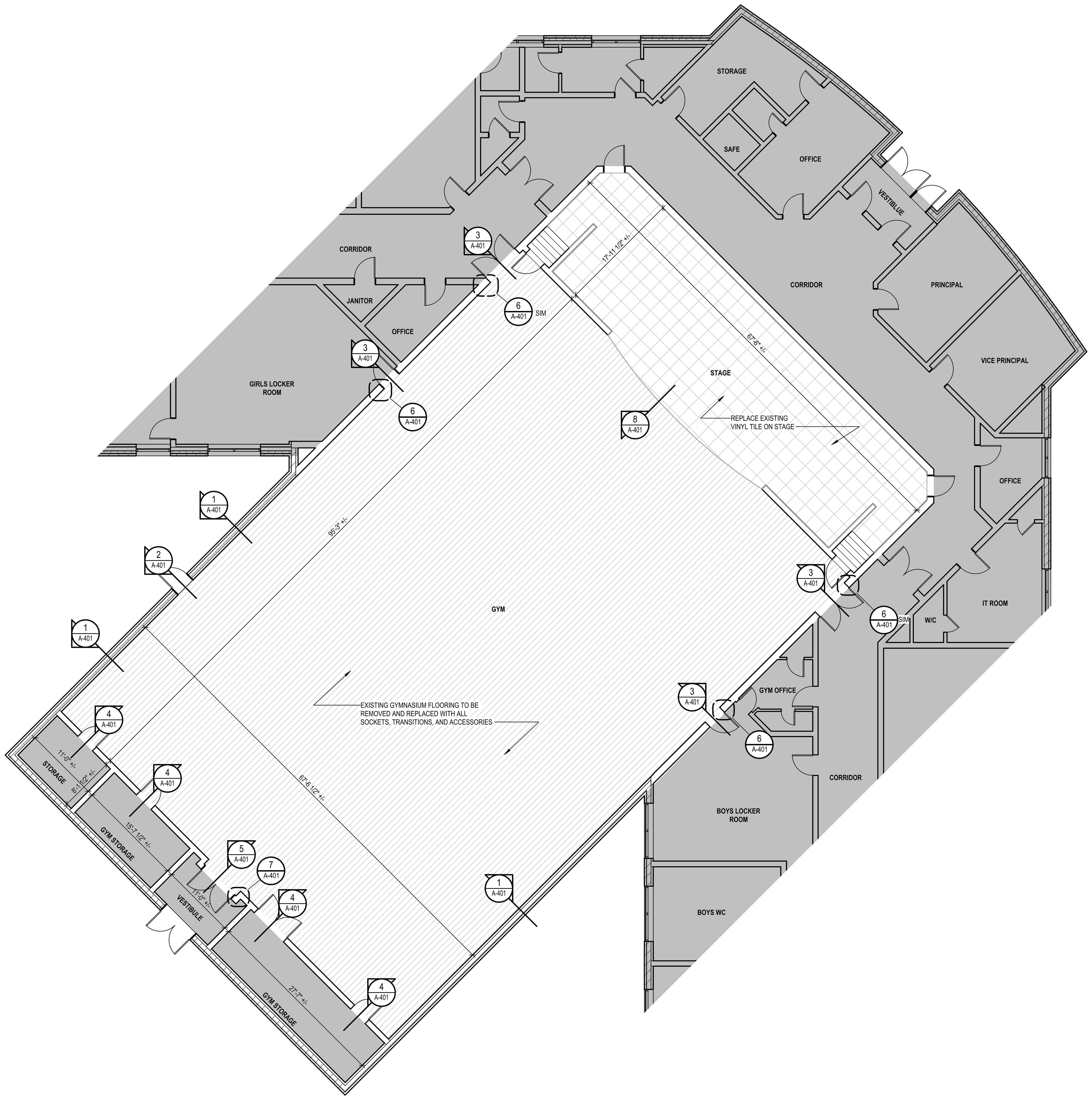
SHEET TITLE

FLOOR PLANS

A-111

FLOORING LEGEND

	NEW MAPLE FLOORING
	NEW TILES
	NOT IN CONTRACT



1 / A-121 **GYM**

SCALE: 1/8" = 1'-0"

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Canada B3K 1C4

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No	REVISION	BY	DATE
0	ISSUED FOR TENDER		10 MAY 2024

STAMP

LICENSED ARCHITECT — MATTHEW CLAYTON MALONE — NOVA SCOTIA ASSOCIATION OF ARCHITECTS

SCALE	As indicated
DRAWN	AL
CHECKED	GW
DATE	10 MAY 2024

PROJECT

BICENTENNIAL SCHOOL - GYM FLOOR REPLACEMENT

CLIENT

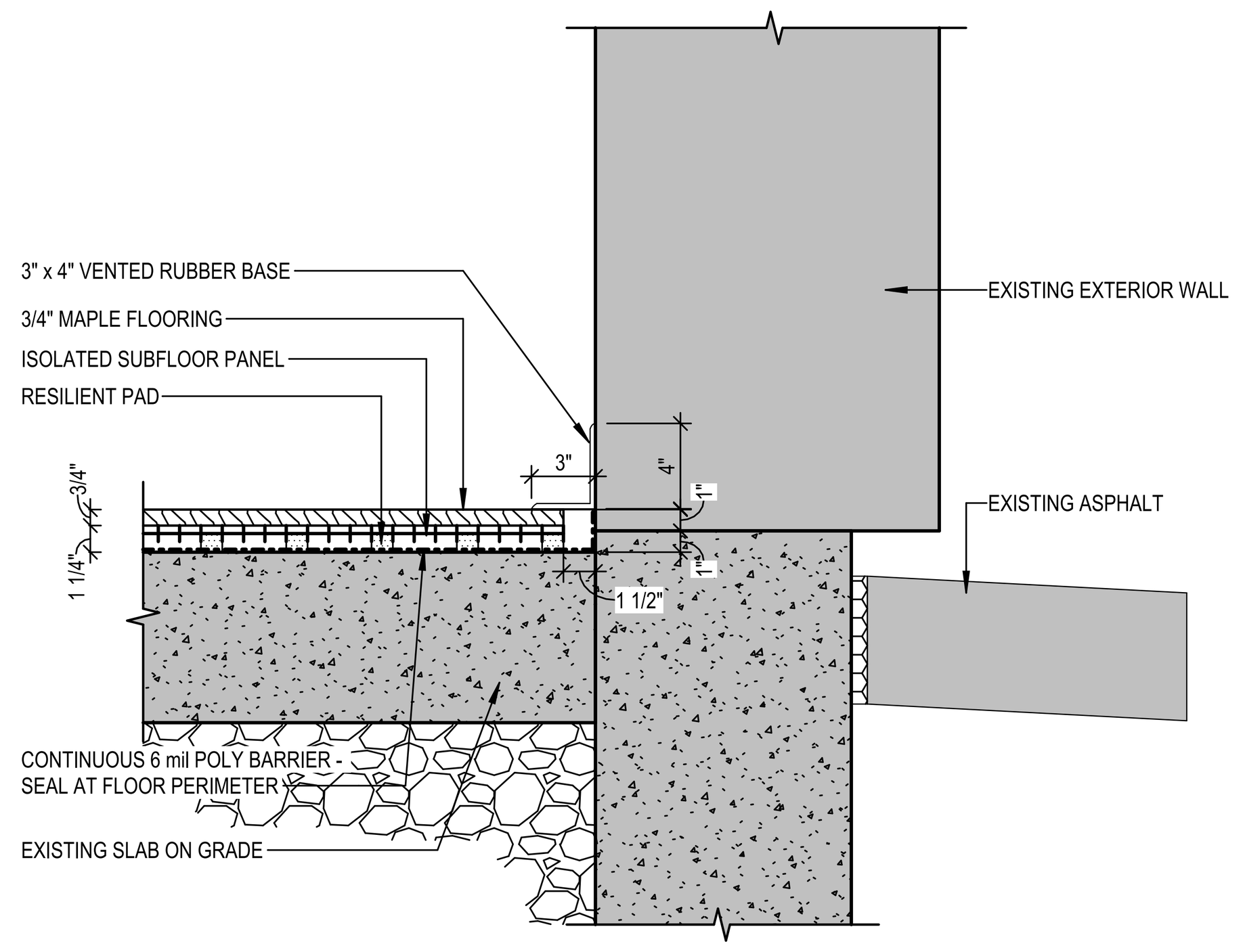
Halifax Regional Centre for Education

PROJECT No. 2024-016-3

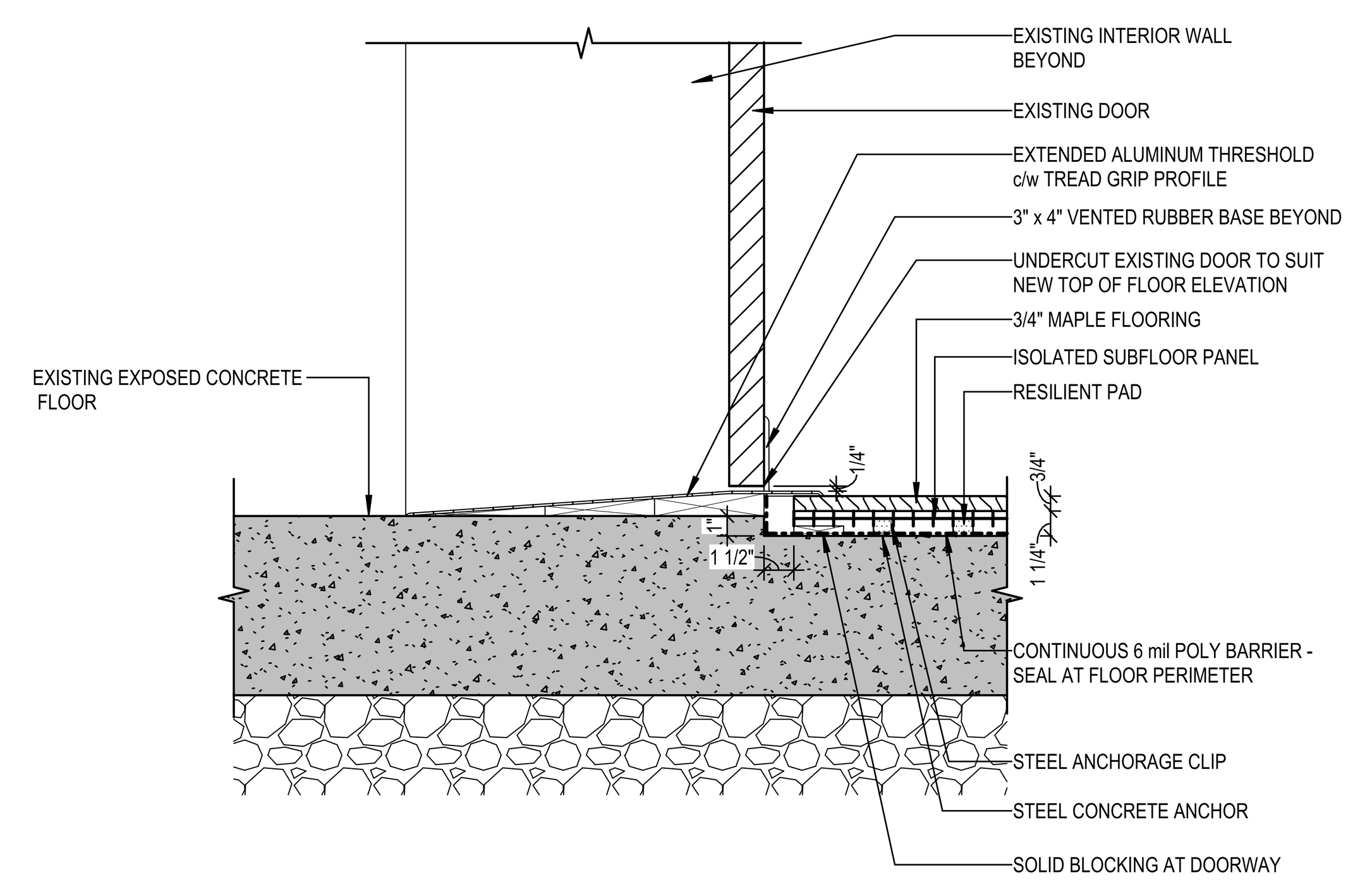
SHEET TITLE

FLOOR PLAN - GYM

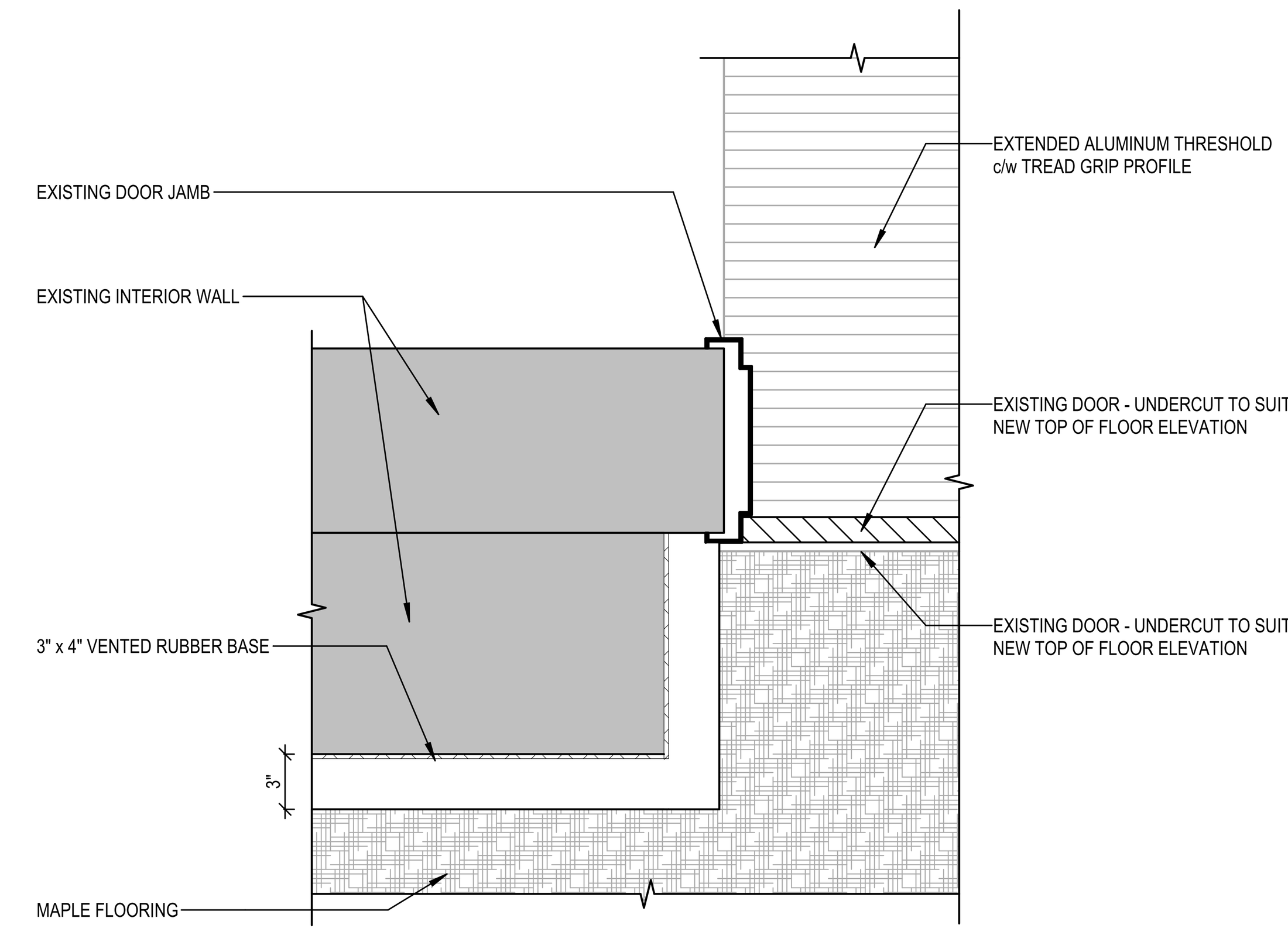
A-121



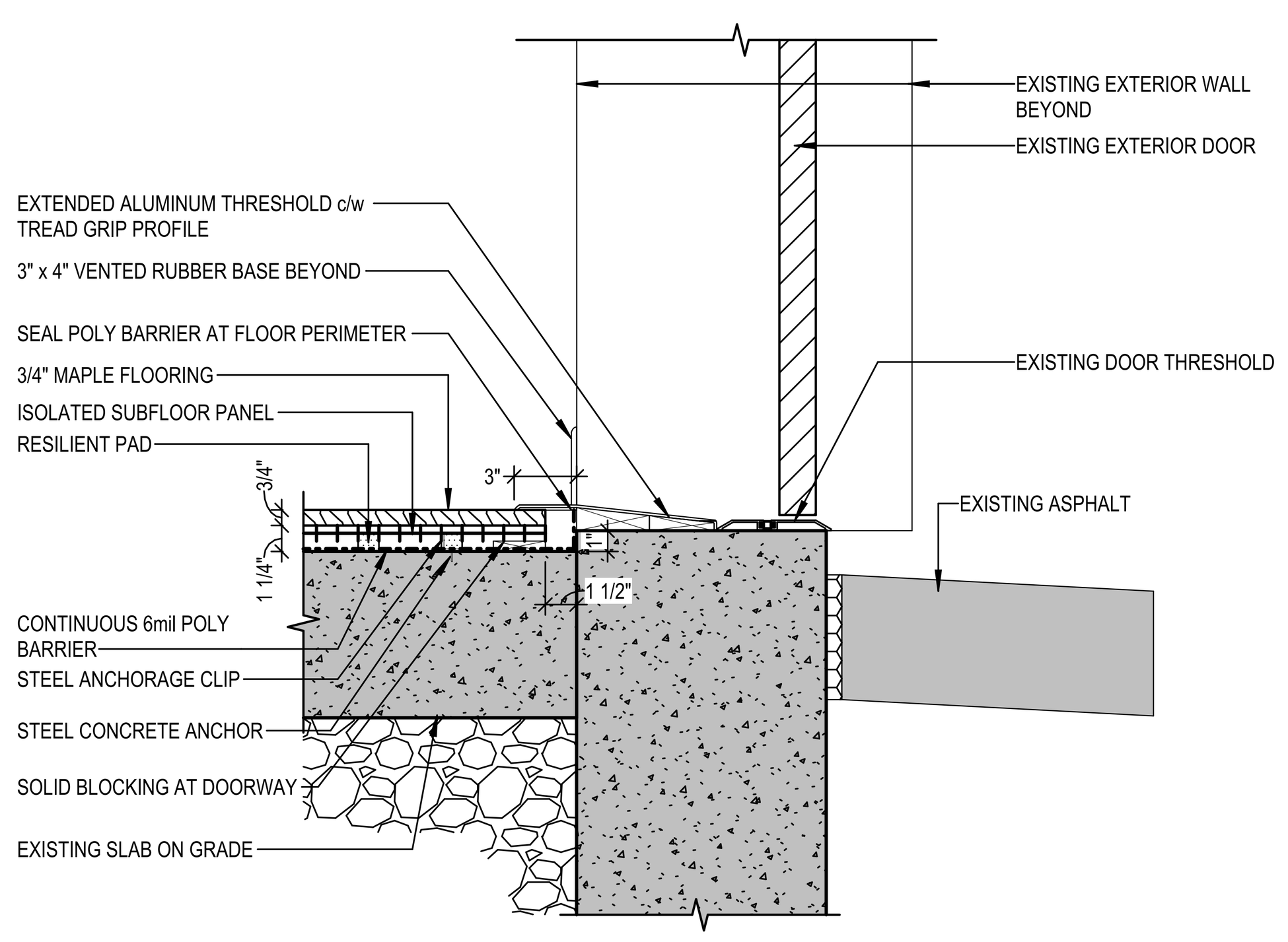
1 SECTION - GYM FLOOR AT BASE OF WALL
A-401
SCALE: 1 1/2" = 1'-0"



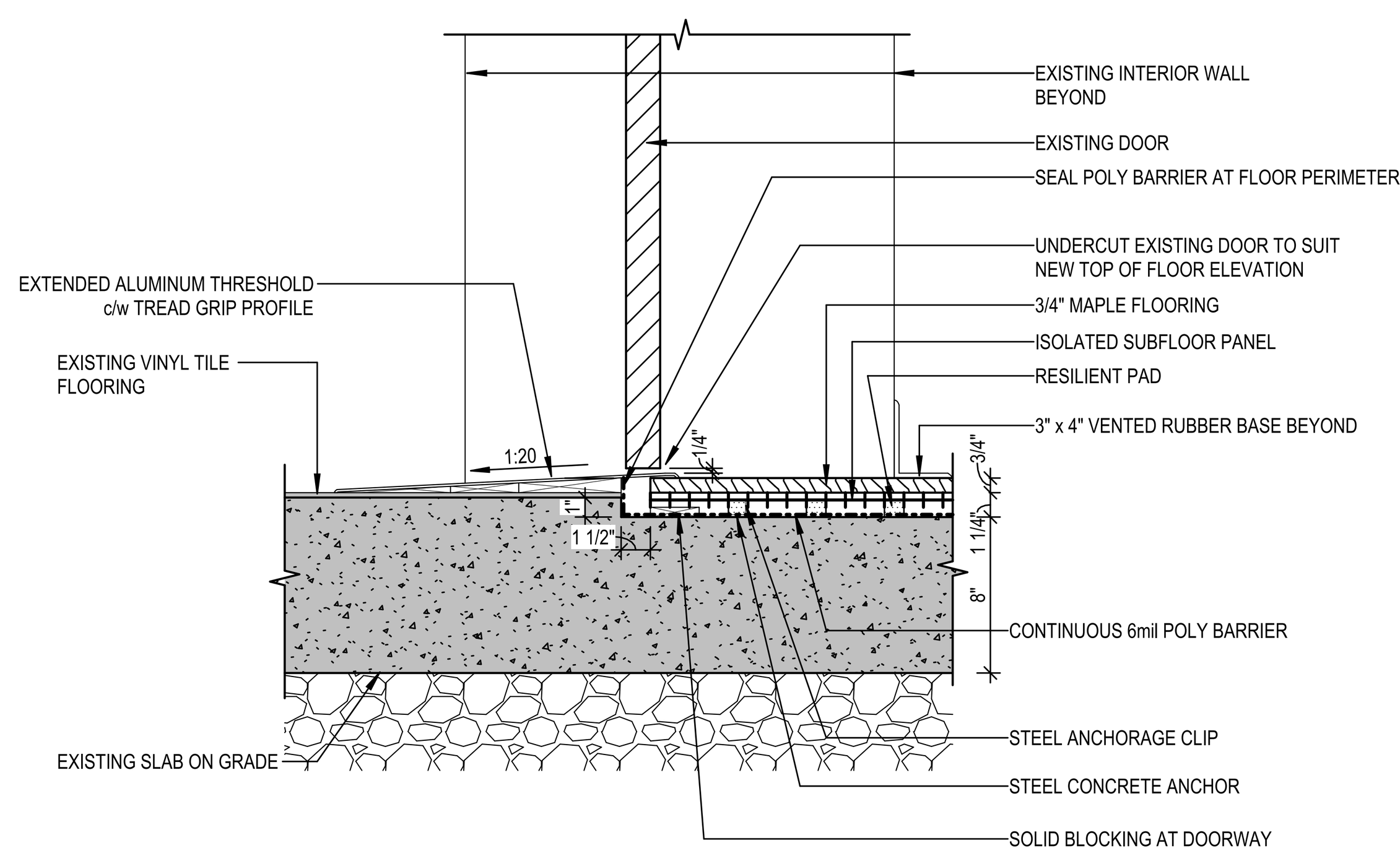
4 SECTION - GYM FLOOR AT INTERIOR DOOR THRESHOLD 2
A-401
SCALE: 1 1/2" = 1'-0"



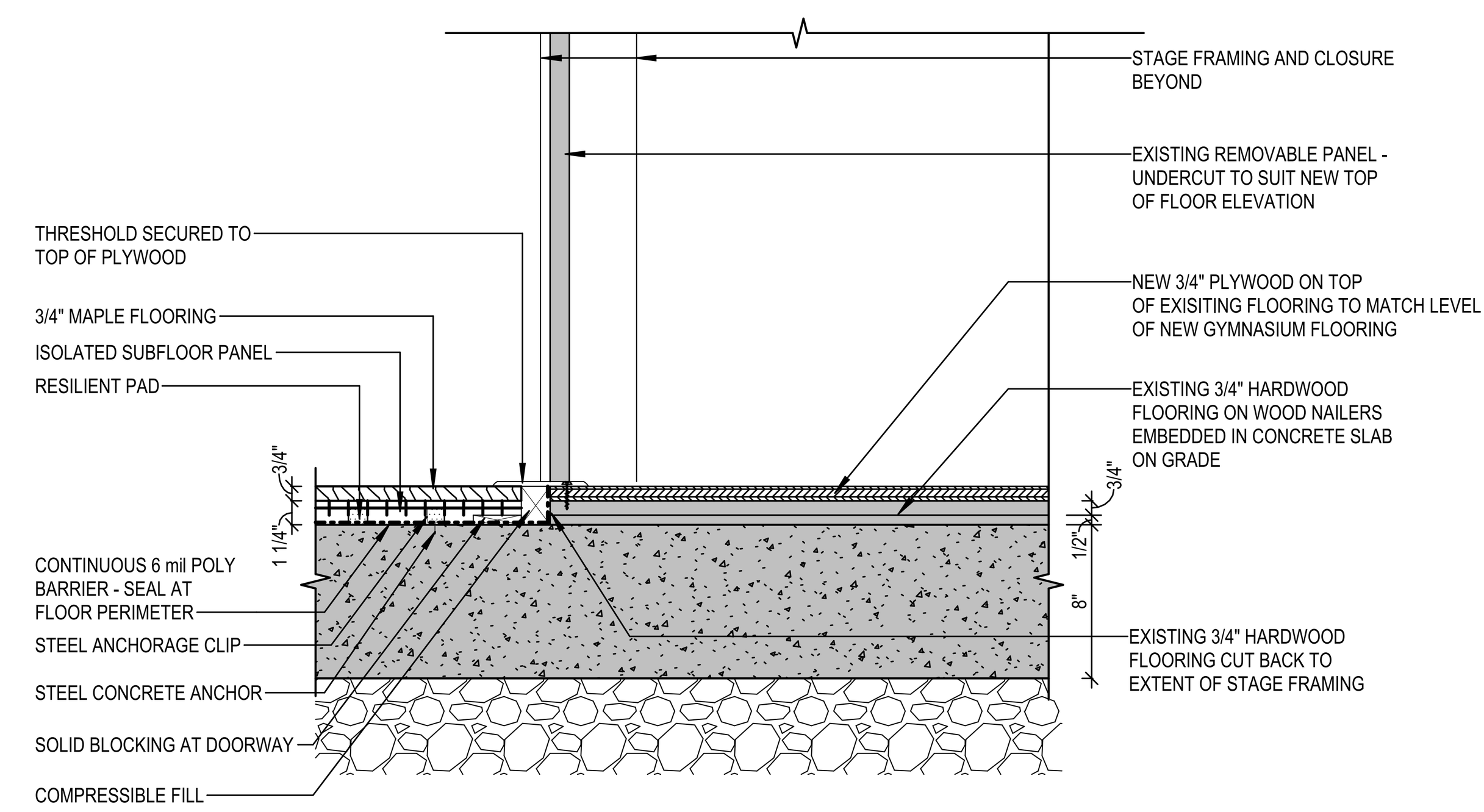
7 PLAN - GYM FLOOR AT INTERIOR DOOR JAMB (ENTRANCE)
A-401
SCALE: 1 1/2" = 1'-0"



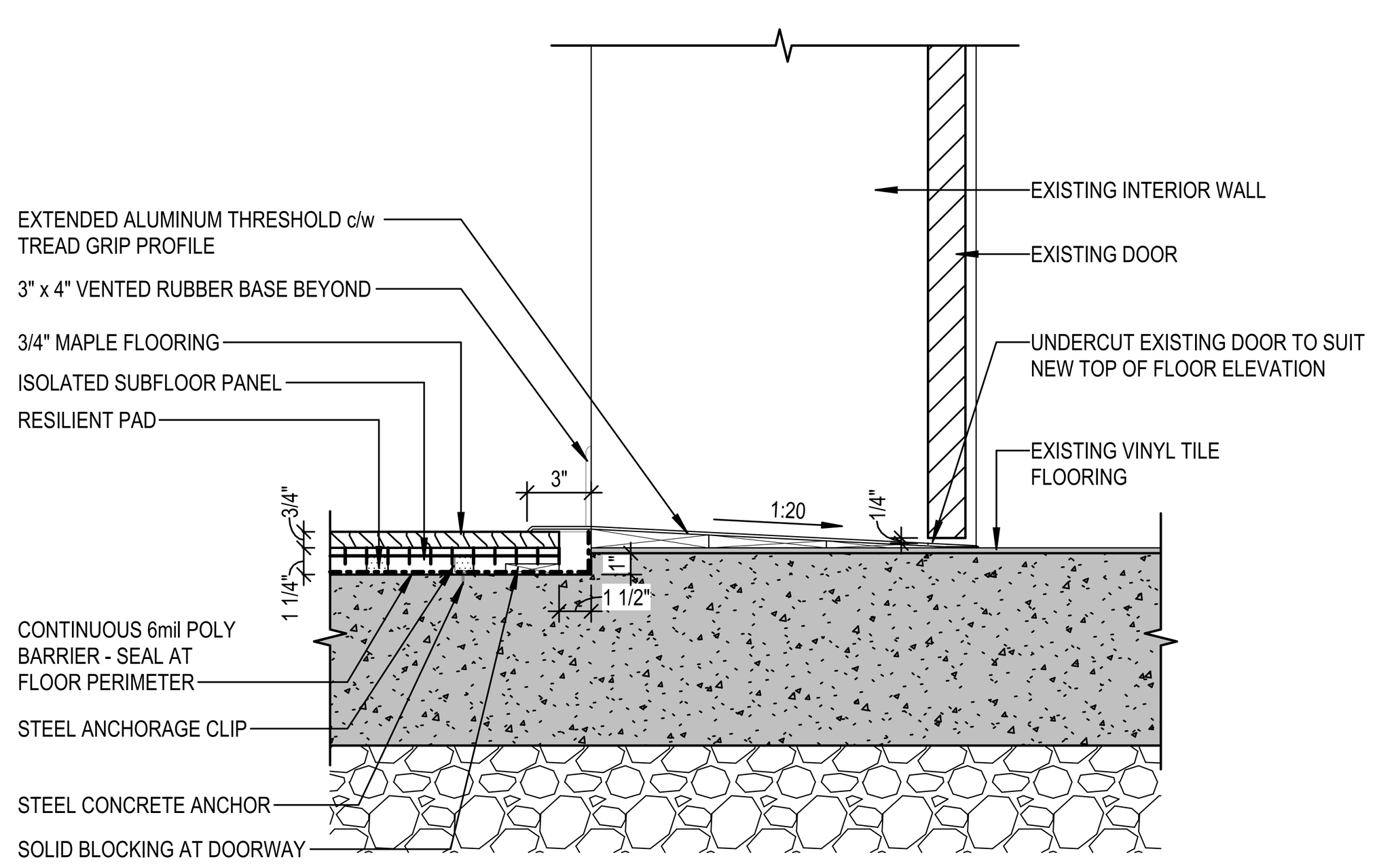
2 SECTION - GYM FLOOR AT EXTERIOR DOOR THRESHOLD
A-401
SCALE: 1 1/2" = 1'-0"



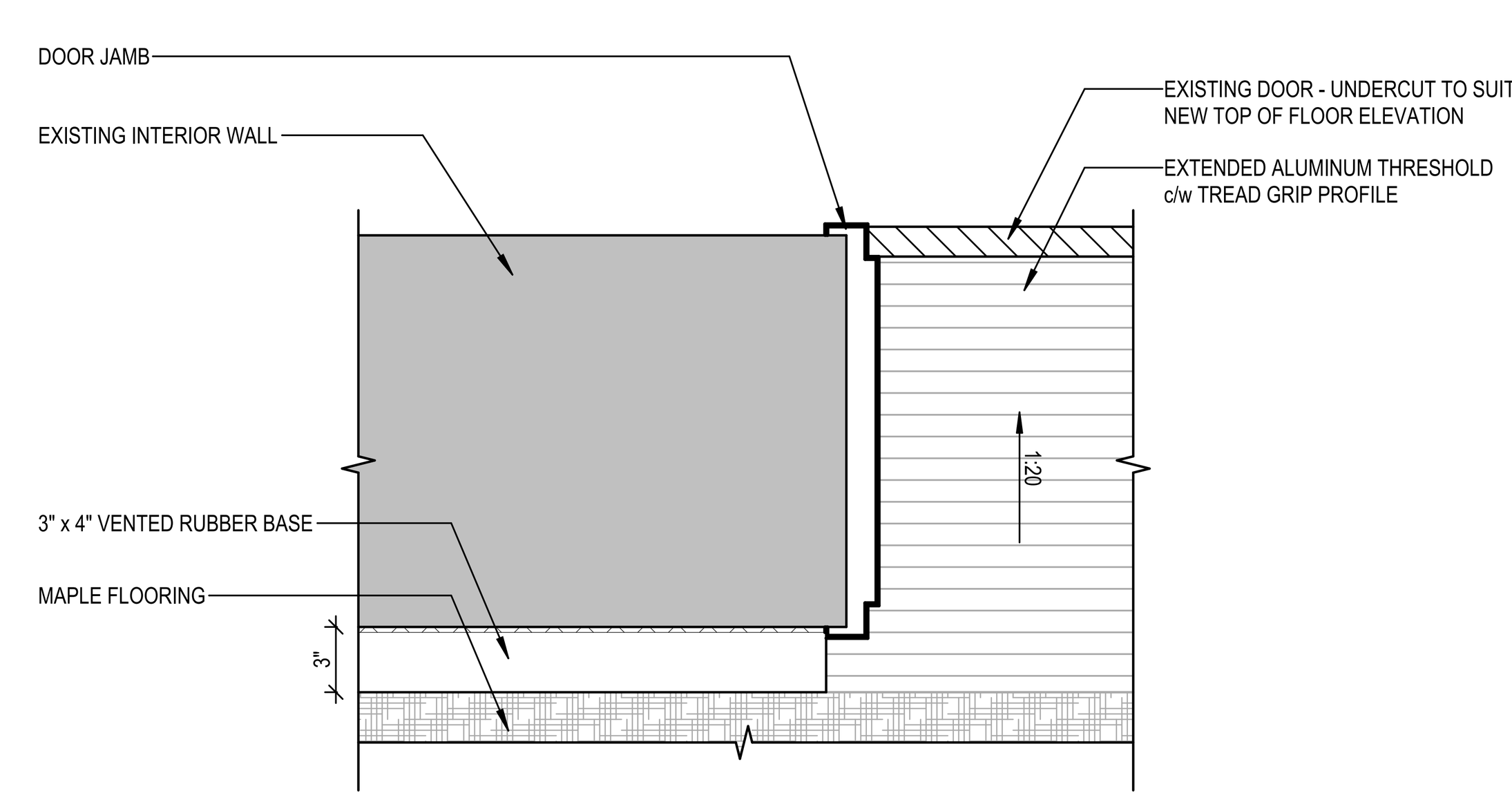
5 SECTION - GYM FLOOR AT INTERIOR DOOR THRESHOLD 3
A-401
SCALE: 1 1/2" = 1'-0"



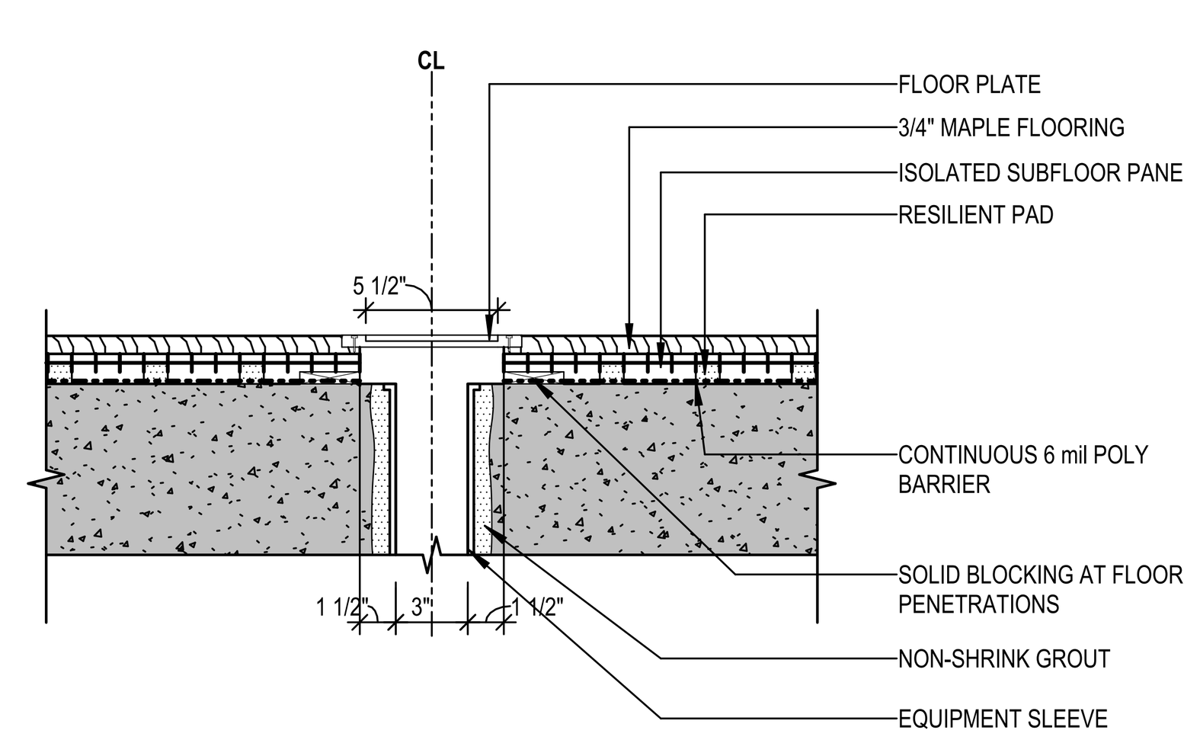
8 SECTION - GYM FLOOR AT STAGE
A-401
SCALE: 1 1/2" = 1'-0"



3 SECTION - GYM FLOOR AT INTERIOR DOOR THRESHOLD 1
A-401
SCALE: 1 1/2" = 1'-0"



6 PLAN - GYM FLOOR AT INTERIOR DOOR JAMB
A-401
SCALE: 1 1/2" = 1'-0"



9 SECTION - GYM FLOOR AT POST ANCHORS
A-401
SCALE: 1 1/2" = 1'-0"

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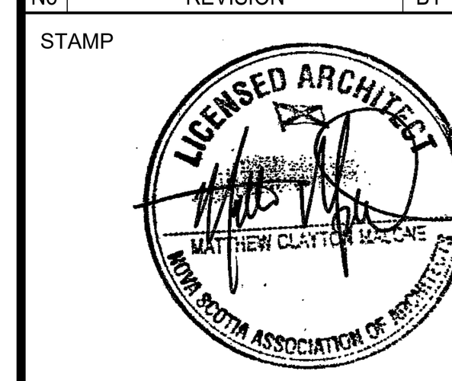
No	REVISION	BY	DATE
0	ISSUED FOR TENDER		10 MAY 2024

STAMP



SCALE	1 1/2" = 1'-0"
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CHECKED	GW
DATE	10 MAY 2024

PROJECT
BICENTENNIAL SCHOOL - GYM FLOOR REPLACEMENT

CLIENT
Halifax Regional Centre for Education

PROJECT No. 2024-016-3

SHEET TITLE
DETAILS - GYM

A-401

Halifax
Regional Centre for Education

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 betaken 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) _____

_____

End of Document